NEW DELHI

Coram: 1. Shri P.K. Pujari, Chairperson

2. Shri I.S. Jha, Member

3. Shri Arun Goyal, Member

Date: 18th February, 2021

IN THE MATTER OF

Determination of levellised generic tariff for FY 2021-22 under Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020.

PROPOSAL

- 1. The Commission has notified the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 (hereinafter referred to as "the RE Tariff Regulations"), which provide for terms and conditions and the procedure for determination of tariff of the following categories of Renewable Energy (RE) generating stations:
 - a. Small Hydro Projects;
 - b. Biomass Power Projects with Rankine Cycle technology;
 - c. Non-fossil fuel-based co-generation Project;
 - d. Biomass Gasifier based Power Projects;
 - e. Biogas based Power Projects
- 2. As per Regulation 7 of the RE Tariff Regulations, the Commission shall determine project specific tariff for the following RE technologies:
 - a. Solar PV power projects, floating solar projects and solar thermal power projects;
 - b. Wind power projects (both on-shore and off-shore);



- c. Biomass gasifier-based power projects and biogas based power projects if a project developer opts for project specific tariff;
- d. Municipal solid waste-based power projects and refuse derived fuel based power projects;
- e. Renewable hybrid energy projects;
- f. Renewable energy with storage projects; and
- g. Any other project based on new renewable energy sources or technologies approved by MNRE.
- 3. Further, Regulation 8(1) of the RE Tariff Regulations provides as under:
 - "8. Petition and proceedings for determination of tariff
 - 1) In case of renewable energy projects for which generic tariff has to be determined as per these regulations, the Commission shall determine such generic tariff through a Generic Tariff Order at least one month before the commencement of year for each year of the Control Period:

Provided that for first year of Control Period i.e., from 1.7.2020 to 31.3.2021, the Generic Tariff Order shall be determined upon issuance of these regulations."

- 4. The Commission, in due discharge of the mandate under Regulation 8(1) of the RE Tariff Regulations proposes to determine the generic tariff of the RE projects for the second year of control period (i.e. FY 2021-22) as per the proposal enclosed as **Annexure-I.**
- 5. The comments/suggestions of the stakeholders on the above proposal are invited by 05.03.2021.

[Arun Goyal] MEMBER [Indu Shekhar Jha] MEMBER [P.K. Pujari] CHAIRPERSON

New Delhi, 18.02.2021



ANNEXURE 1

PROPOSED LEVELLISED GENERIC TARIFF FOR VARIOUS RENEWABLE ENERGY TECHNOLOGIES FOR FY 2021-22

- 1. The proposed levellised generic tariffs for Small Hydro Projects, Biomass Power Projects with Rankine Cycle Technology, Non-fossil Fuel-based Co-generation Projects, Biomass Gasifier based Power Projects and Biogas based Power Projects, for FY 2021-22 are discussed in following paragraphs.
- 2. For RE projects covered under Regulation 7 of the RE Tariff Regulations, the Commission is required to determine project specific tariff. A separate petition is required to be filed by the person seeking tariff for determination of project specific tariff as per Regulation 8 of RE Tariff Regulations.

A. Useful Life

3. The clause (hh) of sub-Regulation (1) of Regulation 2 of the RE Tariff Regulations defines 'useful life' in relation to project, including dedicated evacuation system, from the date of commercial operation (COD) of such project, as under:

Renewable Energy Projects	Years
Small Hydro Projects	40
Biomass power project with Rankine Cycle technology	25
Non-fossil Fuel-based Co-generation Projects	25
Biomass Gasifier based Power Projects	25
Biogas based Power Projects	25

B. Control Period

4. Regulation 5 of the RE Tariff Regulations specifies that the Control Period for determination of tariff for renewable energy projects (RE projects) shall be from 01.07.2020 to 31.03.2023. The proviso to this Regulation specifies that the tariff determined for the RE projects commissioned during the control period, shall remain valid for the tariff period (Useful life of the project). Accordingly, the tariff determined by the Commission vide order 13/SM/2020

dated 21st July 2020, is applicable for RE projects commissioned during first year of the control period. The tariff proposed to be determined via this proposal is for the second year of the control period, which shall be applicable for the Projects commissioned during the period from April 1, 2021 till March 31, 2022.

C. Tariff Structure

- 5. Regulation 9 of the RE Regulations stipulates that the tariff for renewable energy sources shall consist of the following components:
 - a. Return on equity;
 - b. Interest on loan capital;
 - c. Depreciation;
 - d. Interest on working capital; and
 - e. Operation and Maintenance expenses
- 6. For renewable energy technologies having fuel cost component, like biomass power projects with rankine cycle technology, non-fossil fuel based cogeneration projects, biomass gasifier based power projects and biogas based power projects, single part tariff with two components i.e. fixed cost component and fuel cost component, is proposed to be determined.

D. Tariff Design

- 7. In terms of Regulation 10 of the RE Tariff Regulations, the tariff design for renewable energy generating stations is as under:
 - "(1) The generic tariff shall be determined, on levellised basis, considering the year of commissioning of the project, for the tariff period of the project: Provided that for renewable energy projects having single part tariff with two components, fixed cost component shall be determined on levellised basis considering the year of commissioning of the project while fuel cost component shall be determined on year of operation basis in the Tariff Order to be issued by the Commission."

E. Levellised Tariff

8. Levellised Tariff is proposed to be calculated by carrying out levellisation for 'useful life' of each technology considering the discount factor.



F. Discount Factor

9. Regulation 10(2) of the RE Tariff Regulations specifies methodology to calculate discount factor for the purpose of levellised tariff computation as under:

"10. Tariff Design

... ...

- (2) For the purpose of levellised tariff computation, discount factor equivalent to post-tax weighted average cost of capital shall be considered."
- 10. Accordingly, the discount factor considered for this exercise is equal to the post tax weighted average cost of capital on the basis of normative debt: equity ratio (70:30). Considering the normative debt equity ratio and weighted average of the post-tax rates for debt and equity component, the discount factor is calculated.
- 11. Interest Rate considered for the loan component (i.e., 70% of capital cost) is 9%. For equity component (i.e., 30% of capital cost), the rate of Return on Equity (ROE) is considered at post-tax rate of 14%. Further, Corporate Tax rate has been considered as 34.94%¹. Accordingly, the discount factor derived by this method for all technologies is 8.30%.

(Discount Factor = $[{(9\% \times 0.70) \times (1 - 34.94\%)} + (14.0\% \times 0.30)] = 8.30\%)$

G. Capital Cost

12. Regulation 12 of the RE Tariff Regulations specifies as under:

"12. Capital Cost

Norms for capital cost, as specified in relevant chapters of these regulations, shall be inclusive of land cost, pre-development expenses, all capital work including plant & machinery, civil work, erection, commissioning, financing cost, interest during construction, and evacuation infrastructure up to interconnection point."

13. The Commission has considered the normative capital cost as specified in the RE Tariff Regulations, applicable for the second year of control

¹ Income Tax rate of 30% + 12% surcharge on IT rate +4% Health and Education cess on IT rate and Surcharge



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period i.e. FY 2021-22, for various RE technologies viz. Small Hydro Projects, Biomass Power Projects based on Rankine Cycle Technology, Non-Fossil Fuel based Cogeneration Projects, Biomass Gasifier based power projects and Biogas based power projects. The capital cost of RE projects is discussed as under:

Capital cost of Small Hydro Projects (SHP)

- 14. Small Hydro Projects for the purpose of the RE Tariff Regulations cover those projects which are located at the sites approved by the State Nodal Agencies/ State Governments using new plant and machinery and with installed power plant capacity lower than or equal to 25 MW.
- 15. Normative capital cost for small hydro projects for FY 2021-22 in accordance to Regulation 27(1) of the RE Tariff Regulations as under:

Region	Projects Size	Capital Cost
		(Rs.Lakh/MW)
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of	Below 5 MW	1100
Jammu and Kashmir, Union Territory of Ladakh and North Eastern States	5 MW to 25 MW	1100
Others States	Below 5 MW	780
	5 MW to 25 MW	900

Capital cost of Biomass Power Projects based on Rankine Cycle Technology

16. Regulation 31 of the RE Tariff Regulations has specified the normative capital cost for Biomass based Power Projects for FY 2021-22 as under:

Biomass Rankine Cycle Projects	Capital Cost
	(Rs lakh/ MW)
Project [other than rice straw and juliflora (plantation) based project] with water cooled condenser	559
Project [other than rice straw and Juliflora(plantation) based project] with air cooled condenser	600
For rice straw and Juliflora (plantation) based project with water cooled condenser	611
For rice straw and Juliflora (plantation) based project with air cooled condenser	652



Capital cost of Non-fossil fuel based Cogeneration Projects

- 17. Non-fossil based cogeneration has been defined as the process in which more than one form of energy is produced in a sequential manner by using biomass. As per Regulation 4(d) of the RE Tariff Regulations, for a project to qualify as non-fossil based co-generation project, it must be using new plant and machinery with topping cycle mode of operation which uses the non-fossil fuel input for power generation and utilizes the thermal energy generated for useful heat applications in other industrial activities simultaneously, and where the sum of useful power output and half of useful thermal output is greater than 45% of the plant's energy consumption during the season.
- 18. Regulation 39 of the RE Tariff Regulations has specified normative capital cost for the Non-Fossil Fuel Based Cogeneration Projects as Rs. 492 lakh/MW for FY 2021-22.

Capital cost of Biomass Gasifier Power Projects

19. Regulation 50 of the RE Tariff Regulations has specified the normative capital cost for Biomass Gasifier power projects as Rs. 593 lakh/MW for FY 2021-22. After taking into account the capital subsidy of Rs. 150.00 lakh/MW (by Ministry of New and Renewable Energy), net project cost works out to be Rs. 443 lakh/MW for FY 2021-22.

Capital cost of Biogas based Power Projects

- 20. Regulation 56 of the RE Tariff Regulations has specified the normative capital cost for Biogas based power projects as Rs. 1186 lakh/MW for FY 2021-22. After taking into account the capital subsidy of Rs. 300 lakh/MW (by Ministry of New and Renewable Energy), net project cost works out to be Rs. 886 lakh/MW for FY 2021-22.
- 21. The capital cost for FY 2021-22 in respect of various renewable energy power generating stations is summarized as following:



Renewable Energy Projects	Net Capital Cost Norm for FY 2021- 22
Small Hydro Projects	
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States (Below 5 MW)	Rs. 1100 lakh / MW
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States (5 MW to 25 MW)	Rs. 1100 lakh / MW
Other States (Below 5 MW)	Rs. 780 lakh / MW
Other States (5 MW to 25 MW)	Rs. 900 lakh / MW
Biomass Power Projects Based on	Rankine Cycle Technology
Project [other than rice straw and Juliflora (plantation) based project] with water cooled condenser	Rs. 559 lakh / MW
Project [other than rice straw and Juliflora (plantation) based project] with air cooled condenser	Rs. 600 lakh / MW
Rice straw and Juliflora (plantation) based project with water cooled condenser	Rs. 611 lakh / MW
Rice straw and Juliflora (plantation) based project with air cooled condenser	Rs. 652 lakh / MW
Non-fossil fuel co-generation Projects	Rs. 492 lakh / MW
Biomass Gasifier based Power Projects	Rs. 443 lakh / MW
Biogas based Power Projects	Rs. 886 lakh / MW

H. Debt-Equity Ratio

22. Sub-Regulation (1) of Regulation 13 of the RE Tariff Regulations specifies debt-equity ratio of 70:30 for determination of generic tariff based on suo-motu petition.

23. Based on the debt equity ratio of 70:30, the debt and equity components of the normative capital cost for determination of tariff for the RE projects have been worked out as following:

Renewable Energy Projects	Debt Amount	Equity Amount	Net Capital Cost
	(Rs. Lakh)	(Rs. Lakh)	(Rs. Lakh)
Small Hydro Projects			
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States. (Below 5 MW)	770.00	330.00	1,100.00
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States. (5 MW to 25 MW)	770.00	330.00	1,100.00
Other States (Below 5 MW)	546.00	234.00	780.00
Other States (5 MW to 25 MW)	630.00	270.00	900.00
Biomass Power Projects Based on Rankine Cycle Technology			
Project [other than rice straw and Juliflora (plantation) based project] with water cooled condenser	391.30	167.70	559.00
Project [other than rice straw and Juliflora (plantation) based project] with air cooled condenser	420.00	180.00	600.00
Rice straw and Juliflora (plantation) based project with water cooled condenser	427.70	183.30	611.00
Rice straw and Juliflora (plantation) based project with air cooled condenser	456.40	195.60	652.00
Non-fossil fuel based co- generation projects	344.40	147.60	492.00
Biomass Gasifier based Power Projects	310.10	132.90	443.00
Biogas based Power Projects	620.20	265.80	886.00

I Return on Equity

24. As regards Rate of Return on Equity, sub-Regulation (2) of Regulation 16 of the RE Tariff Regulations specifies as under:

"16. Return on Equity

... ...

- (2) The normative Return on Equity shall be 14%. The normative Return on Equity shall be grossed up by the latest available notified Minimum Alternate Tax (MAT) rate for the first 20 years of the Tariff Period and by the latest available notified Corporate Tax rate for the remaining Tariff Period."
- 25. For computation of Rate of Return on Equity, MAT Rate of 17.47% and Corporate Tax Rate of 34.94% have been considered. Accordingly, Rate of Return has been computed as 16.96% for first 20 years and 21.52% after 20 years of useful life.

J. Interest on Loan

- 26. Sub-Regulation (1) of Regulation 14 of the RE Regulations specifies the loan tenure of 15 years for the purpose of determination of generic and project specific tariff for RE projects, which is reproduced as under:
 - "(a) The loans arrived at in the manner indicated in Regulation 13 shall be considered as gross normative loan for calculation for interest on loan.....
 - (b) For the purpose of computation of tariff, normative interest rate of two hundred (200) basis points above the average State Bank of India Marginal Cost of Funds based Lending Rate (MCLR) (one-year tenor) prevalent during the last available six months shall be considered.
 - (c) Notwithstanding any moratorium period availed by project developer, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed."
- 27. The monthly data of MCLR for the last available six months from State Bank of India and the average MCLR is shown in following table:

Effective Date	One (1) Year Tenor MCLR rates2
10.07.2020 to 09.08.2020	7%
10.08.2020 to 09.09.2020	7%
10.09.2020 to 09.10.2020	7%
10.10.2020 to 09.11.2020	7%
10.11.2020 to 09.12.2020	7%

² Source: https://www.sbi.co.in/web/interest-rates/interest-rates/mclr-historical-data



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10.12.2020 to 09.01.2021	7%
Avg. for last Available 6 months	7%

28. Accordingly, interest rate for loan component is determined as 9%.

K. Depreciation

- 29. Regulation 15 of the RE Tariff Regulations specifies for computation of depreciation in the following manner:
 - "(1) The value base for the purpose of depreciation shall be the capital cost of the project admitted by the Commission. The salvage value of the project shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the project"

Provided that, no depreciation shall be allowed to the extent of grant or capital subsidy received for the project.

- (2) Depreciation rate of 4.67% per annum shall be considered for the first 15 years and remaining depreciation shall be evenly spread during remaining Useful Life of the project"
- (3) Depreciation shall be computed from the first year of commercial operation:

Provided, that for determination of project specific tariff, in case of commercial operation of the project for part of the year, depreciation shall be computed on pro rata basis."

30. In accordance with the above, the rate of depreciation for the first 15 years is specified as 4.67% and the rate of depreciation from the 16th year onwards is to be spread over the balance useful life of the RE project as under:

Details	Small Hydro Projects	Biomass Power Projects Based on Rankine Cycle Technology	Non-fossil fuel based co- generation projects	Biomass Gasifier based Power Projects	Biogas based Power Projects
Useful Life (in years	40	25	25	25	25
Rate of depreciation for 15 years (%)	4.67	4.67	4.67	4.67	4.67
Rate of depreciation from 16 th year onwards (%)	0.80%	2.00%	2.00%	2.00%	2.00%



L. Interest on Working Capital

- 31. Regulation 17 of the RE Tariff Regulations specifies the working capital requirements of the RE projects as under:
 - "(1)The Working Capital requirement in respect of wind power projects, small hydro projects, solar PV power projects, floating solar projects, solar thermal power projects, and renewable energy with storage projects shall be computed in accordance with the following:
 - (a) Operation & Maintenance expenses for one month
 - (b) Receivables equivalent to 45 days of tariff for sale of electricity calculated on normative Capacity Utilisation Factor or Plant Load Factor, as the case may be and
 - (c) Maintenance spares equivalent to 15% of Operation and Maintenance expenses.
 - (2) The Working Capital requirement in respect of biomass power projects with Rankine cycle technology, biogas power projects, biomass gasifier based power projects, non-fossil fuel based co-generation projects, municipal solid waste based power projects and refuse derived fuel based power projects shall be computed in accordance with the following
 - (a) Fuel costs for four months equivalent to normative Plant Load Factor:
 - (b) Operation and Maintenance expense for one month;
 - (c) Receivables equivalent to 45 days of tariff for sale of electricity calculated on the plant load factor; and
 - (d) Maintenance spares equivalent to 15% of Operation and Maintenance expenses.
 - (3) In case of renewable hybrid energy projects, the Working Capital requirement shall be sum of the Working Capital requirement determined as per norms applicable for renewable energy sources, in proportion to their rated capacity in the project
 - (4) Interest on Working Capital shall be at interest rate equivalent to the normative interest rate of three hundred and fifty (350) basis points above the average State Bank of India Marginal Cost of Funds based Lending Rate (MCLR) (one-year tenor) prevalent during the last available six months."
- 32. Receivables equivalent to forty five (45) days of tariff for sale of electricity calculated on the plant load factor and four months of fuel cost, (as applicable for biomass power projects with rankine cycle technology, non-fossil fuel based cogeneration projects, biomass gasifier based power projects and biogas based power projects) have been considered.
- 33. Interest rate has been computed as average of State Bank of India MCLR (One Year Tenor) prevalent during the last available six months plus 350



basis points (equivalent to interest rate of 10.50%).

34. The parameters considered for computation of the interest on working capital are stipulated in following table:

Details	Small Hydro Projects	Biomass Power Projects Based on Rankine Cycle Technology, Non-fossil fuel based co-generation projects, Biomass Gasifier based Power Projects and Biogas based Power Projects.
(a) For Fixed Charge		
O&M Expenses (Month)	1 month	1 month
Maintenance Spares (%) of O&M Expenses	15%	15%
Receivables (Days)	45 Days	45 Days
(b) For Variable Charge		
Biomass/Bagasse Stock (Months)	-	4 month
(c) Rate of Interest (%)	10.50%	10.50%

M. Operation and Maintenance Expenses

35. Regulation 19 of the RE Tariff Regulations specifies Operation and Maintenance Expenses (O&M expenses) in respect of RE projects as following

"19. Operation and Maintenance Expenses

- (1) Operation and Maintenance expenses shall be determined for the Tariff Period of the project based on normative O&M expenses specified in these regulations for the first year of the Control Period."
- (2) Normative O&M expenses allowed during first year of the Control Period i.e., financial year 2020-21 under these Regulations shall be escalated at the rate of 3.84% per annum over the Tariff Period."
- 36. The normative O&M expenses for various RE technologies specified under the relevant provisions of the RE Tariff Regulations are as under:
 - (a) **Small Hydro Projects (SHP):** Regulation 30 of the RE Regulations provide for the normative O&M expenses for small hydro projects for the first year of the Control Period (FY 2020-21), which shall be



escalated at the rate of 3.84% per annum over the tariff period for determination of the levellised tariff. Accordingly, the table below represents the O&M cost for SHP as specified by the Commission for FY 2021-22:

Region	Project Size	O&M Expenses FY 2020-21 (Rs Lakh/ MW)	O&M Expenses FY 2021- 22 (Rs Lakh/MW)
Himachal Pradesh,	Below 5 MW	41.78	43.38
Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States	5 MW to 25 MW	31.34	32.54
	Below 5 MW	33.66	34.95
Other States	5 MW to 25 MW	24.37	25.31

- (b) Biomass power projects with rankine cycle technology: Regulation 35 of RE Tariff Regulations provides that the normative O&M expenses for Biomass-based projects for first year of the Control Period (FY 2020-21) is Rs. 46.42 lakh per MW which shall be escalated at the rate of 3.84% per annum over the tariff period. Accordingly, the Commission has proposed O&M cost norm for Biomass-based projects as Rs 48.20 lakhs per MW for FY 2021-22.
- (c) Non-Fossil Fuel based Cogeneration Projects: As per Regulation 45 of RE Tariff Regulations, the normative O&M expenses for non-fossil fuel based co-generation projects for the first year of the Control Period (FY 2020-21) is Rs. 24.52 lakh per MW which shall be escalated at the rate of 3.84% per annum over the tariff period. Accordingly, the Commission has proposed O&M cost norm for non-fossil fuel based cogeneration projects as Rs 25.46 lakhs per MW for FY 2021-22.

- (d) Biomass Gasifier based power projects: As per Regulation 54 of the RE Tariff Regulations, normative O&M expenses for Biomass Gasifier based power projects is Rs. 61.31 lakh/MW for the first year of Control Period (FY 2020-21) which shall be escalated at the rate of 3.84% per annum over the tariff period. Accordingly, the Commission has proposed O&M cost norm for Biomass Gasifier based power projects as Rs 63.66 lakh per MW for FY 2021-22.
- (e) Biogas based power projects: As per Regulation 59 of the RE Tariff Regulations, normative O&M expenses for such projects is Rs. 61.31 lakh/MW for the first year of Control Period (FY 2020-21) which shall be escalated at the rate of 3.84% per annum over the tariff period. Accordingly, the Commission has proposed O&M expense norm for such projects as Rs 63.66 lakh per MW for FY 2021-22.
- 37. The Commission has considered the normative O&M Expenses as specified in RE Tariff Regulations for different RE technologies as stated above.

N. Capacity Utilisation factor (CUF)/Plant Load Factor (PLF)

38. Regulation 18 of the RE Tariff Regulations, as extracted below, specifies number of hours for calculation of CUF/PLF as 8766.

"The number of hours in a year for calculation of capacity utilization factor and plant load factor, as the case may be, shall be considered as 8766."

39. Regulation 28 of the RE Tariff Regulations specifies the norms for Capacity Utilization Factor (CUF) of units generated in a year in respect of the Small Hydro Projects as per the details given in the table below:

Small Hydro Projects	CUF (%)
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States.	45%
Other States	30%

40. Further, the Commission has considered the Plant Load Factor (PLF) for biomass power projects with rankine cycle technology, biomass gasifier



based power projects and biogas based power projects sspecified in Regulations 32, 51 and 57 respectively of the RE Tariff Regulations, which are given in the following table:

Renewable Energy Projects	PLF (%)
Biomass power projects with rankine cycle technology	80%
Biomass gasifier based power projects	85%
Biogas based power projects	90%

41. Further, as regards Non-fossil Fuel based Co-generation projects, the Commission has considered State-wise PLF as specified in Regulation 40 of the RE Tariff Regulations, which is given in the following table:

States	PLF (%)
Uttar Pradesh & Andhra Pradesh	45%
Tamil Nadu & Maharashtra	60%
Other States	53%

O. Auxiliary Consumption

42. The Commission has considered the auxiliary consumption as specified in Regulations 29, 33, 41, 52 and 58 of the RE Tariff Regulations, which is shown in the following Table:

Renewable Energy Projects	Auxiliary Consumption (%)
(i) Small Hydro Projects	1.00%
(ii) Biomass Power Projects with rankine cycle technology	
a) Using Water Cooled Condenser	10.00%
b) Using Air Cooled Condenser	12.00%
(iii) Non-Fossil fuel based co-generation projects	8.50%
(iv) Biomass Gasifier based power projects	10.00%
(v) Biogas based power projects	12.00%

P. Station Heat Rate

43. The Station Heat Rates (SHR) specified under Regulations 34 and 42 of the RE Tariff Regulations for biomass power projects with rankine cycle technology and non-fossil fuel based co-generation projects are as under:

Renewable Energy Projects	SHR (kcal/Kwh)
Biomass power projects with rankine cycle technology	(a) 4200: For projects using travelling grate boilers
	(b) 4125: For Projects using AFBC boilers
Non-Fossil fuel based cogeneration projects	3600

Q. Fuel Parameters

(a) Fuel Mix

- 44. Regulation 53 of the RE Tariff Regulations specifies that the normative specific fuel consumption shall be 1.25 kg per kWh for Biomass Gasifier based power projects.
- 45. Also, Regulation 60 of the RE Tariff Regulations specifies that the normative specific fuel consumption shall be 3 kg of substrate mix per kWh for Biogas based power projects.
- 46. The Commission has considered the fuel mix for Biomass Gasifier based power project and Biogas based power projects as specified above.

(b) Calorific Value

- 47. The Commission has considered the calorific value for biomass fuel used as 3100 kcal/kg as per Regulation 37 of the RE Tariff Regulations.
- 48. Also, the gross calorific value for bagasse in case of non-fossil fuel cogeneration projects has been considered as 2250 kCal/kg as per Regulation 43 of the RE Tariff Regulations, and for the use of biomass fuels other than bagasse, the calorific value as specified in above paragraph shall be applicable.

(c) Fuel Cost

49. The Commission, as per Regulation 38 of the RE Tariff Regulations,



has specified the Biomass fuel price for second year of the Control Period (i.e. FY 2021-22) in the table below. The fuel prices have been derived by escalating the notified prices of first year of control period by 5%. For each subsequent year of the Tariff Period, a normative escalation factor of 5% per annum shall be applicable, unless reviewed and ordered otherwise by the Commission.

States	Biomass Price for FY 2020-21 (Rs/MT)	Biomass Price for FY 2021- 22 (Rs/MT)
Andhra radesh	3,326	3492.3
Haryana	3,786	3975.3
Maharashtra	3,872	4065.6
Punjab	3,960	4158
Rajasthan	3,305	3470.25
Tamil Nadu	3,272	3435.6
Telangana	3,326	3492.3
Uttar Pradesh	3,384	3553.2
Other States	3,557	3734.85

50. The Commission, as per Regulation 44(1) of the RE Tariff Regulations, has specified the Bagasse fuel price during second year of the Control Period (i.e. FY 2021-22) in the following table. The fuel prices have been derived by escalating the notified prices of first year of control period by 5%. For each subsequent year of the Tariff Period, a normative escalation factor of 5% per annum shall be applicable, unless reviewed and ordered otherwise by the Commission.

States	Bagasse Price for FY 2020-21 (Rs/MT)	Bagasse Price for FY 2021- 22 (Rs/MT)
Andhra Pradesh	1878	1971.9
Haryana	2671	2804.55
Maharashtra	2632	2763.6
Punjab	2351	2468.55
Tamil Nadu	2023	2124.15
Telangana	1877	1970.85
Uttar Pradesh	2095	2199.75
Other States	2274	2387.7

- 51. As per Regulation 55 of the RE Tariff Regulations, the biomass fuel price for Biomass gasifier based power projects applicable for FY 2021-22 shall be the same as for biomass power projects based on Rankine cycle technology, as determined in accordance with Regulation 38 of the RE Tariff Regulations and proposed in Clause 49 of this Proposal.
- 52. Regulation 61 of the RE Tariff Regulations has specified the feed stock price for Biogas based power projects during first year of the Control Period (FY 2020-21) at Rs.1422/MT. For each subsequent year of the Tariff Period, a normative escalation factor of 5% per annum shall be applicable, unless reviewed and ordered otherwise by the Commission. For second year of the Control Period (FY 2021-22), the Commission proposes the feed stock price for Biogas based power projects as Rs 1493.10/MT(5% escalation over last year price).

R. Subsidy or Incentives by State/Central Government

53. Regulation 22(1) of the RE Tariff Regulations provides as under:

"The Commission shall take into consideration any incentive, grant or subsidy from the Central or State Government, including accelerated depreciation benefit if availed by the project while determining the tariff under these Regulations.

Provided that the following principles shall be considered for ascertaining income tax benefit on account of accelerated depreciation, if availed, for the purpose of tariff determination:"

- "1) Assessment of benefit shall be based on normative capital cost, accelerated depreciation rate and corporate income tax rate as per relevant provisions under Income Tax Act as amended from time to time
- 2) Capitalization of Renewable energy projects during second half of the fiscal year
- 3) Per unit benefit shall be derived on levellised basis at discount factor equivalent to weighted average cost of capital"
- 54. Capital subsidy provided by the Government as per prevailing scheme/ policy has already been considered, while considering the capital cost of the project.
- 55. In terms of the above regulation, for the projects availing the benefit of accelerated depreciation, applicable Corporate Tax rate of 34.94% has been considered. For the purpose of determining net depreciation benefits, depreciation @5.28% as per straight line method (Book depreciation as per



Companies Act, 1956) has been compared with depreciation as per Income Tax Act, 1961 i.e. 40% of the written down value method. Moreover, additional 20% depreciation in the initial year is proposed to be extended to new assets acquired by power generation companies vide amendment in the section 32, sub-section (1) clause (iia) of the Income Tax Act, 1961.

- Depreciation for the first year has been calculated at the rate of 50% of accelerated depreciation (40%) and 50% of additional depreciation (20%) (as project is capitalized during the second half of the financial year as per proviso to sub-regulation 1 of Regulation 22). Income tax benefits of accelerated depreciation and additional depreciation, have been worked out as per normal tax rate on the net depreciation benefit. Per unit levellised accelerated depreciation benefit has been computed considering the post-tax weighted average cost of capital as discount factor. Accelerated depreciation benefit has been computed as per existing provisions of the Income Tax Act, 1961.
- 57. In the light of the discussions in the preceding paragraphs, the generic tariffs of different RE projects for the financial year 2021-22 have been arrived at and are proposed as follows:

GENERIC TARIFF FOR RE TECHNOLOGIES FOR FY 2021-22

58. The generic tariff for RE technologies computed for FY 2021-22 is shown in the subsequent tables:

Particulars	Levellised Total Tariff (FY 2021-22)
	(Rs/kWh)
Small Hydro Projects	
Himachal Pradesh, Uttarakhand, West Bengal, North Eastern States and Union Territories of Jammu and Kashmir & Ladakh. (Below 5 MW)	5.15
Himachal Pradesh, Uttarakhand, West Bengal, North Eastern States and Union Territories of Jammu and Kashmir & Ladakh. (5 MW to 25 MW)	4.70
Others States (Below 5 MW)	5.74
Others States (5 MW to 25 MW)	5.68



State	Levellised Fixed Cost	Variable Cost (FY 2021-22)	Applicable Tariff Rates (FY 2021-22)	Benefit of AD (if availed)	Net levellised tariff (upon adjusting for AD Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
Biomass Pov	ver Projects ba	sed on Rankir	ne cycle technolog	y [other than	Rice Straw and
Juliflora (pla	ntation) based	project] with \	Nater Cooled Con-	denser and tr	avelling grate boiler
AP	2.62	5.26	7.88	0.11	7.77
Haryana	2.68	5.98	8.66	0.11	8.55
Maharashtra	2.69	6.12	8.81	0.11	8.7
Punjab	2.7	6.26	8.96	0.11	8.85
Rajasthan	2.62	5.22	7.85	0.11	7.73
Tamil Nadu	2.62	5.17	7.79	0.11	7.68
Telangana	2.62	5.26	7.88	0.11	7.77
UP	2.63	5.35	7.98	0.11	7.87
Others	2.65	5.62	8.27	0.11	8.16

State	Levellised Fixed Cost	Variable Cost (FY 2021-22)	Applicable Tariff Rates (FY 2021- 22)	Benefit of Accelerated Depreciation (if availed)	Net levellised tariff (upon adjusting for AD Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
	-		•	ogy [other than R	
Juliflora (pla	ntation) based p	oject] with Air	Cooled Conden	ser and travelling	grate boiler
AP	2.77	5.38	8.14	0.12	8.02
Haryana	2.82	6.12	8.94	0.12	8.82
Maharashtra	2.84	6.26	9.09	0.12	8.97
Punjab	2.85	6.4	9.25	0.12	9.13
Rajasthan	2.77	5.34	8.11	0.12	7.99
Tamil Nadu	2.76	5.29	8.05	0.12	7.93
Telangana	2.77	5.38	8.14	0.12	8.02
UP	2.77	5.47	8.25	0.12	8.12
Others	2.8	5.75	8.55	0.12	8.42

State	Levellised Fixed Cost	Variable Cost (FY 2021-22)	Applicable Tariff Rates (FY 2021-22)	Benefit of Accelerated Depreciation (if availed)	Net levellised tariff (upon adjusting for AD Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
				ology [Rice Straw	
(plantation) b	ased project] wi	th Water Cool	ed Condenser ar	nd travelling grate	boiler
AP	2.73	5.26	7.99	0.12	7.86
Haryana	2.78	5.98	8.77	0.12	8.65
Maharashtra	2.79	6.12	8.91	0.12	8.79
Punjab	2.8	6.26	9.06	0.12	8.94
Rajasthan	2.73	5.22	7.95	0.12	7.83
Tamil Nadu	2.72	5.17	7.89	0.12	7.77
Telangana	2.73	5.26	7.99	0.12	7.86
UP	2.74	5.35	8.08	0.12	7.96
Others	2.76	5.62	8.38	0.12	8.26

State	Levellis ed Fixed Cost	Variable Cost (FY 2021-22)	Applicable Tariff Rates (FY 2021- 22)	Benefit of Accelerated Depreciation (if availed)	Net levellised tariff (upon adjusting for AD Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
	Biomass Power Projects ba				
(plantation) base	ed project] w	ith Air Cooled	Condenser and	travelling grate bo	oiler
AP	2.87	5.38	8.25	0.13	8.12
Haryana	2.93	6.12	9.05	0.13	8.92
Maharashtra	2.94	6.26	9.2	0.13	9.07
Punjab	2.95	6.4	9.35	0.13	9.22
Rajasthan	2.87	5.34	8.21	0.13	8.08
Tamil Nadu	2.87	5.29	8.16	0.13	8.02
Telangana	2.87	5.38	8.25	0.13	8.12
UP	2.88	5.47	8.35	0.13	8.22
Others	2.9	5.75	8.65	0.13	8.52

State	Levellised Fixed Cost	Variable Cost (FY 2021-22)	Applicable Tariff Rates (FY 2021-22)	Benefit of Accelerated Depreciation (if availed)	Net levellised tariff (upon adjusting for AD Benefit) (if availed)	
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	
	Biomass Power Projects based on Rankine Cycle Technology [other than Rice Straw and Juliflora (plantation) based project] with Water Cooled Condenser and AFBC boiler					
AP	2.62	5.16	7.78	0.11	7.67	
Haryana	2.67	5.88	8.55	0.11	8.44	
Maharashtra	2.68	6.01	8.69	0.11	8.58	
Punjab	2.69	6.15	8.84	0.11	8.73	
Rajasthan	2.61	5.13	7.75	0.11	7.63	
Tamil Nadu	2.61	5.08	7.69	0.11	7.58	
Telangana	2.62	5.16	7.78	0.11	7.67	
UP	2.62	5.25	7.88	0.11	7.77	
Others	2.64	5.52	8.17	0.11	8.06	

State	Levellised Fixed Cost	Variable Cost (FY 2021-22)	Applicable Tariff Rates (FY 2021-22)	Benefit of Accelerated Depreciatio n (if availed)	Net levellised tariff (upon adjusting for AD Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
Biomass Po	wer Projects t	pased on Rank	ine Cycle Techno	ology [other tha	n Rice Straw
and Juliflor	a (plantation)	based project	t] with Air Co	oled Condense	er and AFBC
boiler					
AP	2.76	5.28	8.04	0.12	7.92
Haryana	2.82	6.01	8.83	0.12	8.7
Maharashtra	2.83	6.15	8.97	0.12	8.85
Punjab	2.84	6.29	9.12	0.12	9
Rajasthan	2.76	5.25	8.01	0.12	7.88
Tamil Nadu	2.75	5.19	7.95	0.12	7.83
Telangana	2.76	5.28	8.04	0.12	7.92
UP	2.77	5.37	8.14	0.12	8.02
Others	2.79	5.65	8.44	0.12	8.31

State	Levellised Fixed Cost	Variable Cost (FY 2021-22)	Applicabl e Tariff Rates (FY 2021-22)	Benefit of Accelerated Depreciation (if availed)	Net levellised tariff (upon adjusting for AD Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
Biomass Power	r Projects bas	ed on Rankine	e Cycle Techn	ology [Rice Straw	and Juliflora
(plantation) bas	ed project] wit	h Water Coole	<u>d Condenser a</u>	nd AFBC boiler	
AP	2.72	5.16	7.88	0.12	7.76
Haryana	2.78	5.88	8.65	0.12	8.53
Maharashtra	2.79	6.01	8.8	0.12	8.67
Punjab	2.8	6.15	8.94	0.12	8.82
Rajasthan	2.72	5.13	7.85	0.12	7.73
Tamil Nadu	2.71	5.08	7.79	0.12	7.67
Telangana	2.72	5.16	7.88	0.12	7.76
UP	2.73	5.25	7.98	0.12	7.86
Others	2.75	5.52	8.27	0.12	8.15

State	Levellised Fixed Cost	Variable Cost (FY 2021-22)	Applicable Tariff Rates (FY 2021-22)	Benefit of Accelerated Depreciation (if availed)	Net levellised tariff (upon adjusting for AD Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
				ology [Rice Straw	and Juliflora
(plantation) b	ased project] w	ith Air Cooled	Condenser and	AFBC boiler	
AP	2.87	5.28	8.15	0.13	8.01
Haryana	2.92	6.01	8.93	0.13	8.8
Maharashtra	2.93	6.15	9.08	0.13	8.95
Punjab	2.94	6.29	9.23	0.13	9.1
Rajasthan	2.86	5.25	8.11	0.13	7.98
Tamil Nadu	2.86	5.19	8.05	0.13	7.92
Telangana	2.87	5.28	8.15	0.13	8.01
UP	2.87	5.37	8.25	0.13	8.11
Others	2.89	5.65	8.54	0.13	8.41

State	Levellised Fixed Cost	Variable Cost (FY 2021-22)	Applicable Tariff Rates (FY 2021-22)	Benefit of Accelerated Depreciation (if availed)	Net levellised tariff (upon adjusting for AD Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
Bagasse Bas	ed Co-generation	on Project			
AP	2.91	3.45	6.36	0.16	6.2
Haryana	2.63	4.9	7.53	0.14	7.39
Maharashtra	2.36	4.83	7.19	0.12	7.07
Punjab	2.58	4.32	6.9	0.14	6.76
Tamil Nadu	2.27	3.71	5.99	0.12	5.86
Telangana	2.51	3.45	5.96	0.14	5.82
UP	2.94	3.85	6.79	0.16	6.63
Others	2.57	4.18	6.74	0.14	6.61

State	Levellised Fixed Cost	Variable Cost (FY 2021-22)	Applicable Tariff Rates (FY 2021-22)	Benefit of Accelerate d Depreciati on (if availed)	Net levellised tariff (upon adjusting for AD Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
	Bio	omass Gasifier	based Power Pr	oject	
AP	2.58	4.85	7.43	0.08	7.35
Haryana	2.63	5.52	8.15	0.08	8.07
Maharashtra	2.64	5.65	8.29	0.08	8.21
Punjab	2.65	5.78	8.43	0.08	8.34
Rajasthan	2.58	4.82	7.4	0.08	7.32
Tamil Nadu	2.58	4.77	7.35	0.08	7.26
Telangana	2.58	4.85	7.43	0.08	7.35
UP	2.59	4.94	7.52	0.08	7.44
Others	2.61	5.19	7.79	0.08	7.71
		Biogas base	ed power project		
Biogas	3.32	5.09	8.41	0.16	8.25

59. The detailed computations for the generic tariff for various RE technologies have been enclosed with this proposal as per the details given hereunder:

<u>SI.</u>	Renewable Energy Projects	Annexure
<u>No.</u>		
А	Small Hydro Projects	
	Projects Less than 5 MW for HP, Uttarakhand, West	Annexure 1A
	Bengal, Jammu and Kashmir, Ladakh and NE States	Annay was 4D
	Projects between 5 MW and 25 MW for HP, Uttarakhand, West Bengal, Jammu and Kashmir,	Annexure 1B
	Ladakh and NE States	
	Projects less than 5 MW for other States	Annexure 1C
	Projects between 5 MW and 25 MW for other states	Annexure 1D
B.1	Biomass Power Projects based on Rankine Cycle	
	Technology [other than Rice Straw and Juliflora	
	(plantation) based project] with Water Cooled	
	Condenser and using Travelling Grate	
	Andhra Pradesh	Annexure 2.1A
	Haryana	Annexure 2.1B
	Maharashtra	Annexure 2.1C
	Punjab	Annexure 2.1D
	Rajasthan	Annexure 2.1E
	Tamil Nadu	Annexure 2.1F
	Telangana	Annexure 2.1G
	Uttar Pradesh	Annexure 2.1H
	Others	Annexure 2.11
B.2	Biomass Power Projects based on Rankine Cycle	
	Technology [other than Rice Straw and Juliflora	
	(plantation) based project] with Air Cooled	
	Condenser and using Travelling Grate boiler	Annay (110 0 0 0 1
	Andhra Pradesh	Annexure 2.2A
	Haryana	Annexure 2.2B
	Maharashtra	Annexure 2.2C
	Punjab	Annexure 2.2D
	Rajasthan	Annexure 2.2E
	Tamil Nadu	Annexure 2.2F
	Telangana	Annexure 2.2G
	Uttar Pradesh	Annexure 2.2H
	Others	Annexure 2.21
B.3	Biomass Power Projects based on Rankine Cycle	
	Technology [Rice Straw and Juliflora (plantation)	
	based project] with Water Cooled Condenser	
	and using Travelling Grate boiler Andhra Pradesh	Annexure 2.3A
		Annexure 2.3B
	Haryana Maharaahtra	Annexure 2.3C
	Maharashtra Duniah	
	Punjab	Annexure 2.3D

<u>SI.</u>	Renewable Energy Projects	<u>Annexure</u>
<u>No.</u>		
	Rajasthan	Annexure 2.3E
	Tamil Nadu	Annexure 2.3F
	Telangana	Annexure 2.3G
	Uttar Pradesh	Annexure 2.3H
	Others	Annexure 2.3I
B.4	Biomass Power Projects based on Rankine Cycle Technology [Rice Straw and Juliflora (plantation) based project] with Air Cooled Condenser and using Travelling Grate boiler	
	Andhra Pradesh	Annexure 2.4A
	Haryana	Annexure 2.4B
	Maharashtra	Annexure 2.4C
	Punjab	Annexure 2.4D
	Rajasthan	Annexure 2.4E
	Tamil Nadu	Annexure 2.4F
	Telangana	Annexure 2.4G
	Uttar Pradesh	Annexure 2.4H
	Others	Annexure 2.4I
B.5	Biomass Power Projects based on Rankine Cycle Technology [other than Rice Straw and Juliflora (plantation) based project] with Water Cooled Condenser and using AFBC boiler	
	Andhra Pradesh	Annexure 2.5A
	Haryana	Annexure 2.5B
	Maharashtra	Annexure 2.5C
	Punjab	Annexure 2.5D
	Rajasthan	Annexure 2.5E
	Tamil Nadu	Annexure 2.5F
	Telangana	Annexure 2.5G
	Uttar Pradesh	Annexure 2.5H
	Others	Annexure 2.5I
B.6	Biomass Power Projects based on Rankine Cycle Technology [other than Rice Straw and Juliflora (plantation) based project] with Air Cooled Condenser and using AFBC	
	Andhra Pradesh	Annexure 2.6A
	Haryana	Annexure 2.6B
	Maharashtra	Annexure 2.6C
	Punjab	Annexure 2.6D
	Rajasthan	Annexure 2.6E
	Tamil Nadu	Annexure 2.6F

SI.	Renewable Energy Projects	Annexure
No.		
	Telangana	Annexure 2.6G
	Uttar Pradesh	Annexure 2.6H
	Others	Annexure 2.6I
B.7	Biomass Power Projects based on Rankine Cycle Technology [Rice Straw and Juliflora (plantation) based project] with Water Cooled Condenser and using AFBC boiler	
	Andhra Pradesh	Annexure 2.7A
	Haryana	Annexure 2.7B
	Maharashtra	Annexure 2.7C
	Punjab	Annexure 2.7D
	Rajasthan	Annexure 2.7E
	Tamil Nadu	Annexure 2.7F
	Telangana	Annexure 2.7G
	Uttar Pradesh	Annexure 2.7H
	Others	Annexure 2.7I
B.8	Biomass Power Projects based on Rankine Cycle Technology [Rice Straw and Juliflora (plantation) based project] with Air Cooled Condenser and using AFBC boiler	
	Andhra Pradesh	Annexure 2.8A
	Haryana	Annexure 2.8B
	Maharashtra	Annexure 2.8C
	Punjab	Annexure 2.8D
	Rajasthan	Annexure 2.8E
	Tamil Nadu	Annexure 2.8F
	Telangana	Annexure 2.8G
	Uttar Pradesh	Annexure 2.8H
	Others	Annexure 2.8I
С	Non-Fossil Fuel Based Cogeneration Projects	
	Andhra Pradesh	Annexure 3A
	Haryana	Annexure 3B
	Maharashtra	Annexure 3C
	Punjab	Annexure 3D
	Tamil Nadu	Annexure 3E
	Telangana	Annexure 3F
	Uttar Pradesh	Annexure 3G
	Others	Annexure 3H
D	Biomass Gasifier based Power Projects	
	Andhra Pradesh	Annexure 4A

SI.	Renewable Energy Projects	<u>Annexure</u>
<u>No.</u>		
	Haryana	Annexure 4B
	Maharashtra	Annexure 4C
	Punjab	Annexure 4D
	Rajasthan	Annexure 4E
	Tamil Nadu	Annexure 4F
	Telangana	Annexure 4G
	Uttar Pradesh	Annexure 4H
	Others	Annexure 4I
Е	Biogas based Power Projects	Annexure 5A

SHP- Hi	machal Pradesh, Uttarakha	nd, WB, UT of J&K, Lad	akh, North Eeastern States - <=	=5MW	Annexure-1A
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter
			Installed Power Generation Capacity	MW	1
		Capacity	Capacity Utilization Factor	%	45%
01	Power Generation		Auxiliary Consumption	%	1.00%
			Useful Life	Years	40
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	1100.00
			Debt	%	70%
02	Project Cost	Debt: Equity	Equity	%	30%
0Z		Doon Equity	Total Debt Amount	Rs Lakh	770.00
			Total Equity Amout	Rs Lakh	330.00
			Loan Amount	Rs Lakh	770.00
		Debt Component	Moratorium Period	years	0
			Repayment Period	years	15
			Interest Rate	%	9.00%
03	Sources of Fund		Equity amount	Rs Lacs	330.00
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (after 20 years)	% p.a	21.52%
			Discount Rate		8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
	Financial Assumptions		MAT Rate	%	17.47%
		Depreciation	Depreciation Rate(Power Plant)	%	4.67%
04			Depreciation Rate 16th year onwards	%	0.80%
•			O&M Charges	Months	1
	Working Capital		Maintenance Spare	(% of O&M expenses)	15.00%
		For Fixed Charges	Receivables for Debtors	Months	1.5
			Interest On Working Capital	%	10.50%
05	Operation & Maintenance		O&M Cost of power plant	Rs Lakh	43.38
			Total O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Small Hydro Projects : Determination of Tariff Component

Levellised Tariff

5.15 Rs/Unit

Particular Mark M																																											
Number N	Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Fixed Cost Unit Vear 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 25 26 27 28 29 30 31 32 33 34 35 36 37 38 38 40 40 40 40 40 40 40 4	Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
OME Expenses Rs Lish 4.38 4.55 4.76 4.78 4.55 5.0 4.76 4.78 4.52 5.0 4.76 4.70 4.70 5.70 5.70 5.70 5.70 5.70 5.70 5.70 5	Net Generation	MU		3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91
OME Expenses Rs Lish 4.38 4.55 4.76 4.78 4.55 5.0 4.76 4.78 4.52 5.0 4.76 4.70 4.70 5.70 5.70 5.70 5.70 5.70 5.70 5.70 5																																											
Depreciation Resign Resi	Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Interest on term loam	O&M Expenses	Rs Lakh		43.38	45.05	46.78	48.58	50.44	52.38	54.39	56.48	58.65	60.90	63.24	65.67	68.19	70.81	73.53	76.35	79.28	82.33	85.49	88.77	92.18	95.72	99.39	103.21 1	107.17	111.29	115.56	120.00	124.61	129.39	134.36	139.52	144.88	150.44	156.22	162.22	168.45	174.91	181.63	188.61
Interest or working Capilal Res Lash 3.97 3.87 3.89 3.98 4.00 4.01 4.02 4.04 4.06 4.09 4.01 4.16 4	Depreciation	Rs Lakh		51.33	51.33	51.33	51.33	51.33	51.33	51.33	51.33	51.33	51.33	51.33	51.33	51.33	51.33	51.33	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80
Return on Equity Rs Lash	Interest on term loan	Rs Lakh		66.99	62.37	57.75	53.13	48.51	43.89	39.27	34.65	30.03	25.41	20.79	16.17	11.55	6.93	2.31	-		-			-		-		-	-	-	-			-			-				-		
Total Fixed Cost Rs Lake Rs	Interest on working Capital	Rs Lakh		3.97	3.97	3.98	3.99	4.00	4.01	4.02	4.04	4.06	4.09	4.11	4.15	4.18	4.22	4.26	3.77	3.88	4.00	4.12	4.25	4.58	4.71	4.85	5.00	5.15	5.30	5.47	5.64	5.81	5.99	6.18	6.38	6.59	6.80	7.02	7.25	7.48	7.73	7.99	8.25
Per unit Fixed Cost RsikWh 5.68 5.60 5.53 5.45 5.38 5.32 5.25 5.18 5.12 5.06 5.00 4.95 4.90 4.85 4.80 3.71 3.79 3.87 3.95 4.04 4.52 4.62 4.71 4.81 4.92 5.03 5.14 5.26 5.38 5.51 5.64 5.78 5.92 6.07 6.22 6.38 6.55 6.72 6.90 7.08 Levallised tariff corresponding to Useful life Per unit Fixed Cost RsikWh 5.66 5.60 5.53 5.45 5.38 5.32 5.25 5.18 5.12 5.06 5.00 4.95 4.90 4.85 4.80 3.71 3.79 3.87 3.95 4.04 4.52 4.62 4.71 4.81 4.92 5.03 5.14 5.26 5.38 5.51 5.64 5.78 5.92 6.07 6.22 6.38 6.55 6.72 6.90 7.08 Levallised tariff corresponding to Useful life Per unit Fixed Cost RsikWh 5.66 5.60 5.53 5.45 5.38 5.32 5.25 5.18 5.12 5.06 5.00 4.95 4.90 4.85 4.80 3.71 3.79 3.87 3.95 4.04 4.52 4.62 4.71 4.81 4.92 5.03 5.14 5.26 5.38 5.51 5.64 5.78 5.92 6.07 6.22 6.38 6.55 6.72 6.90 7.08 Per unit Fixed Cost RsikWh 5.66 5.00 5.53 5.45 5.38 5.32 5.25 5.18 5.12 5.06 5.00 4.95 4.90 4.85 4.80 3.71 3.79 3.87 3.95 4.04 4.52 4.62 4.71 4.81 4.92 5.03 5.14 5.26 5.38 5.51 5.64 5.78 5.92 6.07 6.22 6.38 6.55 6.72 6.90 7.08 Per unit Fixed Cost RsikWh 5.15 5.68 5.00 5.53 5.45 5.38 5.32 5.25 5.18 5.12 5.06 5.00 4.95 4.90 4.85 4.80 3.71 3.79 3.87 3.95 4.04 4.52 4.62 4.71 4.81 4.92 5.03 5.14 5.26 5.38 5.51 5.64 5.78 5.92 6.07 6.22 6.38 6.55 6.72 6.90 7.08 Levellised	Return on Equity	Rs Lakh		55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02
Levallised tariff corresponding to Useful life Per Unit Cost of Generation Unit RS/MWh 1.76 1.11 1.15 1.20 1.24 1.29 1.34 1.39 1.31 1.31 1.31 1.31 1.31 1.31 1.31	Total Fixed Cost	Relakh		221.66	218.71	215.82	213.01	210.26	207.59	205.00	202.48	200.05 1	197.71	195.46	193.30	191.23	189.27	187.41	144.90	147.95	151.11	154.39	157.80	176.57 1	80.24 1	84.06	188.02 1	92.14	196.41	200.85	205.45	210.24	215.20	220.36	225.72	231.28	237.05	243.05	249.28	255.75	262.46	269.43	276.67
Per Unit Cost of Generation Unit 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 OAM expn Rs/kV/h 1.07 1.71 1.15 1.20 1.24 1.29 1.34 1.39 1.45 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.5	IUIAI FIXEU GUSI	ING LUMII																									4.04	4.00	E 00														
Per Unit Cost of Generation Unit 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 OAM expn Rs/kV/h 1.07 1.71 1.15 1.20 1.24 1.29 1.34 1.39 1.45 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.5				5.68	5.60	5.53	5.45	5.38	5.32	5.25	5.18	5.12	5.06	5.00	4.95	4.90	4.85	4.80	3.71	3.79	3.87	3.95	4.04	4.52	4.62	4./1	4.81	4.92	5.03	5.14	5.26	5.38	5.51	5.64	5.78	5.92	6.07	6.22	6.38	6.55	6.72	6.90	7.08
0AM expn				5.68	5.60	5.53	5.45	5.38	5.32	5.25	5.18	5.12	5.06	5.00	4.95	4.90	4.85	4.80	3.71	3.79	3.87	3.95	4.04	4.52	4.62	4./1	4.81	4.92	5.03	5.14	5.26	5.38	5.51	5.64	5.78	5.92	6.07	6.22	6.38	6.55	6.72	6.90	7.08
Depreciation Rs/kWh 1.02 1.31 1.31 1.31 1.31 1.31 1.31 1.31 1.3	Per unit Fixed Cost	Rs/kWh		5.68	5.60	5.53	5.45	5.38	5.32	5.25	5.18	5.12	5.06	5.00	4.95	4.90	4.85	4.80	3.71	3.79	3.87	3.95	4.04	4.52	4.62	4./1	4.81	4.92	5.03	5.14	5.26	5.38	5.51	5.64	5.78	5.92	6.07	6.22	6.38	6.55	6.72	6.90	7.08
Int. on term loan Rs/kWh 0.77 1.72 1.60 1.48 1.36 1.24 1.12 1.01 0.89 0.77 0.65 0.53 0.41 0.30 0.18 0.06 0.00 0.00 0.00 0.00 0.00 0.00 0.0	Per unit Fixed Cost Levallised tariff corresponding	Rs/kWh		5.68		5.53	5.45		5.32 6	5.25 7	5.18	5.12	5.06	5.00	4.95	4.90	4.85	4.80	3.71	3.79	0.01	0.00	20	4.52	4.62	23	4.81	25	26	27	5.26	5.38	0.01		5.78	5.92 33	6.07	6.22					
Int. on working capital Rs/kWh	Per unit Fixed Cost Levallised tariff corresponding Per Unit Cost of Generation	Rs/kWh to Useful I	life	1	2	3	5.45 4 1.24	5	6 1.34	7 1.39	8 1.45	•				_			_		0.01	19	-					_	_				30	31		33 3.71			36	37	38	39	40
RoE RS/kWh 1.50 1.43 1.43 1.43 1.43 1.43 1.43 1.43 1.43	Per unit Fixed Cost Levallised tariff corresponding Per Unit Cost of Generation O&M expn	Rs/kWh to Useful I Unit Rs/kWh	life 1.76	1 1.11	2 1.15	3 1.20		5	6 1.34 1.31			1.50	1.56	1.62	1.68	1.75	1.81	1.88	1.96	2.03	18 2.11	19 2.19	2.27	2.36	2.45	2.55	2.64	2.74	2.85	2.96	3.07	3.19	30 3.31	31 3.44	3.57	3.71	3.85	4.00	36 4.15	37 4.31	38 4.48	39 4.65	40 4.83
RoE Rs/kWh 1.50 1.43 1.43 1.43 1.43 1.43 1.43 1.43 1.43	Per unit Fixed Cost Levallised tariff corresponding Per Unit Cost of Generation O&M expn Depreciation	Rs/kWh to Useful I Unit Rs/kWh Rs/kWh	1.76 1.02	1 1.11 1.31	2 1.15 1.31	3 1.20 1.31	1.31	5 1.29 1.31	5.32 6 1.34 1.31 1.12	1.31	1.31	1.50	1.56 1.31	1.62 1.31	1.68	1.75	1.81 1.31	1.88	1.96 0.23	2.03	18 2.11 0.23	19 2.19 0.23	2.27 0.23	2.36	2.45 2 0.23 (2.55	2.64 0.23	2.74 0.23	2.85 0.23	2.96 0.23	3.07 0.23	3.19 0.23	30 3.31 0.23	31 3.44 0.23	3.57 0.23	3.71	3.85	4.00 0.23	36 4.15 0.23	37 4.31 0.23	38 4.48 0.23	39 4.65 0.23	40 4.83 0.23
Levellised	Per unit Fixed Cost Levallised tariff corresponding Per Unit Cost of Generation O&M expn Depreciation Int. on term loan	Rs/kWh to Useful I Unit Rs/kWh Rs/kWh Rs/kWh	1.76 1.02 0.77	1 1.11 1.31 1.72	2 1.15 1.31 1.60	3 1.20 1.31 1.48	1.31	5 1.29 1.31 1.24	6 1.34 1.31 1.12	1.31	1.31	1.50	1.56 1.31	1.62 1.31 0.53	1.68 1.31 0.41	1.75 1.31 0.30	1.81 1.31 0.18	1.88 1.31 0.06	1.96 0.23 0.00	2.03 0.23 0.00	18 2.11 0.23 0.00	19 2.19 0.23	2.27 0.23	2.36 0.23 0.00	2.45 2 0.23 (0.00 (2.55 0.23 0.00	2.64 0.23 0.00	2.74 0.23 0.00	2.85 0.23 0.00	2.96 0.23 0.00	3.07 0.23 0.00	3.19 0.23 0.00	30 3.31 0.23 0.00	31 3.44 0.23 0.00	3.57 0.23	3.71	3.85	4.00 0.23 0.00	36 4.15 0.23 0.00	37 4.31 0.23 0.00	38 4.48 0.23 0.00	39 4.65 0.23 0.00	40 4.83 0.23 0.00
Levellised	Per unit Fixed Cost Levallised tariff corresponding Per Unit Cost of Generation 0.8M expn Depreciation Int. on term loan Int. on working capital	Rs/kWh to Useful I Unit Rs/kWh Rs/kWh Rs/kWh	1.76 1.02 0.77 0.11	1 1.11 1.31 1.72 0.10	2 1.15 1.31 1.60 0.10	3 1.20 1.31 1.48 0.10	1.31 1.36 0.10	5 1.29 1.31 1.24 0.10	6 1.34 1.31 1.12 0.10	1.31 1.01 0.10	1.31 0.89 0.10	1.50 1.31 0.77 0.10	1.56 1.31 0.65 0.10	1.62 1.31 0.53 0.11	1.68 1.31 0.41 0.11	1.75 1.31 0.30 0.11	1.81 1.31 0.18 0.11	1.88 1.31 0.06 0.11	1.96 0.23 0.00 0.10	2.03 0.23 0.00 0.10	18 2.11 0.23 0.00 0.10	19 2.19 0.23 0.00 0.11	2.27 0.23 0.00 0.11	2.36 0.23 0.00 0.12	2.45 2 0.23 (0.00 (0.12 (2.55 0.23 0.00 0.12	2.64 0.23 0.00 0.13	2.74 0.23 0.00 0.13	2.85 0.23 0.00 0.14	2.96 0.23 0.00 0.14	3.07 0.23 0.00 0.14	3.19 0.23 0.00 0.15	30 3.31 0.23 0.00 0.15	31 3.44 0.23 0.00 0.16	3.57 0.23 0.00 0.16	3.71 0.23 0.00 0.17	3.85 0.23 0.00 0.17	4.00 0.23 0.00 0.18	36 4.15 0.23 0.00 0.19	37 4.31 0.23 0.00 0.19	38 4.48 0.23 0.00 0.20	39 4.65 0.23 0.00 0.20	40 4.83 0.23 0.00 0.21
	Per unit Fixed Cost Levallised tariff corresponding Per Unit Cost of Generation 0.8M expn Depreciation Int. on term loan Int. on working capital RoE	to Useful I Unit Rs/kWh Rs/kWh Rs/kWh Rs/kWh Rs/kWh	1.76 1.02 0.77 0.11 1.50	1 1.11 1.31 1.72 0.10 1.43	2 1.15 1.31 1.60 0.10 1.43	3 1.20 1.31 1.48 0.10 1.43	1.31 1.36 0.10 1.43	5 1.29 1.31 1.24 0.10 1.43	6 1.34 1.31 1.12 0.10 1.43	1.31 1.01 0.10 1.43	1.31 0.89 0.10 1.43	1.50 1.31 0.77 0.10 1.43	1.56 1.31 0.65 0.10 1.43	1.62 1.31 0.53 0.11 1.43	1.68 1.31 0.41 0.11 1.43	1.75 1.31 0.30 0.11 1.43	1.81 1.31 0.18 0.11 1.43	1.88 1.31 0.06 0.11 1.43	1.96 0.23 0.00 0.10 1.43	2.03 0.23 0.00 0.10 1.43	18 2.11 0.23 0.00 0.10 1.43	19 2.19 0.23 0.00 0.11 1.43	2.27 0.23 0.00 0.11 1.43	2.36 0.23 0.00 0.12 1.82	2.45 2 0.23 (0.00 (0.12 (1.82)	2.55 0.23 0.00 0.12 1.82	2.64 0.23 0.00 0.13 1.82	2.74 0.23 0.00 0.13 1.82	2.85 0.23 0.00 0.14 1.82	2.96 0.23 0.00 0.14 1.82	3.07 0.23 0.00 0.14 1.82	3.19 0.23 0.00 0.15 1.82	30 3.31 0.23 0.00 0.15 1.82	31 3.44 0.23 0.00 0.16 1.82	3.57 0.23 0.00 0.16 1.82	3.71 0.23 0.00 0.17 1.82	3.85 0.23 0.00 0.17 1.82	4.00 0.23 0.00 0.18 1.82	36 4.15 0.23 0.00 0.19 1.82	37 4.31 0.23 0.00 0.19 1.82	38 4.48 0.23 0.00 0.20 1.82	39 4.65 0.23 0.00 0.20 1.82	40 4.83 0.23 0.00 0.21 1.82
	Per unit Fixed Cost Levallised tariff corresponding Per Unit Cost of Generation 0.8M expn Depreciation Int. on term loan Int. on working capital RoE	to Useful I Unit Rs/kWh Rs/kWh Rs/kWh Rs/kWh Rs/kWh	1.76 1.02 0.77 0.11 1.50	1 1.11 1.31 1.72 0.10 1.43	2 1.15 1.31 1.60 0.10 1.43	3 1.20 1.31 1.48 0.10 1.43	1.31 1.36 0.10 1.43	5 1.29 1.31 1.24 0.10 1.43	6 1.34 1.31 1.12 0.10 1.43	1.31 1.01 0.10 1.43	1.31 0.89 0.10 1.43	1.50 1.31 0.77 0.10 1.43	1.56 1.31 0.65 0.10 1.43	1.62 1.31 0.53 0.11 1.43	1.68 1.31 0.41 0.11 1.43	1.75 1.31 0.30 0.11 1.43	1.81 1.31 0.18 0.11 1.43	1.88 1.31 0.06 0.11 1.43	1.96 0.23 0.00 0.10 1.43	2.03 0.23 0.00 0.10 1.43	18 2.11 0.23 0.00 0.10 1.43	19 2.19 0.23 0.00 0.11 1.43	2.27 0.23 0.00 0.11 1.43	2.36 0.23 0.00 0.12 1.82	2.45 2 0.23 (0.00 (0.12 (1.82)	2.55 0.23 0.00 0.12 1.82	2.64 0.23 0.00 0.13 1.82	2.74 0.23 0.00 0.13 1.82	2.85 0.23 0.00 0.14 1.82	2.96 0.23 0.00 0.14 1.82	3.07 0.23 0.00 0.14 1.82	3.19 0.23 0.00 0.15 1.82	30 3.31 0.23 0.00 0.15 1.82	31 3.44 0.23 0.00 0.16 1.82	3.57 0.23 0.00 0.16 1.82	3.71 0.23 0.00 0.17 1.82	3.85 0.23 0.00 0.17 1.82	4.00 0.23 0.00 0.18 1.82	36 4.15 0.23 0.00 0.19 1.82	37 4.31 0.23 0.00 0.19 1.82	38 4.48 0.23 0.00 0.20 1.82	39 4.65 0.23 0.00 0.20 1.82	40 4.83 0.23 0.00 0.21 1.82
	Per unit Fixed Cost Levallised tariff corresponding Per Unit Cost of Generation 0.8M expn Depreciation Int. on term loan Int. on working capital RoE Total COG	to Useful I Unit Rs/kWh Rs/kWh Rs/kWh Rs/kWh Rs/kWh Rs/kWh	1.76 1.02 0.77 0.11 1.50 5.15	1 1.11 1.31 1.72 0.10 1.43	2 1.15 1.31 1.60 0.10 1.43	3 1.20 1.31 1.48 0.10 1.43	1.31 1.36 0.10 1.43	5 1.29 1.31 1.24 0.10 1.43	6 1.34 1.31 1.12 0.10 1.43	1.31 1.01 0.10 1.43	1.31 0.89 0.10 1.43	1.50 1.31 0.77 0.10 1.43	1.56 1.31 0.65 0.10 1.43	1.62 1.31 0.53 0.11 1.43	1.68 1.31 0.41 0.11 1.43	1.75 1.31 0.30 0.11 1.43	1.81 1.31 0.18 0.11 1.43	1.88 1.31 0.06 0.11 1.43	1.96 0.23 0.00 0.10 1.43	2.03 0.23 0.00 0.10 1.43	18 2.11 0.23 0.00 0.10 1.43	19 2.19 0.23 0.00 0.11 1.43	2.27 0.23 0.00 0.11 1.43	2.36 0.23 0.00 0.12 1.82	2.45 2 0.23 (0.00 (0.12 (1.82)	2.55 0.23 0.00 0.12 1.82	2.64 0.23 0.00 0.13 1.82	2.74 0.23 0.00 0.13 1.82	2.85 0.23 0.00 0.14 1.82	2.96 0.23 0.00 0.14 1.82	3.07 0.23 0.00 0.14 1.82	3.19 0.23 0.00 0.15 1.82	30 3.31 0.23 0.00 0.15 1.82	31 3.44 0.23 0.00 0.16 1.82	3.57 0.23 0.00 0.16 1.82	3.71 0.23 0.00 0.17 1.82	3.85 0.23 0.00 0.17 1.82	4.00 0.23 0.00 0.18 1.82	36 4.15 0.23 0.00 0.19 1.82	37 4.31 0.23 0.00 0.19 1.82	38 4.48 0.23 0.00 0.20 1.82	39 4.65 0.23 0.00 0.20 1.82	40 4.83 0.23 0.00 0.21 1.82
Fixed Cost 5.15	Per unit Fixed Cost Levallised tariff corresponding Per Unit Cost of Generation 0.8M expn Depreciation Int. on term loan Int. on working capital RoE Total COG	to Useful I Unit Rs/kWh Rs/kWh Rs/kWh Rs/kWh Rs/kWh Rs/kWh	1.76 1.02 0.77 0.11 1.50 5.15	1 1.11 1.31 1.72 0.10 1.43	2 1.15 1.31 1.60 0.10 1.43	3 1.20 1.31 1.48 0.10 1.43 5.53	1.31 1.36 0.10 1.43	5 1.29 1.31 1.24 0.10 1.43	6 1.34 1.31 1.12 0.10 1.43	1.31 1.01 0.10 1.43	1.31 0.89 0.10 1.43	1.50 1.31 0.77 0.10 1.43	1.56 1.31 0.65 0.10 1.43	1.62 1.31 0.53 0.11 1.43	1.68 1.31 0.41 0.11 1.43	1.75 1.31 0.30 0.11 1.43 4.90	1.81 1.31 0.18 0.11 1.43 4.85	1.88 1.31 0.06 0.11 1.43 4.80	1.96 0.23 0.00 0.10 1.43 3.71	2.03 0.23 0.00 0.10 1.43 3.79	18 2.11 0.23 0.00 0.10 1.43 3.87	19 2.19 0.23 0.00 0.11 1.43	2.27 0.23 0.00 0.11 1.43	2.36 0.23 0.00 0.12 1.82	2.45 2 0.23 (0.00 (0.12 (1.82)	2.55 0.23 0.00 0.12 1.82	2.64 0.23 0.00 0.13 1.82 4.81	2.74 0.23 0.00 0.13 1.82 4.92	2.85 0.23 0.00 0.14 1.82	2.96 0.23 0.00 0.14 1.82	3.07 0.23 0.00 0.14 1.82	3.19 0.23 0.00 0.15 1.82 5.38	30 3.31 0.23 0.00 0.15 1.82	31 3.44 0.23 0.00 0.16 1.82	3.57 0.23 0.00 0.16 1.82 5.78	3.71 0.23 0.00 0.17 1.82 5.92	3.85 0.23 0.00 0.17 1.82 6.07	4.00 0.23 0.00 0.18 1.82	36 4.15 0.23 0.00 0.19 1.82 6.38	37 4.31 0.23 0.00 0.19 1.82 6.55	38 4.48 0.23 0.00 0.20 1.82 6.72	39 4.65 0.23 0.00 0.20 1.82 6.90	40 4.83 0.23 0.00 0.21 1.82 7.08

SHP- Hi	machal Pradesh, Uttarakha	nd, WB, UT of J&K, Lac	lakh, North Eeastern States - >5	MW upto 25 MW	Annexure-1B
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter
			Installed Power Generation Capacity	MW	1
		Capacity	Capacity Utilization Factor	%	45%
01	Power Generation		Auxiliary Consumption	%	1.00%
			Useful Life	Years	40
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	1100.00
		Dahts Fassites	Debt	%	70%
02	Project Cost	Debt: Equity	Equity	%	30%
-			Total Debt Amount	Rs Lakh	770.00
			Total Equity Amout	Rs Lakh	330.00
		Dobt Commonsut	Loan Amount	Rs Lakh	770.00
		Debt Component	Moratorium Period	years	0
			Repayment Period	years	15
			Interest Rate	%	9.00%
03	Sources of Fund	Facility Comment	Equity amount Return on Equity (upto 20	Rs Lacs	330.00
		Equity Component	years)	% p.a	16.96%
			Return on Equity (after 20 years)	% p.a	21.52%
			Discount Rate		8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
	Financial Assumptions		MAT Rate	%	17.47%
		Depreciation	Depreciation Rate(Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	0.80%
04			O&M Charges	Months	1
	Working Capital		Maintenance Spare	(% of O&M expenses)	15.00%
		For Fixed Charges	Receivables for Debtors	Months	1.5
			Interest On Working Capital	%	10.50%
05	Operation & Maintenance		O&M Cost of power plant	Rs Lakh	32.54
			Total O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy	Total No .Of Hours		Hrs	8766.00

Small Hydro Projects : Determination of Tariff Component

Units Generation	Unit	Year>	1	2	2	1	5	6	7	Q	٥	10	11	12	13	14	15	16	17	18	19	20	21	22	23	2/	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Installed Capacity	MW	Icai>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91
Not Ochiciation	INIO		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
O&M Expenses	Rs Lakh		32.54	33.79	35.09	36.44	37.84	39.29	40.80	42.37	43.99	45.68	47.44	49.26		5 53.11	55.15		59.47	61.75	64.13	66.59	69.14	71.80	74.56	77.42	80.39	83.48	86.69	90.01	93.47	97.06	100.79		108.68	112.85	117.18	121.68	126.35	131.21	136.25	141.48
Depreciation	Rs Lakh		51.33	51.33	51.33	51.33	51.33	51.33	51.33	51.33	51.33	51.33	51.33	51.33	51.33	_		-	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80
Interest on term loan	Rs Lakh		66.99	62.37	57.75	53.13	48.51	43.89	39.27	34.65	30.03	25.41	20.79	16.17	11.5	5 6.93	2.31	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	
Interest on working Capital	Rs Lakh		3.56	3.55	3.53	3.52	3.51	3.51	3.50	3.50	3.50	3.51	3.51	3.52	3.50	3 3.54	3.56	3.05	3.13	3.22	3.31	3.40	3.70	3.80	3.90	4.01	4.13	4.24	4.37	4.49	4.63	4.76	4.90	5.05	5.20	5.36	5.53	5.70	5.88	6.06	6.26	6.46
Return on Equity	Rs Lakh		55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	55.98	8 55.98	55.98	55.98	55.98	55.98	55.98	55.98	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02
Total Fixed Cost	Rs Lakh		210.41	207.02	203.69	200.41	197.18	194.00	190.89	187.83	184.84	181.91	179.05	176.26	173.5	4 170.90	168.34	125.10	127.38	129.75	132.21	134.77	152.66	155.41 1	58.28	161.25	164.33	167.54	170.87	174.32	177.91	181.64	185.51	189.52	193.70	198.03	202.53	207.20	212.05	217.09	222.32	227.75
Per unit Fixed Cost	Rs/kWh		5.39	5.30	5.22	5.13	5.05	4.97	4.89	4.81	4.73	4.66	4.58	4.51	4.44	4 4.38	4.31	3.20	3.26	3.32	3.39	3.45	3.91	3.98	4.05	4.13	4.21	4.29	4.38	4.46	4.56	4.65	4.75	4.85	4.96	5.07	5.19	5.31	5.43	5.56	5.69	5.83
Levallised tariff corresponding	ng to Useful lif	fe																																								
Levallised tariff correspondin Per Unit Cost of Generation	ng to Useful lif	fe	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
		fe 1.32	1 0.83	2 0.87	3	4 0.93	5 0.97	6 1.01	7 1.04	8 1.08	9 1.13	10 1.17	11 1.21	12 1.26	13 1.31	14 1.36	15	16 1.47	17 1.52	18 1.58	19 1.64	20 1.71	21 1.77		23 1.91		25 2.06	26 2.14	27 2.22	28 2.30	29 2.39	30 2.49	31 2.58	32 2.68	33 2.78	-	35 3.00	36 3.12	37 3.24	38 3.36	39 3.49	40 3.62
Per Unit Cost of Generation	Unit		1 0.83 1.31	2 0.87 1.31	3 0.90 1.31	4 0.93 1.31	5 0.97 1.31	•	7 1.04 1.31	8 1.08 1.31	-													1.84			-	-			-		-			2.89			•			
Per Unit Cost of Generation O&M expn	Unit Rs/kWh	1.32	_					1.01		_	1.13	1.17	1.21	1.26	1.31	1.36 1.31	1.41	1.47	1.52	1.58	1.64	1.71	1.77	1.84 0.23	1.91	1.98	2.06	2.14	2.22	2.30	2.39	2.49	2.58	2.68	2.78	2.89 0.23	3.00	3.12	3.24	3.36	3.49	3.62
Per Unit Cost of Generation O&M expn Depreciation	Unit Rs/kWh Rs/kWh	1.32	1.31	1.31	1.31	1.31	1.31	1.01	1.31	1.31	1.13	1.17	1.21	1.26	1.31	1.36 1.31 0.18	1.41	1.47 0.23	1.52 0.23	1.58 0.23	1.64 0.23	1.71 0.23	1.77 0.23	1.84 0.23	1.91	1.98 0.23	2.06	2.14 0.23	2.22 0.23	2.30 0.23	2.39 0.23	2.49 0.23	2.58 0.23	2.68 0.23	2.78 0.23	2.89 0.23 0.00	3.00 0.23	3.12 0.23	3.24 0.23	3.36 0.23	3.49 0.23	3.62 0.23
Per Unit Cost of Generation O&M expn Depreciation Int. on term loan	Unit Rs/kWh Rs/kWh Rs/kWh	1.32 1.02 0.77	1.31 1.72	1.31	1.31	1.31	1.31	1.01 1.31 1.12	1.31	1.31 0.89	1.13 1.31 0.77	1.17 1.31 0.65	1.21 1.31 0.53	1.26 1.31 0.41	1.31 1.31 0.30	1.36 1.31 0.18 0.09	1.41 1.31 0.06	1.47 0.23 0.00	1.52 0.23 0.00	1.58 0.23 0.00	1.64 0.23 0.00	1.71 0.23 0.00	1.77 0.23 0.00	1.84 0.23 0.00	1.91	1.98 0.23	2.06	2.14 0.23	2.22 0.23 0.00	2.30 0.23 0.00	2.39 0.23 0.00	2.49 0.23 0.00	2.58 0.23 0.00	2.68 0.23 0.00	2.78 0.23 0.00	2.89 0.23 0.00 0.14	3.00 0.23 0.00	3.12 0.23 0.00	3.24 0.23 0.00	3.36 0.23 0.00	3.49 0.23 0.00	3.62 0.23 0.00
Per Unit Cost of Generation O&M expn Depreciation Int. on term loan Int. on working capital	Unit Rs/kWh Rs/kWh Rs/kWh Rs/kWh	1.32 1.02 0.77 0.09	1.31 1.72 0.09 1.43	1.31 1.60 0.09	1.31 1.48 0.09	1.31 1.36 0.09	1.31 1.24 0.09	1.01 1.31 1.12 0.09	1.31 1.01 0.09	1.31 0.89 0.09	1.13 1.31 0.77 0.09	1.17 1.31 0.65 0.09	1.21 1.31 0.53 0.09	1.26 1.31 0.41 0.09	1.31 1.31 0.30 0.09	1.36 1.31 0.18 0.09 1.43	1.41 1.31 0.06 0.09	1.47 0.23 0.00 0.08	1.52 0.23 0.00 0.08	1.58 0.23 0.00 0.08	1.64 0.23 0.00 0.08	1.71 0.23 0.00	1.77 0.23 0.00 0.09	1.84 0.23 0.00 0.10 1.82	1.91 0.23 0.00 0.10 1.82	1.98 0.23 0.00 0.10 1.82	2.06 0.23 0.00 0.11	2.14 0.23 0.00 0.11 1.82	2.22 0.23 0.00 0.11	2.30 0.23 0.00 0.12	2.39 0.23 0.00 0.12	2.49 0.23 0.00 0.12	2.58 0.23 0.00 0.13	2.68 0.23 0.00 0.13	2.78 0.23 0.00 0.13	2.89 0.23 0.00 0.14 1.82	3.00 0.23 0.00 0.14	3.12 0.23 0.00 0.15	3.24 0.23 0.00 0.15	3.36 0.23 0.00 0.16	3.49 0.23 0.00 0.16	3.62 0.23 0.00 0.17
Per Unit Cost of Generation O&M expn Depreciation Int. on term loan Int. on working capital RoE	Unit Rs/kWh Rs/kWh Rs/kWh Rs/kWh Rs/kWh	1.32 1.02 0.77 0.09 1.50	1.31 1.72 0.09 1.43	1.31 1.60 0.09 1.43	1.31 1.48 0.09 1.43	1.31 1.36 0.09 1.43	1.31 1.24 0.09 1.43	1.01 1.31 1.12 0.09 1.43	1.31 1.01 0.09 1.43	1.31 0.89 0.09 1.43	1.13 1.31 0.77 0.09 1.43	1.17 1.31 0.65 0.09 1.43	1.21 1.31 0.53 0.09 1.43	1.26 1.31 0.41 0.09 1.43	1.31 1.31 0.30 0.09 1.43	1.36 1.31 0.18 0.09 1.43	1.41 1.31 0.06 0.09 1.43	1.47 0.23 0.00 0.08 1.43	1.52 0.23 0.00 0.08 1.43	1.58 0.23 0.00 0.08 1.43	1.64 0.23 0.00 0.08 1.43	1.71 0.23 0.00 0.09 1.43	1.77 0.23 0.00 0.09 1.82	1.84 0.23 0.00 0.10 1.82	1.91 0.23 0.00 0.10 1.82	1.98 0.23 0.00 0.10 1.82	2.06 0.23 0.00 0.11 1.82	2.14 0.23 0.00 0.11 1.82	2.22 0.23 0.00 0.11 1.82	2.30 0.23 0.00 0.12 1.82	2.39 0.23 0.00 0.12 1.82	2.49 0.23 0.00 0.12 1.82	2.58 0.23 0.00 0.13 1.82	2.68 0.23 0.00 0.13 1.82	2.78 0.23 0.00 0.13 1.82	2.89 0.23 0.00 0.14 1.82	3.00 0.23 0.00 0.14 1.82	3.12 0.23 0.00 0.15 1.82	3.24 0.23 0.00 0.15 1.82	3.36 0.23 0.00 0.16 1.82	3.49 0.23 0.00 0.16 1.82	3.62 0.23 0.00 0.17 1.82
Per Unit Cost of Generation O&M expn Depreciation Int. on term loan Int. on working capital RoE	Unit Rs/kWh Rs/kWh Rs/kWh Rs/kWh Rs/kWh	1.32 1.02 0.77 0.09 1.50	1.31 1.72 0.09 1.43	1.31 1.60 0.09 1.43	1.31 1.48 0.09 1.43	1.31 1.36 0.09 1.43	1.31 1.24 0.09 1.43	1.01 1.31 1.12 0.09 1.43	1.31 1.01 0.09 1.43	1.31 0.89 0.09 1.43	1.13 1.31 0.77 0.09 1.43	1.17 1.31 0.65 0.09 1.43	1.21 1.31 0.53 0.09 1.43	1.26 1.31 0.41 0.09 1.43	1.31 1.31 0.30 0.09 1.43	1.36 1.31 0.18 0.09 1.43	1.41 1.31 0.06 0.09 1.43	1.47 0.23 0.00 0.08 1.43	1.52 0.23 0.00 0.08 1.43	1.58 0.23 0.00 0.08 1.43	1.64 0.23 0.00 0.08 1.43	1.71 0.23 0.00 0.09 1.43	1.77 0.23 0.00 0.09 1.82	1.84 0.23 0.00 0.10 1.82	1.91 0.23 0.00 0.10 1.82	1.98 0.23 0.00 0.10 1.82	2.06 0.23 0.00 0.11 1.82	2.14 0.23 0.00 0.11 1.82	2.22 0.23 0.00 0.11 1.82	2.30 0.23 0.00 0.12 1.82	2.39 0.23 0.00 0.12 1.82	2.49 0.23 0.00 0.12 1.82	2.58 0.23 0.00 0.13 1.82	2.68 0.23 0.00 0.13 1.82	2.78 0.23 0.00 0.13 1.82	2.89 0.23 0.00 0.14 1.82	3.00 0.23 0.00 0.14 1.82	3.12 0.23 0.00 0.15 1.82	3.24 0.23 0.00 0.15 1.82	3.36 0.23 0.00 0.16 1.82	3.49 0.23 0.00 0.16 1.82	3.62 0.23 0.00 0.17 1.82
Per Unit Cost of Generation O&M expn Depreciation Int. on term loan Int. on working capital RoE	Unit Rs/kWh Rs/kWh Rs/kWh Rs/kWh Rs/kWh Rs/kWh	1.32 1.02 0.77 0.09 1.50	1.31 1.72 0.09 1.43	1.31 1.60 0.09 1.43	1.31 1.48 0.09 1.43 5.22	1.31 1.36 0.09 1.43 5.13	1.31 1.24 0.09 1.43 5.05	1.01 1.31 1.12 0.09 1.43 4.97	1.31 1.01 0.09 1.43	1.31 0.89 0.09 1.43	1.13 1.31 0.77 0.09 1.43 4.73	1.17 1.31 0.65 0.09 1.43 4.66	1.21 1.31 0.53 0.09 1.43 4.58	1.26 1.31 0.41 0.09 1.43 4.51	1.31 1.31 0.30 0.09 1.43 4.44	1.36 1.31 0.18 0.09 1.43 4.38	1.41 1.31 0.06 0.09 1.43 4.31	1.47 0.23 0.00 0.08 1.43 3.20	1.52 0.23 0.00 0.08 1.43	1.58 0.23 0.00 0.08 1.43 3.32	1.64 0.23 0.00 0.08 1.43	1.71 0.23 0.00 0.09 1.43 3.45	1.77 0.23 0.00 0.09 1.82	1.84 0.23 0.00 0.10 1.82	1.91 0.23 0.00 0.10 1.82	1.98 0.23 0.00 0.10 1.82	2.06 0.23 0.00 0.11 1.82	2.14 0.23 0.00 0.11 1.82	2.22 0.23 0.00 0.11 1.82	2.30 0.23 0.00 0.12 1.82	2.39 0.23 0.00 0.12 1.82	2.49 0.23 0.00 0.12 1.82	2.58 0.23 0.00 0.13 1.82	2.68 0.23 0.00 0.13 1.82	2.78 0.23 0.00 0.13 1.82	2.89 0.23 0.00 0.14 1.82	3.00 0.23 0.00 0.14 1.82	3.12 0.23 0.00 0.15 1.82	3.24 0.23 0.00 0.15 1.82 5.43	3.36 0.23 0.00 0.16 1.82 5.56	3.49 0.23 0.00 0.16 1.82	3.62 0.23 0.00 0.17 1.82
Per Unit Cost of Generation O&M expn Depreciation Int. on term loan Int. on working capital RoE Total COG	Unit Rs/kWh Rs/kWh Rs/kWh Rs/kWh Rs/kWh Rs/kWh	1.32 1.02 0.77 0.09 1.50	1.31 1.72 0.09 1.43	1.31 1.60 0.09 1.43 5.30	1.31 1.48 0.09 1.43 5.22	1.31 1.36 0.09 1.43 5.13	1.31 1.24 0.09 1.43 5.05	1.01 1.31 1.12 0.09 1.43 4.97	1.31 1.01 0.09 1.43 4.89	1.31 0.89 0.09 1.43 4.81	1.13 1.31 0.77 0.09 1.43 4.73	1.17 1.31 0.65 0.09 1.43 4.66	1.21 1.31 0.53 0.09 1.43 4.58	1.26 1.31 0.41 0.09 1.43 4.51	1.31 1.31 0.30 0.09 1.43 4.44	1.36 1.31 0.18 0.09 1.43 4.38	1.41 1.31 0.06 0.09 1.43 4.31	1.47 0.23 0.00 0.08 1.43 3.20	1.52 0.23 0.00 0.08 1.43 3.26	1.58 0.23 0.00 0.08 1.43 3.32	1.64 0.23 0.00 0.08 1.43 3.39	1.71 0.23 0.00 0.09 1.43 3.45	1.77 0.23 0.00 0.09 1.82 3.91	1.84 0.23 0.00 0.10 1.82 3.98	1.91 0.23 0.00 0.10 1.82 4.05	1.98 0.23 0.00 0.10 1.82 4.13	2.06 0.23 0.00 0.11 1.82 4.21	2.14 0.23 0.00 0.11 1.82 4.29	2.22 0.23 0.00 0.11 1.82 4.38	2.30 0.23 0.00 0.12 1.82 4.46	2.39 0.23 0.00 0.12 1.82 4.56	2.49 0.23 0.00 0.12 1.82 4.65	2.58 0.23 0.00 0.13 1.82 4.75	2.68 0.23 0.00 0.13 1.82 4.85	2.78 0.23 0.00 0.13 1.82 4.96	2.89 0.23 0.00 0.14 1.82 5.07	3.00 0.23 0.00 0.14 1.82 5.19	3.12 0.23 0.00 0.15 1.82 5.31	3.24 0.23 0.00 0.15 1.82 5.43	3.36 0.23 0.00 0.16 1.82 5.56	3.49 0.23 0.00 0.16 1.82 5.69	3.62 0.23 0.00 0.17 1.82 5.83

SHP- Ot	her States - <=5MW				Annexure-1C
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter
			Installed Power Generation Capacity	MW	1
		Capacity	Capacity Utilization Factor	%	30%
01	Power Generation		Auxiliary Consumption	%	1.00%
			Useful Life	Years	40
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	780.00
		B 14 E 3	Debt	%	70%
02	Project Cost	Debt: Equity	Equity	%	30%
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			Total Debt Amount	Rs Lakh	546.00
			Total Equity Amout	Rs Lakh	234.00
		Dobt Component	Loan Amount	Rs Lakh	546.00
		Debt Component	Moratorium Period	years	0
			Repayment Period	years	15
			Interest Rate	%	9.00%
03	Sources of Fund	F " 0	Equity amount	Rs Lacs	234.00
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (after 20 years)	% p.a	21.52%
			Discount Rate		8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
	Financial Assumptions		MAT Rate	%	17.47%
		Depreciation	Depreciation Rate(Power Plant)	%	4.67%
04			Depreciation Rate 16th year onwards	%	0.80%
			O&M Charges	Months	1
	Working Capital	For Fixed Charges	Maintenance Spare	(% of O&M expenses)	15.00%
			Receivables for Debtors	Months	1.5
			Interest On Working Capital	%	10.50%
05	Operation & Maintenance		O&M Cost of power plant	Rs Lakh	34.95
			Total O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Small Hydro Projects : Determination of Tariff Component

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	5 16	1	7 18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.6	0 2.6	0 2.6	0 2.60	2.60	0 2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	5 16	1	7 18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
O&M Expenses	Rs Lakh		34.95	36.29	37.69	39.14	40.64	42.20	43.82	45.50	47.25	49.06	50.98	52.90	54.9	4 57.0	5 59.	.24 61.	51 63	.87 66.3	3 68.8	87 71.5	74.2	77.11	80.08	83.15	86.34	89.66	93.10	96.68	100.39	104.24	108.25	112.40	116.72	121.20	125.86	130.69	135.71	140.92	146.33	151.95
Depreciation	Rs Lakh		36.40	36.40	36.40	36.40	36.40	36.40	36.40	36.40	36.40	36.40	36.40	36.40	36.4	0 36.4	0 36.	.40 6.	24 6	.24 6.2	4 6.2	24 6.24	6.2	4 6.24	6.24	6.24	6.24	6.24	6.24	6.24	6.24	6.24	6.24	6.24	6.24	6.24	6.24	6.24	6.24	6.24	6.24	6.24
Interest on term loan	Rs Lakh		47.50	44.23	40.95	37.67	7 34.40	31.12	27.85	24.57	21.29	18.02	14.74	4 11.47	8.1	9 4.9	1 1.	.64 -			-	-	-			-	-	-	-	-						-	-	-	-		-	-
Interest on working Capital	Rs Lakh		2.98	2.98	2.99	3.01	3.02	3.03	3.05	3.07	3.10	3.12	3.15	3.18	3.2	2 3.2	5 3.	.29 2.	96 3	.05 3.1	4 3.2	24 3.3	3.5	8 3.69	3.81	3.92	4.04	4.17	4.30	4.44	4.58	4.73	4.88	5.04	5.20	5.37	5.55	5.74	5.93	6.13	6.33	6.55
Return on Equity	Rs Lakh		39.70	39.70	39.70	39.70	39.70	39.70	39.70	39.70	39.70	39.70	39.70	39.70	39.7	0 39.7	0 39.	.70 39.	70 39	.70 39.7	0 39.7	70 39.70	50.3	6 50.36	50.36	50.36	50.36	50.36	50.36	50.36	50.36	50.36	50.36	50.36	50.36	50.36	50.36	50.36	50.36	50.36	50.36	50.36
Total Fixed Cost	Rs Lakh		161.53	159.60	157.73	155.91	1 154.15	152.45	150.81	149.24	147.74	146.30	144.94	4 143.65	142.4	4 141.3	1 140.	.26 110.	40 112	.85 115.4	0 118.0	04 120.7	134.4	4 137.40	140.48	143.67	146.99	150.43	154.00	157.71	161.57	165.57	169.72	174.04	178.52	183.17	188.00	193.02	198.23	203.64	209.26	215.09
Per unit Fixed Cost	Rs/kWh		6.20	6.13	6.06	5.99	5.92	5.86	5.79	5.73	5.67	5.62	5.57	7 5.52	5.4	7 5.4	3 5.	.39 4.	24 4	.33 4.4	3 4.5	53 4.6	5.1	6 5.28	5.40	5.52	5.65	5.78	5.92	6.06	6.21	6.36	6.52	6.68	6.86	7.04	7.22	7.41	7.61	7.82	8.04	8.26
Levallised tariff correspondin	g to Useful lif	fe																																								
Levallised tariff correspondin Per Unit Cost of Generation	g to Useful lit	fe	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	5 16	1	7 18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
	•	fe 2.12	1.34	2 1.39	3 1.45	4 1.50	5	6 1.62	7 1.68	8 1.75	9 1.81	10	11 1.96		13 2.11		_				19 2.65	_	21 2.85		23 3.08	24 3.19	25 3.32	26 3.44	27 3.58	28 3.71	29 3.86	30 4.00	31 4.16	32 4.32	33 4.48	34 4.66	35 4.83	36 5.02	37 5.21	38 5.41	39 5.62	40 5.84
Per Unit Cost of Generation	Unit		1 1.34 1.40	1.39 1.40	3 1.45 1.40	1.50 1.40	5 1.56 1.40	6 1.62 1.40	7 1.68 1.40	8 1.75 1.40	9 1.81 1.40	10 1.88 1.40	11 1.96 1.40		_	2.19	2.2	28 2.3	6 2.4	15 2.55		5 2.75		2.96	_	_					_		_			_			٠.		39 5.62 0.24	
Per Unit Cost of Generation O&M expn	Unit Rs/kWh	2.12	_		_			-	7 1.68 1.40 1.07	8 1.75 1.40 0.94	9 1.81 1.40 0.82		11 1.96 1.40 0.57	2.03	2.11	2.19	2.2	28 2.3	6 2.4	15 2.55 24 0.24	0.24	5 2.75 4 0.24	2.85	2.96	3.08	3.19	3.32	3.44	3.58	3.71	3.86	4.00	4.16	4.32	4.48	4.66	4.83	5.02	5.21	5.41		5.84
Per Unit Cost of Generation O&M expn Depreciation	Unit Rs/kWh Rs/kWh	2.12	1.40	1.40	1.40			1.40	7 1.68 1.40 1.07 0.12	1.40	9 1.81 1.40 0.82 0.12		11 1.96 1.40 0.57 0.12	2.03	2.11	2.19 1.40 0.19	1.4	28 2.3 10 0.2 16 0.0	6 2.4 4 0.2 0 0.0	15 2.55 24 0.24 00 0.00	0.24	5 2.75 4 0.24 0 0.00	2.85 0.24	2.96 0.24 0.00	3.08 0.24	3.19 0.24	3.32 0.24	3.44 0.24	3.58 0.24	3.71 0.24	3.86 0.24	4.00 0.24	4.16 0.24	4.32 0.24	4.48 0.24	4.66	4.83	5.02 0.24	5.21	5.41 0.24	0.24	5.84
Per Unit Cost of Generation O&M expn Depreciation Int. on term loan	Unit Rs/kWh Rs/kWh Rs/kWh	2.12 1.08 0.82	1.40	1.40	1.40	1.40		1.40	7 1.68 1.40 1.07 0.12 1.52	1.40	9 1.81 1.40 0.82 0.12 1.52		11 1.96 1.40 0.57 0.12 1.52	2.03 1.40 0.44	2.11 1.40 0.31	2.19 1.40 0.19 0.12	1 2.2 1 1.4 1 0.0	28 2.3 10 0.2 16 0.0 13 0.1	6 2.4 4 0.2 0 0.0 1 0.1	15 2.55 24 0.24 00 0.00 12 0.12	0.24	5 2.75 4 0.24 0 0.00 2 0.13	0.24 0.00 0.14	2.96 0.24 0.00 0.14	3.08 0.24 0.00	3.19 0.24 0.00	3.32 0.24 0.00	3.44 0.24 0.00	3.58 0.24 0.00	3.71 0.24 0.00	3.86 0.24 0.00	4.00 0.24 0.00	4.16 0.24 0.00	4.32 0.24 0.00	4.48 0.24 0.00	4.66	4.83	5.02 0.24 0.00	5.21 0.24 0.00	5.41 0.24 0.00	0.24	5.84 0.24 0.00
Per Unit Cost of Generation O&M expn Depreciation Int. on term loan Int. on working capital	Unit Rs/kWh Rs/kWh Rs/kWh Rs/kWh	2.12 1.08 0.82 0.13	1.40 1.82 0.11	1.40 1.70 0.11	1.40 1.57 0.11	1.40 1.45 0.12	1.40 1.32 0.12 1.52	1.40 1.20 0.12	1.40 1.07 0.12	1.40 0.94 0.12	1.40 0.82 0.12	1.40 0.69 0.12	1.40 0.57 0.12	2.03 1.40 0.44 0.12 1.52	2.11 1.40 0.31 0.12 1.52	2.19 1.40 0.19 0.12 1.52	2.2 1 1.4 1 0.0 2 0.1 1 1.5	28 2.3 10 0.2 06 0.0 13 0.1 52 1.5	6 2.4 4 0.2 0 0.0 1 0.1 2 1.5	15 2.55 24 0.24 00 0.00 12 0.12 52 1.52	0.24 0.00 0.12	5 2.75 4 0.24 0 0.00 2 0.13 2 1.52	0.24 0.00 0.14	2.96 0.24 0.00 0.14 1.93	3.08 0.24 0.00 0.15	3.19 0.24 0.00 0.15	3.32 0.24 0.00 0.16	3.44 0.24 0.00 0.16	3.58 0.24 0.00 0.17	3.71 0.24 0.00 0.17	3.86 0.24 0.00 0.18	4.00 0.24 0.00 0.18	4.16 0.24 0.00 0.19	4.32 0.24 0.00 0.19	4.48 0.24 0.00 0.20	4.66 0.24 0.00 0.21	4.83 0.24 0.00 0.21	5.02 0.24 0.00 0.22	5.21 0.24 0.00 0.23	5.41 0.24 0.00 0.24	0.24 0.00 0.24	5.84 0.24 0.00 0.25
Per Unit Cost of Generation O&M expn Depreciation Int. on term loan Int. on working capital RoE	Unit Rs/kWh Rs/kWh Rs/kWh Rs/kWh Rs/kWh	2.12 1.08 0.82 0.13 1.59	1.40 1.82 0.11 1.52	1.40 1.70 0.11 1.52	1.40 1.57 0.11 1.52	1.40 1.45 0.12 1.52	1.40 1.32 0.12 1.52	1.40 1.20 0.12 1.52	1.40 1.07 0.12 1.52	1.40 0.94 0.12 1.52	1.40 0.82 0.12 1.52	1.40 0.69 0.12 1.52	1.40 0.57 0.12 1.52	2.03 1.40 0.44 0.12 1.52	2.11 1.40 0.31 0.12 1.52	2.19 1.40 0.19 0.12 1.52	2.2 1 1.4 1 0.0 2 0.1 1 1.5	28 2.3 10 0.2 06 0.0 13 0.1 52 1.5	6 2.4 4 0.2 0 0.0 1 0.1 2 1.5	15 2.55 24 0.24 00 0.00 12 0.12 52 1.52	0.24 0.00 0.12 1.52	5 2.75 4 0.24 0 0.00 2 0.13 2 1.52	2.85 0.24 0.00 0.14 1.93	2.96 0.24 0.00 0.14 1.93	3.08 0.24 0.00 0.15 1.93	3.19 0.24 0.00 0.15 1.93	3.32 0.24 0.00 0.16 1.93	3.44 0.24 0.00 0.16 1.93	3.58 0.24 0.00 0.17 1.93	3.71 0.24 0.00 0.17 1.93	3.86 0.24 0.00 0.18 1.93	4.00 0.24 0.00 0.18 1.93	4.16 0.24 0.00 0.19 1.93	4.32 0.24 0.00 0.19 1.93	4.48 0.24 0.00 0.20 1.93	4.66 0.24 0.00 0.21 1.93	4.83 0.24 0.00 0.21 1.93	5.02 0.24 0.00 0.22 1.93	5.21 0.24 0.00 0.23 1.93	5.41 0.24 0.00 0.24 1.93	0.24 0.00 0.24 1.93	5.84 0.24 0.00 0.25 1.93
Per Unit Cost of Generation O&M expn Depreciation Int. on term loan Int. on working capital RoE	Unit Rs/kWh Rs/kWh Rs/kWh Rs/kWh Rs/kWh	2.12 1.08 0.82 0.13 1.59 5.74	1.40 1.82 0.11 1.52	1.40 1.70 0.11 1.52	1.40 1.57 0.11 1.52	1.40 1.45 0.12 1.52	1.40 1.32 0.12 1.52	1.40 1.20 0.12 1.52	1.40 1.07 0.12 1.52	1.40 0.94 0.12 1.52	1.40 0.82 0.12 1.52	1.40 0.69 0.12 1.52	1.40 0.57 0.12 1.52	2.03 1.40 0.44 0.12 1.52	2.11 1.40 0.31 0.12 1.52	2.19 1.40 0.19 0.12 1.52	2.2 1 1.4 1 0.0 2 0.1 1 1.5	28 2.3 10 0.2 06 0.0 13 0.1 52 1.5	6 2.4 4 0.2 0 0.0 1 0.1 2 1.5	15 2.55 24 0.24 00 0.00 12 0.12 52 1.52	0.24 0.00 0.12 1.52	5 2.75 4 0.24 0 0.00 2 0.13 2 1.52	2.85 0.24 0.00 0.14 1.93	2.96 0.24 0.00 0.14 1.93	3.08 0.24 0.00 0.15 1.93	3.19 0.24 0.00 0.15 1.93	3.32 0.24 0.00 0.16 1.93	3.44 0.24 0.00 0.16 1.93	3.58 0.24 0.00 0.17 1.93	3.71 0.24 0.00 0.17 1.93	3.86 0.24 0.00 0.18 1.93	4.00 0.24 0.00 0.18 1.93	4.16 0.24 0.00 0.19 1.93	4.32 0.24 0.00 0.19 1.93	4.48 0.24 0.00 0.20 1.93	4.66 0.24 0.00 0.21 1.93	4.83 0.24 0.00 0.21 1.93	5.02 0.24 0.00 0.22 1.93	5.21 0.24 0.00 0.23 1.93	5.41 0.24 0.00 0.24 1.93	0.24 0.00 0.24 1.93	5.84 0.24 0.00 0.25 1.93
Per Unit Cost of Generation O&M expn Depreciation Int. on term loan Int. on working capital RoE	Unit Rs/kWh Rs/kWh Rs/kWh Rs/kWh Rs/kWh Rs/kWh	2.12 1.08 0.82 0.13 1.59 5.74	1.40 1.82 0.11 1.52	1.40 1.70 0.11 1.52	1.40 1.57 0.11 1.52 6.06	1.40 1.45 0.12 1.52 5.99	1.40 1.32 0.12 1.52	1.40 1.20 0.12 1.52 5.86	1.40 1.07 0.12 1.52 5.79	1.40 0.94 0.12 1.52 5.73	1.40 0.82 0.12 1.52 5.67	1.40 0.69 0.12 1.52 5.62	1.40 0.57 0.12 1.52 5.57	2.03 1.40 0.44 0.12 1.52 5.52	2.11 1.40 0.31 0.12 1.52 5.47	2.19 1.40 0.19 0.12 1.52 5.43	2.2 1.4 0.0 1.5 1.5 1.5	28 2.3 10 0.2 10 0.0 13 0.1 152 1.5 19 4.2	6 2.4 4 0.2 0 0.0 11 0.1 2 1.5 4 4.3	15 2.55 24 0.24 00 0.00 12 0.12 52 1.52	0.24 0.00 0.12 1.52 4.53	5 2.75 4 0.24 0 0.00 2 0.13 2 1.52	2.85 0.24 0.00 0.14 1.93 5.16	2.96 0.24 0.00 0.14 3 1.93 5 5.28	3.08 0.24 0.00 0.15 1.93 5.40	3.19 0.24 0.00 0.15 1.93 5.52	3.32 0.24 0.00 0.16 1.93 5.65	3.44 0.24 0.00 0.16 1.93 5.78	3.58 0.24 0.00 0.17 1.93 5.92	3.71 0.24 0.00 0.17 1.93 6.06	3.86 0.24 0.00 0.18 1.93 6.21	4.00 0.24 0.00 0.18 1.93	4.16 0.24 0.00 0.19 1.93 6.52	4.32 0.24 0.00 0.19 1.93 6.68	4.48 0.24 0.00 0.20 1.93 6.86	4.66 0.24 0.00 0.21 1.93 7.04	4.83 0.24 0.00 0.21 1.93	5.02 0.24 0.00 0.22 1.93	5.21 0.24 0.00 0.23 1.93	5.41 0.24 0.00 0.24 1.93 7.82	0.24 0.00 0.24 1.93 8.04	5.84 0.24 0.00 0.25 1.93 8.26
Per Unit Cost of Generation O&M expn Depreciation Int. on term loan Int. on working capital RoE Total COG	Unit Rs/kWh Rs/kWh Rs/kWh Rs/kWh Rs/kWh Rs/kWh	2.12 1.08 0.82 0.13 1.59 5.74	1.40 1.82 0.11 1.52	1.40 1.70 0.11 1.52 6.13	1.40 1.57 0.11 1.52 6.06	1.40 1.45 0.12 1.52 5.99	1.40 1.32 0.12 1.52 5.92	1.40 1.20 0.12 1.52 5.86	1.40 1.07 0.12 1.52 5.79	1.40 0.94 0.12 1.52 5.73	1.40 0.82 0.12 1.52 5.67	1.40 0.69 0.12 1.52 5.62	1.40 0.57 0.12 1.52 5.57	2.03 1.40 0.44 0.12 1.52 5.52	2.11 1.40 0.31 0.12 1.52 5.47	2.19 1.40 0.19 0.12 1.52 5.43	2.2 1.4 0.0 1.5 1.5 1.5	28 2.3 10 0.2 10 0.0 13 0.1 152 1.5 19 4.2	6 2.4 4 0.2 0 0.0 11 0.1 2 1.5 4 4.3	15 2.55 24 0.24 00 0.00 12 0.12 52 1.52 33 4.43	0.24 0.00 0.12 1.52 4.53	5 2.75 4 0.24 0 0.00 2 0.13 2 1.52 3 4.64	2.85 0.24 0.00 0.14 1.93 5.16	2.96 0.24 0.00 0.14 3 1.93 5 5.28	3.08 0.24 0.00 0.15 1.93 5.40	3.19 0.24 0.00 0.15 1.93 5.52	3.32 0.24 0.00 0.16 1.93 5.65	3.44 0.24 0.00 0.16 1.93 5.78	3.58 0.24 0.00 0.17 1.93 5.92	3.71 0.24 0.00 0.17 1.93 6.06	3.86 0.24 0.00 0.18 1.93 6.21	4.00 0.24 0.00 0.18 1.93 6.36	4.16 0.24 0.00 0.19 1.93 6.52	4.32 0.24 0.00 0.19 1.93 6.68	4.48 0.24 0.00 0.20 1.93 6.86	4.66 0.24 0.00 0.21 1.93 7.04	4.83 0.24 0.00 0.21 1.93	5.02 0.24 0.00 0.22 1.93 7.41	5.21 0.24 0.00 0.23 1.93 7.61	5.41 0.24 0.00 0.24 1.93 7.82	0.24 0.00 0.24 1.93 8.04	5.84 0.24 0.00 0.25 1.93 8.26

SHP- Oti	Annexure-1D				
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter
			Installed Power Generation Capacity	MW	1
		Capacity	Capacity Utilization Factor	%	30%
01	Power Generation		Auxiliary Consumption	%	1.00%
			Useful Life	Years	40
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	900.00
		D 14 5 %	Debt	%	70%
02	Project Cost	Debt: Equity	Equity	%	30%
5 2			Total Debt Amount	Rs Lakh	630.00
			Total Equity Amout	Rs Lakh	270.00
		Debt Component	Loan Amount	Rs Lakh	630.00
		Debt Component	Moratorium Period	years	0
			Repayment Period	years	15
00			Interest Rate	%	9.00%
03	Sources of Fund	Equity Component	Equity amount Return on Equity (upto 20	Rs Lacs	270.00
		Equity Component	years) Return on Equity (after 20	% p.a	16.96%
			years)	% p.a	21.52%
			Discount Rate		8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
	Financial Assumptions		MAT Rate	%	17.47%
		Depreciation	Depreciation Rate(Power Plant)	%	4.67%
04			Depreciation Rate 16th year onwards	%	0.80%
			O&M Charges	Months	1
	Working Capital		Maintenance Spare	(% of O&M expenses)	15.00%
			Receivables for Debtors	Months	1.5
		For Fixed Charges	Interest On Working Capital	%	10.50%
05	Operation & Maintenance		O&M Cost of power plant	Rs Lakh	25.31
			Total O & M Expenses		
06	Generation & Sale of		Escalation	%	3.84%
	Energy		Total No .Of Hours	Hrs	8766.00

CERC RE Tariff Order FY 2020-21

Small Hydro Projects of Ca	apacity - : D	eterminati	on of Ta	riff Con	ponen	t																																				
Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
O&M Expenses	Rs Lakh		25.31	26.28	27.29	28.33	29.42	30.55	31.73	32.94	34.21	35.52	36.89	38.30	39.77	41.30	42.89	44.53	46.24	48.02	49.86	51.78	53.77	55.83	57.98	60.20	62.51	64.91	67.41	69.99	72.68	75.47	78.37	81.38	84.51	87.7	91.12	94.62	98.25	102.03	105.94	110.01
Depreciation	Rs Lakh		42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.2	7.20	7.20	7.20	7.20	7.20	7.20
Interest on term loan	Rs Lakh		54.81	51.03	47.25	43.47	39.69	35.91	32.13	28.35	24.57	20.79	17.01	13.23	9.45	5.67	1.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	•	-	-	-	-		-	-	-
Interest on working Capital	Rs Lakh		2.86	2.85	2.84	2.83	2.82	2.81	2.80	2.80	2.80	2.80	2.80	2.80	2.81	2.82	2.83	2.40	2.47	2.54	2.61	2.68	2.92	3.00	3.08	3.16	3.25	3.34	3.44	3.54	3.64	3.75	3.86	3.97	4.09	4.2	4.34	4.48	4.61	4.76	4.91	5.06
Return on Equity	Rs Lakh		45.80	45.80	45.80	45.80	45.80	45.80	45.80	45.80	45.80	45.80	45.80	45.80	45.80	45.80	45.80	45.80	45.80	45.80	45.80	45.80	58.10	58.10	58.10	58.10	58.10	58.10	58.10	58.10	58.10	58.10	58.10	58.10	58.10	58.1	58.10	58.10	58.10	58.10	58.10	58.10
Total Fixed Cost	Rs Lakh		170.78	167.96	165.18	162.43	159.73	157.08	154.46	151.90	149.38	146.91	144.50	142.14	139.84	137.59	135.41	99.94	101.71	103.56	105.47	107.46	121.99	124.13	126.36	128.67	131.07	133.56	136.15	138.84	141.63	144.52	147.53	150.66	153.90	157.2	160.77	164.40	168.17	172.09	176.16	180.38
Per unit Fixed Cost	Rs/kWh		6.56	6.45	6.34	6.24	6.14	6.03	5.93	5.83	5.74	5.64	5.55	5.46	5.37	5.28	5.20	3.84	3.91	3.98	4.05	4.13	4.69	4.77	4.85	4.94	5.03	5.13	5.23	5.33	5.44	5.55	5.67	5.79	5.91	6.0	6.18	6.31	6.46	6.61	6.77	6.93
Levallised tariff corresponding	g to Useful li	fe																																								
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
O&M expn	Rs/kWh	1.54	0.97	1.01	1.05	1.09	1.13	1.17	1.22	1.27	1.31	1.36	1.42	1.47	1.53	1.59	1.65	1.71	1.78	1.84	1.92	1.99	2.07	2.14	2.23	2.31	2.40	2.49	2.59	2.69	2.79	2.90	3.01	3.13	3.25	3.37	3.50	3.63	3.77	3.92	4.07	4.23
Depreciation	Rs/kWh	1.25	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Int. on term loan	Rs/kWh	0.95	2.11	1.96	1.81	1.67	1.52	1.38	1.23	1.09	0.94	0.80	0.65	0.51	0.36	0.22	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.09	0.09	0.10	0.10	0.10	0.11	0.12	0.12	0.12	0.12	0.13	0.13	0.14	0.14	0.14	0.15	0.15	0.16	0.16	0.17	0.17	0.18	0.18	0.19	0.19
RoE	Rs/kWh	1.84	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23
Total COG	Rs/kWh	5.68	6.56	6.45	6.34	6.24	6.14	6.03	5.93	5.83	5.74	5.64	5.55	5.46	5.37	5.28	5.20	3.84	3.91	3.98	4.05	4.13	4.69	4.77	4.85	4.94	5.03	5.13	5.23	5.33	5.44	5.55	5.67	5.79	5.91	6.04	6.18	6.31	6.46	6.61	6.77	6.93
Discount Factor			1	0.92	0.85	0.7	9 0.7	3 0.6	7 0.6	2 0.57	7 0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15	0.14	0.13	0.12	0.11	0.10	0.09	0.09	0.00	0.0	7 0.07	0.06	0.06	0.05	0.05	5 0.0
Fixed Cost	5.68			0.02	0.00		- 0	- 0.0	. 0.0	- 0.01	0.00	0.10	0.10	J. 12	3.00	5.00	3.00	5.00		3120	3.2.	JILL	5.20	5110	5	3.10	2.10	2	3.10	0.12	3111	2.10	0.00	0.00	0.0.	. 0.0	0.01	0.00	0.00	0.00	0.00	0.0
Levellised Tariff	5.68	Rs/Unit	-				+	+	+		-																										-			-		

	ct] with Water Cool		and Juliflora (plantation) bas Travelling Grate- Andhra Pr		Annexure-2.1A
S. lo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
1		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	559.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	391.30
			Total Equity Amount	Rs Lakh	167.70
		Debt Component	Loan Amount	Rs Lakh	391.30
		Door Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount Return on Equity (upto 20	Rs Lakh	167.70
		Equity Component	years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
)3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	
			 		4200.00
			Base Price	Rs/T	3492.30
)4		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
5	Maintenance		O & M Expenses Escalation	%	3.84%
6	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Biomass Projects : Determin	nation of T	ariff Comp	onent
Units Generation	Unit	Year>	1

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		331.81	348.40	365.82	384.11	403.32	423.48	444.66	466.89	490.24	514.75	540.48	567.51	595.88	625.68	656.96	689.81	724.30	760.52	798.54	838.47	880.39	924.41	970.63	1,019.16	1,070.12
Per unit Variable Cost	Rs/kWh		5.26	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.56	8.99	9.44	9.91	10.41	10.93	11.48	12.05	12.65	13.28	13.95	14.65	15.38	16.15	16.96
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		34.04	31.70	29.35	27.00	24.65	22.30	19.96	17.61	15.26	12.91	10.57	8.22	5.87	3.52	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.20	20.04	20.94	21.87	22.86	23.89	24.98	26.12	27.32	28.58	29.90	31.29	32.75	34.28	35.89	37.40	39.21	41.10	43.09	45.18	47.47	49.76	52.17	54.70	57.35
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		155.98	156.33	156.79	157.38	158.09	158.93	159.90	161.01	162.28	163.69	165.26	167.00	168.92	171.01	173.29	161.86	166.92	172.20	177.70	183.43	197.15	203.38	209.87	216.64	223.70
Per unit Fixed Cost	Rs/kWh	2.62	2.47	2.48	2.48	2.49	2.50	2.52	2.53	2.55	2.57	2.59	2.62	2.65	2.68	2.71	2.75	2.56	2.64	2.73	2.82	2.91	3.12	3.22	3.33	3.43	3.54

Levellised tariff corresponding	g to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.25	5.26	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.56	8.99	9.44	9.91	10.41	10.93	11.48	12.05	12.65	13.28	13.95	14.65	15.38	16.15	16.96
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.27	0.54	0.50	0.46	0.43	0.39	0.35	0.32	0.28	0.24	0.20	0.17	0.13	0.09	0.06	0.02		-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.46	0.30	0.32	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.72	0.75	0.79	0.83	0.87	0.91
RoE	Rs/kWh	0.46	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	10.87	7.73	8.00	8.28	8.58	8.89	9.23	9.58	9.95	10.34	10.75	11.18	11.64	12.12	12.62	13.15	13.49	14.12	14.78	15.47	16.19	17.07	17.87	18.70	19.58	20.50
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.26																										

Levellised Tariff 7.88 Rs/Unit

<u>Determination of Additional Depreciation for BIOMASS Projects</u>

2.62

Depreciation amount	90%
Book Depreciation rate	5.28%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17.472%
Income Tax (Normal Rates)	34.944%
Capital Cost	559.00

Levlised Tariff (Fixed)

Capital Cost	559.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Depm.	Rs Lakh	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	6.74																									

Electricity Generation (Levellised) 6.04

Levellised benefit 0.11 Rs/Unit

	ct] with Water Coole		and Juliflora (plantation) bas Travelling Grate- Haryana		Annexure-2.1B
S. Vo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	559.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	391.30
			Total Equity Amount	Rs Lakh	167.70
		Debt Component	Loan Amount	Rs Lakh	391.30
		Debt Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	167.70
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
)3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	
			+		4200.00
1		D:	Base Price	Rs/T	3975.30
)4		Biomass	GCV-Biomass Biomass Price Escalation	Kcal/kg %	3100.00 5.00%
			Factor		
	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
5			O & M Expenses Escalation	%	3.84%
6	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Biomass Projects	· Determination of	Tariff Component

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		377.70	396.59	416.42	437.24	459.10	482.05	506.16	531.46	558.04	585.94	615.24	646.00	678.30	712.21	747.82	785.21	824.48	865.70	908.98	954.43	1,002.16	1,052.26	1,104.88	1,160.12	1,218.13
Per unit Variable Cost	Rs/kWh		5.98	6.28	6.60	6.93	7.27	7.64	8.02	8.42	8.84	9.28	9.75	10.24	10.75	11.28	11.85	12.44	13.06	13.72	14.40	15.12	15.88	16.67	17.51	18.38	19.30
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		34.04	31.70	29.35	27.00	24.65	22.30	19.96	17.61	15.26	12.91	10.57	8.22	5.87	3.52	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		21.43	22.39	23.40	24.46	25.58	26.75	27.98	29.27	30.63	32.05	33.55	35.12	36.77	38.50	40.32	42.05	44.09	46.23	48.47	50.83	53.40	56.00	58.72	61.57	64.57
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		158.22	158.68	159.26	159.97	160.81	161.78	162.90	164.16	165.58	167.16	168.91	170.83	172.93	175.23	177.72	166.51	171.80	177.33	183.08	189.09	203.09	209.61	216.42	223.51	230.91
Per unit Fixed Cost	Rs/kWh	2.68	2.51	2.51	2.52	2.53	2.55	2.56	2.58	2.60	2.62	2.65	2.68	2.71	2.74	2.78	2.82	2.64	2.72	2.81	2.90	3.00	3.22	3.32	3.43	3.54	3.66
Levellised tariff corresponding	g to Useful li	fe																		•				•			
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.39	5.98	6.28	6.60	6.93	7.27	7.64	8.02	8.42	8.84	9.28	9.75	10.24	10.75	11.28	11.85	12.44	13.06	13.72	14.40	15.12	15.88	16.67	17.51	18.38	19.30

Levellised tariff corresponding																											
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.39	5.98	6.28	6.60	6.93	7.27	7.64	8.02	8.42	8.84	9.28	9.75	10.24	10.75	11.28	11.85	12.44	13.06	13.72	14.40	15.12	15.88	16.67	17.51	18.38	19.30
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.27	0.54	0.50	0.46	0.43	0.39	0.35	0.32	0.28	0.24	0.20	0.17	0.13	0.09	0.06	0.02	-		-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.51	0.34	0.35	0.37	0.39	0.41	0.42	0.44	0.46	0.49	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.73	0.77	0.81	0.85	0.89	0.93	0.98	1.02
RoE	Rs/kWh	0.46	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	12.07	8.49	8.80	9.12	9.46	9.82	10.20	10.60	11.02	11.47	11.93	12.42	12.94	13.49	14.06	14.66	15.08	15.79	16.53	17.30	18.12	19.10	19.99	20.93	21.92	22.96
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.98																										

 LevIlised Tariff (Fixed)
 2.68

 LeveIlised Tariff
 8.66
 Rs/Unit

Depreciation amount Book Depreciation rate

Per unit benefit

Discounting Factor

Applicable Discounting Factor

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

90% 5.28%

Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	559.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation							l.							- I	<u> </u>							•	•			
Accelerated Depreciation Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
· ·	%	100%	70% 35.00%	35% 14.00%	21% 8.40%	13% 5.04%	8% 3.02%	5% 1.81%	3% 1.09%	2% 0.65%	1% 0.39%	1% 0.24%	0% 0.14%	0% 0.08%	0% 0.05%	0% 0.03%	0% 0.02%	0% 0.01%	0% 0.01%	0%	0% 0.00%	0%	0%	0% 0.00%	0% 0.00%	0% 0.00%
Opening	% % %										1% 0.39% 0.6%	170	076		0% 0.05% 0.1%		0 /6	0% 0.01% 0.0%	0% 0.01% 0.0%				070			
Opening Allowed during the year	% % % Rs Lakh	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%		0.24%	0.14%	0.08%		0.03%	0.02%			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Opening Allowed during the year Closing	% % % Rs Lakh	30.00% 70.0%	35.00% 35.0%	14.00% 21.0% 78.26	8.40% 12.6% 46.96	5.04% 7.6%	3.02% 4.5%	1.81%	1.09%	0.65% 1.0%	0.6%	0.24%	0.14%	0.08%	0.1%	0.03%	0.02%	0.0%	0.0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Opening Allowed during the year Closing Accelrated Deprn.		30.00% 70.0% 167.70	35.00% 35.0% 195.65	14.00% 21.0% 78.26	8.40% 12.6% 46.96 17.44	5.04% 7.6% 28.17	3.02% 4.5% 16.90	1.81% 2.7% 10.14	1.09% 1.6% 6.09	0.65% 1.0% 3.65	0.6% 2.19	0.24% 0.4% 1.31	0.14% 0.2% 0.79	0.08% 0.1% 0.47	0.1% 0.28	0.03% 0.0% 0.17	0.02% 0.0% 0.10	0.0%	0.0% 0.04	0.00% 0.0% 0.02	0.00% 0.0% 0.01	0.00% 0.0% 0.01	0.00% 0.0% 0.00	0.00% 0.0% 0.00	0.00% 0.0% 0.00	0.00% 0.0% 0.00

-0.16

0.45

0.47

-0.16

0.42

0.43

-0.16

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0.00

0.17

0.18

0.00

0.16

0.00

0.15

Tax Benefit Levellised 6.74

Electricity Generation (Levellised) 6.04

Levellised benefit 0.11 Rs/Unit

Rs/Unit

1.69

1.00

1.00

0.92

0.92

0.96

0.27

0.85

0.89

0.10

0.79

0.82

-0.01

0.73

0.76

-0.07

0.67

0.70

-0.11

0.62

0.65

-0.13

0.57

0.60

-0.14

0.53

0.55

-0.15

0.49

	ct] with Water Coole		and Juliflora (plantation) bas Travelling Grate- Maharash		Annexure-2.1C
S. Vo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	559.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	391.30
			Total Equity Amount	Rs Lakh	167.70
		Debt Component	Loan Amount	Rs Lakh	391.30
		Debt Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	167.70
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
)3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period		
				Kcal/kWh	4200.00
1		Diaman	Base Price GCV-Biomass	Rs/T Kcal/kg	4065.60
)4		Biomass	Biomass Price Escalation	%	3100.00 5.00%
	Oneretie: 0		Factor		
_	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
5			O & M Expenses Escalation	%	3.84%
)6	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Biomass Pro	ojects : Det	ermination of	Tariff C	Component
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Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		386.28	405.60	425.88	447.17	469.53	493.00	517.65	543.54	570.71	599.25	629.21	660.67	693.71	728.39	764.81	803.05	843.20	885.36	929.63	976.11	1,024.92	1,076.17	1,129.97	1,186.47	1,245.80
Per unit Variable Cost	Rs/kWh		6.12	6.43	6.75	7.08	7.44	7.81	8.20	8.61	9.04	9.49	9.97	10.47	10.99	11.54	12.12	12.72	13.36	14.03	14.73	15.47	16.24	17.05	17.90	18.80	19.74
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		34.04	31.70	29.35	27.00	24.65	22.30	19.96	17.61	15.26	12.91	10.57	8.22	5.87	3.52	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		21.85	22.83	23.87	24.95	26.09	27.28	28.54	29.86	31.24	32.70	34.23	35.83	37.52	39.29	41.15	42.92	45.00	47.19	49.48	51.89	54.51	57.16	59.94	62.86	65.92
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		158.63	159.12	159.72	160.45	161.32	162.32	163.46	164.75	166.20	167.81	169.59	171.55	173.69	176.02	178.55	167.38	172.72	178.29	184.09	190.14	204.20	210.78	217.64	224.80	232.26
Per unit Fixed Cost	Rs/kWh	2.69	2.51	2.52	2.53	2.54	2.56	2.57	2.59	2.61	2.63	2.66	2.69	2.72	2.75	2.79	2.83	2.65	2.74	2.82	2.92	3.01	3.24	3.34	3.45	3.56	3.68
Loyallicad tariff carramandir	a to Hooful li	6-							-											•							

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.60	6.12	6.43	6.75	7.08	7.44	7.81	8.20	8.61	9.04	9.49	9.97	10.47	10.99	11.54	12.12	12.72	13.36	14.03	14.73	15.47	16.24	17.05	17.90	18.80	19.74
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.27	0.54	0.50	0.46	0.43	0.39	0.35	0.32	0.28	0.24	0.20	0.17	0.13	0.09	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.52	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.75	0.78	0.82	0.86	0.91	0.95	1.00	1.04
RoE	Rs/kWh	0.46	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	12.29	8.63	8.95	9.28	9.63	10.00	10.38	10.79	11.22	11.68	12.15	12.66	13.19	13.74	14.33	14.95	15.38	16.10	16.85	17.65	18.48	19.47	20.39	21.35	22.36	23.42
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	6.12																										

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

2.69

8.81 Rs/Unit

Veere .	Hait
Capital Cost	559.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Levlised Tariff (Fixed)

Levellised Tariff

Capital Cost	559.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	6.74								_	_																

Tax Benefit Levellised 6.74
Electricity Generation (Levellised) 6.04
Levellised benefit 0.11 Rs/Unit

	ct] with Water Coole		and Juliflora (plantation) bas Travelling Grate- Punjab		Annexure-2.1D
S. Vo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	559.00
		Debt: Equity	Debt	%	70%
		1. 9	Equity	%	30%
			Total Debt Amount	Rs Lakh	391.30
			Total Equity Amount	Rs Lakh	167.70
		Debt Component	Loan Amount	Rs Lakh	391.30
	_	Dept Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	167.70
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
)3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period		
				Kcal/kWh	4200.00
		D:	Base Price	Rs/T	4158
)4		Biomass	GCV-Biomass Biomass Price Escalation	Kcal/kg %	3100.00 5.00%
			Factor		
	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
5			O & M Expenses Escalation	%	3.84%
6	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Biomass Projects : Determination of Tariff Component

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		395.06	414.81	435.55	457.33	480.20	504.21	529.42	555.89	583.68	612.87	643.51	675.69	709.47	744.95	782.19	821.30	862.37	905.49	950.76	998.30	1,048.21	1,100.62	1,155.65	1,213.44	1,274.11
Per unit Variable Cost	Rs/kWh		6.26	6.57	6.90	7.25	7.61	7.99	8.39	8.81	9.25	9.71	10.20	10.71	11.24	11.80	12.39	13.01	13.66	14.35	15.06	15.82	16.61	17.44	18.31	19.23	20.19
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		34.04	31.70	29.35	27.00	24.65	22.30	19.96	17.61	15.26	12.91	10.57	8.22	5.87	3.52	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		22.28	23.28	24.34	25.44	26.61	27.83	29.11	30.46	31.88	33.36	34.93	36.57	38.29	40.10	42.00	43.81	45.94	48.17	50.51	52.97	55.65	58.36	61.19	64.17	67.30
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		159.06	159.57	160.20	160.95	161.84	162.86	164.03	165.35	166.83	168.47	170.29	172.28	174.45	176.83	179.40	168.27	173.65	179.27	185.12	191.23	205.33	211.97	218.89	226.11	233.64
Per unit Fixed Cost	Rs/kWh	2.70	2.52	2.53	2.54	2.55	2.56	2.58	2.60	2.62	2.64	2.67	2.70	2.73	2.76	2.80	2.84	2.67	2.75	2.84	2.93	3.03	3.25	3.36	3.47	3.58	3.70
Levellised tariff corresponding	g to Useful lif	е									•													•			

Per	Unit	C	ost	of Ge	nerati	on	Ur	nit

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.82	6.26	6.57	6.90	7.25	7.61	7.99	8.39	8.81	9.25	9.71	10.20	10.71	11.24	11.80	12.39	13.01	13.66	14.35	15.06	15.82	16.61	17.44	18.31	19.23	20.19
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.27	0.54	0.50	0.46	0.43	0.39	0.35	0.32	0.28	0.24	0.20	0.17	0.13	0.09	0.06	0.02	-	-	-	-	-			-	-	-
Int. on working capital	Rs/kWh	0.53	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.51	0.53	0.55	0.58	0.61	0.64	0.67	0.69	0.73	0.76	0.80	0.84	0.88	0.92	0.97	1.02	1.07
RoE	Rs/kWh	0.46	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	12.52	8.78	9.10	9.44	9.80	10.17	10.57	10.99	11.43	11.89	12.38	12.89	13.44	14.00	14.60	15.24	15.68	16.41	17.19	18.00	18.85	19.86	20.80	21.78	22.81	23.89
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	6.26																										

Levllised Tariff (Fixed) 2.70 Levellised Tariff

Determination of Additional Depreciation for BIOMASS Projects Depreciation amount 90%

Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	559.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation									-																	
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

0.47

0.43

0.37

0.31

0.25

0.51

0.60

Tax Benefit Levellised 6.74 Electricity Generation (Levellised)

Applicable Discounting Factor

6.04 0.11 Rs/Unit Levellised benefit

1.00

0.96

0.82

	ect] with Water Coole		and Juliflora (plantation) bas Travelling Grate-Rajasthan		Annexure-2.1E
S. Vo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	559.00
		Debt: Equity	Debt	%	70%
		' '	Equity	%	30%
			Total Debt Amount	Rs Lakh	391.30
			Total Equity Amount	Rs Lakh	167.70
		Debt Component	Loan Amount	Rs Lakh	391.30
		Debt Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	167.70
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Related	-	Interest On Working Capital	% Kaal/k\\\b	10.50%
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4200.00
	-		During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	3470.25
)4		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
_	Operation &		O&M Expenses	Rs Lakh	48.20
5	Maintenance		O & M Expenses Escalation	%	3.84%
)6	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Biomass Projects: Determination of Tariff Component

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		329.72	346.20	363.51	381.69	400.77	420.81	441.85	463.94	487.14	511.50	537.07	563.93	592.12	621.73	652.81	685.46	719.73	755.71	793.50	833.18	874.83	918.58	964.50	1,012.73	1,063.37
Per unit Variable Cost	Rs/kWh		5.22	5.49	5.76	6.05	6.35	6.67	7.00	7.35	7.72	8.10	8.51	8.93	9.38	9.85	10.34	10.86	11.40	11.97	12.57	13.20	13.86	14.55	15.28	16.05	16.85
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		34.04	31.70	29.35	27.00	24.65	22.30	19.96	17.61	15.26	12.91	10.57	8.22	5.87	3.52	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.09	19.94	20.82	21.76	22.73	23.76	24.84	25.98	27.17	28.42	29.73	31.12	32.57	34.09	35.69	37.19	38.98	40.87	42.84	44.92	47.19	49.48	51.87	54.39	57.02
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		155.88	156.22	156.68	157.26	157.96	158.80	159.76	160.87	162.12	163.53	165.10	166.83	168.73	170.82	173.09	161.64	166.70	171.96	177.45	183.17	196.88	203.09	209.57	216.33	223.37
Per unit Fixed Cost	Rs/kWh	2.62	2.47	2.48	2.48	2.49	2.50	2.52	2.53	2.55	2.57	2.59	2.62	2.64	2.67	2.71	2.74	2.56	2.64	2.72	2.81	2.90	3.12	3.22	3.32	3.43	3.54

l accalling at to siff		

Levellised tariff corresponding	g to Useful lif	e																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.19	5.22	5.49	5.76	6.05	6.35	6.67	7.00	7.35	7.72	8.10	8.51	8.93	9.38	9.85	10.34	10.86	11.40	11.97	12.57	13.20	13.86	14.55	15.28	16.05	16.85
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.27	0.54	0.50	0.46	0.43	0.39	0.35	0.32	0.28	0.24	0.20	0.17	0.13	0.09	0.06	0.02		-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.45	0.30	0.32	0.33	0.34	0.36	0.38	0.39	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.75	0.78	0.82	0.86	0.90
RoE	Rs/kWh	0.46	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	10.82	7.69	7.96	8.24	8.54	8.85	9.18	9.53	9.90	10.29	10.70	11.13	11.58	12.06	12.56	13.09	13.42	14.04	14.70	15.38	16.10	16.98	17.77	18.60	19.47	20.39
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.22																										

Variable Cost Levllised Tariff (Fixed) 2.62 Levellised Tariff 7.85 Rs/Unit

<u>Determination of Additional Depreciation</u> for BIOMASS Projects Depreciation amount Book Depreciation rate 90% 5.28%

Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	559.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	6.74			-													-									
Electricity Generation (Levellised)	6.04																									
	0.44	D (11)	ī																							

6.74 6.04 0.11 Rs/Unit

	ct] with Water Coole		and Juliflora (plantation) bas Travelling Grate- Tamil Nad		Annexure-2.1F
၁	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	559.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	391.30
			Total Equity Amount	Rs Lakh	167.70
		Debt Component	Loan Amount	Rs Lakh	391.30
		Debt Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	167.70
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
)3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	
					4200.00
14		Diamen -	Base Price GCV-Biomass	Rs/T Kcal/kg	3435.60 3100.00
<i>)</i> 4		Biomass	Biomass Price Escalation	%	5.00%
	Operation 9		Factor		
5	Operation & Maintenance		O&M Expenses O & M Expenses Escalation	Rs Lakh %	3.84%
	Generation &				
6	Sale of Energy		Total No .Of Hours	Hrs	8766.00

Biomass	Projects	: Determination	of Tariff C	Component
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Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		326.42	342.74	359.88	377.88	396.77	416.61	437.44	459.31	482.28	506.39	531.71	558.30	586.21	615.52	646.30	678.61	712.54	748.17	785.58	824.86	866.10	909.40	954.87	1,002.62	1,052.75
Per unit Variable Cost	Rs/kWh		5.17	5.43	5.70	5.99	6.29	6.60	6.93	7.28	7.64	8.02	8.42	8.85	9.29	9.75	10.24	10.75	11.29	11.85	12.45	13.07	13.72	14.41	15.13	15.89	16.68
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		34.04	31.70	29.35	27.00	24.65	22.30	19.96	17.61	15.26	12.91	10.57	8.22	5.87	3.52	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		18.93	19.77	20.65	21.57	22.54	23.56	24.63	25.75	26.93	28.17	29.47	30.84	32.28	33.79	35.37	36.85	38.63	40.50	42.46	44.51	46.77	49.03	51.40	53.89	56.51
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		155.71	156.05	156.51	157.08	157.77	158.59	159.55	160.65	161.89	163.28	164.84	166.55	168.44	170.51	172.77	161.31	166.35	171.60	177.07	182.77	196.45	202.65	209.10	215.83	222.85
Per unit Fixed Cost	Rs/kWh	2.62	2.47	2.47	2.48	2.49	2.50	2.51	2.53	2.55	2.56	2.59	2.61	2.64	2.67	2.70	2.74	2.56	2.64	2.72	2.81	2.90	3.11	3.21	3.31	3.42	3.53
Levellised tariff corresponding	a to Useful li	fe																									

Levellised tariff corresponding	to Usetui III	e																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.11	5.17	5.43	5.70	5.99	6.29	6.60	6.93	7.28	7.64	8.02	8.42	8.85	9.29	9.75	10.24	10.75	11.29	11.85	12.45	13.07	13.72	14.41	15.13	15.89	16.68
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.27	0.54	0.50	0.46	0.43	0.39	0.35	0.32	0.28	0.24	0.20	0.17	0.13	0.09	0.06	0.02	-	-	-		-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.45	0.30	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.58	0.61	0.64	0.67	0.71	0.74	0.78	0.81	0.85	0.90
RoE	Rs/kWh	0.46	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	10.73	7.64	7.90	8.18	8.48	8.79	9.11	9.46	9.82	10.21	10.61	11.04	11.48	11.96	12.45	12.98	13.31	13.93	14.57	15.25	15.96	16.84	17.62	18.44	19.31	20.21
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.17																										

 Variable Cost
 5.17

 Levilised Tariff
 2.62

 Levellised Tariff
 7.79
 Rs// Init

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

Years	Unit
Capital Cost	559.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Capital Cost	559.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tay Reposit Levalliced	6.74																									

 Tax Benefit Levellised
 6.74

 Electricity Generation (Levellised)
 6.04

 Levellised benefit
 0.11
 Rs/Unit

	ct] with Water Coole		and Juliflora (plantation) bas Travelling Grate- Telangana		Annexure-2.1G
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	559.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	391.30
			Total Equity Amount	Rs Lakh	167.70
		Debt Component	Loan Amount	Rs Lakh	391.30
		Debt Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	167.70
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
)3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4200.00
4		Riomaca	Base Price GCV-Biomass	Rs/T Kcal/kg	3492.30 3100.00
, ¬		Biomass	Biomass Price Escalation	%	5.00%
	Operation &		Factor		
5	Maintenance		O&M Expenses O & M Expenses Escalation	Rs Lakh %	48.20 3.84%
	Generation &		Total No .Of Hours		
6	Sale of Energy		Total No .Of Hours	Hrs	8766.00

	Biomass	Projects	: Determination of	of Tariff	Component
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Diomass i rojects . Detern							-		_																		
Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		331.81	348.40	365.82	384.11	403.32	423.48	444.66	466.89	490.24	514.75	540.48	567.51	595.88	625.68	656.96	689.81	724.30	760.52	798.54	838.47	880.39	924.41	970.63	1,019.16	1,070.12
Per unit Variable Cost	Rs/kWh		5.26	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.56	8.99	9.44	9.91	10.41	10.93	11.48	12.05	12.65	13.28	13.95	14.65	15.38	16.15	16.96
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		34.04	31.70	29.35	27.00	24.65	22.30	19.96	17.61	15.26	12.91	10.57	8.22	5.87	3.52	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.20	20.04	20.94	21.87	22.86	23.89	24.98	26.12	27.32	28.58	29.90	31.29	32.75	34.28	35.89	37.40	39.21	41.10	43.09	45.18	47.47	49.76	52.17	54.70	57.35
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		155.98	156.33	156.79	157.38	158.09	158.93	159.90	161.01	162.28	163.69	165.26	167.00	168.92	171.01	173.29	161.86	166.92	172.20	177.70	183.43	197.15	203.38	209.87	216.64	223.70
Per unit Fixed Cost	Rs/kWh	2.62	2.47	2.48	2.48	2.49	2.50	2.52	2.53	2.55	2.57	2.59	2.62	2.65	2.68	2.71	2.75	2.56	2.64	2.73	2.82	2.91	3.12	3.22	3.33	3.43	3.54

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.25	5.26	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.56	8.99	9.44	9.91	10.41	10.93	11.48	12.05	12.65	13.28	13.95	14.65	15.38	16.15	16.96
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.27	0.54	0.50	0.46	0.43	0.39	0.35	0.32	0.28	0.24	0.20	0.17	0.13	0.09	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.46	0.30	0.32	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.72	0.75	0.79	0.83	0.87	0.91
RoE	Rs/kWh	0.46	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	10.87	7.73	8.00	8.28	8.58	8.89	9.23	9.58	9.95	10.34	10.75	11.18	11.64	12.12	12.62	13.15	13.49	14.12	14.78	15.47	16.19	17.07	17.87	18.70	19.58	20.50
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.26																										
Levllised Tariff (Fixed)	2.62																										
Levellised Tariff	7.88	Rs/Unit																									

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

Depreciation amount	90%
Book Depreciation rate	5.28%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17.472%
Income Tax (Normal Rates)	34.944%
Capital Cost	559.00

Capital Cost	559.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
T B 6:1 III 1	0.74																									

Applicable Discounting Factor		
Tax Benefit Levellised	6.74	
Flactricity Consention (Levellined)	0.04	

Electricity Generation (Levellised) 6.04

Levellised benefit 0.11 Rs/Unit

	ct] with Water Coole		and Juliflora (plantation) bas Travelling Grate- Uttar Prad		Annexure-2.1H
ა. გა.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	559.00
		Debt: Equity	Debt	%	70%
		""	Equity	%	30%
			Total Debt Amount	Rs Lakh	391.30
			Total Equity Amount	Rs Lakh	167.70
		Debt Component	Loan Amount	Rs Lakh	391.30
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	167.70
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Related		Interest On Working Capital	%	10.50%
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4200.00
	P		During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	3553.2
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Biomass Projects : Determi Units Generation	Unit	Year>	4	•			-		-	•	a	10	11	12	13	14	15	16		18	19	20	21	22	23	24	25
Installed Capacity	MW	rear>	1	2	3	4	3	1	1	8	9	10	11	12	13	14	15	16	17	18	19	20	4	1	23	24	
Net Generation	MU		6.31	6.31	0.04	6.31	0.04	0.04	0.04	0.04	0.04	6.31	0.04	6.31	0.04	0.04	0.04	6.31	0.04	0.04	6.31	0.04	0.04	0.04	0.04	0.04	6.31
Variable Cost	Unit	V	6.31		6.31	6.31	6.31 5	6.31	6.31 7	6.31	6.31		6.31		6.31	6.31	6.31		6.31	6.31	19	6.31	6.31 21	6.31 22	6.31	6.31 24	25
		Year>	1 007.00	2	3	4	-	400.07		475.00	9	10	11	12	13	14	15	16	17	18		20			23		
Biomass Cost	Rs. Lakh		337.60	354.48	372.20	390.81	410.35	430.87	452.41	475.03	498.78	523.72	549.91	577.41	606.28	636.59	668.42	701.84	736.93	773.78	812.47	853.09	895.75	940.53	987.56	1,036.94	1,088.78
Per unit Variable Cost	Rs/kWh	v	5.35	5.62	5.90	6.19	6.50	6.83	7.17	7.53	7.90	8.30	8.71	9.15	9.61	10.09	10.59	11.12	11.68	12.26	12.87	13.52	14.19	14.90	15.65	16.43	17.25
Fixed Cost	Unit	Year>	1 10.00	2	3	50.07	5	50.00	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		34.04	31.70	29.35	27.00	24.65	22.30	19.96	17.61	15.26	12.91	10.57	8.22	5.87	3.52	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.48	20.34	21.25	22.20	23.20	24.25	25.36	26.52	27.74	29.02	30.36	31.77	33.26	34.81	36.45	37.99	39.82	41.75	43.77	45.89	48.21	50.55	53.00	55.57	58.26
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		156.26	156.63	157.11	157.71	158.43	159.29	160.28	161.41	162.69	164.13	165.72	167.49	169.42	171.54	173.85	162.44	167.54	172.84	178.38	184.14	197.90	204.16	210.70	217.51	224.61
Per unit Fixed Cost	Rs/kWh	2.63	2.48	2.48	2.49	2.50	2.51	2.52	2.54	2.56	2.58	2.60	2.63	2.65	2.68	2.72	2.75	2.57	2.65	2.74	2.83	2.92	3.14	3.23	3.34	3.45	3.56
Levellised tariff corresponding		e																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.39	5.35	5.62	5.90	6.19	6.50	6.83	7.17	7.53	7.90	8.30	8.71	9.15	9.61	10.09	10.59	11.12	11.68	12.26	12.87	13.52	14.19	14.90	15.65	16.43	17.25
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.27	0.54	0.50	0.46	0.43	0.39	0.35	0.32	0.28	0.24	0.20	0.17	0.13	0.09	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.46	0.31	0.32	0.34	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.73	0.76	0.80	0.84	0.88	0.92
RoE	Rs/kWh	0.46	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	11.02	7.82	8.10	8.39	8.69	9.01	9.35	9.71	10.08	10.48	10.90	11.34	11.80	12.29	12.80	13.34	13.69	14.33	15.00	15.70	16.43	17.33	18.14	18.99	19.88	20.81
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.35																										
Variable Cost Levllised Tariff (Fixed)	5.35 2.63																										

Determination of Additional De	preciation	for BIOMASS Projects
Depreciation amount	90%	

Electricity Generation (Levellised) Levellised benefit

Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	559.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Depm.	Rs Lakh	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	6.74							•						•												

	ct] with Water Coole		and Juliflora (plantation) bas Travelling Grate- Other Stat		Annexure-2.1I
ა. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	559.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	391.30
			Total Equity Amount	Rs Lakh	167.70
		Debt Component	Loan Amount	Rs Lakh	391.30
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	167.70
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months %	4
	Fuel Related	-	Interest On Working Capital		10.50%
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4200.00
			During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	3734.85
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Biomass Projects: Determination of Tariff Component

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		354.86	372.60	391.23	410.79	431.33	452.90	475.54	499.32	524.28	550.50	578.02	606.92	637.27	669.13	702.59	737.72	774.61	813.34	854.00	896.70	941.54	988.62	1,038.05	1,089.95	1,144.45
Per unit Variable Cost	Rs/kWh		5.62	5.90	6.20	6.51	6.83	7.18	7.53	7.91	8.31	8.72	9.16	9.62	10.10	10.60	11.13	11.69	12.27	12.89	13.53	14.21	14.92	15.66	16.45	17.27	18.13
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		34.04	31.70	29.35	27.00	24.65	22.30	19.96	17.61	15.26	12.91	10.57	8.22	5.87	3.52	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		20.32	21.22	22.18	23.17	24.22	25.33	26.48	27.70	28.98	30.32	31.73	33.21	34.77	36.40	38.12	39.74	41.66	43.68	45.79	48.02	50.45	52.89	55.46	58.15	60.98
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		157.10	157.51	158.03	158.68	159.45	160.36	161.41	162.60	163.94	165.43	167.09	168.92	170.93	173.13	175.52	164.19	169.37	174.77	180.40	186.27	200.13	206.51	213.16	220.09	227.32
Per unit Fixed Cost	Rs/kWh	2.65	2.49	2.50	2.50	2.51	2.53	2.54	2.56	2.58	2.60	2.62	2.65	2.68	2.71	2.74	2.78	2.60	2.68	2.77	2.86	2.95	3.17	3.27	3.38	3.49	3.60
Levellised tariff corresponding	to Useful lif	e																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.82	5.62	5.90	6.20	6.51	6.83	7.18	7.53	7.91	8.31	8.72	9.16	9.62	10.10	10.60	11.13	11.69	12.27	12.89	13.53	14.21	14.92	15.66	16.45	17.27	18.13
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18

RoE Rs/kWh 0.46 Total COG Rs/kWh Discount Factor Variable Cost 5.62

Int. on term loan

Int. on working capital

Book Depreciation rate

Net Depreciation Benefit

Tax Benefit

Energy generation

Per unit benefit

Levlised Tariff (Fixed) 2.65 8.28 Levellised Tariff

Determination of Additional Depreciation for BIOMASS Projects 90% Depreciation amount

Rs Lakh

Rs Lakh

Rs/Unit

MU

152.94

53.44

3.16

1.69

1.00

1.00

166.13

6.31

0.92

0.96

48.74

17.03

6.31

0.27

0.85

0.89

17.44

6.09

6.31

0.10

0.79

0.82

-1.34

6.31

-0.01

0.73

0.76

-12.61

-4.41

6.31

-0.07

0.67

0.70

-19.37

-6.77

6.31

-0.11

0.62

0.65

-23.43

6.31

-0.13

0.57

0.60

-25.86

-9.04

6.31

-0.14

0.53

0.55

5.28%

Rs/kWh

Rs/kWh

0.27

0.49

0.54

0.32

0.45

8.11

0.50

0.34

0.45

8.40

0.92

0.46

0.35

0.45

8.70

0.85

0.43

0.37

0.45

9.02

0.39

0.38

0.45

9.36

0.73

0.35

0.40

0.45

9.72

0.67

0.32

0.42

0.45

10.09

0.62

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0.44

0.45

10.49

0.24

0.46

0.45

10.90

0.20

0.48

0.45

11.34

0.49

0.17

0.50

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11.81

0.45

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12.29

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12.81

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0.45

13.34

0.02

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0.45

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14.29

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14.96

0.69

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15.66

0.26

-16.06

-5.61

6.31

-0.09

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0.18

0.73

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16.39

0.24

0.76

0.45

17.16

0.80

0.57

0.84

0.57

18.94

0.88

0.57

19.82

0.92

0.57

20.76

0.16

0.97

0.57

21.73

25 0.00%

0.00

0.00%

0.0%

0.00

0.00

0.00

6.31

0.00

0.15

0.15

0.00

0.00

6.31

0.00

0.16

0.17

0.15

Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	559.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Accelrated Deprn.	Rs Lakh	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	

-27.32

6.31

-0.15

0.49

0.51

-28.20

-9.85

6.31

-0.16

0.45

0.47

-28.73

-10.04

6.31

-0.16

0.42

0.43

-29.04

6.31

-0.16

0.40

-29.23

-10.21

6.31

-0.16

0.35

0.37

-29.34

-10.25

6.31

-0.16

0.33

0.34

-29.41

6.31

-0.16

0.30

0.31

-29.45

-10.29

6.31

-0.16

0.28

0.29

Discounting Factor Applicable Discounting Factor Tax Benefit Levellised 6.74 Electricity Generation (Levellised) 6.04

Levellised benefit 0.11 Rs/Unit

	ct] with Air Cooled		and Juliflora (plantation) bas avelling Grate- Andhra Prado		Annexure-2.2A
S. Vo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	600.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	420.00
			Total Equity Amount	Rs Lakh	180.00
		Debt Component	Loan Amount	Rs Lakh	420.00
		Debt Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	180.00
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months %	4
	Fuel Related		Interest On Working Capital After stabilization period		10.50%
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4200.00
				Kcal/kWh	4200.00
1		Diaman	Base Price GCV-Biomass	Rs/T Kcal/kg	3492.30
)4		Biomass	Biomass Price Escalation	%	3100.00 5.00%
	Omeration C		Factor		
_	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
5			O & M Expenses Escalation	%	3.84%
6	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		331.81	348.40	365.82	384.11	403.32	423.48	444.66	466.89	490.24	514.75	540.48	567.51	595.88	625.68	656.96	689.81	724.30	760.52	798.54	838.47	880.39	924.41	970.63	1,019.16	1,070.12
Per unit Variable Cost	Rs/kWh		5.38	5.65	5.93	6.22	6.54	6.86	7.21	7.57	7.94	8.34	8.76	9.20	9.66	10.14	10.65	11.18	11.74	12.32	12.94	13.59	14.27	14.98	15.73	16.51	17.34
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		36.54	34.02	31.50	28.98	26.46	23.94	21.42	18.90	16.38	13.86	11.34	8.82	6.30	3.78	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.28	20.13	21.02	21.95	22.93	23.97	25.05	26.19	27.39	28.64	29.96	31.35	32.81	34.34	35.95	37.44	39.24	41.14	43.13	45.21	47.51	49.81	52.22	54.75	57.40
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		162.56	162.74	163.03	163.44	163.97	164.64	165.44	166.38	167.46	168.70	170.10	171.67	173.41	175.32	177.43	164.80	169.87	175.14	180.64	186.38	200.66	206.89	213.39	220.15	227.21
Per unit Fixed Cost	Rs/kWh	2.77	2.63	2.64	2.64	2.65	2.66	2.67	2.68	2.70	2.71	2.73	2.76	2.78	2.81	2.84	2.88	2.67	2.75	2.84	2.93	3.02	3.25	3.35	3.46	3.57	3.68
Levellised tariff corresponding	to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.43	5.38	5.65	5.93	6.22	6.54	6.86	7.21	7.57	7.94	8.34	8.76	9.20	9.66	10.14	10.65	11.18	11.74	12.32	12.94	13.59	14.27	14.98	15.73	16.51	17.34
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.30	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.27	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.47	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.42	0.44	0.46	0.49	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.73	0.77	0.81	0.85	0.89	0.93
RoE	Rs/kWh	0.51	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	11.20	8.01	8.28	8.57	8.87	9.19	9.53	9.89	10.26	10.66	11.07	11.51	11.98	12.47	12.98	13.52	13.85	14.49	15.16	15.87	16.61	17.52	18.33	19.19	20.08	21.02
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.38																										
Levlised Tariff (Fixed)	2.77		_																								
Control Control Transfer	0.44	D - // 1 - 2	i																								

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

Levellised Tariff

Depreciation amount

8.14 Rs/Unit

90%

Depreciation amount	3070																									
Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	600.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation		•	•	•							•					•						•		•		
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.76	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	7.24																								· · · · · ·	

5.91 0.12 Rs/Unit Electricity Generation (Levellised)

		[other than Rice Straw a	and Juliflora (plantation) bas avelling Grate- Haryana	sed	Annexure-2.2B
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	600.00
		Debt: Equity	Debt	%	70%
		. ,	Equity	%	30%
			Total Debt Amount	Rs Lakh	420.00
			Total Equity Amount	Rs Lakh	180.00
		Debt Component	Loan Amount	Rs Lakh	420.00
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	180.00
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	% Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	
					4200.00
0.4			Base Price	Rs/T	3975.3
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
05			O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Biomass Projects : Determination of Tariff Component

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		377.70	396.59	416.42	437.24	459.10	482.05	506.16	531.46	558.04	585.94	615.24	646.00	678.30	712.21	747.82	785.21	824.48	865.70	908.98	954.43	1,002.16	1,052.26	1,104.88	1,160.12	1,218.13
Per unit Variable Cost	Rs/kWh		6.12	6.43	6.75	7.09	7.44	7.81	8.20	8.61	9.04	9.49	9.97	10.47	10.99	11.54	12.12	12.72	13.36	14.03	14.73	15.47	16.24	17.05	17.90	18.80	19.74
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		36.54	34.02	31.50	28.98	26.46	23.94	21.42	18.90	16.38	13.86	11.34	8.82	6.30	3.78	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		21.52	22.48	23.49	24.54	25.66	26.82	28.05	29.34	30.69	32.12	33.61	35.18	36.83	38.56	40.38	42.09	44.13	46.27	48.51	50.87	53.45	56.04	58.76	61.62	64.62
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		164.80	165.09	165.50	166.03	166.69	167.49	168.44	169.53	170.77	172.17	173.75	175.49	177.42	179.54	181.86	169.45	174.75	180.27	186.03	192.03	206.60	213.13	219.93	227.03	234.43
Per unit Fixed Cost	Rs/kWh	2.82	2.67	2.68	2.68	2.69	2.70	2.71	2.73	2.75	2.77	2.79	2.82	2.84	2.88	2.91	2.95	2.75	2.83	2.92	3.01	3.11	3.35	3.45	3.56	3.68	3.80
Levellised tariff corresponding	to Useful life	е																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.60	6.12	6.43	6.75	7.09	7.44	7.81	8.20	8.61	9.04	9.49	9.97	10.47	10.99	11.54	12.12	12.72	13.36	14.03	14.73	15.47	16.24	17.05	17.90	18.80	19.74
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.30	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.27	0.22	0.18	0.14	0.10	0.06	0.02	-		•			-	-	-		-
Int. on working capital	Rs/kWh	0.53	0.35	0.36	0.38	0.40	0.42	0.43	0.45	0.48	0.50	0.52	0.54	0.57	0.60	0.62	0.65	0.68	0.72	0.75	0.79	0.82	0.87	0.91	0.95	1.00	1.05
RoE	Rs/kWh	0.51	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	12.42	8.79	9.10	9.43	9.78	10.14	10.53	10.93	11.36	11.81	12.28	12.78	13.31	13.87	14.45	15.06	15.47	16.19	16.95	17.74	18.58	19.59	20.50	21.47	22.48	23.54
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

Determination of Additional Depreciation for BIOMASS Projects

5.91 0.12 Rs/Unit

6.12

2.82 **8.95** Rs/Unit

Variable Cost

Levlised Tariff (Fixed)

Electricity Generation (Levellised)

Levellised benefit

Depreciation amount	90%																									
Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	600.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.76	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	7.24																									

			and Juliflora (plantation) bas avelling Grate- Maharashtra	sed	Annexure-2.2C
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Concration		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	600.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	420.00
			Total Equity Amount	Rs Lakh	180.00
		Debt Component	Loan Amount	Rs Lakh	420.00
	Sources of Fund	, , , , , ,	Moratorium Period Repayment Period(incld	years	0
02	Sources of Fulla		Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	180.00
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	% Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	4065.6
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Biomass Projects : Determination of Tariff Co	omponent
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Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		386.28	405.60	425.88	447.17	469.53	493.00	517.65	543.54	570.71	599.25	629.21	660.67	693.71	728.39	764.81	803.05	843.20	885.36	929.63	976.11	1,024.92	1,076.17	1,129.97	1,186.47	1,245.80
Per unit Variable Cost	Rs/kWh		6.26	6.57	6.90	7.25	7.61	7.99	8.39	8.81	9.25	9.71	10.20	10.71	11.24	11.80	12.39	13.01	13.66	14.35	15.06	15.82	16.61	17.44	18.31	19.23	20.19
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		36.54	34.02	31.50	28.98	26.46	23.94	21.42	18.90	16.38	13.86	11.34	8.82	6.30	3.78	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		21.94	22.92	23.95	25.03	26.16	27.36	28.61	29.93	31.31	32.76	34.29	35.90	37.58	39.35	41.21	42.96	45.04	47.23	49.52	51.93	54.56	57.21	59.99	62.91	65.97
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		165.22	165.53	165.96	166.51	167.20	168.03	169.00	170.11	171.39	172.82	174.43	176.21	178.18	180.33	182.69	170.32	175.66	181.23	187.04	193.09	207.71	214.29	221.16	228.31	235.78
Per unit Fixed Cost	Rs/kWh	2.84	2.68	2.68	2.69	2.70	2.71	2.72	2.74	2.76	2.78	2.80	2.83	2.86	2.89	2.92	2.96	2.76	2.85	2.94	3.03	3.13	3.37	3.47	3.58	3.70	3.82
Levellised tariff corresponding	to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

Levellised tariff corresponding	to Usetui II	re																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.82	6.26	6.57	6.90	7.25	7.61	7.99	8.39	8.81	9.25	9.71	10.20	10.71	11.24	11.80	12.39	13.01	13.66	14.35	15.06	15.82	16.61	17.44	18.31	19.23	20.19
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.30	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.27	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.54	0.36	0.37	0.39	0.41	0.42	0.44	0.46	0.48	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.73	0.77	0.80	0.84	0.88	0.93	0.97	1.02	1.07
RoE	Rs/kWh	0.51	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	12.65	8.94	9.25	9.59	9.94	10.32	10.71	11.13	11.56	12.03	12.51	13.02	13.56	14.13	14.73	15.35	15.77	16.51	17.28	18.09	18.95	19.97	20.91	21.89	22.93	24.01
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	6.26																										

 Variable Cost
 6.26

 Levllised Tariff (Fixed)
 2.84

 Levellised Tariff
 9.09
 Rs/Unit

Determination of Additional Depreciation for BIOMASS Projects Depreciation amount 90%

Depreciation amount	90%																									
Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	600.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation			•	•			•			·		•									•					,
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.76	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 7.24
Electricity Generation (Levellised) 5.91
Levellised benefit 0.12 Rs/Unit

		[other than Rice Straw a	and Juliflora (plantation) bas avelling Grate- Punjab	sed	Annexure-2.2D
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Concration		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	600.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	420.00
			Total Equity Amount	Rs Lakh	180.00
		Debt Component	Loan Amount	Rs Lakh	420.00
	Sources of Fund		Moratorium Period Repayment Period(incld	years	0
02	oources or runa		Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	180.00
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)	_	21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
		F 5: 101	O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare	1 1	15.00%
			Receivables for Debtors Biomass Stock	Months Months	1.5
		For Variable Charges	Interest On Working Capital	%	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	4158.00
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
	_		Biomass Price Escalation Factor	%	5.00%
	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
05			O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Biomass Pro	jects : D	etermination of	Tariff	Component
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Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		395.06	414.81	435.55	457.33	480.20	504.21	529.42	555.89	583.68	612.87	643.51	675.69	709.47	744.95	782.19	821.30	862.37	905.49	950.76	998.30	1,048.21	1,100.62	1,155.65	1,213.44	1,274.11
Per unit Variable Cost	Rs/kWh		6.40	6.72	7.06	7.41	7.78	8.17	8.58	9.01	9.46	9.93	10.43	10.95	11.50	12.07	12.67	13.31	13.97	14.67	15.41	16.18	16.99	17.83	18.73	19.66	20.65
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		36.54	34.02	31.50	28.98	26.46	23.94	21.42	18.90	16.38	13.86	11.34	8.82	6.30	3.78	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		22.37	23.37	24.42	25.52	26.68	27.90	29.18	30.53	31.94	33.43	34.99	36.63	38.35	40.16	42.05	43.85	45.98	48.21	50.55	53.01	55.70	58.40	61.24	64.22	67.35
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		165.64	165.98	166.43	167.01	167.72	168.57	169.57	170.72	172.02	173.49	175.13	176.94	178.94	181.14	183.54	171.21	176.60	182.21	188.07	194.17	208.85	215.48	222.41	229.63	237.16
Per unit Fixed Cost	Rs/kWh	2.85	2.68	2.69	2.70	2.71	2.72	2.73	2.75	2.77	2.79	2.81	2.84	2.87	2.90	2.94	2.97	2.77	2.86	2.95	3.05	3.15	3.38	3.49	3.60	3.72	3.84
Levellised tariff corresponding	g to Useful lif	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	10.04	6.40	6.72	7.06	7.41	7.78	8.17	8.58	9.01	9.46	9.93	10.43	10.95	11.50	12.07	12.67	13.31	13.97	14.67	15.41	16.18	16.99	17.83	18.73	19.66	20.65
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.30	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.27	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-		-	-	-	-	-

0.57

0.49

13.27

0.45

0.54

0.49

12.74

0.49

0.59

0.49

13.82

0.62

0.49

14.40

0.68

0.49

15.65

0.33

0.71

0.49

16.08

0.30

0.75

0.49

16.84

0.78

0.49

17.63

0.26

0.82

0.49

18.45

0.24

0.86

0.49

19.32

0.22

0.65

0.49

15.01

0.35

RoE Total COG Rs/kWh 12.89 Discount Factor Variable Cost 6.40 Levllised Tariff (Fixed) 2.85

Int. on working capital

Levellised Tariff

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

Rs/kWh

Rs/kWh

9.25

0.55

0.51

0.36

0.49

9.09

0.38

0.49

9.41

0.92

0.40

0.49

9.75

0.85

0.41

0.49

10.12

0.79

0.43

0.49

10.50

0.45

0.49

10.90

0.67

0.47

0.49

11.33

0.62

0.49

0.49

11.77

0.52

0.49

12.25

Depreciation amount	90%																									
Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	600.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.76	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	7.24																									

Electricity Generation (Levellised) 5.91 0.12 Rs/Unit Levellised benefit

0.90

0.63

20.37

0.95

0.63

21.33

0.19

0.99

0.63

22.33

1.04

0.63

23.38

1.09

0.63

24.49

			and Juliflora (plantation) bas avelling Grate- Rajasthan	sed	Annexure-2.2E
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	600.00
		Debt: Equity	Debt	%	70%
		. ,	Equity	%	30%
			Total Debt Amount	Rs Lakh	420.00
			Total Equity Amount	Rs Lakh	180.00
		Debt Component	Loan Amount	Rs Lakh	420.00
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	180.00
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4200.00
			 		
			Base Price	Rs/T	3470.25
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
05			O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Biomass Projects : Determination of Tariff Component

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		329.72	346.20	363.51	381.69	400.77	420.81	441.85	463.94	487.14	511.50	537.07	563.93	592.12	621.73	652.81	685.46	719.73	755.71	793.50	833.18	874.83	918.58	964.50	1,012.73	1,063.37
Per unit Variable Cost	Rs/kWh		5.34	5.61	5.89	6.18	6.49	6.82	7.16	7.52	7.89	8.29	8.70	9.14	9.59	10.07	10.58	11.11	11.66	12.25	12.86	13.50	14.18	14.88	15.63	16.41	17.23
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		36.54	34.02	31.50	28.98	26.46	23.94	21.42	18.90	16.38	13.86	11.34	8.82	6.30	3.78	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.18	20.02	20.91	21.83	22.81	23.84	24.91	26.05	27.24	28.49	29.80	31.18	32.63	34.15	35.74	37.23	39.02	40.91	42.88	44.96	47.24	49.52	51.92	54.43	57.07
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		162.46	162.63	162.92	163.32	163.85	164.51	165.30	166.23	167.31	168.54	169.93	171.49	173.22	175.13	177.23	164.59	169.64	174.91	180.40	186.12	200.39	206.61	213.09	219.84	226.88
Per unit Fixed Cost	Rs/kWh	2.77	2.63	2.64	2.64	2.65	2.66	2.67	2.68	2.69	2.71	2.73	2.75	2.78	2.81	2.84	2.87	2.67	2.75	2.83	2.92	3.02	3.25	3.35	3.45	3.56	3.68
Levellised tariff corresponding	to Useful lit	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.38	5.34	5.61	5.89	6.18	6.49	6.82	7.16	7.52	7.89	8.29	8.70	9.14	9.59	10.07	10.58	11.11	11.66	12.25	12.86	13.50	14.18	14.88	15.63	16.41	17.23
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.30	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.27	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-			-	-	-	-	-
Int. on working capital	Rs/kWh	0.47	0.31	0.32	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.51	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.73	0.77	0.80	0.84	0.88	0.92
RoE	Rs/kWh	0.51	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	11.15	7.98	8.25	8.53	8.83	9.15	9.48	9.84	10.21	10.60	11.02	11.46	11.92	12.40	12.91	13.45	13.77	14.41	15.08	15.78	16.52	17.42	18.23	19.08	19.97	20.91

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

Discount Factor

Levlised Tariff (Fixed)

Depreciation amount

Variable Cost

2.77

8.11

90%

0.73

0.17

0.15

0 1 0	5.000/																									
Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	600.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.76	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	7.24																									
Electricity Generation (Levellised)	5.91																									
Levellised benefit	0.12	Rs/Unit																								

			and Juliflora (plantation) bas avelling Grate- Tamil Nadu	sed	Annexure-2.2F
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	600.00
		Debt: Equity	Debt	%	70%
		. ,	Equity	%	30%
			Total Debt Amount	Rs Lakh	420.00
			Total Equity Amount	Rs Lakh	180.00
		Debt Component	Loan Amount	Rs Lakh	420.00
		Debt component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	180.00
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	3435.60
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
05			O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		326.42	342.74	359.88	377.88	396.77	416.61	437.44	459.31	482.28	506.39	531.71	558.30	586.21	615.52	646.30	678.61	712.54	748.17	785.58	824.86	866.10	909.40	954.87	1,002.62	1,052.75
Per unit Variable Cost	Rs/kWh		5.29	5.55	5.83	6.12	6.43	6.75	7.09	7.44	7.81	8.21	8.62	9.05	9.50	9.97	10.47	11.00	11.55	12.12	12.73	13.37	14.03	14.74	15.47	16.25	17.06
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		36.54	34.02	31.50	28.98	26.46	23.94	21.42	18.90	16.38	13.86	11.34	8.82	6.30	3.78	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.02	19.85	20.73	21.65	22.62	23.63	24.70	25.82	27.00	28.24	29.54	30.90	32.34	33.84	35.43	36.89	38.67	40.54	42.50	44.55	46.81	49.08	51.45	53.94	56.55
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		162.30	162.46	162.74	163.14	163.65	164.30	165.08	166.01	167.07	168.29	169.67	171.22	172.93	174.83	176.91	164.26	169.29	174.54	180.01	185.71	199.97	206.16	212.62	219.35	226.36
Per unit Fixed Cost	Rs/kWh	2.76	2.63	2.63	2.64	2.64	2.65	2.66	2.68	2.69	2.71	2.73	2.75	2.77	2.80	2.83	2.87	2.66	2.74	2.83	2.92	3.01	3.24	3.34	3.45	3.55	3.67
Levellised tariff corresponding	to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.30	5.29	5.55	5.83	6.12	6.43	6.75	7.09	7.44	7.81	8.21	8.62	9.05	9.50	9.97	10.47	11.00	11.55	12.12	12.73	13.37	14.03	14.74	15.47	16.25	17.06
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.30	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.27	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.46	0.31	0.32	0.34	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.69	0.72	0.76	0.80	0.83	0.87	0.92
RoE	Rs/kWh	0.51	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	11.06	7.92	8.19	8.47	8.77	9.08	9.41	9.76	10.13	10.52	10.93	11.37	11.82	12.30	12.81	13.34	13.66	14.29	14.95	15.65	16.38	17.27	18.08	18.92	19.80	20.73

1 0.92 0.85 0.79 0.73 0.67 0.62 0.57 0.53 0.49 0.45 0.42 0.38 0.35 0.33 0.30 0.28 0.26 0.24 0.22 0.20 0.19 0.17 0.16 0.15

Determination of Additional De	preciation	for BIOMASS Projects
Depreciation amount	90%	

5.29

2.76 8.05 Rs/Unit

Discount Factor Variable Cost

Levlised Tariff (Fixed)

Levellised Tariff

Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	600.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	96	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	196	0%	096	0%	0%	0%	0%	0%	0%	096	0%	0%	0%	0%	096
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	96	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.78	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.38	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.88	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dis counting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.78	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellis ed	7.24																									
Electricity Generation (Levellised)	5.91																									
Levellised benefit	0.12	Rs/Unit																								

			and Juliflora (plantation) bas avelling Grate- Telangana	sed	Annexure-2.2G
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	600.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	420.00
			Total Equity Amount	Rs Lakh	180.00
		Debt Component	Loan Amount	Rs Lakh	420.00
	Sources of Fund		Moratorium Period Repayment Period(incld	years	0
02	oources or runa		Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	180.00
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
		F 5: 101	O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare	1 1 1	15.00%
			Receivables for Debtors Biomass Stock	Months Months	1.5
		For Variable Charges	Interest On Working Capital	%	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	3492.3
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
05			O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		331.81	348.40	365.82	384.11	403.32	423.48	444.66	466.89	490.24	514.75	540.48	567.51	595.88	625.68	656.96	689.81	724.30	760.52	798.54	838.47	880.39	924.41	970.63	1,019.16	1,070.12
Per unit Variable Cost	Rs/kWh		5.38	5.65	5.93	6.22	6.54	6.86	7.21	7.57	7.94	8.34	8.76	9.20	9.66	10.14	10.65	11.18	11.74	12.32	12.94	13.59	14.27	14.98	15.73	16.51	17.34
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		36.54	34.02	31.50	28.98	26.46	23.94	21.42	18.90	16.38	13.86	11.34	8.82	6.30	3.78	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.28	20.13	21.02	21.95	22.93	23.97	25.05	26.19	27.39	28.64	29.96	31.35	32.81	34.34	35.95	37.44	39.24	41.14	43.13	45.21	47.51	49.81	52.22	54.75	57.40
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		162.56	162.74	163.03	163.44	163.97	164.64	165.44	166.38	167.46	168.70	170.10	171.67	173.41	175.32	177.43	164.80	169.87	175.14	180.64	186.38	200.66	206.89	213.39	220.15	227.21
Per unit Fixed Cost	Rs/kWh	2.77	2.63	2.64	2.64	2.65	2.66	2.67	2.68	2.70	2.71	2.73	2.76	2.78	2.81	2.84	2.88	2.67	2.75	2.84	2.93	3.02	3.25	3.35	3.46	3.57	3.68
Levellised tariff corresponding	to Useful lit	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.43	5.38	5.65	5.93	6.22	6.54	6.86	7.21	7.57	7.94	8.34	8.76	9.20	9.66	10.14	10.65	11.18	11.74	12.32	12.94	13.59	14.27	14.98	15.73	16.51	17.3
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
nt. on term loan	Rs/kWh	0.30	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.27	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.47	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.42	0.44	0.46	0.49	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.73	0.77	0.81	0.85	0.89	0.9
RoE	Rs/kWh	0.51	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.63	0.63	0.63	0.63	0.6
Total COG	Rs/kWh	11.20	8.01	8.28	8.57	8.87	9.19	9.53	9.89	10.26	10.66	11.07	11.51	11.98	12.47	12.98	13.52	13.85	14.49	15.16	15.87	16.61	17.52	18.33	19.19	20.08	21.0
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.1
/ariable Cost	5.38																										
Levllised Tariff (Fixed)	2.77																										
Levellised Tariff	8.14	Rs/Unit																									

Determination of Additional	Depreciation	for BIOMA	SS Project	s																						
Depreciation amount	90%																									
Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	600.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.76	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	7.24																									
Electricity Generation (Levellised)	5.91																									
Levellised benefit	0.12	Rs/Unit																								

			and Juliflora (plantation) ba ravelling Grate- Uttar Prades		Annexure-2.2H		
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters		
			Installed Power Generation Capacity	MW	1		
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%		
	Concration		Auxiliary Consumption after stabilization	%	12.00%		
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%		
			PLF(during first year after Stabilization)	%	80.00%		
			PLF(second year onwards)	%	80.00%		
			Useful Life	Years	25		
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	600.00		
		Debt: Equity	Debt	%	70%		
			Equity	%	30%		
			Total Debt Amount	Rs Lakh	420.00		
			Total Equity Amount	Rs Lakh	180.00		
		Debt Component	Loan Amount	Rs Lakh	420.00		
		2 ost component	Moratorium Period	years	0		
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15		
			Interest Rate	%	9.00%		
			Equity amount Return on Equity (upto 20	Rs Lakh	180.00		
		Equity Component	years)	% p.a	16.96%		
			Return on Equity (After 20 years)	ļ	21.52%		
			Discount Rate (equiv. to WACC)	%	8.30%		
		Fiscal Assumptions	Income Tax	%	34.94%		
			MAT Rate	%	17.47%		
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%		
03			Depreciation Rate 16th year onwards	%	2.00%		
			O&M Charges	Months	1		
		For Fixed Charges	Maintenance Spare		15.00%		
			Receivables for Debtors	Months	1.5		
		For Variable Charges	Biomass Stock	Months	4		
	Fuel Related		Interest On Working Capital	%	10.50%		
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4200.00		
	•		During stabilization period	Kcal/kWh	4200.00		
			Base Price	Rs/T	3553.2		
04		Biomass	GCV-Biomass	Kcal/kg	3100.00		
			Biomass Price Escalation Factor	%	5.00%		
	Operation &		O&M Expenses	Rs Lakh	48.20		
05	Maintenance		O & M Expenses Escalation	%	3.84%		
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00		

Biomass Projects : Determin	nation of i	arim Comp	onent
Units Generation	Unit	Year>	1

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		337.60	354.48	372.20	390.81	410.35	430.87	452.41	475.03	498.78	523.72	549.91	577.41	606.28	636.59	668.42	701.84	736.93	773.78	812.47	853.09	895.75	940.53	987.56	1,036.94	1,088.78
Per unit Variable Cost	Rs/kWh		5.47	5.74	6.03	6.33	6.65	6.98	7.33	7.70	8.08	8.49	8.91	9.36	9.82	10.32	10.83	11.37	11.94	12.54	13.17	13.82	14.51	15.24	16.00	16.80	17.64
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		36.54	34.02	31.50	28.98	26.46	23.94	21.42	18.90	16.38	13.86	11.34	8.82	6.30	3.78	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.57	20.43	21.33	22.28	23.28	24.33	25.43	26.59	27.80	29.08	30.42	31.83	33.32	34.87	36.51	38.03	39.86	41.79	43.81	45.93	48.26	50.59	53.04	55.61	58.31
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		162.84	163.03	163.34	163.77	164.32	165.00	165.82	166.77	167.88	169.14	170.56	172.15	173.91	175.86	177.99	165.39	170.48	175.79	181.32	187.09	201.41	207.68	214.21	221.02	228.12
Per unit Fixed Cost	Rs/kWh	2.78	2.64	2.64	2.65	2.65	2.66	2.67	2.69	2.70	2.72	2.74	2.76	2.79	2.82	2.85	2.88	2.68	2.76	2.85	2.94	3.03	3.26	3.37	3.47	3.58	3.70
Levellised tariff corresponding	g to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.58	5.47	5.74	6.03	6.33	6.65	6.98	7.33	7.70	8.08	8.49	8.91	9.36	9.82	10.32	10.83	11.37	11.94	12.54	13.17	13.82	14.51	15.24	16.00	16.80	17.64
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.30	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.27	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.48	0.32	0.33	0.35	0.36	0.38	0.39	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.74	0.78	0.82	0.86	0.90	0.94

0.49

11.67

0.45

0.49

12.15

0.42

0.49

11.23

0.49

0.49

12.64

0.38

0.49

13.16

0.35

0.49

13.72

0.49

14.70

0.28

0.49

15.39

0.26

0.49

14.05

0.30

0.49

16.10

0.24

0.49

16.86

0.63

17.78

0.20

0.63

18.61

0.19

0.63

19.47

0.17

0.51 Rs/kWh Total COG 11.36 Rs/kWh Discount Factor Variable Cost 5.47 Levlised Tariff (Fixed) 2.78

Levellised Tariff 8.25 Rs/Unit

Depreciation amount

Electricity Generation (Levellised)

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

90%

0.49

8.11

0.49

8.39

0.92

0.49

8.68

0.85

0.49

8.99

0.79

0.49

9.31

0.73

0.49

9.66

0.67

0.49

10.02

0.62

0.49

10.40

0.57

0.49

10.80

0.53

Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%	1																								
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	600.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation			•					•	•					•	•					•	•					
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.76	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Renefit Levellised	7 24	1																								·

0.63

21.34

0.15

0.63

20.38

			and Juliflora (plantation) ba		Annexure-2.2I
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Concration		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	600.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	420.00
			Total Equity Amount	Rs Lakh	180.00
		Debt Component	Loan Amount	Rs Lakh	420.00
		Bost Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount Return on Equity (upto 20	Rs Lakh	180.00
		Equity Component	years)	% p.a	16.96%
			Return on Equity (After 20 years)	<u> </u>	21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax MAT Rate	%	34.94% 17.47%
			Depreciation Rate(Power	70	17.47%
	Financial Assumptions	Depreciation	Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Deleted	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Interest On Working Capital	%	10.50%
	Fuel Related Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4200.00
	: 1000111p110110		During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	3734.85
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Biomass Projects : Determination of Tariff Con	nponent
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Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		354.86	372.60	391.23	410.79	431.33	452.90	475.54	499.32	524.28	550.50	578.02	606.92	637.27	669.13	702.59	737.72	774.61	813.34	854.00	896.70	941.54	988.62	1,038.05	1,089.95	1,144.45
Per unit Variable Cost	Rs/kWh		5.75	6.04	6.34	6.66	6.99	7.34	7.71	8.09	8.50	8.92	9.37	9.83	10.33	10.84	11.38	11.95	12.55	13.18	13.84	14.53	15.26	16.02	16.82	17.66	18.54
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		36.54	34.02	31.50	28.98	26.46	23.94	21.42	18.90	16.38	13.86	11.34	8.82	6.30	3.78	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		20.41	21.31	22.26	23.25	24.30	25.40	26.56	27.77	29.05	30.39	31.80	33.27	34.83	36.46	38.17	39.77	41.70	43.72	45.83	48.05	50.49	52.94	55.51	58.20	61.02
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		163.68	163.92	164.27	164.74	165.34	166.07	166.94	167.96	169.12	170.45	171.93	173.59	175.42	177.44	179.66	167.14	172.32	177.72	183.35	189.22	203.64	210.02	216.67	223.61	230.83
Per unit Fixed Cost	Rs/kWh	2.80	2.65	2.66	2.66	2.67	2.68	2.69	2.71	2.72	2.74	2.76	2.79	2.81	2.84	2.88	2.91	2.71	2.79	2.88	2.97	3.07	3.30	3.40	3.51	3.62	3.74
Levellised tariff corresponding	to Useful lif	e																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.02	5.75	6.04	6.34	6.66	6.99	7.34	7.71	8.09	8.50	8.92	9.37	9.83	10.33	10.84	11.38	11.95	12.55	13.18	13.84	14.53	15.26	16.02	16.82	17.66	18.54
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.30	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.27	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.50	0.33	0.35	0.36	0.38	0.39	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.56	0.59	0.62	0.64	0.68	0.71	0.74	0.78	0.82	0.86	0.90	0.94	0.99
RoE	Rs/kWh	0.51	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	11.82	8.40	8.69	9.00	9.33	9.67	10.03	10.41	10.81	11.24	11.68	12.15	12.65	13.17	13.72	14.30	14.66	15.34	16.06	16.81	17.60	18.56	19.42	20.33	21.29	22.29
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.75																										

Determination of Additional Depreciation for BIOMASS Projects Depreciation amount 90%

2.80

8.55 Rs/Unit

Levllised Tariff (Fixed)

Electricity Generation (Levellised)

Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	600.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.76	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	7.24																									

Vate	r Cooled Condense		a (plantation) based project] rate boiler - Andhra Pradesh		Annexure-2.3A
S. Vo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
)1		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	611
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	427.70
			Total Equity Amount	Rs Lakh	183.30
		Debt Component	Loan Amount	Rs Lakh	427.70
		Debt Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	183.30
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
)3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
_	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	
			<u> </u>		4200.00
.,		D:	Base Price	Rs/T	3492.30
)4		Biomass	GCV-Biomass Biomass Price Escalation	Kcal/kg %	3100.00 5.00%
	0		Factor		
	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
5			O & M Expenses Escalation	%	3.84%
6	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		331.81	348.40	365.82	384.11	403.32	423.48	444.66	466.89	490.24	514.75	540.48	567.51	595.88	625.68	656.96	689.81	724.30	760.52	798.54	838.47	880.39	924.41	970.63	1,019.16	1,070.12
Per unit Variable Cost	Rs/kWh		5.26	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.56	8.99	9.44	9.91	10.41	10.93	11.48	12.05	12.65	13.28	13.95	14.65	15.38	16.15	16.96
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		37.21	34.64	32.08	29.51	26.95	24.38	21.81	19.25	16.68	14.11	11.55	8.98	6.42	3.85	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.31	20.15	21.04	21.97	22.96	23.99	25.07	26.21	27.41	28.66	29.98	31.37	32.82	34.35	35.96	37.45	39.25	41.15	43.14	45.22	47.52	49.82	52.23	54.76	57.41
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		164.33	164.46	164.70	165.07	165.55	166.17	166.92	167.82	168.85	170.05	171.40	172.92	174.61	176.48	178.54	165.59	170.66	175.93	181.43	187.17	201.61	207.83	214.33	221.10	228.15
Per unit Fixed Cost	Rs/kWh	2.73	2.60	2.61	2.61	2.62	2.62	2.63	2.64	2.66	2.68	2.69	2.72	2.74	2.77	2.80	2.83	2.62	2.70	2.79	2.87	2.97	3.19	3.29	3.40	3.50	3.61
Levallised tariff corresponding	to Useful li	fe																									

Levallised tariff corresponding	to Useful lif	ie																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.25	5.26	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.56	8.99	9.44	9.91	10.41	10.93	11.48	12.05	12.65	13.28	13.95	14.65	15.38	16.15	16.96
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.46	0.31	0.32	0.33	0.35	0.36	0.38	0.40	0.42	0.43	0.45	0.48	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.72	0.75	0.79	0.83	0.87	0.91
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.62	0.62	0.62	0.62	0.62
Total COG	Rs/kWh	10.97	7.86	8.13	8.41	8.70	9.01	9.34	9.69	10.06	10.44	10.85	11.28	11.73	12.21	12.71	13.24	13.55	14.18	14.84	15.53	16.25	17.14	17.94	18.77	19.65	20.57
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

 Variable Cost
 5.26

 Lewlised Tariff (Fixed)
 2.73

 Levellised Tariff
 7.99

 Rs/Unit

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

Years>	Unit
Capital Cost	611.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Oapitai Oost	011.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation		•																								
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net December December	De Letit	407.47	404.50	20.00	40.00	4 47	40.70	04.47	05.04	00.07	00.07	20.00	04.40	04.74	04.05	00.07	00.45	20.40	47.50	0.00	0.04	0.04	0.04	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised

7.37

Electricity Generation (Levellised) 6.04

Levellised benefit 0.12 Rs/Unit

		[Rice Straw and Juliflorated or a control of the co	a (plantation) based project] rate boiler - Haryana	with	Annexure-2.3B
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	611
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	427.70
			Total Equity Amount	Rs Lakh	183.30
		Debt Component	Loan Amount	Rs Lakh	427.70
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	183.30
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)	_	21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months %	4
	Fuel Related		Interest On Working Capital		10.50%
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4200.00
	•		During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	3975.30
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
	0		Biomass Price Escalation Factor	%	5.00%
	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
05			O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		377.70	396.59	416.42	437.24	459.10	482.05	506.16	531.46	558.04	585.94	615.24	646.00	678.30	712.21	747.82	785.21	824.48	865.70	908.98	954.43	1,002.16	1,052.26	######	1,160.12	1,218.13
Per unit Variable Cost	Rs/kWh		5.98	6.28	6.60	6.93	7.27	7.64	8.02	8.42	8.84	9.28	9.75	10.24	10.75	11.28	11.85	12.44	13.06	13.72	14.40	15.12	15.88	16.67	17.51	18.38	19.30
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		37.21	34.64	32.08	29.51	26.95	24.38	21.81	19.25	16.68	14.11	11.55	8.98	6.42	3.85	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		21.54	22.50	23.51	24.56	25.68	26.84	28.07	29.36	30.71	32.13	33.63	35.20	36.84	38.57	40.39	42.10	44.14	46.28	48.52	50.88	53.46	56.06	58.78	61.63	64.63
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		166.56	166.81	167.17	167.66	168.27	169.03	169.92	170.96	172.16	173.52	175.04	176.75	178.63	180.70	182.97	170.24	175.54	181.06	186.82	192.82	207.54	214.07	220.87	227.97	235.37
Per unit Fixed Cost	Rs/kWh	2.78	2.64	2.64	2.65	2.66	2.67	2.68	2.69	2.71	2.73	2.75	2.77	2.80	2.83	2.86	2.90	2.70	2.78	2.87	2.96	3.06	3.29	3.39	3.50	3.61	3.73
Levallised tariff corresponding	to Useful li	fe																									

Levallised tariff corresponding	jto Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.39	5.98	6.28	6.60	6.93	7.27	7.64	8.02	8.42	8.84	9.28	9.75	10.24	10.75	11.28	11.85	12.44	13.06	13.72	14.40	15.12	15.88	16.67	17.51	18.38	19.30
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.51	0.34	0.36	0.37	0.39	0.41	0.43	0.44	0.47	0.49	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.73	0.77	0.81	0.85	0.89	0.93	0.98	1.02
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.62	0.62	0.62	0.62	0.62
Total COG	Rs/kWh	12.17	8.62	8.93	9.25	9.58	9.94	10.32	10.71	11.13	11.57	12.03	12.52	13.04	13.58	14.15	14.75	15.14	15.84	16.58	17.36	18.18	19.17	20.06	21.01	21.99	23.03
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
V	F 00																										

 Variable Cost
 5.98

 Levllised Tariff (Fixed)
 2.78

 Levellised Tariff
 8.77
 Rs/Unit

Determination of Additional Depreciation for BIOMASS Projects Depreciation amount 90% Rock Depreciation rate 5 2894

Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	611.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 7.37
Electricity Generation (Levellised) 6.04

Levellised benefit 0.12 Rs/Unit

Vate	r Cooled Condense		a (plantation) based project] rate boiler - Maharashtra		Annexure-2.3C
S. Vo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	611
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	427.70
			Total Equity Amount	Rs Lakh	183.30
		Debt Component	Loan Amount	Rs Lakh	427.70
		Debt Component	Moratorium Period	years	0
2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	183.30
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
)3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months %	4
	Fuel Related		Interest On Working Capital		10.50%
	Assumptions	Heat Rate	After stabilization period During stabilization period	Kcal/kWh	4200.00
	-			Kcal/kWh	4200.00
			Base Price	Rs/T	4065.6
)4		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
5	Maintenance		O & M Expenses Escalation	%	3.84%
6	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		386.28	405.60	425.88	447.17	469.53	493.00	517.65	543.54	570.71	599.25	629.21	660.67	693.71	728.39	764.81	803.05	843.20	885.36	929.63	976.11	1,024.92	1,076.17	1,129.97	1,186.47	1,245.80
Per unit Variable Cost	Rs/kWh		6.12	6.43	6.75	7.08	7.44	7.81	8.20	8.61	9.04	9.49	9.97	10.47	10.99	11.54	12.12	12.72	13.36	14.03	14.73	15.47	16.24	17.05	17.90	18.80	19.74
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		37.21	34.64	32.08	29.51	26.95	24.38	21.81	19.25	16.68	14.11	11.55	8.98	6.42	3.85	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		21.96	22.94	23.97	25.05	26.18	27.38	28.63	29.95	31.33	32.78	34.31	35.91	37.60	39.36	41.22	42.97	45.05	47.24	49.53	51.94	54.57	57.22	60.00	62.92	65.98
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		166.98	167.25	167.63	168.14	168.78	169.56	170.48	171.55	172.78	174.17	175.73	177.46	179.38	181.49	183.80	171.11	176.45	182.02	187.83	193.88	208.65	215.23	222.10	229.26	236.72
Per unit Fixed Cost	Rs/kWh	2.79	2.65	2.65	2.66	2.66	2.67	2.69	2.70	2.72	2.74	2.76	2.78	2.81	2.84	2.88	2.91	2.71	2.80	2.88	2.98	3.07	3.31	3.41	3.52	3.63	3.75

Levallised tariff corresponding	to Useful life

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.60	6.12	6.43	6.75	7.08	7.44	7.81	8.20	8.61	9.04	9.49	9.97	10.47	10.99	11.54	12.12	12.72	13.36	14.03	14.73	15.47	16.24	17.05	17.90	18.80	19.74
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02			-	-		-	-	-	-	-
Int. on working capital	Rs/kWh	0.52	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.50	0.52	0.54	0.57	0.60	0.62	0.65	0.68	0.71	0.75	0.78	0.82	0.86	0.91	0.95	1.00	1.05
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.62	0.62	0.62	0.62	0.62
Total COG	Rs/kWh	12.39	8.77	9.08	9.40	9.75	10.11	10.50	10.90	11.33	11.78	12.25	12.75	13.28	13.83	14.42	15.03	15.43	16.16	16.91	17.71	18.54	19.54	20.46	21.42	22.43	23.49
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	6.12																										

Levellised Tariff 8.91 Rs/Unit

Determination of Additional Depreciation for BIOMASS Projects

Years>	Unit
Capital Cost	611.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

LevIlised Tariff (Fixed)

Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation				•				•				•					•				•					
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
T D C. I II' I	7.07																									

Tax Benefit Levellised 7.37

Electricity Generation (Levellised) 6.04

Electricity Generation (Levellised) 6.04

Levellised benefit 0.12 Rs/Unit

Nate	r Cooled Condense	r and using Travelling G	a (plantation) based project] rate boiler - Punjab	***************************************	Annexure-2.3D
S	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	611
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	427.70
			Total Equity Amount	Rs Lakh	183.30
		Debt Component	Loan Amount	Rs Lakh	427.70
		Debt Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	183.30
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
)3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period		
			+	Kcal/kWh	4200.00
		D:	Base Price GCV-Biomass	Rs/T	4158.00
)4		Biomass	Biomass Price Escalation	Kcal/kg %	3100.00 5.00%
	Onevetter C		Factor		
_	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
5			O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		395.06	414.81	435.55	457.33	480.20	504.21	529.42	555.89	583.68	612.87	643.51	675.69	709.47	744.95	782.19	821.30	862.37	905.49	950.76	998.30	1,048.21	1,100.62	1,155.65	1,213.44	1,274.11
Per unit Variable Cost	Rs/kWh		6.26	6.57	6.90	7.25	7.61	7.99	8.39	8.81	9.25	9.71	10.20	10.71	11.24	11.80	12.39	13.01	13.66	14.35	15.06	15.82	16.61	17.44	18.31	19.23	20.19
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		37.21	34.64	32.08	29.51	26.95	24.38	21.81	19.25	16.68	14.11	11.55	8.98	6.42	3.85	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		22.39	23.39	24.44	25.54	26.70	27.92	29.20	30.55	31.96	33.45	35.01	36.64	38.36	40.17	42.07	43.86	45.99	48.22	50.56	53.02	55.71	58.41	61.25	64.23	67.36
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		167.41	167.70	168.10	168.64	169.30	170.11	171.06	172.16	173.41	174.83	176.42	178.19	180.15	182.30	184.65	172.00	177.39	183.00	188.86	194.96	209.79	216.43	223.35	230.57	238.10
Per unit Fixed Cost	Rs/kWh	2.80	2.65	2.66	2.66	2.67	2.68	2.70	2.71	2.73	2.75	2.77	2.80	2.82	2.85	2.89	2.93	2.73	2.81	2.90	2.99	3.09	3.32	3.43	3.54	3.65	3.77

Levallised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.82	6.26	6.57	6.90	7.25	7.61	7.99	8.39	8.81	9.25	9.71	10.20	10.71	11.24	11.80	12.39	13.01	13.66	14.35	15.06	15.82	16.61	17.44	18.31	19.23	20.19
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.54	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.51	0.53	0.55	0.58	0.61	0.64	0.67	0.69	0.73	0.76	0.80	0.84	0.88	0.93	0.97	1.02	1.07
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.62	0.62	0.62	0.62	0.62
Total COG	Rs/kWh	12.62	8.91	9.23	9.56	9.92	10.29	10.68	11.10	11.54	12.00	12.48	12.99	13.53	14.10	14.69	15.32	15.74	16.47	17.25	18.06	18.91	19.93	20.87	21.85	22.88	23.96
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

Variable Cost Levlised Tariff (Fixed) Levellised Tariff 9.06

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

Years>	Unit
Capital Cost	611.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Capital Cost	611.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation			•	•	•		•	•	•			•		•	•	•	•	•	•	•	•	•	•	•		
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised Electricity Generation (Levellised)

6.04 0.12 Rs/Unit Levellised benefit

Vate	r Cooled Condense	and using Travelling G	a (plantation) based project] rate boiler - Rajasthan		Annexure-2.3E
S. Vo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	611
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	427.70
			Total Equity Amount	Rs Lakh	183.30
		Debt Component	Loan Amount	Rs Lakh	427.70
		Debt Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	183.30
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months %	4
	Fuel Related		Interest On Working Capital After stabilization period		10.50%
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4200.00
	-		 	Kcal/kWh	4200.00
			Base Price	Rs/T	3470.25
)4		Biomass	GCV-Biomass Biomass Price Escalation	Kcal/kg	3100.00
			Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
5	Maintenance		O & M Expenses Escalation	%	3.84%
6	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		329.72	346.20	363.51	381.69	400.77	420.81	441.85	463.94	487.14	511.50	537.07	563.93	592.12	621.73	652.81	685.46	719.73	755.71	793.50	833.18	874.83	918.58	964.50	1,012.73	1,063.37
Per unit Variable Cost	Rs/kWh		5.22	5.49	5.76	6.05	6.35	6.67	7.00	7.35	7.72	8.10	8.51	8.93	9.38	9.85	10.34	10.86	11.40	11.97	12.57	13.20	13.86	14.55	15.28	16.05	16.85
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		37.21	34.64	32.08	29.51	26.95	24.38	21.81	19.25	16.68	14.11	11.55	8.98	6.42	3.85	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.20	20.04	20.93	21.86	22.83	23.86	24.93	26.07	27.25	28.50	29.82	31.19	32.64	34.16	35.76	37.24	39.03	40.92	42.89	44.97	47.25	49.54	51.93	54.44	57.08
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		164.22	164.35	164.59	164.95	165.43	166.04	166.79	167.67	168.70	169.89	171.23	172.74	174.43	176.29	178.34	165.38	170.43	175.70	181.19	186.91	201.33	207.55	214.03	220.78	227.82
Per unit Fixed Cost	Rs/kWh	2.73	2.60	2.60	2.61	2.61	2.62	2.63	2.64	2.66	2.67	2.69	2.71	2.74	2.76	2.79	2.83	2.62	2.70	2.78	2.87	2.96	3.19	3.29	3.39	3.50	3.61
Levallised tariff corresponding	to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.19	5.22	5.49	5.76	6.05	6.35	6.67	7.00	7.35	7.72	8.10	8.51	8.93	9.38	9.85	10.34	10.86	11.40	11.97	12.57	13.20	13.86	14.55	15.28	16.05	16.85
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	-	-		-	-	-		-	-	-

0.45

0.49

10.80

0.47

0.49

11.22

0.49

0.49

11.67

0.52

0.49

12.15

0.54

0.49

12.64

0.57

0.49

13.17

0.59

0.49

13.48

0.62

0.49

14.10

0.65

0.49

14.76

0.68

0.49

15.44

0.71

0.49

16.16

0.75

0.62

17.05

0.78

0.62

17.84

0.62

18.67

Determination of Additional Depreciation for BIOMASS Projects

Rs/kWh

Rs/kWh

0.46

0.50

0.30

0.49

7.83

0.32

0.49

8.09

0.33

0.49

8.37

0.35

0.49

8.66

0.36

0.49

8.97

0.38

0.49

9.30

0.40

0.49

9.64

0.41

0.49

0.57

10.01

0.43

0.49

10.39

Years>	Unit
Capital Cost	611.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Int. on working capital

Capital Cost	611.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation							•	•	•	•		•		•	•	•	•	•	•	•	•	•	•		•	
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised

Electricity Generation (Levellised) 6.04

Levellised benefit 0.12 Rs/Unit

one product

7.37

0.90

0.62

20.46

0.15

0.86

0.62

19.54

0.16

Vate	r Cooled Condense		a (plantation) based project] rate boiler – Tamil Nadu		Annexure-2.3F
S. Vo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	611
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	427.70
			Total Equity Amount	Rs Lakh	183.30
		Debt Component	Loan Amount	Rs Lakh	427.70
		Debt Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	183.30
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
)3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	
			+		4200.00
14		Diamaga	Base Price GCV-Biomass	Rs/T Kcal/kg	3435.6 3100.00
J 4		Biomass	Biomass Price Escalation	%	5.00%
	Oneretie: 0		Factor		
5	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
5	Generation &		O & M Expenses Escalation	%	3.84%
)6	Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		326.42	342.74	359.88	377.88	396.77	416.61	437.44	459.31	482.28	506.39	531.71	558.30	586.21	615.52	646.30	678.61	712.54	748.17	785.58	824.86	866.10	909.40	954.87	1,002.62	1,052.75
Per unit Variable Cost	Rs/kWh		5.17	5.43	5.70	5.99	6.29	6.60	6.93	7.28	7.64	8.02	8.42	8.85	9.29	9.75	10.24	10.75	11.29	11.85	12.45	13.07	13.72	14.41	15.13	15.89	16.68
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		37.21	34.64	32.08	29.51	26.95	24.38	21.81	19.25	16.68	14.11	11.55	8.98	6.42	3.85	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.04	19.88	20.75	21.67	22.64	23.65	24.72	25.84	27.02	28.25	29.55	30.92	32.35	33.86	35.44	36.90	38.68	40.55	42.51	44.56	46.83	49.09	51.46	53.95	56.56
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		164.06	164.18	164.41	164.76	165.23	165.83	166.57	167.45	168.47	169.64	170.97	172.47	174.14	175.99	178.02	165.05	170.08	175.33	180.80	186.50	200.91	207.10	213.56	220.29	227.31
Per unit Fixed Cost	Rs/kWh	2.72	2.60	2.60	2.60	2.61	2.62	2.63	2.64	2.65	2.67	2.69	2.71	2.73	2.76	2.79	2.82	2.61	2.69	2.78	2.86	2.95	3.18	3.28	3.38	3.49	3.60
Levallised tariff corresponding	to Useful li	fe	•	•	-	•	-			-	•	•	-	•		•						-					
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
																											-

Levallised tariff corresponding	to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.11	5.17	5.43	5.70	5.99	6.29	6.60	6.93	7.28	7.64	8.02	8.42	8.85	9.29	9.75	10.24	10.75	11.29	11.85	12.45	13.07	13.72	14.41	15.13	15.89	16.68
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-		-	-	-	-	-
Int. on working capital	Rs/kWh	0.45	0.30	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.58	0.61	0.64	0.67	0.71	0.74	0.78	0.82	0.85	0.90
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.62	0.62	0.62	0.62	0.62
Total COG	Rs/kWh	10.83	7.77	8.03	8.31	8.60	8.90	9.23	9.57	9.93	10.31	10.71	11.13	11.58	12.05	12.54	13.06	13.37	13.98	14.63	15.31	16.02	16.91	17.69	18.51	19.38	20.28
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.17																								_	_	
Levilised Tariff (Fixed)	2.72	1																									

<u>Determination of Additional Depreciation</u> for BIOMASS Projects Depreciation amount 90%

7.89

1.00

7.37

0.96

0.89

0.82

0.65

0.55

0.51

Levellised Tariff

Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	611.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation				-																						
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Depm.	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.70	0.73	0.67	0.62	0.57	0.53	0.40	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	n 19	0.17	0.16	0.15

0.47

0.43

0.27

0.21

Electricity Generation (Levellised) 6.04 0.12 Rs/Unit

Applicable Discounting Factor

Tax Benefit Levellised

Levellised benefit

		[Rice Straw and Juliflor and using Travelling G	a (plantation) based project] rate boiler – Telangana	with	Annexure-2.3G
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	611
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	427.70
			Total Equity Amount	Rs Lakh	183.30
		Debt Component	Loan Amount	Rs Lakh	427.70
		Debt component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	183.30
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03	•		Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Related	<u> </u>	Interest On Working Capital	%	10.50%
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4200.00
	• • • •		During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	3492.3
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		331.81	348.40	365.82	384.11	403.32	423.48	444.66	466.89	490.24	514.75	540.48	567.51	595.88	625.68	656.96	689.81	724.30	760.52	798.54	838.47	880.39	924.41	970.63	1,019.16	1,070.12
Per unit Variable Cost	Rs/kWh		5.26	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.56	8.99	9.44	9.91	10.41	10.93	11.48	12.05	12.65	13.28	13.95	14.65	15.38	16.15	16.96
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		37.21	34.64	32.08	29.51	26.95	24.38	21.81	19.25	16.68	14.11	11.55	8.98	6.42	3.85	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.31	20.15	21.04	21.97	22.96	23.99	25.07	26.21	27.41	28.66	29.98	31.37	32.82	34.35	35.96	37.45	39.25	41.15	43.14	45.22	47.52	49.82	52.23	54.76	57.41
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		164.33	164.46	164.70	165.07	165.55	166.17	166.92	167.82	168.85	170.05	171.40	172.92	174.61	176.48	178.54	165.59	170.66	175.93	181.43	187.17	201.61	207.83	214.33	221.10	228.15
Per unit Fixed Cost	Rs/kWh	2.73	2.60	2.61	2.61	2.62	2.62	2.63	2.64	2.66	2.68	2.69	2.72	2.74	2.77	2.80	2.83	2.62	2.70	2.79	2.87	2.97	3.19	3.29	3.40	3.50	3.61

Levallised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.25	5.26	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.56	8.99	9.44	9.91	10.41	10.93	11.48	12.05	12.65	13.28	13.95	14.65	15.38	16.15	16.96
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.46	0.31	0.32	0.33	0.35	0.36	0.38	0.40	0.42	0.43	0.45	0.48	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.72	0.75	0.79	0.83	0.87	0.91
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.62	0.62	0.62	0.62	0.62
Total COG	Rs/kWh	10.97	7.86	8.13	8.41	8.70	9.01	9.34	9.69	10.06	10.44	10.85	11.28	11.73	12.21	12.71	13.24	13.55	14.18	14.84	15.53	16.25	17.14	17.94	18.77	19.65	20.57
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.26																										

 Variable Cost
 5.26

 Lewllised Tariff (Fixed)
 2.73

 Levellised Tariff
 7.99
 Rs/Unit

Determination of Additional Depreciation for BIOMASS Projects

Capital Cost	611.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation			•		•	•	•	•	•		•	•	•	•		•		•	•	•			•	•	•	
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 7.37
Electricity Generation (Levellised) 6.04

Levellised benefit 0.12 Rs/Unit

			a (plantation) based project] rate boiler – Uttar Pradesh	with	Annexure-2.3H
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	611
		Debt: Equity	Debt	%	70%
		. ,	Equity	%	30%
			Total Debt Amount	Rs Lakh	427.70
			Total Equity Amount	Rs Lakh	183.30
		Debt Component	Loan Amount	Rs Lakh	427.70
		Debt component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount Return on Equity (upto 20	Rs Lakh	183.30
		Equity Component	years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03	-		Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Related		Interest On Working Capital	% Kcal/kWh	10.50%
	Assumptions	Heat Rate	After stabilization period		4200.00
	-		During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	3553.2
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		337.60	354.48	372.20	390.81	410.35	430.87	452.41	475.03	498.78	523.72	549.91	577.41	606.28	636.59	668.42	701.84	736.93	773.78	812.47	853.09	895.75	940.53	987.56	1,036.94	1,088.78
Per unit Variable Cost	Rs/kWh		5.35	5.62	5.90	6.19	6.50	6.83	7.17	7.53	7.90	8.30	8.71	9.15	9.61	10.09	10.59	11.12	11.68	12.26	12.87	13.52	14.19	14.90	15.65	16.43	17.25
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		37.21	34.64	32.08	29.51	26.95	24.38	21.81	19.25	16.68	14.11	11.55	8.98	6.42	3.85	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.59	20.45	21.35	22.30	23.30	24.35	25.45	26.61	27.82	29.10	30.44	31.85	33.33	34.89	36.52	38.04	39.87	41.80	43.82	45.94	48.27	50.61	53.06	55.63	58.32
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		164.61	164.75	165.01	165.39	165.90	166.53	167.30	168.21	169.27	170.49	171.86	173.40	175.12	177.01	179.10	166.18	171.27	176.58	182.11	187.88	202.35	208.62	215.15	221.96	229.06
Per unit Fixed Cost	Rs/kWh	2.74	2.61	2.61	2.61	2.62	2.63	2.64	2.65	2.67	2.68	2.70	2.72	2.75	2.77	2.80	2.84	2.63	2.71	2.80	2.89	2.98	3.21	3.31	3.41	3.52	3.63

Levallised tariff corresponding to Useful life

Levaniseu tarin corresponding	to oserui ii	16																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.39	5.35	5.62	5.90	6.19	6.50	6.83	7.17	7.53	7.90	8.30	8.71	9.15	9.61	10.09	10.59	11.12	11.68	12.26	12.87	13.52	14.19	14.90	15.65	16.43	17.25
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	-		-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.47	0.31	0.32	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.73	0.76	0.80	0.84	0.88	0.92
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.62	0.62	0.62	0.62	0.62
Total COG	Rs/kWh	11.13	7.96	8.23	8.51	8.81	9.13	9.47	9.82	10.19	10.58	11.00	11.44	11.90	12.38	12.89	13.43	13.75	14.39	15.06	15.76	16.49	17.40	18.21	19.06	19.95	20.88
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	E DE																										

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

2.74

•	
Years>	Unit
Capital Cost	611.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Levlised Tariff (Fixed)

Levellised Tariff

Capital Cost	011.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation							•												•					•		
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised

7.37 6.04

Electricity Generation (Levellised) 6.04

Levellised benefit 0.12

			a (plantation) based project] rate boiler – Other States	with	Annexure-2.3I
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	611
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	427.70
			Total Equity Amount	Rs Lakh	183.30
		Debt Component	Loan Amount	Rs Lakh	427.70
	Sources of Fund		Moratorium Period Repayment Period(incld	years	0
02	oources or runa		Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	183.30
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors Biomass Stock	Months Months	1.5
		For Variable Charges	Interest On Working Capital	%	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	3734.85
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
05			O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		354.86	372.60	391.23	410.79	431.33	452.90	475.54	499.32	524.28	550.50	578.02	606.92	637.27	669.13	702.59	737.72	774.61	813.34	854.00	896.70	941.54	988.62	1,038.05	1,089.95	1,144.45
Per unit Variable Cost	Rs/kWh		5.62	5.90	6.20	6.51	6.83	7.18	7.53	7.91	8.31	8.72	9.16	9.62	10.10	10.60	11.13	11.69	12.27	12.89	13.53	14.21	14.92	15.66	16.45	17.27	18.13
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		37.21	34.64	32.08	29.51	26.95	24.38	21.81	19.25	16.68	14.11	11.55	8.98	6.42	3.85	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		20.43	21.33	22.28	23.28	24.32	25.42	26.58	27.79	29.07	30.41	31.81	33.29	34.84	36.47	38.19	39.79	41.71	43.73	45.84	48.06	50.51	52.95	55.52	58.21	61.04
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		165.45	165.64	165.94	166.37	166.92	167.60	168.43	169.40	170.52	171.79	173.23	174.84	176.63	178.60	180.77	167.93	173.11	178.51	184.14	190.01	204.59	210.97	217.62	224.55	231.78
Per unit Fixed Cost	Rs/kWh	2.76	2.62	2.62	2.63	2.64	2.64	2.66	2.67	2.68	2.70	2.72	2.74	2.77	2.80	2.83	2.86	2.66	2.74	2.83	2.92	3.01	3.24	3.34	3.45	3.56	3.67

Levallised tariff corresponding	a to	Useful	life
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Ecvamoca tariii corresponding	, 10 000141111																										
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.82	5.62	5.90	6.20	6.51	6.83	7.18	7.53	7.91	8.31	8.72	9.16	9.62	10.10	10.60	11.13	11.69	12.27	12.89	13.53	14.21	14.92	15.66	16.45	17.27	18.13
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-	-	-	-	-	-	
Int. on working capital	Rs/kWh	0.49	0.32	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.58	0.61	0.63	0.66	0.69	0.73	0.76	0.80	0.84	0.88	0.92	0.97
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.62	0.62	0.62	0.62	0.62
Total COG	Rs/kWh	11.58	8.24	8.53	8.83	9.14	9.48	9.83	10.20	10.60	11.01	11.44	11.90	12.39	12.90	13.43	14.00	14.35	15.02	15.71	16.45	17.22	18.16	19.01	19.89	20.83	21.80
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.62																										

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

2.76

Years>	Unit
Capital Cost	611.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Levlised Tariff (Fixed)

Levellised Tariff

Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 7.37
Electricity Generation (Levellised) 6.04

Levellised benefit 0.12 Rs/Unit

		[Rice Straw and Juliflor sing Travelling Grate- A	a (plantation) based project ndhra Pradesh] with Air	Annexure-2.4A
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Contraction		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	652.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	456.40
			Total Equity Amount	Rs Lakh	195.60
		Debt Component	Loan Amount	Rs Lakh	456.40
02	Sources of Fund	·	Moratorium Period Repayment Period(incld	years	15
			Moratorium) Interest Rate	%	9.00%
			Equity amount	Rs Lakh	195.60
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
		F F:	O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare	1	15.00%
			Receivables for Debtors Biomass Stock	Months Months	1.5
		For Variable Charges	Interest On Working Capital	%	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	3492.30
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
05			O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		331.81	348.40	365.82	384.11	403.32	423.48	444.66	466.89	490.24	514.75	540.48	567.51	595.88	625.68	656.96	689.81	724.30	760.52	798.54	838.47	880.39	924.41	970.63	1,019.16	1,070.12
Per unit Variable Cost	Rs/kWh		5.38	5.65	5.93	6.22	6.54	6.86	7.21	7.57	7.94	8.34	8.76	9.20	9.66	10.14	10.65	11.18	11.74	12.32	12.94	13.59	14.27	14.98	15.73	16.51	17.34
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		39.71	36.97	34.23	31.49	28.75	26.01	23.28	20.54	17.80	15.06	12.32	9.58	6.85	4.11	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.39	20.24	21.12	22.05	23.03	24.06	25.14	26.28	27.47	28.73	30.05	31.43	32.88	34.41	36.02	37.49	39.29	41.19	43.18	45.26	47.57	49.87	52.28	54.80	57.46
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		170.91	170.87	170.94	171.12	171.44	171.88	172.46	173.18	174.04	175.06	176.24	177.58	179.10	180.80	182.68	168.54	173.60	178.88	184.38	190.11	205.12	211.35	217.84	224.61	231.67
Per unit Fixed Cost	Rs/kWh	2.87	2.77	2.77	2.77	2.77	2.78	2.79	2.79	2.81	2.82	2.84	2.86	2.88	2.90	2.93	2.96	2.73	2.81	2.90	2.99	3.08	3.32	3.42	3.53	3.64	3.75
evallised tariff corresponding	a to Heoful li	fo	•		•								•			•		•					•			•	

Levallised tariff corresponding	g to Useful li	ife																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.43	5.38	5.65	5.93	6.22	6.54	6.86	7.21	7.57	7.94	8.34	8.76	9.20	9.66	10.14	10.65	11.18	11.74	12.32	12.94	13.59	14.27	14.98	15.73	16.51	17.34
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.44	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.32	0.64	0.60	0.55	0.51	0.47	0.42	0.38	0.33	0.29	0.24	0.20	0.16	0.11	0.07	0.02			-		-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.47	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.73	0.77	0.81	0.85	0.89	0.93
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	11.31	8.15	8.41	8.70	9.00	9.31	9.65	10.00	10.37	10.76	11.18	11.61	12.07	12.56	13.07	13.61	13.91	14.55	15.22	15.93	16.67	17.59	18.40	19.26	20.15	21.09
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.38																										

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

2.87

Levlised Tariff (Fixed)

90%																									
5.28%																									
40%																									
20%																									
17.472%																									
34.944%																									
652.00																									
Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00
MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Rs/Unit	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
	5.28% 40% 20% 17.472% 34.944% 652.00 Unit % Rs Lakh % % Rs Lakh Rs Lakh Rs Lakh	5.28% 40% 20% 17.472% 34.944% 652.00 Unit % 2.64% Rs Lakh 17.21 % 30.00% % 70.0% Rs Lakh 195.60 Rs Lakh 198.60 Rs Lakh 178.39 Rs Lakh 62.34 MU 3.09	5.28% 40% 20% 17.472% 34.944% 652.00 Unit 1 2 % 2.64% 5.28% Rs Lakh 17.21 34.43 % 100% 70% % 30.00% 35.0% % 70.0% 35.0% Rs Lakh 195.60 228.20 Rs Lakh 178.39 193.77 MU 3.09 6.17	5.28% 40% 20% 5.28% 5.28% 65.200 Unit 1 2 3 3 4.43 4.43 5.28% 5.28% 65.20% 65.2	5.28% 40% 20% 17.472% 34.944% 652.00 Unit 1 2 3 4 % 2.64% 5.28% 5.28% 5.28% Rs Lakh 17.21 34.43 34.43 34.43 % 100% 70% 35% 21% % 30.00% 35.00% 14.00% 8.40% % 70.0% 35.0% 21.0% 12.6% Rs Lakh 195.60 228.20 91.28 54.77 Rs Lakh 178.39 193.77 56.85 20.34 MU 3.09 6.17 6.17 6.17	5.28% 40% 20% 17.472% 34.944% 652.00 Unit 1 2 3 4 5 5.28% 5.28% 5.28% 5.28% 8.24% 17.21 34.43 34	5.28% 40% 20% 17.472% 34.944% 652.00 Unit 1 2 3 4 5 6 8 Rs Lakh 17.21 34.43 3	5.28% 40% 20% 17.472% 34.944% 652.00 Unit 1 2 3 4 5 6 7 % 2.64% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% Rs Lakh 17.21 34.43 34.43 34.43 34.43 34.43 34.43 34.43 % 100% 70% 35% 21% 13% 8% 5% % 30.00% 35.00% 14.00% 8.40% 5.04% 3.02% 1.81% % 70.0% 35.0% 21.0% 12.6% 7.6% 4.5% 2.7% Rs Lakh 195.60 228.20 91.28 54.77 32.86 19.72 11.83 Rs Lakh 178.39 193.77 56.85 20.34 -1.56 -14.71 -2.260 Rs Lakh 62.34 67.71 19.87 7.11 -0.55 -5.14 7.90 MU 3.09 6.17 6.17 6.17 6.17 6.17 6.17	5.28% 40% 20% 17.472% 34.944% 652.00 Unit 1 2 3 4 5 6 7 8 9 5.28%	5.28% 40% 20% 17.472% 34.944% 652.00 Unit 1 2 3 4 5 6 7 8 9 9	5.28% 40% 20% 17.472% 34.944% 652.00 Unit 1 2 3 4 5 6 7 8 9 10 9.25	5.28% 40% 20% 17.472% 34.944% 652.00 Unit 1 2 3 4 5 6 7 8 9 10 11 9% 2.64% 5.28% 5.2	5.28% 40% 20% 17.472% 34.944% 652.00 Unit 1 2 3 4 5 6 7 8 9 10 11 12 % 2.64% 5.28%	5.28% 40% 20% 17.472% 34.944% 652.00 Unit 1 2 3 4 5 6 7 8 9 10 11 12 13 8 8 10 10 11 12 13 14 14 11.49 15 15 15 15 15 15 15 15 15 15 15 15 15	5.28% 40% 20% 17.472% 34.944% 652.00 Unit 1 2 3 4 5 6 7 8 9 10 11 12 13 14 % 2.64% 5.28%	5.28% 40% 20% 17.472% 34.944% 652.00 Unit 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 % 2.64% 5.28% 5.	5.28% 40% 20% 17.472% 34.944% 652.00 Unit 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 9 10 10 11 12 13 14 15 16 16 17 17.21 34.43 3	5.28% 40% 20% 17.472% 34.944% 652.00 Unit 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 White 1 2 5.28% 5.	5.28% 40% 20% 17.472% 34.944% 652.00 Unit 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 14 15 16 17 18 18 1.00 10 11 1.00 10 10 11 1.00 10 11 1.00 10 11 1.00 10 11 1.00 10 10 11 1.00 10 11 11 1.00 10 10 11 11 12 13 14 15 16 17 18 18 1.00 10 11 11 12 13 14 15 16 17 18 18 1.00 10 11 11 11 12 13 14 15 16 17 18 18 11 18 18 18 18 18 18 18 18 18 18	5.28% 40% 20% 17.472% 34.944% 652.00 **Milk*** 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 **Second	5.28% 40% 20% 17.472% 34.944% 652.00 Unit 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 **Secondary Construction of Co	5.28% 40% 20% 17.472% 34.944% 652.00 Unit 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	5.28% 40% 20% 17.472% 34.44% 650.200	5.28% 40% 20% 17.472% 34.94% 652.00 White 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 % 2.64% 5.28%	5.28% 40% 20% 17.472% 34.94% 652.00 White 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 % 2.64% 5.28% 5.

Tax Benefit Levellised 7.86
Electricity Generation (Levellised) 5.91

Levellised benefit 0.13 Rs/Unit

		[Rice Straw and Juliflora sing Travelling Grate- Ha	(plantation) based project] Iryana	with Air	Annexure-2.4B
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	652.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	456.40
			Total Equity Amount	Rs Lakh	195.60
		Debt Component	Loan Amount	Rs Lakh	456.40
	Sources of Fund	·	Moratorium Period Repayment Period(incld	years	0
02	oources or runa		Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	195.60
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare	N4	15.00%
			Receivables for Debtors Biomass Stock	Months Months	1.5
		For Variable Charges	Interest On Working Capital	%	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	3975.3
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
05			O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

MW					-	J	ь	- /	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Rs. Lakh		377.70	396.59	416.42	437.24	459.10	482.05	506.16	531.46	558.04	585.94	615.24	646.00	678.30	712.21	747.82	785.21	824.48	865.70	908.98	954.43	1,002.16	1,052.26	1,104.88	1,160.12	1,218.13
Rs/kWh		6.12	6.43	6.75	7.09	7.44	7.81	8.20	8.61	9.04	9.49	9.97	10.47	10.99	11.54	12.12	12.72	13.36	14.03	14.73	15.47	16.24	17.05	17.90	18.80	19.74
Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Rs Lakh		39.71	36.97	34.23	31.49	28.75	26.01	23.28	20.54	17.80	15.06	12.32	9.58	6.85	4.11	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rs Lakh		21.63	22.59	23.59	24.64	25.75	26.92	28.14	29.43	30.78	32.20	33.69	35.26	36.90	38.63	40.45	42.14	44.18	46.32	48.56	50.92	53.51	56.10	58.82	61.68	64.67
Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Rs Lakh		173.15	173.22	173.40	173.72	174.16	174.74	175.46	176.33	177.35	178.53	179.88	181.41	183.12	185.02	187.11	173.19	178.49	184.01	189.76	195.77	211.06	217.58	224.39	231.48	238.88
Rs/kWh	2.93	2.81	2.81	2.81	2.81	2.82	2.83	2.84	2.86	2.87	2.89	2.91	2.94	2.97	3.00	3.03	2.81	2.89	2.98	3.07	3.17	3.42	3.53	3.64	3.75	3.87
Rs Rs Rs Rs	Unit s. Lakh s/s/kWh Unit s Lakh	Unit Year-> s. Lakh S/kWh Unit Year-> s Lakh	Unit Year> 1 s. Lakh 377.70 s/kWh 6.12 Unit Year> 1 s Lakh 48.20 s Lakh 39.71 s Lakh 21.63 s Lakh 21.63 s Lakh 33.18 s Lakh 173.15 s/kWh 2.93 2.81	Unit Year→> 1 2 s. Lakh 377.70 396.59 s/kWh 6.12 6.43 Unit Year→> 1 2 s Lakh 48.20 50.05 s Lakh 30.43 30.43 s Lakh 39.71 36.97 s Lakh 21.63 22.59 s Lakh 33.18 33.18 s Lakh 173.15 173.22 s/kWh 2.93 2.81 2.81	Unit Year→ 1 2 3 s. Lakh 377.70 396.59 416.42 s/kWh 6.12 6.43 6.75 Unit Year→ 1 2 3 s Lakh 48.20 50.05 51.98 s Lakh 30.43 30.43 30.43 s Lakh 39.71 36.97 34.23 s Lakh 21.63 22.59 23.59 s Lakh 33.18 33.18 33.18 s Lakh 173.15 173.22 173.40 s/kWh 2.93 2.81 2.81 2.81	Unit Year→ 1 2 3 4 s. Lakh 377.70 396.59 416.42 437.24 s/kWh 6.12 6.43 6.75 7.09 Unit Year→> 1 2 3 4 s Lakh 48.20 50.05 51.98 53.97 s Lakh 30.43 30.43 30.43 30.43 s Lakh 39.71 36.97 34.23 31.49 s Lakh 21.63 22.59 23.59 24.64 s Lakh 33.18 33.18 33.18 33.18 33.18 33.18 33.18 33.18 33.18 2.81 2.81 2.81 2.81 2.81 2.81 2.81	Unit Year→ 1 2 3 4 5 s. Lakh 377.70 396.59 416.42 437.24 459.10 s/kWh 6.12 6.43 6.75 7.09 7.44 Unit Year→ 1 2 3 4 5 s Lakh 48.20 50.05 51.98 53.97 56.04 s Lakh 30.43 30.43 30.43 30.43 30.43 30.43 s Lakh 39.71 36.97 34.23 31.49 28.75 s Lakh 21.63 22.59 23.59 24.64 25.75 s Lakh 33.18 33.18 33.18 33.18 33.18 33.18 33.18 33.18 33.18 33.18 2.81 2.81 2.81 2.81 2.82	Unit Year→ 1 2 3 4 5 6 s. Lakh 377.70 396.59 416.42 437.24 459.10 482.05 s/kWh 6.12 6.43 6.75 7.09 7.44 7.81 Unit Year→ 1 2 3 4 5 6 s Lakh 48.20 50.05 51.98 53.97 56.04 58.20 s Lakh 30.43 30.43 30.43 30.43 30.43 30.43 30.43 s Lakh 39.71 36.97 34.23 31.49 28.75 26.01 s Lakh 21.63 22.59 23.59 24.64 25.75 26.92 s Lakh 33.18 33.18 33.18 33.18 33.18 33.18 33.18 s Lakh 173.15 173.22 173.40 173.72 174.16 174.74 s/kWh 2.93 2.81 2.81 2.81 2.81 2.82 2.83	Unit Year→ 1 2 3 4 5 6 7 s. Lakh 377.70 396.59 416.42 437.24 459.10 482.05 506.16 s/kWh 6.12 6.43 6.75 7.09 7.44 7.81 8.20 Unit Year→ 1 2 3 4 5 6 7 s Lakh 48.20 50.05 51.98 53.97 56.04 58.20 60.43 s Lakh 30.43 28.75 26.01 23.28 28.8 Lakh 21.63 22.59 23.59 24.64 25.75 26.92 28.14 28.1 33.18 33.18 33.18 33.18 33.18<	Unit Year→ 1 2 3 4 5 6 7 8 s. Lakh 377.70 396.59 416.42 437.24 459.10 482.05 506.16 531.46 s/s/Wh 6.12 6.43 6.75 7.09 7.44 7.81 8.20 8.61 Unit Year→ 1 2 3 4 5 6 7 8 s Lakh 48.20 50.05 51.98 53.97 56.04 58.20 60.43 62.75 s Lakh 30.43	Unit Year→ 1 2 3 4 5 6 7 8 9 s. Lakh 377.70 396.59 416.42 437.24 459.10 482.05 506.16 531.46 558.04 s/s/Wh 6.12 6.43 6.75 7.09 7.44 7.81 8.20 8.61 9.04 Unit Year→ 1 2 3 4 5 6 7 8 9 s Lakh 48.20 50.05 51.98 53.97 56.04 58.20 60.43 62.75 56.16 s Lakh 30.43	Unit Year→ 1 2 3 4 5 6 7 8 9 10 s. Lakh 377.70 396.59 416.42 437.24 459.10 482.05 506.16 531.46 558.04 585.94 s/s/Wh 6.12 6.43 6.75 7.09 7.44 7.81 8.20 8.61 9.04 9.49 Unit Year→ 1 2 3 4 5 6 7 8 9 10 S Lakh 48.20 50.05 51.98 53.97 56.04 58.20 60.43 62.75 65.16 67.66 s Lakh 30.43 3	Unit Year→ 1 2 3 4 5 6 7 8 9 10 11 s. Lakh 377.70 396.59 416.42 437.24 459.10 482.05 506.16 531.46 558.04 585.94 615.24 s/s/Wh 6.12 6.43 6.75 7.09 7.44 7.81 8.20 8.61 9.49 9.97 Unit Year→ 1 2 3 4 5 6 7 8 9 10 11 s Lakh 48.20 50.05 51.98 53.97 56.04 58.20 60.43 62.75 65.66 70.26 s Lakh 30.43<	Unit Year→ 1 2 3 4 5 6 7 8 9 10 11 12 s. Lakh 377.70 396.59 416.42 437.24 459.10 482.05 506.16 531.46 558.04 585.94 615.24 646.00 s/kWh 6.12 6.43 6.75 7.09 7.44 7.81 8.20 8.61 9.04 9.49 9.97 10.47 Unit Year→ 1 2 3 4 5 6 7 8 9 10 11 12 s Lakh 48.20 50.05 51.98 53.97 56.04 58.20 60.43 62.75 66.16 67.66 70.26 72.96 s Lakh 30.43	Unit Year→ 1 2 3 4 5 6 7 8 9 10 11 12 13 s. Lakh 377.70 396.59 416.42 437.24 459.10 482.05 506.16 531.46 558.04 585.94 615.24 646.00 678.30 s/k/Wh 6.12 6.43 6.75 7.09 7.44 7.81 8.20 8.61 9.04 9.99 10.47 10.99 Unit Year→ 1 2 3 4 5 6 7 8 9 10 11 12 13 s Lakh 48.20 50.05 51.98 53.97 56.04 58.20 60.43 62.75 65.16 67.66 70.26 72.96 75.76 s Lakh 30.43 30.43 30.43 30.43 30.43 30.43 30.43 30.43 30.43 30.43 30.43 30.43 30.43 30.43 30.43 30.43	Name	Unit Year→ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 s. Lakh 377.70 396.59 416.42 437.24 459.10 482.05 506.16 531.46 558.04 585.94 615.24 646.00 678.30 712.21 747.82 s/kWh 6.12 6.43 6.75 7.09 7.44 7.81 8.20 8.61 9.49 9.97 10.47 10.99 11.54 12.12 Unit Year→ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 s Lakh 48.20 50.05 51.98 53.97 56.04 58.20 60.43 62.75 66.16 67.66 70.26 72.96 75.76 78.67 81.69 s Lakh 30.43 30.43 30.43 30.43 30.43 30.43 30.4	Unit Year→ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 s. Lakh 377.70 396.59 416.42 437.24 459.10 482.05 506.16 531.46 558.94 615.24 646.00 678.30 712.21 747.82 785.21 s/kWh 6.12 6.43 6.75 7.09 7.44 7.81 8.20 8.61 9.49 9.97 10.47 10.99 11.54 12.2 12.72 11.22 12.72 10.01 11 12 13 14 15 16 6.63 6.75 7.09 7.44 7.81 8.20 8.61 9.49 9.97 10.47 10.99 11.54 12.21 12.72 12.72 12.72 12.72 12.72 12.72 12.72 16.75 16.63 6.75 8.9 10 11 12 13 14 15.5 16 6.63	Name	The box The	The border The	Character Char	The box The	The box The	The border The	The black The

Levellised tariff corresponding	to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.60	6.12	6.43	6.75	7.09	7.44	7.81	8.20	8.61	9.04	9.49	9.97	10.47	10.99	11.54	12.12	12.72	13.36	14.03	14.73	15.47	16.24	17.05	17.90	18.80	19.74
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.44	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.32	0.64	0.60	0.55	0.51	0.47	0.42	0.38	0.33	0.29	0.24	0.20	0.16	0.11	0.07	0.02	-	-	-		-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.53	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.68	0.72	0.75	0.79	0.83	0.87	0.91	0.95	1.00	1.05
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	12.53	8.93	9.23	9.56	9.90	10.26	10.64	11.04	11.47	11.92	12.39	12.88	13.41	13.96	14.54	15.15	15.53	16.25	17.01	17.80	18.64	19.66	20.58	21.54	22.55	23.61
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

 Variable Cost
 6.12

 Levilised Tariff (Fixed)
 2.93

 Levellised Tariff
 9.05
 Rs/Unit

Determination of Additional Depreciation for BIOMASS Projects Depreciation amount 90%

Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	652.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation					•		•			•			•							•		•			-	
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.06	0.80	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 7.86
Electricity Generation (Levellised) 5.91

Levellised benefit 0.13 Rs/Unit

		ising Travelling Grate- M	a (plantation) based project aharashtra	J With Air	Annexure-2.4C
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	652.00
		Debt: Equity	Debt	%	70%
		1. 7	Equity	%	30%
			Total Debt Amount	Rs Lakh	456.40
			Total Equity Amount	Rs Lakh	195.60
		Debt Component	Loan Amount	Rs Lakh	456.40
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	195.60
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03	-		Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Related		Interest On Working Capital	% Kaal/k/Mb	10.50%
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4200.00
	-		During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	4065.6
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
)5	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		386.28	405.60	425.88	447.17	469.53	493.00	517.65	543.54	570.71	599.25	629.21	660.67	693.71	728.39	764.81	803.05	843.20	885.36	929.63	976.11	1,024.92	1,076.17	1,129.97	1,186.47	1,245.80
Per unit Variable Cost	Rs/kWh		6.26	6.57	6.90	7.25	7.61	7.99	8.39	8.81	9.25	9.71	10.20	10.71	11.24	11.80	12.39	13.01	13.66	14.35	15.06	15.82	16.61	17.44	18.31	19.23	20.19
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		39.71	36.97	34.23	31.49	28.75	26.01	23.28	20.54	17.80	15.06	12.32	9.58	6.85	4.11	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		22.05	23.02	24.05	25.13	26.26	27.45	28.70	30.02	31.40	32.85	34.37	35.97	37.65	39.42	41.27	43.01	45.09	47.28	49.57	51.98	54.62	57.27	60.05	62.96	66.02
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		173.57	173.65	173.86	174.20	174.67	175.27	176.02	176.91	177.97	179.18	180.56	182.12	183.87	185.81	187.94	174.06	179.40	184.97	190.77	196.82	212.17	218.75	225.61	232.77	240.23
Per unit Fixed Cost	Rs/kWh	2.94	2.81	2.81	2.82	2.82	2.83	2.84	2.85	2.87	2.88	2.90	2.93	2.95	2.98	3.01	3.05	2.82	2.91	3.00	3.09	3.19	3.44	3.54	3.66	3.77	3.89

Levellised tariff corresponding to Useful life

Levellised tariff corresponding	j to osetui ii	ie																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.82	6.26	6.57	6.90	7.25	7.61	7.99	8.39	8.81	9.25	9.71	10.20	10.71	11.24	11.80	12.39	13.01	13.66	14.35	15.06	15.82	16.61	17.44	18.31	19.23	20.19
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.44	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.32	0.64	0.60	0.55	0.51	0.47	0.42	0.38	0.33	0.29	0.24	0.20	0.16	0.11	0.07	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.54	0.36	0.37	0.39	0.41	0.43	0.44	0.47	0.49	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.73	0.77	0.80	0.84	0.89	0.93	0.97	1.02	1.07
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	12.76	9.07	9.39	9.72	10.07	10.44	10.83	11.24	11.67	12.13	12.61	13.12	13.66	14.22	14.81	15.44	15.83	16.57	17.34	18.16	19.01	20.05	20.98	21.97	23.00	24.08
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	6.26					-					-	•	-			-			-		-			-			

Determination of Additional Depreciation for BIOMASS Projects

Depreciation amount 90%

2.94

Book Depreciation rate	5.28%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17.472%
Income Tax (Normal Rates)	34.944%
Capital Cost	652.00
Years>	Unit
DI: Di-ti	0/

Levlised Tariff (Fixed)

Levellised Tariff

Capital Cost	652.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation								•			•								•	•	•	•	•			
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised
Electricity Generation (Levellised)

5.91

evellised benefit 0.13 Rs/Unit

		IRICE Straw and Julifior sing Travelling Grate- P	a (plantation) based project unjab	J With Air	Annexure-2.4D
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	652.00
		Debt: Equity	Debt	%	70%
		' '	Equity	%	30%
			Total Debt Amount	Rs Lakh	456.40
			Total Equity Amount	Rs Lakh	195.60
		Debt Component	Loan Amount	Rs Lakh	456.40
	0	Bost Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount Return on Equity (upto 20	Rs Lakh	195.60
		Equity Component	years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	%	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	4158.00
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		395.06	414.81	435.55	457.33	480.20	504.21	529.42	555.89	583.68	612.87	643.51	675.69	709.47	744.95	782.19	821.30	862.37	905.49	950.76	998.30	1,048.21	1,100.62	1,155.65	1,213.44	1,274.11
Per unit Variable Cost	Rs/kWh		6.40	6.72	7.06	7.41	7.78	8.17	8.58	9.01	9.46	9.93	10.43	10.95	11.50	12.07	12.67	13.31	13.97	14.67	15.41	16.18	16.99	17.83	18.73	19.66	20.65
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		39.71	36.97	34.23	31.49	28.75	26.01	23.28	20.54	17.80	15.06	12.32	9.58	6.85	4.11	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		22.48	23.47	24.52	25.62	26.78	28.00	29.28	30.62	32.03	33.51	35.07	36.70	38.42	40.23	42.12	43.90	46.03	48.26	50.60	53.06	55.75	58.46	61.30	64.28	67.41
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		173.99	174.10	174.34	174.70	175.19	175.82	176.59	177.52	178.60	179.84	181.26	182.86	184.64	186.61	188.79	174.95	180.33	185.95	191.80	197.91	213.30	219.94	226.86	234.08	241.61
Per unit Fixed Cost	Rs/kWh	2.95	2.82	2.82	2.82	2.83	2.84	2.85	2.86	2.88	2.89	2.91	2.94	2.96	2.99	3.02	3.06	2.83	2.92	3.01	3.11	3.21	3.46	3.56	3.68	3.79	3.92
Levellised tariff corresponding	to Useful li	fe																									

Levellised tariff corresponding	to Useful lit	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	10.04	6.40	6.72	7.06	7.41	7.78	8.17	8.58	9.01	9.46	9.93	10.43	10.95	11.50	12.07	12.67	13.31	13.97	14.67	15.41	16.18	16.99	17.83	18.73	19.66	20.65
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.44	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.32	0.64	0.60	0.55	0.51	0.47	0.42	0.38	0.33	0.29	0.24	0.20	0.16	0.11	0.07	0.02			-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.55	0.36	0.38	0.40	0.42	0.43	0.45	0.47	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.75	0.78	0.82	0.86	0.90	0.95	0.99	1.04	1.09
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	12.99	9.22	9.54	9.88	10.24	10.62	11.02	11.44	11.88	12.35	12.85	13.36	13.91	14.49	15.10	15.73	16.14	16.90	17.69	18.51	19.38	20.44	21.40	22.40	23.46	24.56
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

Variable Cost 6.40 Levlised Tariff (Fixed) 2.95 Levellised Tariff 9.35

Book Depreciation rate

Energy generation

Discounting Factor

Per unit benefit

Determination of Additional Depreciation for BIOMASS Projects 90% Depreciation amount

5.28%

2.02

1.00

1.00

6.17

1.10

0.92

6.17

0.32

0.85

6.17

0.12

0.79

0.82

6.17

-0.01

0.73

6.17

-0.08

0.67

0.70

6.17

-0.13

0.62

0.65

6.17

-0.15

0.57

6.17

-0.17

0.53

0.55

6.17

-0.18

0.49

Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	652.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Depm.	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00

6.17

-0.19

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6.17

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0.15

Applicable Discounting Factor Tax Benefit Levellised

Electricity Generation (Levellised) 0.13 Rs/Unit Levellised benefit

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		sing Travelling Grate- R	a (plantation) based project ajasthan	J With Air	Annexure-2.4E
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	652.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	456.40
			Total Equity Amount	Rs Lakh	195.60
		Debt Component	Loan Amount	Rs Lakh	456.40
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	195.60
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03	-		Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period		
	Assumptions	Heat Rate		Kcal/kWh	4200.00
	-		During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	3470.25
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
)5	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		329.72	346.20	363.51	381.69	400.77	420.81	441.85	463.94	487.14	511.50	537.07	563.93	592.12	621.73	652.81	685.46	719.73	755.71	793.50	833.18	874.83	918.58	964.50	1,012.73	1,063.37
Per unit Variable Cost	Rs/kWh		5.34	5.61	5.89	6.18	6.49	6.82	7.16	7.52	7.89	8.29	8.70	9.14	9.59	10.07	10.58	11.11	11.66	12.25	12.86	13.50	14.18	14.88	15.63	16.41	17.23
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		39.71	36.97	34.23	31.49	28.75	26.01	23.28	20.54	17.80	15.06	12.32	9.58	6.85	4.11	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.29	20.13	21.01	21.94	22.91	23.93	25.01	26.14	27.32	28.57	29.88	31.25	32.70	34.22	35.81	37.28	39.07	40.95	42.93	45.00	47.30	49.58	51.98	54.49	57.13
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		170.81	170.76	170.82	171.01	171.31	171.75	172.32	173.03	173.89	174.90	176.07	177.41	178.92	180.60	182.48	168.32	173.38	178.64	184.13	189.85	204.85	211.06	217.54	224.30	231.34
Per unit Fixed Cost	Rs/kWh	2.87	2.77	2.77	2.77	2.77	2.78	2.78	2.79	2.80	2.82	2.83	2.85	2.87	2.90	2.93	2.96	2.73	2.81	2.89	2.98	3.08	3.32	3.42	3.53	3.63	3.75

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.38	5.34	5.61	5.89	6.18	6.49	6.82	7.16	7.52	7.89	8.29	8.70	9.14	9.59	10.07	10.58	11.11	11.66	12.25	12.86	13.50	14.18	14.88	15.63	16.41	17.23
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.44	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.32	0.64	0.60	0.55	0.51	0.47	0.42	0.38	0.33	0.29	0.24	0.20	0.16	0.11	0.07	0.02		-			-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.47	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.42	0.44	0.46	0.48	0.51	0.53	0.55	0.58	0.60	0.63	0.66	0.70	0.73	0.77	0.80	0.84	0.88	0.93
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	11.25	8.11	8.38	8.66	8.96	9.27	9.60	9.95	10.32	10.71	11.12	11.56	12.01	12.49	13.00	13.54	13.83	14.47	15.14	15.84	16.58	17.50	18.30	19.15	20.04	20.98
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.34																										

 LevIlised Tariff (Fixed)
 2.87

 LeveIlised Tariff
 8.21
 Rs/Unit

Determination of Additional Depreciation for BIOMASS Projects

MU

0.13 Rs/Unit

Voars	Unit
Capital Cost	652.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Energy generation

Levellised benefit

Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00

6.17

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2.02 Per unit benefit Rs/Unit 1.10 0.32 0.12 -0.01 -0.08 -0.13 Discounting Factor
Applicable Discounting Factor 0.79 1.00 0.92 0.85 0.73 0.67 0.62 1.00 0.89 0.82 0.70 0.65 Tax Benefit Levellised 7.86 Electricity Generation (Levellised) 5.91

6.17

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Cool	iass Power Projects ed Condenser and u	IRICE Straw and Julifior sing Travelling Grate- T	a (plantation) based project amil Nadu	J With Air	Annexure-2.4F
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	652.00
		Debt: Equity	Debt	%	70%
		1. 7	Equity	%	30%
			Total Debt Amount	Rs Lakh	456.40
			Total Equity Amount	Rs Lakh	195.60
		Debt Component	Loan Amount	Rs Lakh	456.40
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	195.60
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors Biomass Stock	Months Months	1.5
		For Variable Charges	Interest On Working Capital	%	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	3435.6
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
)5	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		326.42	342.74	359.88	377.88	396.77	416.61	437.44	459.31	482.28	506.39	531.71	558.30	586.21	615.52	646.30	678.61	712.54	748.17	785.58	824.86	866.10	909.40	954.87	1,002.62	1,052.75
Per unit Variable Cost	Rs/kWh		5.29	5.55	5.83	6.12	6.43	6.75	7.09	7.44	7.81	8.21	8.62	9.05	9.50	9.97	10.47	11.00	11.55	12.12	12.73	13.37	14.03	14.74	15.47	16.25	17.06
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		39.71	36.97	34.23	31.49	28.75	26.01	23.28	20.54	17.80	15.06	12.32	9.58	6.85	4.11	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.13	19.96	20.83	21.75	22.71	23.73	24.79	25.91	27.09	28.32	29.62	30.98	32.41	33.92	35.50	36.94	38.72	40.59	42.54	44.60	46.87	49.13	51.51	54.00	56.61
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		170.65	170.59	170.65	170.82	171.12	171.55	172.11	172.81	173.65	174.65	175.81	177.13	178.63	180.30	182.16	167.99	173.03	178.28	183.75	189.45	204.42	210.62	217.07	223.80	230.82
Per unit Fixed Cost	Rs/kWh	2.87	2.77	2.76	2.77	2.77	2.77	2.78	2.79	2.80	2.81	2.83	2.85	2.87	2.89	2.92	2.95	2.72	2.80	2.89	2.98	3.07	3.31	3.41	3.52	3.63	3.74
l evellised tariff corresponding	to Heaful li	fo																									

Levellised tariff corresponding	to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.30	5.29	5.55	5.83	6.12	6.43	6.75	7.09	7.44	7.81	8.21	8.62	9.05	9.50	9.97	10.47	11.00	11.55	12.12	12.73	13.37	14.03	14.74	15.47	16.25	17.06
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.44	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.32	0.64	0.60	0.55	0.51	0.47	0.42	0.38	0.33	0.29	0.24	0.20	0.16	0.11	0.07	0.02	-	-	-			-	-	-	-	-
Int. on working capital	Rs/kWh	0.46	0.31	0.32	0.34	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.72	0.76	0.80	0.83	0.87	0.92
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	11.16	8.05	8.32	8.60	8.89	9.20	9.53	9.88	10.24	10.63	11.04	11.46	11.92	12.39	12.90	13.42	13.72	14.35	15.01	15.71	16.44	17.35	18.15	18.99	19.87	20.80
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

 Variable Cost
 5.29

 Levllised Tariff (Fixed)
 2.87

 Levellised Tariff
 8.16
 Rs/Unit

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

Years>	Unit
Capital Cost	652.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Capital Cost	032.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation															•								•		•	,
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 7.86
Electricity Generation (Levellised) 5.91

Levellised benefit 0.13 Rs/Unit

		IRICE Straw and Julifior sing Travelling Grate- T	a (plantation) based project elangana	J With Air	Annexure-2.4G
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	652.00
		Debt: Equity	Debt	%	70%
		' '	Equity	%	30%
			Total Debt Amount	Rs Lakh	456.40
			Total Equity Amount	Rs Lakh	195.60
		Debt Component	Loan Amount	Rs Lakh	456.40
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	195.60
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	3492.3
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		331.81	348.40	365.82	384.11	403.32	423.48	444.66	466.89	490.24	514.75	540.48	567.51	595.88	625.68	656.96	689.81	724.30	760.52	798.54	838.47	880.39	924.41	970.63	1,019.16	1,070.12
Per unit Variable Cost	Rs/kWh		5.38	5.65	5.93	6.22	6.54	6.86	7.21	7.57	7.94	8.34	8.76	9.20	9.66	10.14	10.65	11.18	11.74	12.32	12.94	13.59	14.27	14.98	15.73	16.51	17.34
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		39.71	36.97	34.23	31.49	28.75	26.01	23.28	20.54	17.80	15.06	12.32	9.58	6.85	4.11	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.39	20.24	21.12	22.05	23.03	24.06	25.14	26.28	27.47	28.73	30.05	31.43	32.88	34.41	36.02	37.49	39.29	41.19	43.18	45.26	47.57	49.87	52.28	54.80	57.46
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		170.91	170.87	170.94	171.12	171.44	171.88	172.46	173.18	174.04	175.06	176.24	177.58	179.10	180.80	182.68	168.54	173.60	178.88	184.38	190.11	205.12	211.35	217.84	224.61	231.67
Per unit Fixed Cost	Rs/kWh	2.87	2.77	2.77	2.77	2.77	2.78	2.79	2.79	2.81	2.82	2.84	2.86	2.88	2.90	2.93	2.96	2.73	2.81	2.90	2.99	3.08	3.32	3.42	3.53	3.64	3.75
Levellised tariff corresponding	to Heaful li	fo																									

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.43	5.38	5.65	5.93	6.22	6.54	6.86	7.21	7.57	7.94	8.34	8.76	9.20	9.66	10.14	10.65	11.18	11.74	12.32	12.94	13.59	14.27	14.98	15.73	16.51	17.34
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.44	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.32	0.64	0.60	0.55	0.51	0.47	0.42	0.38	0.33	0.29	0.24	0.20	0.16	0.11	0.07	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.47	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.73	0.77	0.81	0.85	0.89	0.93
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	11.31	8.15	8.41	8.70	9.00	9.31	9.65	10.00	10.37	10.76	11.18	11.61	12.07	12.56	13.07	13.61	13.91	14.55	15.22	15.93	16.67	17.59	18.40	19.26	20.15	21.09
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.38																										

Levellised Tariff (Fixed) 2.87

Levellised Tariff 8.25 Rs/Unit

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

Depreciation amount	90%
Book Depreciation rate	5.28%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17.472%
Income Tax (Normal Rates)	34.944%
Capital Cost	652.00
Vooro	Unit

Capital Cost	652.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation						•	•		•		•				•	•	•	•		·	•	•	•		•	
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

 Tax Benefit Levellised
 7.86

 Electricity Generation (Levellised)
 5.91

 Levellised benefit
 0.13
 Rs/Unit

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	ed Condenser and u	sing Travelling Grate- U	a (plantation) based project ttar Pradesh	j with Air	Annexure-2.4H
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	652.00
		Debt: Equity	Debt	%	70%
		1. 7	Equity	%	30%
			Total Debt Amount	Rs Lakh	456.40
			Total Equity Amount	Rs Lakh	195.60
		Debt Component	Loan Amount	Rs Lakh	456.40
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	195.60
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	%	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	3553.2
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
)5	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		337.60	354.48	372.20	390.81	410.35	430.87	452.41	475.03	498.78	523.72	549.91	577.41	606.28	636.59	668.42	701.84	736.93	773.78	812.47	853.09	895.75	940.53	987.56	1,036.94	1,088.78
Per unit Variable Cost	Rs/kWh		5.47	5.74	6.03	6.33	6.65	6.98	7.33	7.70	8.08	8.49	8.91	9.36	9.82	10.32	10.83	11.37	11.94	12.54	13.17	13.82	14.51	15.24	16.00	16.80	17.64
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		39.71	36.97	34.23	31.49	28.75	26.01	23.28	20.54	17.80	15.06	12.32	9.58	6.85	4.11	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.67	20.53	21.43	22.38	23.38	24.42	25.52	26.68	27.89	29.17	30.50	31.91	33.39	34.94	36.57	38.07	39.91	41.84	43.86	45.98	48.32	50.65	53.10	55.67	58.37
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		171.19	171.16	171.25	171.45	171.78	172.24	172.84	173.57	174.46	175.50	176.70	178.06	179.61	181.33	183.24	169.12	174.22	179.52	185.06	190.83	205.87	212.13	218.67	225.48	232.58
Per unit Fixed Cost	Rs/kWh	2.88	2.77	2.77	2.77	2.78	2.78	2.79	2.80	2.81	2.83	2.84	2.86	2.89	2.91	2.94	2.97	2.74	2.82	2.91	3.00	3.09	3.34	3.44	3.54	3.65	3.77

Levellised tariff corresponding	g to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.58	5.47	5.74	6.03	6.33	6.65	6.98	7.33	7.70	8.08	8.49	8.91	9.36	9.82	10.32	10.83	11.37	11.94	12.54	13.17	13.82	14.51	15.24	16.00	16.80	17.64
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.44	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.32	0.64	0.60	0.55	0.51	0.47	0.42	0.38	0.33	0.29	0.24	0.20	0.16	0.11	0.07	0.02	-	-	-		-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.48	0.32	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.75	0.78	0.82	0.86	0.90	0.95
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	11.46	8.24	8.52	8.81	9.11	9.43	9.77	10.13	10.51	10.91	11.33	11.77	12.24	12.73	13.25	13.80	14.11	14.76	15.45	16.16	16.92	17.85	18.68	19.55	20.46	21.41
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

 Levellised Tariff (Fixed)
 2.88

 Levellised Tariff
 8.35
 Rs/Unit

Depreciation amount

Book Depreciation rate

Tax Depreciation rate

Determination of Additional Depreciation for BIOMASS Projects

90%

5.28%

Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	652.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

195.60 91.28 19.72 11.83 0.92 0.12 0.00 Rs Lakh -30.17 -31.87 -33.51 0.00 Net Depreciation Benefit 178.39 193.77 56.85 20.34 -14.71 -22.60 -32.89 -33.87 -34.09 -34.23 -34.31 -34.35 -18.73 0.03 0.01 19.87 -7.90 -11.49 -11.96 0.00 0.00 Rs Lakh -10.54 -11.14 -11.71 -11.84 -11.99 -12.00 6.17 6.17 Energy generation MU 6.17 6.17 6.17 6.17 6.17 6.17 6.17 6.17 6.17 6.17 6.17 6.17 6.17 6.17 6.17 6.17 Per unit benefit Rs/Unit 2.02 0.32 0.12 -0.01 -0.08 -0.13 -0.15 -0.17 -0.18 -0.19 -0.19 -0.19 -0.19 -0.19 -0.19 -0.19 -0.11 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Discounting Factor 1.00 0.92 0.85 0.79 0.73 0.67 0.62 0.57 0.53 0.49 0.45 0.42 0.38 0.35 0.33 0.30 0.28 0.26 0.24 0.22 0.20 0.17 0.16 0.15 Applicable Discounting Factor 1.00 0.89 0.82 0.76 0.70 0.65 0.55 0.51 0.43 0.40 0.37 0.34 0.31 0.29 0.27 0.25 0.23 0.21 0.20 0.18 0.17 0.15

Electricity Generation (Levellised) 5.91

Levellised benefit 0.13 Rs/Unit

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	ass Power Projects ed Condenser and u	Annexure-2.4I			
S. Vo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
-	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
02		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	652.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	456.40
			Total Equity Amount	Rs Lakh	195.60
		Debt Component	Loan Amount	Rs Lakh	456.40
		Debt Component	Moratorium Period	years	0
	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	195.60
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	4 10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4200.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4200.00
			Base Price	Rs/T	3734.85
		Riomass	GCV-Biomass	Kcal/kg	3100.00
		Biomass	Biomass Price Escalation	%	5.00%
	Operation &		Factor ORM Expanses		
5	Maintenance		O&M Expenses O & M Expenses Escalation	Rs Lakh %	48.20 3.84%
	Generation &		,	1	

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		354.86	372.60	391.23	410.79	431.33	452.90	475.54	499.32	524.28	550.50	578.02	606.92	637.27	669.13	702.59	737.72	774.61	813.34	854.00	896.70	941.54	988.62	1,038.05	1,089.95	1,144.45
Per unit Variable Cost	Rs/kWh		5.75	6.04	6.34	6.66	6.99	7.34	7.71	8.09	8.50	8.92	9.37	9.83	10.33	10.84	11.38	11.95	12.55	13.18	13.84	14.53	15.26	16.02	16.82	17.66	18.54
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		39.71	36.97	34.23	31.49	28.75	26.01	23.28	20.54	17.80	15.06	12.32	9.58	6.85	4.11	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		20.52	21.42	22.36	23.35	24.40	25.50	26.65	27.86	29.13	30.47	31.88	33.35	34.90	36.53	38.24	39.82	41.75	43.76	45.88	48.10	50.55	53.00	55.56	58.26	61.08
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		172.03	172.05	172.17	172.43	172.80	173.32	173.96	174.76	175.70	176.80	178.07	179.50	181.12	182.92	184.91	170.87	176.05	181.45	187.08	192.95	208.10	214.48	221.13	228.06	235.29
Per unit Fixed Cost	Rs/kWh	2.90	2.79	2.79	2.79	2.79	2.80	2.81	2.82	2.83	2.85	2.86	2.89	2.91	2.93	2.96	3.00	2.77	2.85	2.94	3.03	3.13	3.37	3.48	3.58	3.70	3.81
	to Headed III		•	•	•	•			•					•			•			-							

Levellised tariff corresponding	to Useful lif	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.02	5.75	6.04	6.34	6.66	6.99	7.34	7.71	8.09	8.50	8.92	9.37	9.83	10.33	10.84	11.38	11.95	12.55	13.18	13.84	14.53	15.26	16.02	16.82	17.66	18.54
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.44	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.32	0.64	0.60	0.55	0.51	0.47	0.42	0.38	0.33	0.29	0.24	0.20	0.16	0.11	0.07	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.50	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.74	0.78	0.82	0.86	0.90	0.94	0.99
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	11.92	8.54	8.83	9.13	9.45	9.79	10.15	10.52	10.92	11.34	11.79	12.25	12.74	13.26	13.81	14.38	14.72	15.40	16.12	16.87	17.66	18.63	19.50	20.40	21.36	22.36
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

Variable Cost Levlised Tariff (Fixed) 5.75 Levellised Tariff 8.65

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

Vooro	Unit
Capital Cost	652.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

7.86 Tax Benefit Levellised Electricity Generation (Levellised) 5.91

	ct] with Water Coole		and Juliflora (plantation) bas AFBC Boiler- Andhra Prade		Annexure-2.5A
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	559.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	391.30
			Total Equity Amount	Rs Lakh	167.70
		Debt Component	Loan Amount	Rs Lakh	391.30
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	167.70
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Related		Interest On Working Capital	%	10.50%
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4125.00
	P		During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3492.30
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW	100.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		325.89	342.18	359.29	377.25	396.12	415.92	436.72	458.55	481.48	505.56	530.83	557.38	585.24	614.51	645.23	677.49	711.37	746.94	784.28	823.50	864.67	907.91	953.30	1,000.97	1,051.01
Per unit Variable Cost	Rs/kWh		5.16	5.42	5.69	5.98	6.28	6.59	6.92	7.27	7.63	8.01	8.41	8.83	9.27	9.74	10.22	10.73	11.27	11.83	12.43	13.05	13.70	14.38	15.10	15.86	16.65
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		34.04	31.70	29.35	27.00	24.65	22.30	19.96	17.61	15.26	12.91	10.57	8.22	5.87	3.52	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		18.91	19.74	20.62	21.54	22.51	23.52	24.59	25.71	26.89	28.13	29.43	30.80	32.23	33.74	35.32	36.80	38.58	40.44	42.39	44.45	46.70	48.96	51.33	53.81	56.42
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		155.69	156.03	156.48	157.05	157.74	158.56	159.51	160.61	161.85	163.24	164.79	166.51	168.40	170.47	172.72	161.26	166.29	171.54	177.00	182.70	196.38	202.57	209.03	215.75	222.77
Per unit Fixed Cost	Rs/kWh	2.62	2.47	2.47	2.48	2.49	2.50	2.51	2.53	2.54	2.56	2.59	2.61	2.64	2.67	2.70	2.74	2.55	2.63	2.72	2.80	2.89	3.11	3.21	3.31	3.42	3.53
Levellised tariff corresponding	to Useful li	fe																									

Per	Unit Cost of Generation	Unit	
_			Г

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.10	5.16	5.42	5.69	5.98	6.28	6.59	6.92	7.27	7.63	8.01	8.41	8.83	9.27	9.74	10.22	10.73	11.27	11.83	12.43	13.05	13.70	14.38	15.10	15.86	16.65
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.27	0.54	0.50	0.46	0.43	0.39	0.35	0.32	0.28	0.24	0.20	0.17	0.13	0.09	0.06	0.02	-		-	-		-	-	-	-	-
Int. on working capital	Rs/kWh	0.45	0.30	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.74	0.78	0.81	0.85	0.89
RoE	Rs/kWh	0.46	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	10.72	7.63	7.89	8.17	8.47	8.78	9.10	9.45	9.81	10.19	10.60	11.02	11.47	11.94	12.44	12.96	13.29	13.91	14.55	15.23	15.94	16.81	17.59	18.42	19.28	20.18
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.16																										

Levlised Tariff (Fixed) 2.62 Levellised Tariff

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

Voore	Unit
Capital Cost	559.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation						•	•	•	•										•							
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

6.04 Electricity Generation (Levellised)

0.11 Rs/Unit

	ct] with Water Coole	ed Condenser and using	and Juliflora (plantation) bas AFBC Boiler- Haryana	sea	Annexure-2.5B
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	559.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	391.30
			Total Equity Amount	Rs Lakh	167.70
		Dobt Component	Loan Amount	Rs Lakh	391.30
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	167.70
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Firel Deleted		Interest On Working Capital	%	10.50%
	Fuel Related Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4125.00
	7.00umpo		During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3975.3
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		370.96	389.50	408.98	429.43	450.90	473.45	497.12	521.97	548.07	575.48	604.25	634.46	666.19	699.49	734.47	771.19	809.75	850.24	892.75	937.39	984.26	1,033.47	1,085.15	1,139.40	1,196.37
Per unit Variable Cost	Rs/kWh		5.88	6.17	6.48	6.80	7.14	7.50	7.88	8.27	8.68	9.12	9.57	10.05	10.56	11.08	11.64	12.22	12.83	13.47	14.14	14.85	15.59	16.37	17.19	18.05	18.96
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		34.04	31.70	29.35	27.00	24.65	22.30	19.96	17.61	15.26	12.91	10.57	8.22	5.87	3.52	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		21.11	22.05	23.04	24.08	25.18	26.33	27.54	28.81	30.14	31.54	33.01	34.56	36.18	37.88	39.67	41.37	43.37	45.48	47.68	50.00	52.53	55.08	57.76	60.56	63.51
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		157.89	158.33	158.90	159.59	160.41	161.36	162.46	163.70	165.10	166.65	168.37	170.27	172.34	174.61	177.07	165.83	171.09	176.57	182.29	188.26	202.21	208.70	215.46	222.50	229.85
Per unit Fixed Cost	Rs/kWh	2.67	2.50	2.51	2.52	2.53	2.54	2.56	2.57	2.59	2.62	2.64	2.67	2.70	2.73	2.77	2.81	2.63	2.71	2.80	2.89	2.98	3.20	3.31	3.41	3.53	3.64

Levellised tariff corre	spondina to	Useful I	ife
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Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.22	5.88	6.17	6.48	6.80	7.14	7.50	7.88	8.27	8.68	9.12	9.57	10.05	10.56	11.08	11.64	12.22	12.83	13.47	14.14	14.85	15.59	16.37	17.19	18.05	18.96
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.27	0.54	0.50	0.46	0.43	0.39	0.35	0.32	0.28	0.24	0.20	0.17	0.13	0.09	0.06	0.02	-	-	-		-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.50	0.33	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.69	0.72	0.76	0.79	0.83	0.87	0.92	0.96	1.01
RoE	Rs/kWh	0.46	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	11.89	8.38	8.68	9.00	9.33	9.69	10.06	10.45	10.86	11.30	11.76	12.24	12.75	13.29	13.85	14.44	14.85	15.54	16.27	17.03	17.83	18.80	19.68	20.61	21.58	22.60
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.88																										

Levellised Tariff 8.55 Rs/Unit

Determination of Additional Depreciation for BIOMASS Projects Depreciation amount 90%

2.67

1.00

0.92

0.85

0.79

0.73

0.67

0.62

0.57

0.53

0.49

Book Depreciation	9/.
Years>	Unit
Capital Cost	559.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	3070

Levlised Tariff (Fixed)

Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.45

0.42

0.38

0.35

0.33

0.30

0.28

0.26

0.24

0.22

0.20

0.19

Applicable Discounting Factor

Tax Benefit Levellised 6.7

Electricity Generation (Levellised) 6.0

Discounting Factor

Levellised benefit 0.11 Rs/Unit

0.17

0.16

	ct] with Water Coole		and Juliflora (plantation) bas AFBC Boiler- Maharashtra	sea	Annexure-2.5C
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	559.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	391.30
			Total Equity Amount	Rs Lakh	167.70
		Dobt Component	Loan Amount	Rs Lakh	391.30
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	167.70
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Firel Deleted		Interest On Working Capital	%	10.50%
	Fuel Related Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4125.00
	7.00umpo		During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	4065.6
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		379.38	398.35	418.27	439.18	461.14	484.20	508.41	533.83	560.52	588.55	617.98	648.87	681.32	715.38	751.15	788.71	828.15	869.55	913.03	958.68	1,006.62	1,056.95	1,109.80	1,165.29	1,223.55
Per unit Variable Cost	Rs/kWh		6.01	6.31	6.63	6.96	7.31	7.67	8.06	8.46	8.88	9.32	9.79	10.28	10.79	11.33	11.90	12.50	13.12	13.78	14.47	15.19	15.95	16.75	17.58	18.46	19.39
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		34.04	31.70	29.35	27.00	24.65	22.30	19.96	17.61	15.26	12.91	10.57	8.22	5.87	3.52	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		21.52	22.48	23.49	24.56	25.68	26.85	28.09	29.38	30.75	32.18	33.68	35.26	36.92	38.66	40.49	42.22	44.27	46.42	48.67	51.04	53.62	56.23	58.96	61.83	64.83
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		158.30	158.76	159.35	160.07	160.91	161.89	163.01	164.28	165.70	167.29	169.04	170.97	173.08	175.38	177.89	166.68	171.98	177.51	183.28	189.29	203.30	209.84	216.66	223.77	231.18
Per unit Fixed Cost	Rs/kWh	2.68	2.51	2.52	2.52	2.54	2.55	2.56	2.58	2.60	2.63	2.65	2.68	2.71	2.74	2.78	2.82	2.64	2.72	2.81	2.90	3.00	3.22	3.32	3.43	3.55	3.66

Levellised tariff corresponding to Useful life

Levenised tarm corresponding	to oseiui ii	ie																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.43	6.01	6.31	6.63	6.96	7.31	7.67	8.06	8.46	8.88	9.32	9.79	10.28	10.79	11.33	11.90	12.50	13.12	13.78	14.47	15.19	15.95	16.75	17.58	18.46	19.39
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.27	0.54	0.50	0.46	0.43	0.39	0.35	0.32	0.28	0.24	0.20	0.17	0.13	0.09	0.06	0.02	-	-	-		-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.52	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.74	0.77	0.81	0.85	0.89	0.93	0.98	1.03
RoE	Rs/kWh	0.46	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	12.11	8.52	8.83	9.15	9.49	9.86	10.24	10.64	11.06	11.51	11.98	12.47	12.99	13.54	14.11	14.72	15.14	15.85	16.59	17.37	18.19	19.17	20.07	21.02	22.01	23.05
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	6.01																										

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

2.68

Depreciation amount	90%
Book Depreciation rate	5.28%
Tax Depreciation rate	409
Additional Depreciation	209
Income Tax (MAT)	17.4729
Income Tax (Normal Rates)	34.9449
Capital Cost	559.0

Levlised Tariff (Fixed)

Levellised Tariff

Capital Cost	559.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation										·						•		•		•						
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Depm.	Rs Lakh	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Applicable Discounting Factor

Tax Benefit Levellised 6.74

Electricity Generation (Levellised) 6.04

	ct] with Water Coole	ed Condenser and using	and Juliflora (plantation) bas AFBC Boiler- Punjab	sea	Annexure-2.5D
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	559.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	391.30
			Total Equity Amount	Rs Lakh	167.70
		Debt Component	Loan Amount	Rs Lakh	391.30
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	167.70
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03	-		Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Related		Interest On Working Capital	%	10.50%
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4125.00
	P		During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	4158
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		388.01	407.41	427.78	449.17	471.62	495.20	519.96	545.96	573.26	601.92	632.02	663.62	696.80	731.64	768.22	806.64	846.97	889.32	933.78	980.47	1,029.49	1,080.97	1,135.02	1,191.77	1,251.36
Per unit Variable Cost	Rs/kWh		6.15	6.45	6.78	7.12	7.47	7.85	8.24	8.65	9.08	9.54	10.01	10.51	11.04	11.59	12.17	12.78	13.42	14.09	14.79	15.53	16.31	17.13	17.98	18.88	19.83
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		34.04	31.70	29.35	27.00	24.65	22.30	19.96	17.61	15.26	12.91	10.57	8.22	5.87	3.52	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		21.94	22.92	23.96	25.05	26.19	27.39	28.65	29.98	31.37	32.83	34.37	35.98	37.67	39.45	41.32	43.10	45.19	47.38	49.68	52.10	54.74	57.40	60.19	63.12	66.19
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		158.72	159.21	159.82	160.55	161.42	162.42	163.57	164.87	166.32	167.94	169.73	171.69	173.84	176.18	178.72	167.55	172.90	178.48	184.29	190.36	204.42	211.01	217.89	225.06	232.54
Per unit Fixed Cost	Rs/kWh	2.69	2.51	2.52	2.53	2.54	2.56	2.57	2.59	2.61	2.64	2.66	2.69	2.72	2.75	2.79	2.83	2.65	2.74	2.83	2.92	3.02	3.24	3.34	3.45	3.57	3.68
Levellised tariff corresponding	to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.64	6.15	6.45	6.78	7.12	7.47	7.85	8.24	8.65	9.08	9.54	10.01	10.51	11.04	11.59	12.17	12.78	13.42	14.09	14.79	15.53	16.31	17.13	17.98	18.88	19.83
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.27	0.54	0.50	0.46	0.43	0.39	0.35	0.32	0.28	0.24	0.20	0.17	0.13	0.09	0.06	0.02			-	-	-	-	-	-	- 1	-

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RoE Rs/kWh 0.46 Total COG Rs/kWh 12.34 Discount Factor 6.15 Variable Cost Levilised Tariff (Fixed) 2.69 Levellised Tariff 8.84 Rs/Unit

Rs/kWh

90%

0.53

1.00

0.35

0.45

8.66

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11.72

0.53

Int. on working capital

Depreciation amount

Determination of Additional Depreciation for BIOMASS Projects

Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	559.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
																									-	

0.47

0.43

0.40

Electricity Generation (Levellised) 0.11 Rs/Unit Levellised benefit

Applicable Discounting Factor

0.17

	ct] with Water Coole		and Juliflora (plantation) bas AFBC Boiler- Rajasthan	sea	Annexure-2.5E
ა ა ა	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	559.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	391.30
			Total Equity Amount	Rs Lakh	167.70
		Debt Component	Loan Amount	Rs Lakh	391.30
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	167.70
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)	_	21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03	•		Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Related		Interest On Working Capital	%	10.50%
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4125.00
	,		During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3470.25
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
05			O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		323.83	340.02	357.02	374.87	393.62	413.30	433.96	455.66	478.44	502.36	527.48	553.86	581.55	610.63	641.16	673.22	706.88	742.22	779.33	818.30	859.21	902.17	947.28	994.65	1,044.38
Per unit Variable Cost	Rs/kWh		5.13	5.39	5.66	5.94	6.24	6.55	6.88	7.22	7.58	7.96	8.36	8.78	9.21	9.67	10.16	10.67	11.20	11.76	12.35	12.97	13.61	14.29	15.01	15.76	16.55
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		34.04	31.70	29.35	27.00	24.65	22.30	19.96	17.61	15.26	12.91	10.57	8.22	5.87	3.52	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		18.81	19.64	20.51	21.42	22.38	23.40	24.46	25.57	26.74	27.97	29.27	30.62	32.05	33.55	35.12	36.59	38.36	40.21	42.15	44.19	46.43	48.68	51.03	53.50	56.10
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		155.59	155.92	156.37	156.93	157.62	158.43	159.38	160.47	161.70	163.09	164.63	166.34	168.22	170.28	172.52	161.05	166.07	171.31	176.76	182.45	196.12	202.29	208.73	215.45	222.44
Per unit Fixed Cost	Rs/kWh	2.62	2.47	2.47	2.48	2.49	2.50	2.51	2.53	2.54	2.56	2.58	2.61	2.64	2.67	2.70	2.73	2.55	2.63	2.71	2.80	2.89	3.11	3.21	3.31	3.41	3.52

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.05	5.13	5.39	5.66	5.94	6.24	6.55	6.88	7.22	7.58	7.96	8.36	8.78	9.21	9.67	10.16	10.67	11.20	11.76	12.35	12.97	13.61	14.29	15.01	15.76	16.55
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.27	0.54	0.50	0.46	0.43	0.39	0.35	0.32	0.28	0.24	0.20	0.17	0.13	0.09	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.45	0.30	0.31	0.32	0.34	0.35	0.37	0.39	0.41	0.42	0.44	0.46	0.49	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.74	0.77	0.81	0.85	0.89
RoE	Rs/kWh	0.46	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	10.66	7.60	7.86	8.13	8.43	8.73	9.06	9.40	9.76	10.14	10.54	10.97	11.41	11.88	12.37	12.89	13.22	13.83	14.47	15.15	15.86	16.72	17.50	18.32	19.17	20.07
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.13																										

Levellised Tariff (Fixed) 2.62

Levellised Tariff 7.75 Rs/Unit

Determination of Additional Depreciation for BIOMASS Projects

Years>	Unit
Capital Cost	559.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Book Depreciation % 2.64% 5.28% 0.00	Capital Cost	559.00																									
Book Depreciation Rs Lakh 14.76 29.52	Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Accelerated Depreciation Deping % 100% 70% 35% 21% 13% 8% 55% 3% 22% 11% 11% 00	Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Opening % 100% 70% 35% 21% 13% 8% 5% 3% 2% 1% 11% 0% 0% 0% 0% 0%	Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allowed during the year % 30.00% 35.00% 14.00% 8.40% 5.04% 3.02% 1.81% 1.09% 0.65% 0.39% 0.24% 0.14% 0.08% 0.05% 0.03% 0.02% 0.01% 0.01% 0.00% 0	Accelerated Depreciation																										
Closing % 70.0% 35.0% 21.0% 12.6% 7.6% 4.5% 2.7% 1.6% 1.0% 0.6% 0.4% 0.2% 0.1% 0.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0	Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Accellated Depm. Rs Lakh 167.70 195.65 78.26 46.96 28.17 16.90 10.14 6.09 3.65 2.19 1.31 0.79 0.47 0.28 0.17 0.10 0.06 0.04 0.02 0.01 0.01 0.00 0.00 0.00 0.00 0.00	Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Net Depreciation Benefit Rs Lakh 152.94 166.13 48.74 17.44 -1.34 -12.61 -19.37 -23.43 -25.86 -27.32 -28.20 -28.73 -29.04 -29.23 -29.34 -29.41 -29.45 -16.06 0.02 0.01 0.00 0.00 0.00 0.00 0.00 0.00	Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Tax Benefit Rs Lakh 53.44 58.05 17.03 6.09 -0.47 -4.41 -6.77 -8.19 -9.04 -9.55 -9.85 -10.04 -10.15 -10.21 -10.25 -10.28 -10.29 -5.61 0.01 0.00 0.00 0.00 0.00 0.00 0.00 0	Accelrated Deprn.	Rs Lakh	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Energy generation MU 3.16 6.31 6.31 6.31 6.31 6.31 6.31 6.31	Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Per unit benefit Rs/Unit 1.69 0.92 0.27 0.10 -0.01 -0.07 -0.11 -0.13 -0.14 -0.15 -0.16 -0.16 -0.16 -0.16 -0.16 -0.16 -0.16 -0.16 -0.16 -0.16 -0.16 -0.19 0.00 0.00 0.00 0.00 0.00 0.00 0.00	Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor 1.00 0.92 0.85 0.79 0.73 0.67 0.62 0.57 0.53 0.49 0.45 0.42 0.38 0.35 0.33 0.30 0.28 0.26 0.24 0.22 0.20 0.19 0.17 0.16	Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
	Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor 1.00 0.96 0.89 0.82 0.76 0.70 0.65 0.60 0.55 0.51 0.47 0.43 0.40 0.37 0.34 0.31 0.29 0.27 0.25 0.23 0.21 0.20 0.18 0.17	Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 6.74
Electricity Generation (Levellised) 6.04

	ct] with Water Coole		and Juliflora (plantation) bas AFBC Boiler- Tamil Nadu	sea	Annexure-2.5F
လ လ	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	559.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	391.30
			Total Equity Amount	Rs Lakh	167.70
		Debt Component	Loan Amount	Rs Lakh	391.30
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	167.70
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Related	-	Interest On Working Capital	%	10.50%
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4125.00
	•		During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3435.60
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		320.59	336.62	353.46	371.13	389.68	409.17	429.63	451.11	473.66	497.35	522.21	548.33	575.74	604.53	634.76	666.49	699.82	734.81	771.55	810.13	850.63	893.16	937.82	984.71	1,033.95
Per unit Variable Cost	Rs/kWh		5.08	5.33	5.60	5.88	6.17	6.48	6.81	7.15	7.50	7.88	8.27	8.69	9.12	9.58	10.06	10.56	11.09	11.64	12.22	12.84	13.48	14.15	14.86	15.60	16.38
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		34.04	31.70	29.35	27.00	24.65	22.30	19.96	17.61	15.26	12.91	10.57	8.22	5.87	3.52	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		18.65	19.47	20.33	21.24	22.19	23.19	24.25	25.35	26.51	27.73	29.01	30.36	31.77	33.25	34.81	36.26	38.01	39.85	41.77	43.79	46.01	48.24	50.57	53.02	55.59
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		155.43	155.75	156.19	156.75	157.42	158.23	159.17	160.25	161.47	162.84	164.37	166.07	167.93	169.98	172.21	160.72	165.73	170.94	176.38	182.05	195.70	201.86	208.27	214.96	221.93
Per unit Fixed Cost	Rs/kWh	2.61	2.46	2.47	2.47	2.48	2.49	2.51	2.52	2.54	2.56	2.58	2.60	2.63	2.66	2.69	2.73	2.55	2.63	2.71	2.79	2.88	3.10	3.20	3.30	3.41	3.52

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	7.97	5.08	5.33	5.60	5.88	6.17	6.48	6.81	7.15	7.50	7.88	8.27	8.69	9.12	9.58	10.06	10.56	11.09	11.64	12.22	12.84	13.48	14.15	14.86	15.60	16.38
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.27	0.54	0.50	0.46	0.43	0.39	0.35	0.32	0.28	0.24	0.20	0.17	0.13	0.09	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.44	0.30	0.31	0.32	0.34	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.57	0.60	0.63	0.66	0.69	0.73	0.76	0.80	0.84	0.88
RoE	Rs/kWh	0.46	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	10.58	7.54	7.80	8.07	8.36	8.67	8.99	9.33	9.69	10.06	10.46	10.88	11.32	11.78	12.27	12.79	13.11	13.71	14.35	15.02	15.72	16.58	17.35	18.16	19.01	19.90
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
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 Variable Cost
 5.08

 Levilised Tariff (Fixed)
 2.61

 Levellised Tariff
 7.69
 Rs/Unit

Determination of Additional Depreciation for BIOMASS Projects

Depreciation amount	90%
Book Depreciation rate	5.28%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17.472%
Income Tax (Normal Rates)	34.944%
Capital Cost	559.00

Capital Cost	559.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 6.74 Electricity Generation (Levellised) 6.04

	ct] with Water Coole		and Juliflora (plantation) bas AFBC Boiler- Telangana	sea	Annexure-2.5G
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	559.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	391.30
			Total Equity Amount	Rs Lakh	167.70
		Debt Component	Loan Amount	Rs Lakh	391.30
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount Return on Equity (upto 20	Rs Lakh	167.70
		Equity Component	years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4125.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3492.30
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

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Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		325.89	342.18	359.29	377.25	396.12	415.92	436.72	458.55	481.48	505.56	530.83	557.38	585.24	614.51	645.23	677.49	711.37	746.94	784.28	823.50	864.67	907.91	953.30	1,000.97	1,051.01
Per unit Variable Cost	Rs/kWh		5.16	5.42	5.69	5.98	6.28	6.59	6.92	7.27	7.63	8.01	8.41	8.83	9.27	9.74	10.22	10.73	11.27	11.83	12.43	13.05	13.70	14.38	15.10	15.86	16.65
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		34.04	31.70	29.35	27.00	24.65	22.30	19.96	17.61	15.26	12.91	10.57	8.22	5.87	3.52	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		18.91	19.74	20.62	21.54	22.51	23.52	24.59	25.71	26.89	28.13	29.43	30.80	32.23	33.74	35.32	36.80	38.58	40.44	42.39	44.45	46.70	48.96	51.33	53.81	56.42
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		155.69	156.03	156.48	157.05	157.74	158.56	159.51	160.61	161.85	163.24	164.79	166.51	168.40	170.47	172.72	161.26	166.29	171.54	177.00	182.70	196.38	202.57	209.03	215.75	222.77
Per unit Fixed Cost	Rs/kWh	2.62	2.47	2.47	2.48	2.49	2.50	2.51	2.53	2.54	2.56	2.59	2.61	2.64	2.67	2.70	2.74	2.55	2.63	2.72	2.80	2.89	3.11	3.21	3.31	3.42	3.53

Levellised tariff corresponding to Useful life

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Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.10	5.16	5.42	5.69	5.98	6.28	6.59	6.92	7.27	7.63	8.01	8.41	8.83	9.27	9.74	10.22	10.73	11.27	11.83	12.43	13.05	13.70	14.38	15.10	15.86	16.65
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.27	0.54	0.50	0.46	0.43	0.39	0.35	0.32	0.28	0.24	0.20	0.17	0.13	0.09	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.45	0.30	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.74	0.78	0.81	0.85	0.89
RoE	Rs/kWh	0.46	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	10.72	7.63	7.89	8.17	8.47	8.78	9.10	9.45	9.81	10.19	10.60	11.02	11.47	11.94	12.44	12.96	13.29	13.91	14.55	15.23	15.94	16.81	17.59	18.42	19.28	20.18
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	E 40																										

Determination of Additional Depreciation for BIOMASS Projects

2.62

Depreciation amount	90%
Book Depreciation rate	5.28%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17.472%
Income Tax (Normal Rates)	34.944%
Capital Cost	559.00

Levlised Tariff (Fixed)

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Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31

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0.00

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0.00

0.16

0.00

0.15

0.15

Tax Benefit Levellised 6.74
Electricity Generation (Levellised) 6.04

Per unit benefit

Discounting Factor
Applicable Discounting Factor

Levellised benefit 0.11 Rs/Unit

Rs/Unit

1.69

1.00

1.00

0.92

0.92

0.27

0.85

0.89

0.10

0.79

0.82

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0.73

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-0.14

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-0.15

0.49

	ct] with Water Coole		and Juliflora (plantation) bas AFBC Boiler- Uttar Pradesh		Annexure-2.5H
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	559.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	391.30
			Total Equity Amount	Rs Lakh	167.70
		Debt Component	Loan Amount	Rs Lakh	391.30
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	167.70
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03	-		Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Firel Deleted		Interest On Working Capital	%	10.50%
	Fuel Related Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4125.00
	7.00umpo		During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3553.20
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
)5			O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		331.57	348.15	365.55	383.83	403.02	423.17	444.33	466.55	489.88	514.37	540.09	567.09	595.45	625.22	656.48	689.31	723.77	759.96	797.96	837.86	879.75	923.74	969.92	1,018.42	1,069.34
Per unit Variable Cost	Rs/kWh		5.25	5.52	5.79	6.08	6.39	6.70	7.04	7.39	7.76	8.15	8.56	8.99	9.43	9.91	10.40	10.92	11.47	12.04	12.64	13.28	13.94	14.64	15.37	16.14	16.94
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		34.04	31.70	29.35	27.00	24.65	22.30	19.96	17.61	15.26	12.91	10.57	8.22	5.87	3.52	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.18	20.03	20.92	21.86	22.84	23.88	24.96	26.10	27.30	28.56	29.88	31.27	32.73	34.26	35.87	37.38	39.18	41.07	43.06	45.15	47.43	49.73	52.14	54.66	57.31
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		155.97	156.32	156.78	157.37	158.07	158.91	159.88	161.00	162.26	163.67	165.24	166.98	168.89	170.99	173.27	161.83	166.89	172.17	177.67	183.40	197.12	203.35	209.84	216.60	223.66
Per unit Fixed Cost	Rs/kWh	2.62	2.47	2.48	2.48	2.49	2.50	2.52	2.53	2.55	2.57	2.59	2.62	2.65	2.68	2.71	2.75	2.56	2.64	2.73	2.82	2.91	3.12	3.22	3.32	3.43	3.54

Levellised tariff corresponding	to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.24	5.25	5.52	5.79	6.08	6.39	6.70	7.04	7.39	7.76	8.15	8.56	8.99	9.43	9.91	10.40	10.92	11.47	12.04	12.64	13.28	13.94	14.64	15.37	16.14	16.94
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.27	0.54	0.50	0.46	0.43	0.39	0.35	0.32	0.28	0.24	0.20	0.17	0.13	0.09	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.46	0.30	0.32	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.72	0.75	0.79	0.83	0.87	0.91
RoE	Rs/kWh	0.46	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	10.86	7.72	7.99	8.28	8.57	8.89	9.22	9.57	9.94	10.33	10.74	11.18	11.63	12.11	12.62	13.15	13.49	14.11	14.77	15.46	16.18	17.06	17.86	18.69	19.57	20.49
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.25																										

2.62 Levilised Tariff (Fixed)

Determination of Additional Depreciation for BIOMASS Projects Depreciation amount Book Depreciation rate Tax Depreciation rate Additional Depreciation 90%

5.28%

Book Bopicolation rate	0.2070	l																								
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	559.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 6.74 Electricity Generation (Levellised) 6.04

Levellised benefit

	ct] with Water Coole		and Juliflora (plantation) bas AFBC Boiler- Other States	sea	Annexure-2.5I
လ လ	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	559.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	391.30
			Total Equity Amount	Rs Lakh	167.70
		Debt Component	Loan Amount	Rs Lakh	391.30
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	167.70
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)	_	21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03	-		Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Firel Deleted		Interest On Working Capital	%	10.50%
	Fuel Related Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4125.00
	7.00umpo		During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3734.85
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		348.52	365.95	384.24	403.45	423.63	444.81	467.05	490.40	514.92	540.67	567.70	596.09	625.89	657.19	690.04	724.55	760.77	798.81	838.75	880.69	924.73	970.96	1,019.51	1,070.49	1,124.01
Per unit Variable Cost	Rs/kWh		5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.57	8.99	9.44	9.92	10.41	10.93	11.48	12.05	12.66	13.29	13.95	14.65	15.38	16.15	16.96	17.81
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		34.04	31.70	29.35	27.00	24.65	22.30	19.96	17.61	15.26	12.91	10.57	8.22	5.87	3.52	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		20.01	20.90	21.83	22.82	23.85	24.93	26.07	27.27	28.52	29.84	31.23	32.68	34.21	35.82	37.51	39.09	40.98	42.97	45.05	47.23	49.63	52.03	54.56	57.20	59.98
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		156.79	157.18	157.69	158.32	159.08	159.97	160.99	162.16	163.48	164.95	166.59	168.40	170.38	172.55	174.91	163.55	168.70	174.06	179.66	185.49	199.31	205.65	212.26	219.14	226.33
Per unit Fixed Cost	Rs/kWh	2.65	2.48	2.49	2.50	2.51	2.52	2.53	2.55	2.57	2.59	2.61	2.64	2.67	2.70	2.73	2.77	2.59	2.67	2.76	2.85	2.94	3.16	3.26	3.36	3.47	3.59

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.66	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.57	8.99	9.44	9.92	10.41	10.93	11.48	12.05	12.66	13.29	13.95	14.65	15.38	16.15	16.96	17.81
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.27	0.54	0.50	0.46	0.43	0.39	0.35	0.32	0.28	0.24	0.20	0.17	0.13	0.09	0.06	0.02		-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.48	0.32	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.75	0.79	0.82	0.86	0.91	0.95
RoE	Rs/kWh	0.46	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	11.31	8.01	8.29	8.59	8.90	9.23	9.58	9.95	10.34	10.75	11.18	11.63	12.11	12.62	13.15	13.70	14.07	14.73	15.41	16.14	16.89	17.81	18.64	19.52	20.43	21.39
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.52																										
Levlised Tariff (Fixed)	2.65																										

Levellised Tariff 8.17 Rs/Unit

Determination of Additional Depreciation for BIOMASS Projects Depreciation amount 90%

Years>	Unit
Capital Cost	559.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	30 /0

Capital Cost	559.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 6.74
Electricity Generation (Levellised) 6.04

oroje	ect] with Air Cooled		and Juliflora (plantation) bas FBC Boiler- Andhra Pradesh		Annexure-2.6A
S. Vo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	600.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	420.00
			Total Equity Amount	Rs Lakh	180.00
		Debt Component	Loan Amount	Rs Lakh	420.00
		Debt Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	180.00
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)	_	21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
)3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months %	4
	Fuel Related		Interest On Working Capital After stabilization period		10.50%
	Assumptions	Heat Rate		Kcal/kWh	4125.00
	-		During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3492.30
)4		Biomass	GCV-Biomass Biomass Price Escalation	Kcal/kg	3100.00
			Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
5	Maintenance		O & M Expenses Escalation	%	3.84%
6	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		325.89	342.18	359.29	377.25	396.12	415.92	436.72	458.55	481.48	505.56	530.83	557.38	585.24	614.51	645.23	677.49	711.37	746.94	784.28	823.50	864.67	907.91	953.30	1,000.97	1,051.01
Per unit Variable Cost	Rs/kWh		5.28	5.54	5.82	6.11	6.42	6.74	7.08	7.43	7.80	8.19	8.60	9.03	9.48	9.96	10.46	10.98	11.53	12.10	12.71	13.34	14.01	14.71	15.45	16.22	17.03
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		36.54	34.02	31.50	28.98	26.46	23.94	21.42	18.90	16.38	13.86	11.34	8.82	6.30	3.78	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		18.99	19.83	20.70	21.62	22.58	23.60	24.66	25.78	26.96	28.20	29.49	30.86	32.29	33.79	35.37	36.84	38.61	40.48	42.43	44.48	46.75	49.00	51.37	53.86	56.47
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		162.27	162.43	162.71	163.10	163.62	164.27	165.05	165.97	167.04	168.25	169.63	171.17	172.89	174.78	176.86	164.20	169.23	174.48	179.95	185.65	199.90	206.09	212.54	219.27	226.28
Per unit Fixed Cost	Rs/kWh	2.76	2.63	2.63	2.64	2.64	2.65	2.66	2.67	2.69	2.71	2.73	2.75	2.77	2.80	2.83	2.87	2.66	2.74	2.83	2.92	3.01	3.24	3.34	3.44	3.55	3.67
Levellised tariff corresponding	a to Heaful li	60																									

	Use	

zoromoca tann conceptioning	, to occiai ii																										
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.28	5.28	5.54	5.82	6.11	6.42	6.74	7.08	7.43	7.80	8.19	8.60	9.03	9.48	9.96	10.46	10.98	11.53	12.10	12.71	13.34	14.01	14.71	15.45	16.22	17.03
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.30	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.27	0.22	0.18	0.14	0.10	0.06	0.02		-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.46	0.31	0.32	0.34	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.69	0.72	0.76	0.79	0.83	0.87	0.92
RoE	Rs/kWh	0.51	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	11.04	7.91	8.18	8.46	8.76	9.07	9.40	9.75	10.12	10.51	10.92	11.35	11.81	12.28	12.79	13.32	13.64	14.27	14.93	15.62	16.35	17.25	18.05	18.89	19.77	20.70
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

Levllised Tariff (Fixed) Levellised Tariff

Determination of Additional Depreciation for BIOMASS Projects

Depreciation amount	90%
Book Depreciation rate	5.28%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17.472%
Income Tax (Normal Rates)	34.944%
Capital Cost	600.0

Capital Cost	600.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.76	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised Electricity Generation (Levellised)

5.91 0.12 Rs/Unit

		[other than Rice Straw a	and Juliflora (plantation) bas FBC Boiler- Haryana	sed	Annexure-2.6B
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	600.00
		Debt: Equity	Debt	%	70%
		. ,	Equity	%	30%
			Total Debt Amount	Rs Lakh	420.00
			Total Equity Amount	Rs Lakh	180.00
		Debt Component	Loan Amount	Rs Lakh	420.00
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount Return on Equity (upto 20	Rs Lakh	180.00
		Equity Component	years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	4
	Fuel Related			% Kcal/kWh	10.50%
	Assumptions	Heat Rate	After stabilization period		4125.00
	-		During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3975.30
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		370.96	389.50	408.98	429.43	450.90	473.45	497.12	521.97	548.07	575.48	604.25	634.46	666.19	699.49	734.47	771.19	809.75	850.24	892.75	937.39	984.26	1,033.47	1,085.15	1,139.40	1,196.37
Per unit Variable Cost	Rs/kWh		6.01	6.31	6.63	6.96	7.31	7.67	8.06	8.46	8.88	9.33	9.79	10.28	10.79	11.33	11.90	12.50	13.12	13.78	14.47	15.19	15.95	16.75	17.58	18.46	19.39
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		36.54	34.02	31.50	28.98	26.46	23.94	21.42	18.90	16.38	13.86	11.34	8.82	6.30	3.78	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		21.19	22.13	23.12	24.16	25.26	26.40	27.61	28.88	30.21	31.61	33.07	34.62	36.24	37.94	39.73	41.41	43.41	45.51	47.72	50.04	52.58	55.13	57.80	60.61	63.56
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		164.47	164.74	165.13	165.65	166.29	167.07	168.00	169.06	170.28	171.66	173.21	174.93	176.83	178.92	181.21	168.77	174.03	179.52	185.24	191.20	205.73	212.21	218.97	226.02	233.37
Per unit Fixed Cost	Rs/kWh	2.82	2.67	2.67	2.68	2.68	2.69	2.71	2.72	2.74	2.76	2.78	2.81	2.83	2.87	2.90	2.94	2.73	2.82	2.91	3.00	3.10	3.33	3.44	3.55	3.66	3.78
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Levellised tariff corresponding	to Useful lif	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.43	6.01	6.31	6.63	6.96	7.31	7.67	8.06	8.46	8.88	9.33	9.79	10.28	10.79	11.33	11.90	12.50	13.12	13.78	14.47	15.19	15.95	16.75	17.58	18.46	19.39
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.30	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.27	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.52	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.59	0.61	0.64	0.67	0.70	0.74	0.77	0.81	0.85	0.89	0.94	0.98	1.03
RoE	Rs/kWh	0.51	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	12.25	8.68	8.98	9.30	9.64	10.00	10.38	10.78	11.20	11.64	12.11	12.60	13.12	13.66	14.23	14.84	15.23	15.94	16.69	17.47	18.29	19.28	20.19	21.13	22.13	23.17
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

Determination of Additional Depreciation for BIOMASS Projects Depreciation amount 90%

Depreciation amount	30 /6																									
Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	600.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.76	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

0.47

0.43

0.40

0.34

0.37

0.31

0.29

0.27

0.23 0.21

0.65

0.60

0.55

0.51

 Tax Benefit Levellised
 7.24

 Electricity Generation (Levellised)
 5.91

 Levellised benefit
 0.12
 Rs/Unit

Applicable Discounting Factor

0.96

1.00

0.89

	ect] with Air Cooled		and Juliflora (plantation) bas -BC Boiler- Maharashtra	, ou	Annexure-2.6C
S. Vo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	600.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	420.00
			Total Equity Amount	Rs Lakh	180.00
		Debt Component	Loan Amount	Rs Lakh	420.00
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	180.00
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Related	-	Interest On Working Capital	% Kaal/k\\\b	10.50%
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4125.00
	-		During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	4065.60
04		Biomass	GCV-Biomass Biomass Price Escalation	Kcal/kg	3100.00
			Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
)5	Maintenance		O & M Expenses Escalation	%	3.84%
)6	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Biomass Projects	: Determination of	Tariff Component
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Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		379.38	398.35	418.27	439.18	461.14	484.20	508.41	533.83	560.52	588.55	617.98	648.87	681.32	715.38	751.15	788.71	828.15	869.55	913.03	958.68	1,006.62	1,056.95	1,109.80	1,165.29	1,223.55
Per unit Variable Cost	Rs/kWh		6.15	6.45	6.78	7.12	7.47	7.85	8.24	8.65	9.08	9.54	10.01	10.51	11.04	11.59	12.17	12.78	13.42	14.09	14.79	15.53	16.31	17.13	17.98	18.88	19.83
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		36.54	34.02	31.50	28.98	26.46	23.94	21.42	18.90	16.38	13.86	11.34	8.82	6.30	3.78	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		21.60	22.56	23.58	24.64	25.75	26.93	28.16	29.45	30.81	32.24	33.74	35.32	36.98	38.71	40.54	42.26	44.31	46.46	48.71	51.08	53.67	56.27	59.00	61.87	64.88
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		164.88	165.17	165.59	166.12	166.79	167.60	168.55	169.64	170.89	172.30	173.88	175.63	177.57	179.70	182.03	169.62	174.93	180.46	186.23	192.24	206.82	213.35	220.17	227.28	234.69
Per unit Fixed Cost	Rs/kWh	2.83	2.67	2.68	2.68	2.69	2.70	2.72	2.73	2.75	2.77	2.79	2.82	2.85	2.88	2.91	2.95	2.75	2.83	2.92	3.02	3.12	3.35	3.46	3.57	3.68	3.80
Levellised tariff corresponding	to Useful li	fe																									

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.64	6.15	6.45	6.78	7.12	7.47	7.85	8.24	8.65	9.08	9.54	10.01	10.51	11.04	11.59	12.17	12.78	13.42	14.09	14.79	15.53	16.31	17.13	17.98	18.88	19.83
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.30	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.27	0.22	0.18	0.14	0.10	0.06	0.02	-		-	-	-	-	-	-	-	
Int. on working capital	Rs/kWh	0.53	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.68	0.72	0.75	0.79	0.83	0.87	0.91	0.96	1.00	1.05
RoE	Rs/kWh	0.51	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	12.47	8.82	9.13	9.46	9.81	10.18	10.56	10.97	11.40	11.85	12.33	12.83	13.36	13.92	14.50	15.12	15.53	16.25	17.01	17.81	18.65	19.66	20.58	21.55	22.57	23.63
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
V	0.45																										

 Levellised Tariff (Fixed)
 2.83

 Levellised Tariff
 8.97
 Rs/Unit

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

Depreciation amount	90%
Book Depreciation rate	5.28%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17.472%
Income Tax (Normal Rates)	34.944%
Capital Cost	600.00
V	11-14

Capital Cost	600.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.76	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	7.24																									

Tax Benefit Levellised Electricity Generation (Levellised)

		[other than Rice Straw a	and Juliflora (plantation) bas FBC Boiler- Punjab	sed	Annexure-2.6D
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Contraction		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	600.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	420.00
			Total Equity Amount	Rs Lakh	180.00
		Debt Component	Loan Amount	Rs Lakh	420.00
	Sources of Fund		Moratorium Period Repayment Period(incld	years	0
02	oourooo or runa		Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	180.00
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4125.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	4158
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		388.01	407.41	427.78	449.17	471.62	495.20	519.96	545.96	573.26	601.92	632.02	663.62	696.80	731.64	768.22	806.64	846.97	889.32	933.78	980.47	1,029.49	1,080.97	1,135.02	1,191.77	1,251.36
Per unit Variable Cost	Rs/kWh		6.29	6.60	6.93	7.28	7.64	8.02	8.43	8.85	9.29	9.75	10.24	10.75	11.29	11.86	12.45	13.07	13.72	14.41	15.13	15.89	16.68	17.52	18.39	19.31	20.28
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		36.54	34.02	31.50	28.98	26.46	23.94	21.42	18.90	16.38	13.86	11.34	8.82	6.30	3.78	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		22.02	23.01	24.04	25.13	26.27	27.46	28.72	30.05	31.44	32.90	34.43	36.04	37.73	39.51	41.37	43.14	45.23	47.42	49.72	52.14	54.78	57.44	60.23	63.16	66.24
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		165.30	165.62	166.05	166.61	167.30	168.14	169.11	170.23	171.51	172.95	174.57	176.35	178.33	180.49	182.86	170.50	175.85	181.42	187.24	193.30	207.93	214.53	221.40	228.57	236.05
Per unit Fixed Cost	Rs/kWh	2.84	2.68	2.68	2.69	2.70	2.71	2.72	2.74	2.76	2.78	2.80	2.83	2.86	2.89	2.92	2.96	2.76	2.85	2.94	3.03	3.13	3.37	3.48	3.59	3.70	3.82

Levellised t	ariff correspon	dina to Useful	life

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.86	6.29	6.60	6.93	7.28	7.64	8.02	8.43	8.85	9.29	9.75	10.24	10.75	11.29	11.86	12.45	13.07	13.72	14.41	15.13	15.89	16.68	17.52	18.39	19.31	20.28
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.30	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.27	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.54	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.73	0.77	0.81	0.84	0.89	0.93	0.98	1.02	1.07
RoE	Rs/kWh	0.51	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	12.70	8.97	9.29	9.62	9.98	10.35	10.75	11.17	11.61	12.07	12.56	13.07	13.61	14.18	14.78	15.41	15.83	16.57	17.35	18.17	19.02	20.05	20.99	21.98	23.02	24.10
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	6.29																										

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

2.84

Depreciation amount	90%
Book Depreciation rate	5.28%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17.472%
Income Tax (Normal Rates)	34.944%
Capital Cost	600.00

Levllised Tariff (Fixed)

Levellised Tariff

Capital Cost	600.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.76	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	7.24																									

Tax Benefit Levellised
Electricity Generation (Levellised)

		[other than Rice Straw a	and Juliflora (plantation) bas FBC Boiler- Rajasthan	sed	Annexure-2.6E
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	600.00
		Debt: Equity	Debt	%	70%
		. ,	Equity	%	30%
			Total Debt Amount	Rs Lakh	420.00
			Total Equity Amount	Rs Lakh	180.00
		Debt Component	Loan Amount	Rs Lakh	420.00
		Debt component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount Return on Equity (upto 20	Rs Lakh	180.00
		Equity Component	years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03	-		Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	4
	Fuel Related				10.50%
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4125.00
	-		During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3470.25
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		323.83	340.02	357.02	374.87	393.62	413.30	433.96	455.66	478.44	502.36	527.48	553.86	581.55	610.63	641.16	673.22	706.88	742.22	779.33	818.30	859.21	902.17	947.28	994.65	1,044.38
Per unit Variable Cost	Rs/kWh		5.25	5.51	5.79	6.07	6.38	6.70	7.03	7.38	7.75	8.14	8.55	8.97	9.42	9.89	10.39	10.91	11.45	12.03	12.63	13.26	13.92	14.62	15.35	16.12	16.92
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		36.54	34.02	31.50	28.98	26.46	23.94	21.42	18.90	16.38	13.86	11.34	8.82	6.30	3.78	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		18.89	19.72	20.59	21.50	22.46	23.47	24.53	25.64	26.81	28.04	29.33	30.69	32.11	33.61	35.18	36.63	38.39	40.25	42.19	44.23	46.48	48.72	51.08	53.55	56.14
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		162.17	162.33	162.60	162.99	163.50	164.14	164.92	165.83	166.89	168.10	169.47	171.00	172.71	174.59	176.66	163.99	169.02	174.25	179.71	185.39	199.63	205.81	212.25	218.96	225.95
Per unit Fixed Cost	Rs/kWh	2.76	2.63	2.63	2.63	2.64	2.65	2.66	2.67	2.69	2.70	2.72	2.75	2.77	2.80	2.83	2.86	2.66	2.74	2.82	2.91	3.00	3.23	3.33	3.44	3.55	3.66

Levellised tariff corresponding to Useful life

Levelliseu tarili corresponding	io oseiui ii	ie																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.23	5.25	5.51	5.79	6.07	6.38	6.70	7.03	7.38	7.75	8.14	8.55	8.97	9.42	9.89	10.39	10.91	11.45	12.03	12.63	13.26	13.92	14.62	15.35	16.12	16.92
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.30	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.27	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.46	0.31	0.32	0.33	0.35	0.36	0.38	0.40	0.42	0.43	0.45	0.48	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.72	0.75	0.79	0.83	0.87	0.91
RoE	Rs/kWh	0.51	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	10.99	7.88	8.14	8.42	8.72	9.03	9.36	9.70	10.07	10.46	10.86	11.29	11.75	12.22	12.72	13.25	13.57	14.19	14.85	15.54	16.26	17.16	17.95	18.79	19.67	20.58
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	E 2E																										

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

2.76

100.0	0
Years>	Unit
Capital Cost	600.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Levilised Tariff (Fixed)

Levellised Tariff

oupitur ooot	000.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Depm.	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.76	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 7.24
Electricity Generation (Levellised) 5.91

	ect] with Air Cooled	Condenser and using Al	and Juliflora (plantation) bas FBC Boiler- Tamil Nadu		Annexure-2.6F
S. Vo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	600.00
		Debt: Equity	Debt	%	70%
		1. 7	Equity	%	30%
			Total Debt Amount	Rs Lakh	420.00
			Total Equity Amount	Rs Lakh	180.00
		Debt Component	Loan Amount	Rs Lakh	420.00
		Dept Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	180.00
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related	-	After stabilization period		
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4125.00
	-		+	Kcal/kWh	4125.00
			Base Price	Rs/T	3435.60
)4		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
5	Maintenance		O & M Expenses Escalation	%	3.84%
)6	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		320.59	336.62	353.46	371.13	389.68	409.17	429.63	451.11	473.66	497.35	522.21	548.33	575.74	604.53	634.76	666.49	699.82	734.81	771.55	810.13	850.63	893.16	937.82	984.71	1,033.95
Per unit Variable Cost	Rs/kWh		5.19	5.45	5.73	6.01	6.31	6.63	6.96	7.31	7.68	8.06	8.46	8.89	9.33	9.80	10.29	10.80	11.34	11.91	12.50	13.13	13.78	14.47	15.20	15.96	16.75
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		36.54	34.02	31.50	28.98	26.46	23.94	21.42	18.90	16.38	13.86	11.34	8.82	6.30	3.78	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		18.74	19.55	20.42	21.32	22.27	23.27	24.32	25.42	26.58	27.80	29.07	30.42	31.83	33.31	34.86	36.30	38.05	39.89	41.81	43.83	46.06	48.28	50.62	53.07	55.64
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		162.01	162.16	162.43	162.81	163.31	163.94	164.70	165.61	166.65	167.85	169.21	170.73	172.42	174.29	176.35	163.66	168.67	173.89	179.33	184.99	199.21	205.37	211.79	218.47	225.45
Per unit Fixed Cost	Rs/kWh	2.75	2.63	2.63	2.63	2.64	2.65	2.66	2.67	2.68	2.70	2.72	2.74	2.77	2.79	2.82	2.86	2.65	2.73	2.82	2.91	3.00	3.23	3.33	3.43	3.54	3.65

Levellisea tariff corresponding	to Usetui II	te																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.15	5.19	5.45	5.73	6.01	6.31	6.63	6.96	7.31	7.68	8.06	8.46	8.89	9.33	9.80	10.29	10.80	11.34	11.91	12.50	13.13	13.78	14.47	15.20	15.96	16.75
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.30	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.27	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-		-	-	-	-	-
Int. on working capital	Rs/kWh	0.46	0.30	0.32	0.33	0.35	0.36	0.38	0.39	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.56	0.59	0.62	0.65	0.68	0.71	0.75	0.78	0.82	0.86	0.90
RoE	Rs/kWh	0.51	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	10.90	7.82	8.08	8.36	8.65	8.96	9.29	9.63	9.99	10.38	10.78	11.20	11.65	12.12	12.62	13.14	13.45	14.07	14.72	15.41	16.13	17.01	17.80	18.63	19.50	20.41
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.19																										

 Variable Cost
 5.19

 Levilised Tariff (Fixed)
 2.75

 Levellised Tariff
 7.95
 Rs/Unit

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

Book Depreciation	%	2.64%
Years>	Unit	1
Capital Cost	600.00	
Income Tax (Normal Rates)	34.944%	
Income Tax (MAT)	17.472%	
Additional Depreciation	20%	
Tax Depreciation rate	40%	
Book Depreciation rate	5.28%	
Depreciation amount	90%	

Oupitul Oost	000.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.76	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 7.24
Electricity Generation (Levellised) 5.91

	ct] with Air Cooled	Condenser and using Al	and Juliflora (plantation) bas FBC Boiler- Telangana		Annexure-2.6G
S. Vo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	600.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	420.00
			Total Equity Amount	Rs Lakh	180.00
		Debt Component	Loan Amount	Rs Lakh	420.00
		Debt Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	180.00
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
)3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	4 10.50%
_	Fuel Related		After stabilization period	Kcal/kWh	4125.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4125.00
4		Riomass	Base Price GCV-Biomass	Rs/T Kcal/kg	3492.30 3100.00
, , ,		Biomass	Biomass Price Escalation	%	5.00%
	Operation &		Factor		
5	Maintenance		O&M Expenses O & M Expenses Escalation	Rs Lakh %	3.84%
)6	Generation &		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		325.89	342.18	359.29	377.25	396.12	415.92	436.72	458.55	481.48	505.56	530.83	557.38	585.24	614.51	645.23	677.49	711.37	746.94	784.28	823.50	864.67	907.91	953.30	1,000.97	1,051.01
Per unit Variable Cost	Rs/kWh		5.28	5.54	5.82	6.11	6.42	6.74	7.08	7.43	7.80	8.19	8.60	9.03	9.48	9.96	10.46	10.98	11.53	12.10	12.71	13.34	14.01	14.71	15.45	16.22	17.03
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		36.54	34.02	31.50	28.98	26.46	23.94	21.42	18.90	16.38	13.86	11.34	8.82	6.30	3.78	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		18.99	19.83	20.70	21.62	22.58	23.60	24.66	25.78	26.96	28.20	29.49	30.86	32.29	33.79	35.37	36.84	38.61	40.48	42.43	44.48	46.75	49.00	51.37	53.86	56.47
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		162.27	162.43	162.71	163.10	163.62	164.27	165.05	165.97	167.04	168.25	169.63	171.17	172.89	174.78	176.86	164.20	169.23	174.48	179.95	185.65	199.90	206.09	212.54	219.27	226.28
Per unit Fixed Cost	Rs/kWh	2.76	2.63	2.63	2.64	2.64	2.65	2.66	2.67	2.69	2.71	2.73	2.75	2.77	2.80	2.83	2.87	2.66	2.74	2.83	2.92	3.01	3.24	3.34	3.44	3.55	3.67

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.28	5.28	5.54	5.82	6.11	6.42	6.74	7.08	7.43	7.80	8.19	8.60	9.03	9.48	9.96	10.46	10.98	11.53	12.10	12.71	13.34	14.01	14.71	15.45	16.22	17.03
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.30	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.27	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.46	0.31	0.32	0.34	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.69	0.72	0.76	0.79	0.83	0.87	0.92
RoE	Rs/kWh	0.51	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	11.04	7.91	8.18	8.46	8.76	9.07	9.40	9.75	10.12	10.51	10.92	11.35	11.81	12.28	12.79	13.32	13.64	14.27	14.93	15.62	16.35	17.25	18.05	18.89	19.77	20.70
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

 Variable Cost
 5.28

 Levilised Tariff (Fixed)
 2.76

 Levellised Tariff
 8.04
 Rs/Unit

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

Years	Unit
Capital Cost	600.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Capital Cost	600.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Depm.	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.76	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 7.24

Electricity Generation (Levellised) 5.91

	ass Power Projects ect] with Air Cooled (sed	Annexure-2.6H		
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Concration		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	600.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	420.00
			Total Equity Amount	Rs Lakh	180.00
		Debt Component	Loan Amount	Rs Lakh	420.00
	Sources of Fund		Moratorium Period Repayment Period(incld	years	0
02	oourooo or r una		Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	180.00
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4125.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3553.20
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		331.57	348.15	365.55	383.83	403.02	423.17	444.33	466.55	489.88	514.37	540.09	567.09	595.45	625.22	656.48	689.31	723.77	759.96	797.96	837.86	879.75	923.74	969.92	1,018.42	1,069.34
Per unit Variable Cost	Rs/kWh		5.37	5.64	5.92	6.22	6.53	6.86	7.20	7.56	7.94	8.33	8.75	9.19	9.65	10.13	10.64	11.17	11.73	12.31	12.93	13.58	14.26	14.97	15.72	16.50	17.33
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		36.54	34.02	31.50	28.98	26.46	23.94	21.42	18.90	16.38	13.86	11.34	8.82	6.30	3.78	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.27	20.12	21.01	21.94	22.92	23.95	25.04	26.17	27.37	28.63	29.95	31.33	32.79	34.32	35.92	37.41	39.22	41.11	43.10	45.18	47.48	49.78	52.18	54.71	57.36
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		162.55	162.73	163.02	163.43	163.96	164.62	165.42	166.36	167.45	168.68	170.08	171.65	173.38	175.30	177.41	164.78	169.84	175.12	180.61	186.35	200.63	206.86	213.35	220.12	227.17
Per unit Fixed Cost	Rs/kWh	2.77	2.63	2.64	2.64	2.65	2.66	2.67	2.68	2.70	2.71	2.73	2.76	2.78	2.81	2.84	2.87	2.67	2.75	2.84	2.93	3.02	3.25	3.35	3.46	3.57	3.68
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Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.43	5.37	5.64	5.92	6.22	6.53	6.86	7.20	7.56	7.94	8.33	8.75	9.19	9.65	10.13	10.64	11.17	11.73	12.31	12.93	13.58	14.26	14.97	15.72	16.50	17.33
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.30	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.27	0.22	0.18	0.14	0.10	0.06	0.02	-	-		-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.47	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.42	0.44	0.46	0.49	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.73	0.77	0.81	0.85	0.89	0.93
RoE	Rs/kWh	0.51	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	11.20	8.01	8.28	8.57	8.87	9.19	9.52	9.88	10.26	10.65	11.07	11.51	11.97	12.46	12.97	13.51	13.84	14.48	15.15	15.86	16.60	17.51	18.32	19.17	20.07	21.01
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.37																										

Levelised farm 0.14 RoyOllit

Determination of	f Additional De	preciation	for BIOMAS	SS Projects

Years>	Unit
Capital Cost	600.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Levllised Tariff (Fixed)

Capital Cost	000.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.76	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 7.24
Electricity Generation (Levellised) 5.91

	ass Power Projects ect] with Air Cooled (sed	Annexure-2.6I		
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Concration		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	600.00
		Debt: Equity	Debt	%	70%
		. ,	Equity	%	30%
			Total Debt Amount	Rs Lakh	420.00
			Total Equity Amount	Rs Lakh	180.00
		Debt Component	Loan Amount	Rs Lakh	420.00
		Debt component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount Return on Equity (upto 20	Rs Lakh	180.00
		Equity Component	years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	4
	Fuel Related				10.50%
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4125.00
	-		During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3734.85
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		348.52	365.95	384.24	403.45	423.63	444.81	467.05	490.40	514.92	540.67	567.70	596.09	625.89	657.19	690.04	724.55	760.77	798.81	838.75	880.69	924.73	970.96	1,019.51	1,070.49	1,124.01
Per unit Variable Cost	Rs/kWh		5.65	5.93	6.23	6.54	6.86	7.21	7.57	7.95	8.34	8.76	9.20	9.66	10.14	10.65	11.18	11.74	12.33	12.94	13.59	14.27	14.98	15.73	16.52	17.35	18.21
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		36.54	34.02	31.50	28.98	26.46	23.94	21.42	18.90	16.38	13.86	11.34	8.82	6.30	3.78	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		20.10	20.98	21.92	22.90	23.93	25.01	26.14	27.34	28.59	29.91	31.29	32.75	34.27	35.88	37.56	39.13	41.02	43.01	45.09	47.27	49.67	52.08	54.60	57.25	60.03
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		163.38	163.59	163.93	164.38	164.96	165.68	166.53	167.52	168.67	169.97	171.43	173.06	174.87	176.86	179.05	166.50	171.64	177.01	182.60	188.44	202.82	209.16	215.77	222.66	229.84
Per unit Fixed Cost	Rs/kWh	2.79	2.65	2.65	2.66	2.66	2.67	2.68	2.70	2.71	2.73	2.75	2.78	2.80	2.83	2.87	2.90	2.70	2.78	2.87	2.96	3.05	3.29	3.39	3.50	3.61	3.72
Levellised tariff corresponding	g to Useful li	fe																									

Levellised tariff corresponding	g to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.86	5.65	5.93	6.23	6.54	6.86	7.21	7.57	7.95	8.34	8.76	9.20	9.66	10.14	10.65	11.18	11.74	12.33	12.94	13.59	14.27	14.98	15.73	16.52	17.35	18.21
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.30	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.27	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-		-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.49	0.33	0.34	0.36	0.37	0.39	0.41	0.42	0.44	0.46	0.48	0.51	0.53	0.56	0.58	0.61	0.63	0.66	0.70	0.73	0.77	0.80	0.84	0.88	0.93	0.97
RoE	Rs/kWh	0.51	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	11.65	8.29	8.58	8.88	9.20	9.54	9.89	10.27	10.66	11.08	11.52	11.98	12.46	12.98	13.51	14.08	14.44	15.11	15.81	16.55	17.32	18.27	19.12	20.02	20.95	21.94
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
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 Variable Cost
 5.65

 Levilised Tariff (Fixed)
 2.79

 Levellised Tariff
 8.44
 Rs/Unit

Depreciation amount

Book Depreciation rate

Determination of Additional Depreciation for BIOMASS Projects

Tax Depreciation rate	40%														
Additional Depreciation	20%														
Income Tax (MAT)	17.472%														
Income Tax (Normal Rates)	34.944%														
Capital Cost	600.00														
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68

Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Depm.	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.76	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 7.24

Electricity Generation (Levellised) 5.91

Levellised benefit 0.12 Rs/Unit

20 21 22 23 24

		[Rice Straw and Juliflor and using AFBC boiler	a (plantation) based project] - Andhra Pradesh	with	Annexure-2.7A
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Contraction		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	611
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	427.70
			Total Equity Amount	Rs Lakh	183.30
		Debt Component	Loan Amount	Rs Lakh	427.70
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	183.30
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)	_	21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Related		Interest On Working Capital	%	10.50%
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4125.00
			During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3492.30
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
05			O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		325.89	342.18	359.29	377.25	396.12	415.92	436.72	458.55	481.48	505.56	530.83	557.38	585.24	614.51	645.23	677.49	711.37	746.94	784.28	823.50	864.67	907.91	953.30	1,000.97	1,051.01
Per unit Variable Cost	Rs/kWh		5.16	5.42	5.69	5.98	6.28	6.59	6.92	7.27	7.63	8.01	8.41	8.83	9.27	9.74	10.22	10.73	11.27	11.83	12.43	13.05	13.70	14.38	15.10	15.86	16.65
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		37.21	34.64	32.08	29.51	26.95	24.38	21.81	19.25	16.68	14.11	11.55	8.98	6.42	3.85	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.02	19.85	20.72	21.64	22.60	23.62	24.68	25.80	26.98	28.21	29.51	30.87	32.31	33.81	35.39	36.85	38.62	40.49	42.44	44.49	46.76	49.02	51.39	53.87	56.48
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		164.04	164.15	164.38	164.73	165.20	165.80	166.54	167.41	168.43	169.60	170.93	172.42	174.09	175.94	177.97	164.99	170.02	175.27	180.74	186.44	200.84	207.03	213.48	220.21	227.22
Per unit Fixed Cost	Rs/kWh	2.72	2.60	2.60	2.60	2.61	2.62	2.63	2.64	2.65	2.67	2.69	2.71	2.73	2.76	2.79	2.82	2.61	2.69	2.78	2.86	2.95	3.18	3.28	3.38	3.49	3.60
Levellised tariff corresponding	to Useful li	fe																									

Levellised tariff corresponding	g to Useful lif	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.10	5.16	5.42	5.69	5.98	6.28	6.59	6.92	7.27	7.63	8.01	8.41	8.83	9.27	9.74	10.22	10.73	11.27	11.83	12.43	13.05	13.70	14.38	15.10	15.86	16.65
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-			-	-	-	-	-
Int. on working capital	Rs/kWh	0.45	0.30	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.58	0.61	0.64	0.67	0.70	0.74	0.78	0.81	0.85	0.89
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.62	0.62	0.62	0.62	0.62
Total COG	Rs/kWh	10.82	7.76	8.02	8.30	8.59	8.89	9.22	9.56	9.92	10.30	10.70	11.12	11.56	12.03	12.52	13.04	13.35	13.96	14.61	15.29	16.00	16.88	17.67	18.49	19.35	20.25
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

 Variable Cost
 5.16

 Lewlised Tariff (Fixed)
 2.72

 Levellised Tariff
 7.88
 Rs/Unit

Determination of Additional Depreciation for BIOMASS Projects

Years>	Unit
Capital Cost	611.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Capital Cost	011.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation				•																					•	
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Depm.	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

 Tax Benefit Levellised
 7.37

 Electricity Generation (Levellised)
 6.04

 Levellised benefit
 0.12
 Rs/Unit

Vate	r Cooled Condense	r and using AFBC boiler	a (plantation) based project] - Haryana	***************************************	Annexure-2.7B
S. Vo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	611
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	427.70
			Total Equity Amount	Rs Lakh	183.30
		Debt Component	Loan Amount	Rs Lakh	427.70
		Dept Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	183.30
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
)3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4125.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4125.00
			· · · · · · · · · · · · · · · · · · ·		
14		Biomass	Base Price GCV-Biomass	Rs/T Kcal/kg	3975.30 3100.00
'		DIOIIIass	Biomass Price Escalation	%	5.00%
	Operation &		Factor O&M Expenses	Rs Lakh	48.20
5	Maintenance		O & M Expenses Escalation	%	3.84%
)6	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Biomass Pro	jects : Determination of	Tariff Component
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Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		370.96	389.50	408.98	429.43	450.90	473.45	497.12	521.97	548.07	575.48	604.25	634.46	666.19	699.49	734.47	771.19	809.75	850.24	892.75	937.39	984.26	1,033.47	1,085.15	1,139.40	1,196.37
Per unit Variable Cost	Rs/kWh		5.88	6.17	6.48	6.80	7.14	7.50	7.88	8.27	8.68	9.12	9.57	10.05	10.56	11.08	11.64	12.22	12.83	13.47	14.14	14.85	15.59	16.37	17.19	18.05	18.96
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		37.21	34.64	32.08	29.51	26.95	24.38	21.81	19.25	16.68	14.11	11.55	8.98	6.42	3.85	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		21.22	22.16	23.14	24.18	25.28	26.42	27.63	28.90	30.23	31.62	33.09	34.63	36.25	37.95	39.74	41.42	43.42	45.53	47.73	50.05	52.59	55.14	57.81	60.62	63.57
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		166.24	166.46	166.81	167.28	167.87	168.61	169.48	170.50	171.68	173.01	174.51	176.18	178.04	180.08	182.32	169.56	174.82	180.31	186.03	191.99	206.67	213.15	219.91	226.96	234.31
Per unit Fixed Cost	Rs/kWh	2.78	2.63	2.64	2.64	2.65	2.66	2.67	2.69	2.70	2.72	2.74	2.76	2.79	2.82	2.85	2.89	2.69	2.77	2.86	2.95	3.04	3.27	3.38	3.48	3.60	3.71

Levellised tariff corresponding to Useful life

Ec venioca tariii corresponding	io osciai ii																										
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.22	5.88	6.17	6.48	6.80	7.14	7.50	7.88	8.27	8.68	9.12	9.57	10.05	10.56	11.08	11.64	12.22	12.83	13.47	14.14	14.85	15.59	16.37	17.19	18.05	18.96
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-		-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.51	0.34	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.69	0.72	0.76	0.79	0.83	0.87	0.92	0.96	1.01
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.62	0.62	0.62	0.62	0.62
Total COG	Rs/kWh	11.99	8.51	8.81	9.12	9.45	9.80	10.17	10.56	10.97	11.40	11.86	12.34	12.84	13.38	13.94	14.53	14.91	15.60	16.33	17.09	17.89	18.87	19.75	20.68	21.65	22.67
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Coat	E 00					•				-		•							•	•					•		

 Determination of Additional Depreciation for BIOMASS Projects

 Depreciation amount
 90%

2.78

Book Depreciation rate	5.28%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17.472%
Income Tax (Normal Rates)	34.944%
Capital Cost	611.00
Years>	Unit
Book Depreciation	%
Book Depreciation	Rs Lakh

Levllised Tariff (Fixed)

Capital Cost	611.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation		•	•	•	•			•		•			•		•		•	•	•		•	•	•	•	•	-
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 7.37
Electricity Generation (Levellised) 6.04

Levellised benefit 0.12 Rs/Unit

Wate	r Cooled Condense	r and using AFBC boiler	a (plantation) based project] - Maharashtra	With	Annexure-2.7C
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	611
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	427.70
			Total Equity Amount	Rs Lakh	183.30
		Debt Component	Loan Amount	Rs Lakh	427.70
		Debt Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	183.30
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
)3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4125.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	
					4125.00
14		Diamaga	Base Price GCV-Biomass	Rs/T Kcal/kg	4065.60 3100.00
/ 4		Biomass	Biomass Price Escalation	%	5.00%
	Operation 9		Factor		
5	Operation & Maintenance		O&M Expenses O & M Expenses Escalation	Rs Lakh %	48.20 3.84%
	Generation &				
)6	Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		379.38	398.35	418.27	439.18	461.14	484.20	508.41	533.83	560.52	588.55	617.98	648.87	681.32	715.38	751.15	788.71	828.15	869.55	913.03	958.68	1,006.62	1,056.95	1,109.80	1,165.29	1,223.55
Per unit Variable Cost	Rs/kWh		6.01	6.31	6.63	6.96	7.31	7.67	8.06	8.46	8.88	9.32	9.79	10.28	10.79	11.33	11.90	12.50	13.12	13.78	14.47	15.19	15.95	16.75	17.58	18.46	19.39
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		37.21	34.64	32.08	29.51	26.95	24.38	21.81	19.25	16.68	14.11	11.55	8.98	6.42	3.85	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		21.63	22.59	23.60	24.66	25.78	26.95	28.18	29.47	30.83	32.26	33.76	35.34	36.99	38.73	40.55	42.27	44.32	46.47	48.72	51.09	53.68	56.28	59.02	61.88	64.89
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		166.65	166.89	167.26	167.75	168.37	169.13	170.03	171.08	172.28	173.65	175.18	176.89	178.78	180.86	183.14	170.41	175.72	181.25	187.02	193.03	207.76	214.30	221.11	228.22	235.63
Per unit Fixed Cost	Rs/kWh	2.79	2.64	2.64	2.65	2.66	2.67	2.68	2.69	2.71	2.73	2.75	2.78	2.80	2.83	2.87	2.90	2.70	2.78	2.87	2.96	3.06	3.29	3.40	3.50	3.62	3.73
		,																									

Levellised tariff corresponding	to Useful lif	e																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.43	6.01	6.31	6.63	6.96	7.31	7.67	8.06	8.46	8.88	9.32	9.79	10.28	10.79	11.33	11.90	12.50	13.12	13.78	14.47	15.19	15.95	16.75	17.58	18.46	19.39
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-		-	-	-	-	-
Int. on working capital	Rs/kWh	0.52	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.53	0.56	0.59	0.61	0.64	0.67	0.70	0.74	0.77	0.81	0.85	0.89	0.94	0.98	1.03
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.62	0.62	0.62	0.62	0.62
Total COG	Rs/kWh	12.21	8.65	8.96	9.28	9.62	9.97	10.35	10.75	11.17	11.61	12.08	12.57	13.08	13.63	14.20	14.80	15.20	15.91	16.65	17.43	18.25	19.24	20.14	21.09	22.08	23.12
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

Variable Cost 6.01 Levlised Tariff (Fixed) 2.79 Levellised Tariff 8.80

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

Depreciation amount	90%
Book Depreciation rate	5.28%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17.472%
Income Tax (Normal Rates)	34.944%
Capital Cost	611.00

Capital Cost	611.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 7.37 Electricity Generation (Levellised) 6.04

0.12 Rs/Unit Levellised benefit

Nate	r Cooled Condense	and using AFBC boiler	a (plantation) based project] - Punjab	With	Annexure-2.7D
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	611
		Debt: Equity	Debt	%	70%
		' '	Equity	%	30%
			Total Debt Amount	Rs Lakh	427.70
			Total Equity Amount	Rs Lakh	183.30
		Debt Component	Loan Amount	Rs Lakh	427.70
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	183.30
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4125.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	
					4125.00
14		Diamas	Base Price GCV-Biomass	Rs/T	4158
04		Biomass	Biomass Price Escalation	Kcal/kg %	3100.00 5.00%
	Onerette: C		Factor		
	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
)5			O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		388.01	407.41	427.78	449.17	471.62	495.20	519.96	545.96	573.26	601.92	632.02	663.62	696.80	731.64	768.22	806.64	846.97	889.32	933.78	980.47	1,029.49	1,080.97	1,135.02	1,191.77	1,251.36
Per unit Variable Cost	Rs/kWh		6.15	6.45	6.78	7.12	7.47	7.85	8.24	8.65	9.08	9.54	10.01	10.51	11.04	11.59	12.17	12.78	13.42	14.09	14.79	15.53	16.31	17.13	17.98	18.88	19.83
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		37.21	34.64	32.08	29.51	26.95	24.38	21.81	19.25	16.68	14.11	11.55	8.98	6.42	3.85	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		22.05	23.03	24.06	25.15	26.29	27.48	28.74	30.07	31.45	32.91	34.45	36.06	37.75	39.52	41.39	43.15	45.24	47.43	49.73	52.15	54.80	57.46	60.25	63.18	66.25
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		167.07	167.33	167.72	168.24	168.88	169.67	170.59	171.67	172.90	174.30	175.86	177.60	179.53	181.65	183.97	171.29	176.64	182.21	188.03	194.09	208.88	215.47	222.34	229.51	236.99
Per unit Fixed Cost	Rs/kWh	2.80	2.65	2.65	2.66	2.67	2.68	2.69	2.70	2.72	2.74	2.76	2.79	2.81	2.84	2.88	2.91	2.71	2.80	2.89	2.98	3.08	3.31	3.41	3.52	3.64	3.75

Levellised tariff corresponding	to Useful lif	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.64	6.15	6.45	6.78	7.12	7.47	7.85	8.24	8.65	9.08	9.54	10.01	10.51	11.04	11.59	12.17	12.78	13.42	14.09	14.79	15.53	16.31	17.13	17.98	18.88	19.83
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-		-	-	-	-	-
Int. on working capital	Rs/kWh	0.53	0.35	0.36	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.68	0.72	0.75	0.79	0.83	0.87	0.91	0.95	1.00	1.05
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.62	0.62	0.62	0.62	0.62
Total COG	Rs/kWh	12.44	8.79	9.11	9.44	9.78	10.15	10.53	10.94	11.37	11.82	12.30	12.80	13.33	13.88	14.47	15.09	15.49	16.22	16.98	17.77	18.61	19.62	20.54	21.51	22.52	23.58
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

Variable Cost 6.15 Levllised Tariff (Fixed) 2.80

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

Voore	Unit
Capital Cost	611.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
•	•	•			•	•	•	•	•	•	•		•			•	•		•	•	•	•	•	•	
%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
	1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
9 9 F	% Rs Lakh % % % Rs Lakh Rs Lakh Rs Lakh Rs Lakh	% 2.64% Rs Lakh 16.13 6 100% 6 30.00% 6 70.0% Rs Lakh 183.30 Rs Lakh 167.17 Rs Lakh 58.42	% 2.64% 5.28% Rs Lakh 16.13 32.26 6 100% 70% 6 30.00% 35.00% 6 70.0% 35.0% 8s Lakh 183.30 213.85 8s Lakh 167.17 181.59 8s Lakh 58.42 63.45 AU 3.16 6.31 8s/Unit 1.85 1.01 1.00 0.92	% 2.64% 5.28% 5.28% 88 Lakh 16.13 32.26 32	% 2.64% 5.28% 5.28% 5.28% Rs Lakh 16.13 32.26 32.26 32.26 46 100% 70% 35% 21% 6 30.00% 35.00% 14.00% 8.40% 6 70.0% 35.0% 21.0% 12.6% 8s Lakh 183.30 213.85 85.54 51.32 8s Lakh 167.17 181.59 53.28 19.06 8s Lakh 58.42 63.45 18.62 6.66 MU 3.16 6.31 6.31 6.31 6.31 8s/Unit 1.85 1.01 0.29 0.11 1.00 0.92 0.85 0.79	% 2.64% 5.28% 5.28% 5.28% 5.28% rs Lakh 16.13 32.26	% 2.64% 5.28% 5.28% 5.28% 5.28% 5.28% Rs Lakh 16.13 32.26 32.26 32.26 32.26 32.26 6 100% 70% 35% 21% 13% 8% 6 30.00% 35.00% 14.00% 8.40% 5.04% 3.02% 6 70.0% 35.0% 21.0% 12.6% 7.6% 4.5% 8s Lakh 183.30 213.85 85.54 51.32 30.79 18.48 8s Lakh 167.17 181.59 53.28 19.06 -1.47 -13.78 8s Lakh 58.42 63.45 18.62 6.66 -0.51 -4.82 MU 3.16 6.31 6.31 6.31 6.31 6.31 6.31 8s/Unit 1.85 1.01 0.29 0.11 -0.01 -0.08 1.00 0.92 0.85 0.79 0.73 0.67	% 2.64% 5.28% 32.26 32.	% 2.64% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% Rs Lakh 16.13 32.26	% 2.64% 5.28% 32.26 32.	% 2.64% 5.28% 32.26 12.26 32.26 12.26 12.26 12.26 12.26 12.26 12.27 12.	% 2.64% 5.28% 3.26 32.2	% 2.64% 5.28% 32.26 32.	% 2.64% 5.28% 32.26 32.	% 2.64% 5.28% 3.26 32.2	% 2.64% 5.28% 5.2	% 2.64% 5.28% 5.2	% 2.64% 5.28% 5.2	% 2.64% 5.28% 5.2	% 2.64% 5.28% 5.2	% 2.64% 5.28% 5.2	% 2.64% 5.28% 5.2	% 2.64% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 0.00% 0.0	% 2.64% 5.28% 5.2	% 2.64% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 5.28% 0.00% 0.0

Tax Benefit Levellised

7.37

Electricity Generation (Levellised) 6.04

Levellised benefit 0.12 Rs/Unit

Vate	r Cooled Condense	and using AFBC boiler	a (plantation) based project] - Rajasthan	With	Annexure-2.7E
S. Vo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	611
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	427.70
			Total Equity Amount	Rs Lakh	183.30
		Debt Component	Loan Amount	Rs Lakh	427.70
		Debt Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	183.30
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
)3			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4125.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4125.00
14		Biomass	Base Price GCV-Biomass	Rs/T Kcal/kg	3470.25 3100.00
'		וטווומסס	Biomass Price Escalation	%	5.00%
	Operation &		Factor O&M Expenses	Rs Lakh	48.20
5	Maintenance		O & M Expenses Escalation	%	3.84%
)6	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		323.83	340.02	357.02	374.87	393.62	413.30	433.96	455.66	478.44	502.36	527.48	553.86	581.55	610.63	641.16	673.22	706.88	742.22	779.33	818.30	859.21	902.17	947.28	994.65	1,044.38
Per unit Variable Cost	Rs/kWh		5.13	5.39	5.66	5.94	6.24	6.55	6.88	7.22	7.58	7.96	8.36	8.78	9.21	9.67	10.16	10.67	11.20	11.76	12.35	12.97	13.61	14.29	15.01	15.76	16.55
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		37.21	34.64	32.08	29.51	26.95	24.38	21.81	19.25	16.68	14.11	11.55	8.98	6.42	3.85	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		18.92	19.74	20.61	21.52	22.48	23.49	24.55	25.66	26.83	28.06	29.35	30.70	32.13	33.62	35.19	36.64	38.41	40.26	42.20	44.24	46.49	48.74	51.09	53.56	56.16
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		163.94	164.05	164.27	164.61	165.08	165.67	166.40	167.27	168.28	169.44	170.77	172.25	173.91	175.75	177.77	164.78	169.81	175.04	180.50	186.18	200.57	206.75	213.19	219.90	226.90
Per unit Fixed Cost	Rs/kWh	2.72	2.60	2.60	2.60	2.61	2.62	2.62	2.64	2.65	2.67	2.68	2.71	2.73	2.76	2.78	2.82	2.61	2.69	2.77	2.86	2.95	3.18	3.28	3.38	3.48	3.59

Levellised tariff corresponding to Useful life

Levellised tariii corresponding	io oseiui ii	ie																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.05	5.13	5.39	5.66	5.94	6.24	6.55	6.88	7.22	7.58	7.96	8.36	8.78	9.21	9.67	10.16	10.67	11.20	11.76	12.35	12.97	13.61	14.29	15.01	15.76	16.55
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-		-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.45	0.30	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.44	0.46	0.49	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.74	0.77	0.81	0.85	0.89
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.62	0.62	0.62	0.62	0.62
Total COG	Rs/kWh	10.77	7.73	7.99	8.26	8.55	8.85	9.17	9.51	9.87	10.25	10.64	11.06	11.50	11.97	12.46	12.98	13.28	13.89	14.53	15.21	15.92	16.79	17.57	18.39	19.24	20.14
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.13																										

Determination of Additional Depreciation for BIOMASS Projects
Depreciation amount 90%

2.72

Dardi Danas dation	0/
Years>	Unit
Capital Cost	611.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Doprodiation amount	0070

Levllised Tariff (Fixed)

Levellised Tariff

Capital Cost	611.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 7.37 Electricity Generation (Levellised) 6.04

Levellised benefit 0.12 Rs/Unit

		and using AFBC boiler	a (plantation) based project] – Tamil Nadu	With	Annexure-2.7F
ഉ.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	611
		Debt: Equity	Debt	%	70%
		' '	Equity	%	30%
			Total Debt Amount	Rs Lakh	427.70
			Total Equity Amount	Rs Lakh	183.30
		Debt Component	Loan Amount	Rs Lakh	427.70
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	183.30
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months %	10.50%
	Fuel Related		Interest On Working Capital After stabilization period	% Kcal/kWh	
	Assumptions	Heat Rate	During stabilization period		4125.00
	-		+	Kcal/kWh	4125.00
			Base Price	Rs/T	3435.60
04		Biomass	GCV-Biomass Biomass Price Escalation	Kcal/kg	3100.00
			Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
)5	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		320.59	336.62	353.46	371.13	389.68	409.17	429.63	451.11	473.66	497.35	522.21	548.33	575.74	604.53	634.76	666.49	699.82	734.81	771.55	810.13	850.63	893.16	937.82	984.71	1,033.95
Per unit Variable Cost	Rs/kWh		5.08	5.33	5.60	5.88	6.17	6.48	6.81	7.15	7.50	7.88	8.27	8.69	9.12	9.58	10.06	10.56	11.09	11.64	12.22	12.84	13.48	14.15	14.86	15.60	16.38
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		37.21	34.64	32.08	29.51	26.95	24.38	21.81	19.25	16.68	14.11	11.55	8.98	6.42	3.85	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		18.76	19.58	20.44	21.34	22.29	23.29	24.34	25.44	26.60	27.81	29.09	30.43	31.84	33.32	34.88	36.31	38.06	39.90	41.82	43.84	46.07	48.30	50.63	53.08	55.65
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		163.78	163.88	164.10	164.43	164.89	165.47	166.19	167.05	168.05	169.20	170.51	171.98	173.63	175.45	177.46	164.45	169.46	174.68	180.12	185.78	200.15	206.31	212.73	219.42	226.39
Per unit Fixed Cost	Rs/kWh	2.71	2.59	2.60	2.60	2.61	2.61	2.62	2.63	2.65	2.66	2.68	2.70	2.72	2.75	2.78	2.81	2.61	2.68	2.77	2.85	2.94	3.17	3.27	3.37	3.48	3.59

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	7.97	5.08	5.33	5.60	5.88	6.17	6.48	6.81	7.15	7.50	7.88	8.27	8.69	9.12	9.58	10.06	10.56	11.09	11.64	12.22	12.84	13.48	14.15	14.86	15.60	16.38
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	,	-			-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.45	0.30	0.31	0.32	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.73	0.77	0.80	0.84	0.88
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.62	0.62	0.62	0.62	0.62
Total COG	Rs/kWh	10.68	7.67	7.93	8.20	8.49	8.79	9.10	9.44	9.79	10.17	10.56	10.98	11.41	11.87	12.36	12.87	13.17	13.77	14.41	15.08	15.78	16.65	17.42	18.23	19.08	19.97
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.08																										

Determination of Additional Depreciation for BIOMASS Projects

2.71

Years>	Unit
Capital Cost	611.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Levlised Tariff (Fixed)

Levellised Tariff

Oupitui Oost	011.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised

7.37

Electricity Generation (Levellised)

Levellised benefit 6.04 0.12 Rs/Unit

	r Cooled Condense	r and using AFBC boiler	a (plantation) based project] – Telangana	***************************************	Annexure-2.7G
ഉ.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	611
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	427.70
			Total Equity Amount	Rs Lakh	183.30
		Debt Component	Loan Amount	Rs Lakh	427.70
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	183.30
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months %	10.50%
	Fuel Related	_	Interest On Working Capital After stabilization period	% Kcal/kWh	
	Assumptions	Heat Rate	During stabilization period		4125.00
	-		+	Kcal/kWh	4125.00
			Base Price	Rs/T	3492.30
04		Biomass	GCV-Biomass Biomass Price Escalation	Kcal/kg	3100.00
			Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
5	Maintenance		O & M Expenses Escalation	%	3.84%
96	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		325.89	342.18	359.29	377.25	396.12	415.92	436.72	458.55	481.48	505.56	530.83	557.38	585.24	614.51	645.23	677.49	711.37	746.94	784.28	823.50	864.67	907.91	953.30	1,000.97	1,051.01
Per unit Variable Cost	Rs/kWh		5.16	5.42	5.69	5.98	6.28	6.59	6.92	7.27	7.63	8.01	8.41	8.83	9.27	9.74	10.22	10.73	11.27	11.83	12.43	13.05	13.70	14.38	15.10	15.86	16.65
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		37.21	34.64	32.08	29.51	26.95	24.38	21.81	19.25	16.68	14.11	11.55	8.98	6.42	3.85	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.02	19.85	20.72	21.64	22.60	23.62	24.68	25.80	26.98	28.21	29.51	30.87	32.31	33.81	35.39	36.85	38.62	40.49	42.44	44.49	46.76	49.02	51.39	53.87	56.48
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		164.04	164.15	164.38	164.73	165.20	165.80	166.54	167.41	168.43	169.60	170.93	172.42	174.09	175.94	177.97	164.99	170.02	175.27	180.74	186.44	200.84	207.03	213.48	220.21	227.22
Per unit Fixed Cost	Rs/kWh	2.72	2.60	2.60	2.60	2.61	2.62	2.63	2.64	2.65	2.67	2.69	2.71	2.73	2.76	2.79	2.82	2.61	2.69	2.78	2.86	2.95	3.18	3.28	3.38	3.49	3.60

Levellised tariff corresponding	to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.10	5.16	5.42	5.69	5.98	6.28	6.59	6.92	7.27	7.63	8.01	8.41	8.83	9.27	9.74	10.22	10.73	11.27	11.83	12.43	13.05	13.70	14.38	15.10	15.86	16.65
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.45	0.30	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.58	0.61	0.64	0.67	0.70	0.74	0.78	0.81	0.85	0.89
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.62	0.62	0.62	0.62	0.62
Total COG	Rs/kWh	10.82	7.76	8.02	8.30	8.59	8.89	9.22	9.56	9.92	10.30	10.70	11.12	11.56	12.03	12.52	13.04	13.35	13.96	14.61	15.29	16.00	16.88	17.67	18.49	19.35	20.25
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.16																										

 LevIlised Tariff (Fixed)
 2.72

 LeveIlised Tariff
 7.88
 Rs/Unit

Determination of Additional Depreciation for BIOMASS Projects

Years>	Unit
Capital Cost	611.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

 Tax Benefit Levellised
 7.37

 Electricity Generation (Levellised)
 6.04

 Levellised benefit
 0.12
 Rs/Unit

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		and using AFBC boiler	a (plantation) based project] – Uttar Pradesh	With	Annexure-2.7H
ഉ.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	611
		Debt: Equity	Debt	%	70%
		' '	Equity	%	30%
			Total Debt Amount	Rs Lakh	427.70
			Total Equity Amount	Rs Lakh	183.30
		Debt Component	Loan Amount	Rs Lakh	427.70
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	183.30
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months %	10.50%
	Fuel Related		Interest On Working Capital After stabilization period	% Kcal/kWh	
	Assumptions	Heat Rate	During stabilization period		4125.00
	-		+	Kcal/kWh	4125.00
			Base Price	Rs/T	3553.20
04		Biomass	GCV-Biomass Biomass Price Escalation	Kcal/kg	3100.00
			Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
)5	Maintenance		O & M Expenses Escalation	%	3.84%
96	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		331.57	348.15	365.55	383.83	403.02	423.17	444.33	466.55	489.88	514.37	540.09	567.09	595.45	625.22	656.48	689.31	723.77	759.96	797.96	837.86	879.75	923.74	969.92	1,018.42	1,069.34
Per unit Variable Cost	Rs/kWh		5.25	5.52	5.79	6.08	6.39	6.70	7.04	7.39	7.76	8.15	8.56	8.99	9.43	9.91	10.40	10.92	11.47	12.04	12.64	13.28	13.94	14.64	15.37	16.14	16.94
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		37.21	34.64	32.08	29.51	26.95	24.38	21.81	19.25	16.68	14.11	11.55	8.98	6.42	3.85	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.29	20.14	21.03	21.96	22.94	23.97	25.05	26.19	27.39	28.64	29.96	31.35	32.80	34.33	35.94	37.42	39.23	41.12	43.11	45.19	47.49	49.79	52.20	54.72	57.37
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		164.31	164.44	164.69	165.05	165.54	166.16	166.91	167.80	168.84	170.03	171.38	172.90	174.59	176.46	178.52	165.57	170.63	175.91	181.41	187.14	201.57	207.80	214.29	221.06	228.11
Per unit Fixed Cost	Rs/kWh	2.73	2.60	2.61	2.61	2.62	2.62	2.63	2.64	2.66	2.68	2.69	2.72	2.74	2.77	2.80	2.83	2.62	2.70	2.79	2.87	2.97	3.19	3.29	3.40	3.50	3.61

Levellised tariff corresponding to Useful life Per Unit Cost of Generation 2 7 8 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 8.24 Rs/kWh 5.25 5.52 5.79 6.08 6.39 6.70 7.04 7.39 7.76 8.15 8.56 8.99 9.43 9.91 10.40 10.92 11.47 12.04 12.64 13.28 13.94 14.64 15.37 16.14 16.94 Per unit Variable Cost O&M expn Rs/kWh 1.07 0.76 0.79 0.82 0.86 0.89 0.92 0.96 0.99 1.03 1.07 1.11 1.16 1.20 1.25 1.29 1.34 1.40 1.45 1.50 1.56 1.62 1.68 1.75 1.82 1.89 0.45 0.45 0.45 0.45 0.45 0.45 0.45 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 Rs/kWh 0.40 0.45 0.45 0.45 0.45 0.45 0.45 0.45 0.45 0.19 Depreciation Int. on term loan Rs/kWh 0.29 0.59 0.55 0.51 0.47 0.43 0.39 0.35 0.30 0.26 0.22 0.18 0.14 0.10 0.06 0.02 Int. on working capital Rs/kWh 0.46 0.31 0.32 0.33 0.35 0.36 0.38 0.40 0.41 0.43 0.45 0.47 0.50 0.52 0.54 0.57 0.59 0.62 0.65 0.68 0.72 0.79 0.83 0.87 0.91 RoE Rs/kWh 0.50 0.49 0.62 0.62 0.62 0.62 0.62 Total COG Rs/kWh 7.86 8.12 8.40 8.70 9.01 9.68 10.05 10.44 10.84 11.27 11.72 12.20 12.70 13.23 13.54 14.17 14.83 15.52 16.24 17.13 17.93 18.76 20.56 0.92 0.15 0.79 0.73 0.62 0.57 0.53 0.45 0.33 0.30 0.26 Discount Factor 0.85 0.49 0.22 0.17

 Variable Cost
 5.25

 Lewlised Tariff (Fixed)
 2.73

 Levellised Tariff
 7.98
 Rs/Unit

Determination of Additional Depreciation for BIOMASS Projects

Years>	Unit
Capital Cost	611.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation			•	•	•	•	•	•	•	•	•	•	•	•			•		•	•	•	•	•	•	•	
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

 Tax Benefit Levellised
 7.37

 Electricity Generation (Levellised)
 6.04

 Levellised benefit
 0.12
 Rs/Unit

		[Rice Straw and Juliflora and using AFBC boiler	a (plantation) based project] – Other States	with	Annexure-2.7I
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	10.00%
	Generation		Auxiliary Consumption after stabilization	%	10.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	611
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	427.70
			Total Equity Amount	Rs Lakh	183.30
		Debt Component	Loan Amount	Rs Lakh	427.70
	Sources of Fund	, , , , ,	Moratorium Period Repayment Period(incld	years	0
02	Sources of Fulla		Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount Return on Equity (upto 20	Rs Lakh	183.30
		Equity Component	years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4125.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3734.85
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		348.52	365.95	384.24	403.45	423.63	444.81	467.05	490.40	514.92	540.67	567.70	596.09	625.89	657.19	690.04	724.55	760.77	798.81	838.75	880.69	924.73	970.96	1,019.51	1,070.49	1,124.01
Per unit Variable Cost	Rs/kWh		5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.57	8.99	9.44	9.92	10.41	10.93	11.48	12.05	12.66	13.29	13.95	14.65	15.38	16.15	16.96	17.81
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		37.21	34.64	32.08	29.51	26.95	24.38	21.81	19.25	16.68	14.11	11.55	8.98	6.42	3.85	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		20.12	21.01	21.94	22.92	23.95	25.03	26.16	27.36	28.61	29.93	31.31	32.76	34.29	35.89	37.57	39.14	41.03	43.02	45.10	47.28	49.69	52.09	54.61	57.26	60.04
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		165.14	165.31	165.60	166.01	166.54	167.21	168.01	168.96	170.06	171.31	172.73	174.31	176.07	178.02	180.16	167.29	172.43	177.80	183.39	189.23	203.77	210.10	216.71	223.60	230.78
Per unit Fixed Cost	Rs/kWh	2.75	2.62	2.62	2.62	2.63	2.64	2.65	2.66	2.68	2.69	2.71	2.74	2.76	2.79	2.82	2.85	2.65	2.73	2.82	2.91	3.00	3.23	3.33	3.43	3.54	3.66

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.66	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.57	8.99	9.44	9.92	10.41	10.93	11.48	12.05	12.66	13.29	13.95	14.65	15.38	16.15	16.96	17.81
O&M expn	Rs/kWh	1.07	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82	1.89
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	-	-	-	-		-	-	-	-	-
Int. on working capital	Rs/kWh	0.48	0.32	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.50	0.52	0.54	0.57	0.60	0.62	0.65	0.68	0.71	0.75	0.79	0.83	0.87	0.91	0.95
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.62	0.62	0.62	0.62	0.62
Total COG	Rs/kWh	11.41	8.14	8.42	8.71	9.02	9.35	9.70	10.06	10.45	10.85	11.28	11.73	12.21	12.71	13.23	13.79	14.13	14.79	15.47	16.19	16.95	17.88	18.71	19.59	20.50	21.47
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5 52			-	-	-			-	-			•								-						

 Levellised Tariff (Fixed)
 2.75

 Levellised Tariff
 8.27
 Rs/Unit

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

V	11-14
Capital Cost	611.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Capital Cost	611.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised

7.37

Electricity Generation (Levellised)

Levellised benefit

) 6.04 0.12 Rs/Unit

		[Rice Straw and Juliflor sing AFBC Boiler- Andh	a (plantation) based project ra Pradesh] with Air	Annexure-2.8A
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	652.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	456.40
			Total Equity Amount	Rs Lakh	195.60
		Debt Component	Loan Amount	Rs Lakh	456.40
	Sources of Fund		Moratorium Period Repayment Period(incld	years	0
02	Courses or runa		Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	195.60
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4125.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3492.30
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		325.89	342.18	359.29	377.25	396.12	415.92	436.72	458.55	481.48	505.56	530.83	557.38	585.24	614.51	645.23	677.49	711.37	746.94	784.28	823.50	864.67	907.91	953.30	1,000.97	1,051.01
Per unit Variable Cost	Rs/kWh		5.28	5.54	5.82	6.11	6.42	6.74	7.08	7.43	7.80	8.19	8.60	9.03	9.48	9.96	10.46	10.98	11.53	12.10	12.71	13.34	14.01	14.71	15.45	16.22	17.03
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		39.71	36.97	34.23	31.49	28.75	26.01	23.28	20.54	17.80	15.06	12.32	9.58	6.85	4.11	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.10	19.93	20.80	21.72	22.68	23.69	24.76	25.87	27.05	28.28	29.57	30.94	32.36	33.87	35.44	36.89	38.66	40.53	42.48	44.53	46.80	49.06	51.43	53.92	56.53
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		170.62	170.56	170.62	170.79	171.09	171.51	172.07	172.77	173.62	174.61	175.77	177.09	178.58	180.25	182.11	167.94	172.97	178.22	183.68	189.38	204.35	210.54	217.00	223.72	230.73
Per unit Fixed Cost	Rs/kWh	2.87	2.76	2.76	2.76	2.77	2.77	2.78	2.79	2.80	2.81	2.83	2.85	2.87	2.89	2.92	2.95	2.72	2.80	2.89	2.98	3.07	3.31	3.41	3.52	3.63	3.74

Levellised tariff corresponding to Useful life

Levelliseu tarili corresponding	io oseiui ii	ie																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.28	5.28	5.54	5.82	6.11	6.42	6.74	7.08	7.43	7.80	8.19	8.60	9.03	9.48	9.96	10.46	10.98	11.53	12.10	12.71	13.34	14.01	14.71	15.45	16.22	17.03
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.44	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.32	0.64	0.60	0.55	0.51	0.47	0.42	0.38	0.33	0.29	0.24	0.20	0.16	0.11	0.07	0.02	-	-	-		-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.46	0.31	0.32	0.34	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.69	0.72	0.76	0.80	0.83	0.87	0.92
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	11.15	8.05	8.31	8.59	8.88	9.19	9.52	9.86	10.23	10.62	11.02	11.45	11.90	12.38	12.88	13.41	13.70	14.33	14.99	15.69	16.41	17.32	18.12	18.96	19.85	20.77
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Coat	E 20													-				-				-	-		-		

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

2.87

Depreciation amount	90%
Book Depreciation rate	5.28%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17.472%
Income Tax (Normal Rates)	34.944%
Capital Cost	652.00

Levlised Tariff (Fixed)

Capital Cost	002.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Depm.	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 7.86
Electricity Generation (Levellised) 5.91

Levellised benefit 0.13 Rs/Unit

		[Rice Straw and Juliflora sing AFBC Boiler- Harya	a (plantation) based project na] with Air	Annexure-2.8B
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Concration		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	652.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	456.40
			Total Equity Amount	Rs Lakh	195.60
		Debt Component	Loan Amount	Rs Lakh	456.40
	0	Dobt component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	195.60
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
		F 5: 10:	O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare	<u> </u>	15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4125.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4125.00
			'		
04		Biomass	Base Price GCV-Biomass	Rs/T Kcal/kg	3975.30 3100.00
		Diomass	Biomass Price Escalation	%	5.00%
	Operation &		Factor O&M Expenses	Rs Lakh	48.20
05	Maintenance		O&M Expenses O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00
	Sale of Energy				

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		370.96	389.50	408.98	429.43	450.90	473.45	497.12	521.97	548.07	575.48	604.25	634.46	666.19	699.49	734.47	771.19	809.75	850.24	892.75	937.39	984.26	1,033.47	1,085.15	1,139.40	1,196.37
Per unit Variable Cost	Rs/kWh		6.01	6.31	6.63	6.96	7.31	7.67	8.06	8.46	8.88	9.33	9.79	10.28	10.79	11.33	11.90	12.50	13.12	13.78	14.47	15.19	15.95	16.75	17.58	18.46	19.39
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		39.71	36.97	34.23	31.49	28.75	26.01	23.28	20.54	17.80	15.06	12.32	9.58	6.85	4.11	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		21.30	22.24	23.23	24.26	25.35	26.50	27.70	28.97	30.29	31.69	33.15	34.69	36.31	38.01	39.80	41.46	43.46	45.56	47.77	50.09	52.64	55.19	57.86	60.67	63.61
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		172.82	172.87	173.04	173.33	173.76	174.32	175.02	175.86	176.86	178.02	179.35	180.85	182.53	184.40	186.46	172.51	177.77	183.25	188.97	194.94	210.18	216.67	223.43	230.47	237.82
Per unit Fixed Cost	Rs/kWh	2.92	2.80	2.80	2.80	2.81	2.82	2.82	2.84	2.85	2.87	2.88	2.91	2.93	2.96	2.99	3.02	2.80	2.88	2.97	3.06	3.16	3.41	3.51	3.62	3.73	3.85
Levellised tariff corresponding	n to Useful li	fe																									

Per Unit Cost of Generation Unit 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 Per unit Variable Cost Rs/kWh 6.01 6.31 6.63 6.96 7.31 7.67 8.06 8.46 8.88 9.33 9.79 10.28 10.79 11.33 11.90 12.50 13.12 13.78 14.47 15.19 16.75 17.58 19.39 O&M expn Rs/kWh 0.78 0.87 0.94 1.02 1.06 1.10 1.14 1.18 1.23 1.37 1.48 1.54 1.60 1.72 1.79 1.93 Depreciation Rs/kWh 0.49 0.49 0.49 0.49 0.49 0.49 0.49 0.49 0.49 0.49 0.49 0.49 0.49 0.49 0.49 0.21 0.21 0.21 0.21 0.21 0.21 0.21 0.21 Int. on term loan Rs/kWh 0.64 0.60 0.55 0.51 0.47 0.42 0.38 0.29 0.24 0.20 0.16 0.11 0.07 Rs/kWh 0.35 0.36 0.38 0.39 0.41 0.43 0.45 0.49 0.51 0.54 0.56 0.59 0.62 0.64 0.67 0.70 0.74 0.77 0.81 0.89 0.94 1.03 Int. on working capital RoE Rs/kWh 0.55 0.54 0.68 0.68 0.68 0.68 0.68 Total COG Rs/kWh 12.35 8.81 9.11 9.43 9.77 10.12 10.50 10.89 11.31 11.75 12.21 12.70 13.21 13.75 14.32 14.92 15.29 16.75 17.53 18.35 19.35 20.26 21.20 22.20 23.24 16.00 0.33 0.92 0.85 0.79 0.73 0.67 0.62 0.57 0.53 0.49 0.45 0.42 0.38 0.35 0.30 0.26 0.24 0.22 0.20 0.19 0.17 0.15 Discount Factor

 Variable Cost
 6.01

 Lewlised Tariff (Fixed)
 2.92

 Levellised Tariff
 8.93
 Rs/Unit

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

V	11.74
Capital Cost	652.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

oupitui ooot	002.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation					-																				-	
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	7.86																									

Tax Benefit Levellised 7.86
Electricity Generation (Levellised) 5.91

evellised benefit 0.13 Rs/Unit

	ed Condenser and u	sing AFBC Boiler- Maha	a (plantation) based project trashtra		Annexure-2.8C
S. Vo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	652.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	456.40
			Total Equity Amount	Rs Lakh	195.60
		Debt Component	Loan Amount	Rs Lakh	456.40
		Debt Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	195.60
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period		
	Assumptions	Heat Rate		Kcal/kWh	4125.00
	-		During stabilization period	Kcal/kWh	4125.00
. 4			Base Price	Rs/T	4065.60
)4		Biomass	GCV-Biomass Biomass Price Escalation	Kcal/kg	3100.00
			Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
5	Maintenance		O & M Expenses Escalation	%	3.84%
)6	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		379.38	398.35	418.27	439.18	461.14	484.20	508.41	533.83	560.52	588.55	617.98	648.87	681.32	715.38	751.15	788.71	828.15	869.55	913.03	958.68	1,006.62	1,056.95	1,109.80	1,165.29	1,223.55
Per unit Variable Cost	Rs/kWh		6.15	6.45	6.78	7.12	7.47	7.85	8.24	8.65	9.08	9.54	10.01	10.51	11.04	11.59	12.17	12.78	13.42	14.09	14.79	15.53	16.31	17.13	17.98	18.88	19.83
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		39.71	36.97	34.23	31.49	28.75	26.01	23.28	20.54	17.80	15.06	12.32	9.58	6.85	4.11	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		21.71	22.67	23.68	24.74	25.85	27.02	28.25	29.54	30.90	32.33	33.82	35.40	37.05	38.79	40.61	42.31	44.36	46.51	48.76	51.13	53.73	56.33	59.06	61.93	64.94
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		173.23	173.30	173.49	173.81	174.26	174.84	175.57	176.44	177.47	178.66	180.02	181.55	183.27	185.17	187.28	173.36	178.66	184.20	189.96	195.97	211.27	217.81	224.63	231.74	239.15
Per unit Fixed Cost	Rs/kWh	2.93	2.81	2.81	2.81	2.82	2.82	2.83	2.84	2.86	2.88	2.90	2.92	2.94	2.97	3.00	3.03	2.81	2.90	2.98	3.08	3.18	3.42	3.53	3.64	3.76	3.88

.evellised	tariff	correspond	ing to	Useful	life
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Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.64	6.15	6.45	6.78	7.12	7.47	7.85	8.24	8.65	9.08	9.54	10.01	10.51	11.04	11.59	12.17	12.78	13.42	14.09	14.79	15.53	16.31	17.13	17.98	18.88	19.83
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.44	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.32	0.64	0.60	0.55	0.51	0.47	0.42	0.38	0.33	0.29	0.24	0.20	0.16	0.11	0.07	0.02	-	-	-					-	-	-
Int. on working capital	Rs/kWh	0.53	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.69	0.72	0.75	0.79	0.83	0.87	0.91	0.96	1.00	1.05
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	12.58	8.95	9.26	9.59	9.93	10.30	10.68	11.08	11.51	11.96	12.43	12.93	13.46	14.01	14.59	15.21	15.59	16.31	17.08	17.87	18.71	19.73	20.66	21.62	22.64	23.70
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	6.15																										

 LevIlised Tariff (Fixed)
 2.93

 LeveIlised Tariff
 9.08
 Rs/Unit

Determination of Additional Depreciation for BIOMASS Projects Depreciation amount 90%

Book Depreciation rate	5.28%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17.472%
Income Tax (Normal Rates)	34.944%
Capital Cost	652.00
Years>	Unit
Book Depreciation	%

Capital Cost	652.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation												•			•	•			•						•	
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 7.86
Electricity Generation (Levellised) 5.91

Levellised benefit 0.13 Rs/Unit

		[Rice Straw and Juliflora sing AFBC Boiler- Punja	n (plantation) based project b	with Air	Annexure-2.8D
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	652.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	456.40
			Total Equity Amount	Rs Lakh	195.60
		Debt Component	Loan Amount	Rs Lakh	456.40
	Sources of Fund	,	Moratorium Period Repayment Period(incld	years	0
02	Sources of Fulla		Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	195.60
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare	Marit	15.00%
			Receivables for Debtors Biomass Stock	Months Months	1.5
		For Variable Charges	Interest On Working Capital	%	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4125.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	4158
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		388.01	407.41	427.78	449.17	471.62	495.20	519.96	545.96	573.26	601.92	632.02	663.62	696.80	731.64	768.22	806.64	846.97	889.32	933.78	980.47	1,029.49	1,080.97	1,135.02	1,191.77	1,251.36
Per unit Variable Cost	Rs/kWh		6.29	6.60	6.93	7.28	7.64	8.02	8.43	8.85	9.29	9.75	10.24	10.75	11.29	11.86	12.45	13.07	13.72	14.41	15.13	15.89	16.68	17.52	18.39	19.31	20.28
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		39.71	36.97	34.23	31.49	28.75	26.01	23.28	20.54	17.80	15.06	12.32	9.58	6.85	4.11	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		22.13	23.11	24.14	25.23	26.36	27.56	28.82	30.14	31.52	32.98	34.51	36.12	37.81	39.58	41.44	43.18	45.28	47.47	49.77	52.19	54.84	57.50	60.29	63.22	66.30
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		173.65	173.74	173.96	174.30	174.77	175.38	176.13	177.03	178.09	179.31	180.70	182.27	184.02	185.96	188.11	174.23	179.58	185.16	190.97	197.04	212.39	218.98	225.86	233.03	240.50
Per unit Fixed Cost	Rs/kWh	2.94	2.81	2.82	2.82	2.82	2.83	2.84	2.85	2.87	2.89	2.91	2.93	2.95	2.98	3.01	3.05	2.82	2.91	3.00	3.09	3.19	3.44	3.55	3.66	3.78	3.90
Levellised tariff corresponding	to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.86	6.29	6.60	6.93	7.28	7.64	8.02	8.43	8.85	9.29	9.75	10.24	10.75	11.29	11.86	12.45	13.07	13.72	14.41	15.13	15.89	16.68	17.52	18.39	19.31	20.28
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93

Levellised tariff corresponding	to Usetui III	re																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.86	6.29	6.60	6.93	7.28	7.64	8.02	8.43	8.85	9.29	9.75	10.24	10.75	11.29	11.86	12.45	13.07	13.72	14.41	15.13	15.89	16.68	17.52	18.39	19.31	20.28
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.44	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.32	0.64	0.60	0.55	0.51	0.47	0.42	0.38	0.33	0.29	0.24	0.20	0.16	0.11	0.07	0.02	-	-	-	-		-	-	-	-	-
Int. on working capital	Rs/kWh	0.54	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.53	0.56	0.59	0.61	0.64	0.67	0.70	0.73	0.77	0.81	0.85	0.89	0.93	0.98	1.02	1.07
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	12.81	9.10	9.42	9.75	10.10	10.47	10.87	11.28	11.72	12.18	12.66	13.17	13.71	14.27	14.87	15.50	15.89	16.63	17.41	18.23	19.08	20.12	21.06	22.05	23.09	24.17
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	6.29																										

Levlised Tariff (Fixed) 2.94

Determination of Additional Depreciation for BIOMASS Projects

Years>	Unit
Capital Cost	652.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Capital Cost	652.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised

7.86

Electricity Generation (Levellised)

Levellised benefit

5.91 0.13 Rs/Unit

		[Rice Straw and Juliflor sing AFBC Boiler- Rajas	a (plantation) based project sthan] with Air	Annexure-2.8E
No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	652.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	456.40
			Total Equity Amount	Rs Lakh	195.60
		Debt Component	Loan Amount	Rs Lakh	456.40
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	195.60
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03	-		Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Related		Interest On Working Capital	%	10.50%
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4125.00
	P		During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3470.25
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		323.83	340.02	357.02	374.87	393.62	413.30	433.96	455.66	478.44	502.36	527.48	553.86	581.55	610.63	641.16	673.22	706.88	742.22	779.33	818.30	859.21	902.17	947.28	994.65	1,044.38
Per unit Variable Cost	Rs/kWh		5.25	5.51	5.79	6.07	6.38	6.70	7.03	7.38	7.75	8.14	8.55	8.97	9.42	9.89	10.39	10.91	11.45	12.03	12.63	13.26	13.92	14.62	15.35	16.12	16.92
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		39.71	36.97	34.23	31.49	28.75	26.01	23.28	20.54	17.80	15.06	12.32	9.58	6.85	4.11	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.00	19.83	20.69	21.60	22.56	23.57	24.62	25.73	26.90	28.12	29.41	30.76	32.18	33.68	35.24	36.68	38.44	40.30	42.24	44.28	46.54	48.78	51.14	53.61	56.20
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		170.52	170.46	170.51	170.67	170.96	171.38	171.94	172.63	173.47	174.46	175.60	176.92	178.40	180.06	181.91	167.73	172.75	177.99	183.44	189.13	204.09	210.26	216.70	223.41	230.41
Per unit Fixed Cost	Rs/kWh	2.86	2.76	2.76	2.76	2.77	2.77	2.78	2.79	2.80	2.81	2.83	2.85	2.87	2.89	2.92	2.95	2.72	2.80	2.88	2.97	3.06	3.31	3.41	3.51	3.62	3.73
Levellised tariff corresponding	to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.23	5.25	5.51	5.79	6.07	6.38	6.70	7.03	7.38	7.75	8.14	8.55	8.97	9.42	9.89	10.39	10.91	11.45	12.03	12.63	13.26	13.92	14.62	15.35	16.12	16.92
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.44	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.32	0.64	0.60	0.55	0.51	0.47	0.42	0.38	0.33	0.29	0.24	0.20	0.16	0.11	0.07	0.02	-	-	-	-	-	-	-	-	-	-

0.46

0.54

10.97

0.49

0.48

0.54

11.39

0.45

0.54

11.84

0.42

0.52

0.54

12.31

0.38

0.54

12.81

0.35

0.54

13.34

0.33

0.54

13.63

0.62

0.54

14.25

0.65

0.54

14.91

0.26

0.68

0.54

15.60

0.24

0.72

0.54

16.32

0.68

17.23

0.20

0.79

0.68

18.03

0.19

0.68

18.86

0.17

0.91

0.68

20.66

0.15

0.68

19.74

0.16

| Int. on working capital | Rs/kWh | 0.46 | RoE | Rs/kWh | 0.55 | Total COG | Rs/kWh | 11.09 | Discount Factor | Variable Cost | 5.25 | Levellised Tariff | 8.11 | Rs/Unit | Rs/Unit | Rs/Line | Rs/

0.32

0.54

8.27

0.92

0.54

8.01

0.54

8.55

0.85

0.35

0.54

8.84

0.37

0.54

9.15

0.73

0.38

0.54

9.47

0.67

0.40

0.54

9.82

0.62

0.42

0.54

10.18

0.57

0.44

0.54

10.56

0.53

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

Depreciation amount	90%
Book Depreciation rate	5.28%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17.472%
Income Tax (Normal Rates)	34.944%
Capital Cost	652.00
Years>	Unit
Book Depreciation	%

Capital Cost	652.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 7.86

Electricity Generation (Levellised) 5.91

Levellised benefit 0.13 Rs/Unit

		[Rice Straw and Juliflora sing AFBC Boiler- Tamil	ı (plantation) based project Nadu	with Air	Annexure-2.8F
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	652.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	456.40
			Total Equity Amount	Rs Lakh	195.60
		Debt Component	Loan Amount	Rs Lakh	456.40
	Sources of Fund	,	Moratorium Period Repayment Period(incld	years	0
02	Sources of Fulla		Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	195.60
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare	NA /	15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4125.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3435.60
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Biomass Pro	jects : Determination o	f Tariff Component
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Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		320.59	336.62	353.46	371.13	389.68	409.17	429.63	451.11	473.66	497.35	522.21	548.33	575.74	604.53	634.76	666.49	699.82	734.81	771.55	810.13	850.63	893.16	937.82	984.71	1,033.95
Per unit Variable Cost	Rs/kWh		5.19	5.45	5.73	6.01	6.31	6.63	6.96	7.31	7.68	8.06	8.46	8.89	9.33	9.80	10.29	10.80	11.34	11.91	12.50	13.13	13.78	14.47	15.20	15.96	16.75
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		39.71	36.97	34.23	31.49	28.75	26.01	23.28	20.54	17.80	15.06	12.32	9.58	6.85	4.11	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		18.85	19.66	20.52	21.42	22.37	23.36	24.41	25.51	26.67	27.88	29.15	30.49	31.90	33.38	34.93	36.35	38.10	39.93	41.86	43.88	46.12	48.34	50.68	53.12	55.69
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		170.36	170.29	170.33	170.49	170.77	171.18	171.73	172.41	173.23	174.21	175.35	176.65	178.12	179.77	181.60	167.40	172.41	177.62	183.06	188.73	203.67	209.82	216.24	222.93	229.90
Per unit Fixed Cost	Rs/kWh	2.86	2.76	2.76	2.76	2.76	2.77	2.77	2.78	2.79	2.81	2.82	2.84	2.86	2.89	2.91	2.94	2.71	2.79	2.88	2.97	3.06	3.30	3.40	3.50	3.61	3.73

Levellised tariff corresponding to Useful life

Levellised tariii corresponding	to oscial in	10																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.15	5.19	5.45	5.73	6.01	6.31	6.63	6.96	7.31	7.68	8.06	8.46	8.89	9.33	9.80	10.29	10.80	11.34	11.91	12.50	13.13	13.78	14.47	15.20	15.96	16.75
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.44	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.32	0.64	0.60	0.55	0.51	0.47	0.42	0.38	0.33	0.29	0.24	0.20	0.16	0.11	0.07	0.02	-	-	-		-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.46	0.31	0.32	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.75	0.78	0.82	0.86	0.90
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	11.01	7.96	8.21	8.49	8.78	9.08	9.40	9.74	10.10	10.48	10.88	11.30	11.75	12.22	12.71	13.23	13.51	14.13	14.79	15.47	16.19	17.08	17.87	18.70	19.57	20.48
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
V	F 40					•	•	•	•	•	•			•					•			•		•	•		

Determination of Additional Depreciation for BIOMASS Projects

2.86

	0.1
Years>	Unit
Capital Cost	652.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Levlised Tariff (Fixed)

Levellised Tariff

Capital Cost	002.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

7.86 Tax Benefit Levellised Electricity Generation (Levellised)

Levellised benefit 5.91 0.13 Rs/Unit

		[Rice Straw and Juliflor sing AFBC Boiler- Telan	a (plantation) based project gana] with Air	Annexure-2.8G
No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	652.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	456.40
			Total Equity Amount	Rs Lakh	195.60
		Dobt Component	Loan Amount	Rs Lakh	456.40
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	195.60
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fire Deleted	1	Interest On Working Capital	%	10.50%
	Fuel Related Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4125.00
	Accumptions		During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3492.30
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		325.89	342.18	359.29	377.25	396.12	415.92	436.72	458.55	481.48	505.56	530.83	557.38	585.24	614.51	645.23	677.49	711.37	746.94	784.28	823.50	864.67	907.91	953.30	1,000.97	1,051.01
Per unit Variable Cost	Rs/kWh		5.28	5.54	5.82	6.11	6.42	6.74	7.08	7.43	7.80	8.19	8.60	9.03	9.48	9.96	10.46	10.98	11.53	12.10	12.71	13.34	14.01	14.71	15.45	16.22	17.03
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		39.71	36.97	34.23	31.49	28.75	26.01	23.28	20.54	17.80	15.06	12.32	9.58	6.85	4.11	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.10	19.93	20.80	21.72	22.68	23.69	24.76	25.87	27.05	28.28	29.57	30.94	32.36	33.87	35.44	36.89	38.66	40.53	42.48	44.53	46.80	49.06	51.43	53.92	56.53
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		170.62	170.56	170.62	170.79	171.09	171.51	172.07	172.77	173.62	174.61	175.77	177.09	178.58	180.25	182.11	167.94	172.97	178.22	183.68	189.38	204.35	210.54	217.00	223.72	230.73
Per unit Fixed Cost	Rs/kWh	2.87	2.76	2.76	2.76	2.77	2.77	2.78	2.79	2.80	2.81	2.83	2.85	2.87	2.89	2.92	2.95	2.72	2.80	2.89	2.98	3.07	3.31	3.41	3.52	3.63	3.74
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Levellised tariff corresponding	to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.28	5.28	5.54	5.82	6.11	6.42	6.74	7.08	7.43	7.80	8.19	8.60	9.03	9.48	9.96	10.46	10.98	11.53	12.10	12.71	13.34	14.01	14.71	15.45	16.22	17.03
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.44	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.32	0.64	0.60	0.55	0.51	0.47	0.42	0.38	0.33	0.29	0.24	0.20	0.16	0.11	0.07	0.02	-	-	-			-	-	-	-	-
Int. on working capital	Rs/kWh	0.46	0.31	0.32	0.34	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.69	0.72	0.76	0.80	0.83	0.87	0.92
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	11.15	8.05	8.31	8.59	8.88	9.19	9.52	9.86	10.23	10.62	11.02	11.45	11.90	12.38	12.88	13.41	13.70	14.33	14.99	15.69	16.41	17.32	18.12	18.96	19.85	20.77
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

 Variable Cost
 5.28

 Levilised Tariff (Fixed)
 2.87

 Levellised Tariff
 8.15
 Rs/Unit

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

Years>	Unit
Capital Cost	652.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Oupital Oost	002.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Depm.	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 7.86
Electricity Generation (Levellised) 5.91

Levellised benefit 0.13 Rs/Unit

	ed Condenser and u	sing AFBC Boiler- Uttar	a (plantation) based project Pradesh	J With Air	Annexure-2.8H
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	652.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	456.40
			Total Equity Amount	Rs Lakh	195.60
		Dobt Component	Loan Amount	Rs Lakh	456.40
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	195.60
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Related		Interest On Working Capital	%	10.50%
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	4125.00
	P		During stabilization period	Kcal/kWh	4125.00
			Base Price	Rs/T	3553.20
04		Biomass	GCV-Biomass	Kcal/kg	3100.00
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	48.20
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Biomass Projects:	: Determination of	Tariff	Component
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Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		331.57	348.15	365.55	383.83	403.02	423.17	444.33	466.55	489.88	514.37	540.09	567.09	595.45	625.22	656.48	689.31	723.77	759.96	797.96	837.86	879.75	923.74	969.92	1,018.42	1,069.34
Per unit Variable Cost	Rs/kWh		5.37	5.64	5.92	6.22	6.53	6.86	7.20	7.56	7.94	8.33	8.75	9.19	9.65	10.13	10.64	11.17	11.73	12.31	12.93	13.58	14.26	14.97	15.72	16.50	17.33
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		39.71	36.97	34.23	31.49	28.75	26.01	23.28	20.54	17.80	15.06	12.32	9.58	6.85	4.11	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.38	20.22	21.11	22.04	23.02	24.05	25.13	26.26	27.46	28.71	30.03	31.41	32.86	34.39	35.99	37.46	39.27	41.16	43.15	45.23	47.54	49.83	52.24	54.77	57.42
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		170.90	170.85	170.92	171.11	171.42	171.87	172.44	173.16	174.02	175.04	176.22	177.56	179.08	180.77	182.66	168.51	173.57	178.85	184.35	190.08	205.09	211.31	217.81	224.57	231.63
Per unit Fixed Cost	Rs/kWh	2.87	2.77	2.77	2.77	2.77	2.78	2.78	2.79	2.81	2.82	2.84	2.86	2.88	2.90	2.93	2.96	2.73	2.81	2.90	2.99	3.08	3.32	3.42	3.53	3.64	3.75

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.43	5.37	5.64	5.92	6.22	6.53	6.86	7.20	7.56	7.94	8.33	8.75	9.19	9.65	10.13	10.64	11.17	11.73	12.31	12.93	13.58	14.26	14.97	15.72	16.50	17.33
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.44	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.32	0.64	0.60	0.55	0.51	0.47	0.42	0.38	0.33	0.29	0.24	0.20	0.16	0.11	0.07	0.02	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.47	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.44	0.47	0.49	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.73	0.77	0.81	0.85	0.89	0.93
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	11.30	8.14	8.41	8.69	8.99	9.31	9.64	9.99	10.37	10.76	11.17	11.61	12.07	12.55	13.06	13.60	13.90	14.54	15.21	15.92	16.66	17.58	18.39	19.25	20.14	21.08
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.37																										
Levlised Tariff (Fixed)	2.87																										

Levellised Tariff 8.25 Rs/Unit

Determination of Additional Depreciation for BIOMASS Projects

Voore	Unit
Capital Cost	652.00
Income Tax (Normal Rates)	34.944%
Income Tax (MAT)	17.472%
Additional Depreciation	20%
Tax Depreciation rate	40%
Book Depreciation rate	5.28%
Depreciation amount	90%

Oupital Oost	002.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Depm.	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 5.91 0.13 Rs/Unit Electricity Generation (Levellised) Levellised benefit

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		[Rice Straw and Juliflor ising AFBC Boiler- Other	a (plantation) based project r States	J With Air	Annexure-2.8I
ა. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	12.00%
	Generation		Auxiliary Consumption after stabilization	%	12.00%
01		Capacity	PLF(Stabilization for 6 months)	%	80.00%
			PLF(during first year after Stabilization)	%	80.00%
			PLF(second year onwards)	%	80.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	652.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	456.40
			Total Equity Amount	Rs Lakh	195.60
		Debt Component	Loan Amount	Rs Lakh	456.40
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount Return on Equity (upto 20	Rs Lakh	195.60
		Equity Component	years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	10.50%
	Fuel Related		After stabilization period	Kcal/kWh	4125.00
	Assumptions	Heat Rate	During stabilization period	Kcal/kWh	
			 		4125.00
0.4			Base Price	Rs/T	3734.85
04		Biomass	GCV-Biomass Biomass Price Escalation	Kcal/kg %	3100.00 5.00%
	Omenatic of		Factor		
	Operation & Maintenance		O&M Expenses	Rs Lakh	48.20
05			O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Biomass Projects: Determination of Tariff Component

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		348.52	365.95	384.24	403.45	423.63	444.81	467.05	490.40	514.92	540.67	567.70	596.09	625.89	657.19	690.04	724.55	760.77	798.81	838.75	880.69	924.73	970.96	1,019.51	1,070.49	1,124.01
Per unit Variable Cost	Rs/kWh		5.65	5.93	6.23	6.54	6.86	7.21	7.57	7.95	8.34	8.76	9.20	9.66	10.14	10.65	11.18	11.74	12.33	12.94	13.59	14.27	14.98	15.73	16.52	17.35	18.21
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		48.20	50.05	51.98	53.97	56.04	58.20	60.43	62.75	65.16	67.66	70.26	72.96	75.76	78.67	81.69	84.83	88.09	91.47	94.98	98.63	102.41	106.35	110.43	114.67	119.08
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		39.71	36.97	34.23	31.49	28.75	26.01	23.28	20.54	17.80	15.06	12.32	9.58	6.85	4.11	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		20.21	21.09	22.02	23.00	24.02	25.10	26.24	27.43	28.68	29.99	31.37	32.82	34.35	35.95	37.63	39.18	41.07	43.06	45.14	47.32	49.73	52.14	54.66	57.31	60.09
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		171.72	171.72	171.83	172.07	172.43	172.92	173.55	174.32	175.25	176.32	177.56	178.98	180.56	182.33	184.30	170.23	175.38	180.75	186.34	192.17	207.28	213.62	220.22	227.11	234.29
Per unit Fixed Cost	Rs/kWh	2.89	2.78	2.78	2.78	2.79	2.79	2.80	2.81	2.82	2.84	2.86	2.88	2.90	2.93	2.95	2.99	2.76	2.84	2.93	3.02	3.11	3.36	3.46	3.57	3.68	3.80

Levellised tariff corresponding to Useful life

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Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.86	5.65	5.93	6.23	6.54	6.86	7.21	7.57	7.95	8.34	8.76	9.20	9.66	10.14	10.65	11.18	11.74	12.33	12.94	13.59	14.27	14.98	15.73	16.52	17.35	18.21
O&M expn	Rs/kWh	1.09	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	0.44	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.32	0.64	0.60	0.55	0.51	0.47	0.42	0.38	0.33	0.29	0.24	0.20	0.16	0.11	0.07	0.02		-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.49	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.44	0.46	0.49	0.51	0.53	0.56	0.58	0.61	0.63	0.67	0.70	0.73	0.77	0.81	0.84	0.89	0.93	0.97
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	11.75	8.43	8.71	9.01	9.33	9.66	10.01	10.38	10.77	11.18	11.62	12.08	12.56	13.07	13.60	14.17	14.50	15.17	15.87	16.61	17.38	18.34	19.20	20.09	21.03	22.01
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.65																										

<u>Determination of Additional Depreciation</u> for BIOMASS Projects

2.89

Depreciation amount	90%
Book Depreciation rate	5.28%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17.472%
Income Tax (Normal Rates)	34.944%
Capital Cost	652.00
Years>	Unit
Book Depreciation	%

Levlised Tariff (Fixed)

Levellised Tariff

Capital Cost	032.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation						•			•	•					•					•		•				
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

Tax Benefit Levellised 5.91 0.13 Rs/Unit Electricity Generation (Levellised)

Non	Fossil Fuel based Co	o-Generation Projects- A	andhra Pradesh		Annexure-3A
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	8.50%
	Generation		Auxiliary Consumption after stabilization	%	8.50%
01		Capacity	PLF(Stabilization for 6 months)	%	45.00%
			PLF(during first year after Stabilization)	%	45.00%
			PLF(second year onwards)	%	45.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	467.00
		Debt: Equity	Debt	%	70%
		Doon Equity	Equity	%	30%
			Total Debt Amount	Rs Lakh	326.90
			Total Equity Amount	Rs Lakh	140.10
		D 1 1 0	Loan Amount	Rs Lakh	326.90
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	140.10
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Related		Interest On Working Capital	%	10.50%
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	3600.00
			During stabilization period	Kcal/kWh	3600.00
			Base Price	Rs/T	1971.90
04		Bagasse	GCV-Bagasse	Kcal/kg	2250
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	25.46
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Cogeneration Projects : Determination of Tariff Component	Cogeneration	Projects	: Determination	of Tariff	Component
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Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		124.46	130.68	137.21	144.07	151.28	158.84	166.78	175.12	183.88	193.07	202.73	212.86	223.51	234.68	246.42	258.74	271.67	285.26	299.52	314.50	330.22	346.73	364.07	382.27	401.39
Per unit Variable Cost	Rs/kWh		3.45	3.62	3.80	3.99	4.19	4.40	4.62	4.85	5.09	5.35	5.62	5.90	6.19	6.50	6.83	7.17	7.53	7.90	8.30	8.71	9.15	9.61	10.09	10.59	11.12
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		25.46	26.44	27.45	28.51	29.60	30.74	31.92	33.15	34.42	35.74	37.11	38.54	40.02	41.56	43.15	44.81	46.53	48.32	50.17	52.10	54.10	56.18	58.33	60.57	62.90
Depreciation	Rs Lakh		21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34
Interest on term loan	Rs Lakh		28.44	26.48	24.52	22.56	20.59	18.63	16.67	14.71	12.75	10.79	8.83	6.86	4.90	2.94	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		8.02	8.34	8.67	9.02	9.39	9.77	10.18	10.61	11.05	11.53	12.02	12.55	13.10	13.67	14.28	14.77	15.46	16.19	16.96	17.76	18.69	19.58	20.50	21.48	22.50
Return on Equity	Rs Lakh		23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	30.15	30.15	30.15	30.15	30.15
Total Fixed Cost	Rs Lakh		107.49	106.82	106.20	105.64	105.14	104.71	104.33	104.02	103.78	103.62	103.52	103.51	103.58	103.73	103.97	92.68	95.10	97.61	100.24	102.97	112.28	115.24	118.32	121.54	124.88
Per unit Fixed Cost	Rs/kWh		2.98	2.96	2.94	2.93	2.91	2.90	2.89	2.88	2.88	2.87	2.87	2.87	2.87	2.87	2.88	2.57	2.63	2.70	2.78	2.85	3.11	3.19	3.28	3.37	3.46
Levallised tariff corresponding	to Useful li	fe																									
Por Unit Cost of Congration	Unit		4	2	•	4	E	e	7	0	•	10	11	12	13	14	15	16	17	10	10	20	21	22	23	24	25

Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	5.41	3.45	3.62	3.80	3.99	4.19	4.40	4.62	4.85	5.09	5.35	5.62	5.90	6.19	6.50	6.83	7.17	7.53	7.90	8.30	8.71	9.15	9.61	10.09	10.59	11.12
O&M expn	Rs/kWh	0.99	0.71	0.73	0.76	0.79	0.82	0.85	0.88	0.92	0.95	0.99	1.03	1.07	1.11	1.15	1.20	1.24	1.29	1.34	1.39	1.44	1.50	1.56	1.62	1.68	1.74
Depreciation	Rs/kWh	0.54	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Int. on term loan	Rs/kWh	0.39	0.79	0.73	0.68	0.62	0.57	0.52	0.46	0.41	0.35	0.30	0.24	0.19	0.14	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.32	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.31	0.32	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.57	0.60	0.62
RoE	Rs/kWh	0.67	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.84	0.84	0.84	0.84	0.84
Total COG	Rs/kWh	8.32	6.43	6.58	6.74	6.92	7.10	7.30	7.51	7.73	7.97	8.22	8.48	8.77	9.06	9.38	9.71	9.74	10.16	10.61	11.08	11.57	12.26	12.80	13.36	13.96	14.58
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	3.45																										

 LevIlised Tariff (Fixed)
 2.91

 LeveIlised Tariff
 6.36
 Rs/Unit

5.28%

0.85

0.79

0.73

0.92

0.67

0.62

0.57

0.53

0.49

Determination of Additional Depreciation Depreciation amount 90%

Book Depreciation rate

Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.47%																									
Income Tax (Normal Rates)	34.94%																									
Capital Cost	467.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	12.33	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	13.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation					•	•						·		•		•						•				
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Depm.	Rs Lakh	140.10	163.45	65.38	39.23	23.54	14.12	8.47	5.08	3.05	1.83	1.10	0.66	0.40	0.24	0.14	0.09	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	127.77	138.79	40.72	14.57	- 1.12 -	10.54	16.18	19.57 -	21.61	22.83	23.56 -	24.00	24.26	24.42	24.52	- 24.57 -	24.61	- 13.42	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	44.65	48.50	14.23	5.09	- 0.39 -	3.68	5.66	6.84 -	7.55	7.98	8.23 -	8.39	8.48	8.53	8.57	- 8.59 -	8.60	4.69	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	1.80	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61
Per unit henefit	Rs/LInit	2 47	1.34	0.39	0.14	- 0.01 -	0.10	0.16	0.19 -	0.21	0.22	0.23	0.23	0.23	0.24	0.24	- 024 -	0.24	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.45

0.42

0.38

0.35

0.33

0.30

0.28

0.26

0.17

0.16

0.15

0.24

0.22

0.20

0.19

Non	Fossil Fuel based Co	o-Generation Projects- H	laryana		Annexure-3B
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	8.50%
	Generation		Auxiliary Consumption after stabilization	%	8.50%
01		Capacity	PLF(Stabilization for 6 months)	%	53.00%
			PLF(during first year after Stabilization)	%	53.00%
			PLF(second year onwards)	%	53.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	467.00
		Debt: Equity	Debt	%	70%
		20011 = 4011	Equity	%	30%
			Total Debt Amount	Rs Lakh	326.90
			Total Equity Amount	Rs Lakh	140.10
		Dalat Carrage and	Loan Amount	Rs Lakh	326.90
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	140.10
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Related		Interest On Working Capital	%	10.50%
	Assumptions	Heat Rate	After stabilization period	Kcal/kWh	3600.00
			During stabilization period	Kcal/kWh	3600.00
			Base Price	Rs/T	2804.55
04		Bagasse	GCV-Bagasse	Kcal/kg	2250
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	25.46
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Cogeneration Pr	rojects : Detern	nination of Tai	iff Component
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oogeneration rojects . De	torring		00po	v																							
Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		208.48	218.90	229.85	241.34	253.41	266.08	279.38	293.35	308.02	323.42	339.59	356.57	374.40	393.12	412.77	433.41	455.08	477.84	501.73	526.81	553.15	580.81	609.85	640.35	672.36
Per unit Variable Cost	Rs/kWh		4.90	5.15	5.41	5.68	5.96	6.26	6.57	6.90	7.25	7.61	7.99	8.39	8.81	9.25	9.71	10.20	10.71	11.24	11.80	12.39	13.01	13.66	14.35	15.06	15.82
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		25.46	26.44	27.45	28.51	29.60	30.74	31.92	33.15	34.42	35.74	37.11	38.54	40.02	41.56	43.15	44.81	46.53	48.32	50.17	52.10	54.10	56.18	58.33	60.57	62.90
Depreciation	Rs Lakh		21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34
Interest on term loan	Rs Lakh		28.44	26.48	24.52	22.56	20.59	18.63	16.67	14.71	12.75	10.79	8.83	6.86	4.90	2.94	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		12.12	12.64	13.19	13.76	14.37	15.00	15.67	16.37	17.11	17.88	18.70	19.55	20.45	21.40	22.39	23.28	24.41	25.58	26.82	28.12	29.56	30.99	32.49	34.06	35.71
Return on Equity	Rs Lakh		23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	30.15	30.15	30.15	30.15	30.15
Total Fixed Cost	Rs Lakh		111.58	111.12	110.72	110.39	110.12	109.93	109.82	109.79	109.84	109.97	110.20	110.52	110.94	111.46	112.08	101.20	104.04	107.01	110.10	113.32	123.15	126.65	130.31	134.12	138.10
Per unit Fixed Cost	Rs/kWh		2.62	2.61	2.60	2.60	2.59	2.59	2.58	2.58	2.58	2.59	2.59	2.60	2.61	2.62	2.64	2.38	2.45	2.52	2.59	2.67	2.90	2.98	3.07	3.16	3.25
Levallised tariff corresponding	to Useful li	fe																			•						
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	7.69	4.90	5.15	5.41	5.68	5.96	6.26	6.57	6.90	7.25	7.61	7.99	8.39	8.81	9.25	9.71	10.20	10.71	11.24	11.80	12.39	13.01	13.66	14.35	15.06	15.82
O&M expn	Rs/kWh	0.84	0.60	0.62	0.65	0.67	0.70	0.72	0.75	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.05	1.09	1.14	1.18	1.23	1.27	1.32	1.37	1.42	1.48
Depreciation	Rs/kWh	0.46	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Int. on term loan	Rs/kWh	0.33	0.67	0.62	0.58	0.53	0.48	0.44	0.39	0.35	0.30	0.25	0.21	0.16	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.43	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.57	0.60	0.63	0.66	0.70	0.73	0.76	0.80	0.84
RoE	Rs/kWh	0.57	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.71	0.71	0.71	0.71	0.71
Total COG	Rs/kWh	10.32	7.53	7.76	8.01	8.27	8.55	8.85	9.16	9.48	9.83	10.19	10.58	10.99	11.42	11.87	12.35	12.58	13.15	13.76	14.39	15.06	15.91	16.64	17.41	18.22	19.06
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.1
Variable Cost	4.90	İ																									

Determination of Additional Depreciation Depreciation amount 90% Book Depreciation rate 5.28%

Levlised Tariff (Fixed)

Levellised Tariff

Tax Depreciation rate	40%	5																								
Additional Depreciation	20%	5																								
Income Tax (MAT)	17.47%	5																								
Income Tax (Normal Rates)	34.94%	5																								
Capital Cost	467.00)																								
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	12.33	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	13.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation			•			•						•	•	•				•	•	•	•		•			
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	140.10	163.45	65.38	39.23	23.54	14.12	8.47	5.08	3.05	1.83	1.10	0.66	0.40	0.24	0.14	0.09	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	127.77	138.79	40.72	14.57	- 1.12 -	10.54 -	16.18 -	19.57 -	21.61 -	22.83	23.56	24.00	24.26	24.42 -	24.52	24.57 -	24.61 -	13.42	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	44.65	48.50	14.23	5.09	- 0.39 -	3.68 -	5.66 -	6.84 -	7.55 -	7.98	8.23	8.39	8.48	8.53 -	8.57	8.59 -	8.60 -	4.69	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	2.13	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
Per unit benefit	Rs/Unit	2.10	1.14	0.33	0.12	- 0.01 -	0.09 -	0.13 -	0.16 -	0.18 -	0.19	0.19	0.20	0.20	0.20 -	0.20	0.20 -	0.20 -	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	5.63	Rs/Unit		•																						•
Electricity Generation (Levellised)	4.07	Rs/Unit																								
Levellised benefit	0.14	Rs/Unit																								

		o-Generation Projects- N	<u>Maharashtra</u>		Annexure-3C
S. Io.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	8.50%
	Generation		Auxiliary Consumption after stabilization	%	8.50%
)1		Capacity	PLF(Stabilization for 6 months)	%	60.00%
			PLF(during first year after Stabilization)	%	60.00%
			PLF(second year onwards)	%	60.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	467.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	326.90
			Total Equity Amount	Rs Lakh	140.10
		Dalat Carana and	Loan Amount	Rs Lakh	326.90
		Debt Component	Moratorium Period	years	0
2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	140.10
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
3	•		Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Deleted	3. 2	Interest On Working Capital	%	10.50%
	Fuel Related Assumptions	Heat Rate	After stabilization period	Kcal/kWh	3600.00
			During stabilization period	Kcal/kWh	3600.00
			Base Price	Rs/T	2763.60
4		Bagasse	GCV-Bagasse	Kcal/kg	2250
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	25.46
5	Maintenance		O & M Expenses Escalation	%	3.84%
6	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		232.57	244.20	256.40	269.23	282.69	296.82	311.66	327.24	343.61	360.79	378.83	397.77	417.66	438.54	460.47	483.49	507.66	533.05	559.70	587.68	617.07	647.92	680.32	714.33	750.05
Per unit Variable Cost	Rs/kWh		4.83	5.07	5.33	5.59	5.87	6.17	6.48	6.80	7.14	7.50	7.87	8.27	8.68	9.11	9.57	10.05	10.55	11.08	11.63	12.21	12.82	13.46	14.14	14.84	15.59
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		25.46	26.44	27.45	28.51	29.60	30.74	31.92	33.15	34.42	35.74	37.11	38.54	40.02	41.56	43.15	44.81	46.53	48.32	50.17	52.10	54.10	56.18	58.33	60.57	62.90
Depreciation	Rs Lakh		21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34
Interest on term loan	Rs Lakh		28.44	26.48	24.52	22.56	20.59	18.63	16.67	14.71	12.75	10.79	8.83	6.86	4.90	2.94	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		13.30	13.87	14.48	15.12	15.79	16.50	17.24	18.02	18.84	19.71	20.61	21.56	22.56	23.61	24.72	25.73	26.97	28.28	29.65	31.09	32.68	34.26	35.92	37.67	39.50
Return on Equity	Rs Lakh		23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	30.15	30.15	30.15	30.15	30.15
Total Fixed Cost	Rs Lakh		112.76	112.35	112.01	111.75	111.55	111.43	111.40	111.44	111.57	111.79	112.11	112.53	113.05	113.67	114.41	103.64	106.61	109.70	112.92	116.29	126.27	129.93	133.75	137.73	141.89
Per unit Fixed Cost	Rs/kWh		2.34	2.33	2.33	2.32	2.32	2.32	2.31	2.32	2.32	2.32	2.33	2.34	2.35	2.36	2.38	2.15	2.22	2.28	2.35	2.42	2.62	2.70	2.78	2.86	2.95
Levallised tariff corresponding	to Useful lit	e																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	7.58	4.83	5.07	5.33	5.59	5.87	6.17	6.48	6.80	7.14	7.50	7.87	8.27	8.68	9.11	9.57	10.05	10.55	11.08	11.63	12.21	12.82	13.46	14.14	14.84	15.59
O&M expn	Rs/kWh	0.74	0.53	0.55	0.57	0.59	0.62	0.64	0.66	0.69	0.72	0.74	0.77	0.80	0.83	0.86	0.90	0.93	0.97	1.00	1.04	1.08	1.12	1.17	1.21	1.26	1.31
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.26	0.22	0.18	0.14	0.10	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.41	0.28	0.29	0.30	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.53	0.56	0.59	0.62	0.65	0.68	0.71	0.75	0.78	0.82
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	9.94	7.18	7.41	7.66	7.92	8.19	8.48	8.79	9.12	9.46	9.82	10.20	10.60	11.03	11.47	11.95	12.20	12.76	13.36	13.98	14.63	15.45	16.16	16.92	17.71	18.53
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	4.83																										
	2.36																										

Determination of Additional De																										
Depreciation amount	90%	i T																								
Book Depreciation rate	5.28%	 																								
Tax Depreciation rate	40%	İ																								
Additional Depreciation	20%	İ																								
Income Tax (MAT)	17.47%	1																								
Income Tax (Normal Rates)	34.94%	1																								
Capital Cost	467.00	Ī																								
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	12.33	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	13.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation													-													
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	140.10	163.45	65.38	39.23	23.54	14.12	8.47	5.08	3.05	1.83	1.10	0.66	0.40	0.24	0.14	0.09	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	127.77	138.79	40.72	14.57	1.12	10.54 -	16.18	19.57 -	21.61 -	22.83 -	23.56 -	24.00 -	24.26 -	24.42 -	24.52 -	24.57 -	24.61 -	13.42	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	44.65	48.50	14.23	5.09	0.39	3.68 -	5.66	6.84 -	7.55 -	7.98 -	8.23 -	8.39 -	8.48 -	8.53 -	8.57 -	8.59 -	8.60 -	4.69	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	2.41	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	0.01	0.08 -	0.12	0.14 -	0.16 -	0.17 -	0.17 -	0.17 -	0.18 -	0.18 -	0.18 -	0.18 -	0.18 -	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised		Rs/Unit																								
Electricity Generation (Levellised)	4.61	Rs/Unit																								
Levellised benefit	0.12	Rs/Unit																								

Non	Fossil Fuel based Co	o-Generation Projects- P	unjab		Annexure-3D
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	8.50%
	Contraction		Auxiliary Consumption after stabilization	%	8.50%
01		Capacity	PLF(Stabilization for 6 months)	%	53.00%
			PLF(during first year after Stabilization)	%	53.00%
			PLF(second year onwards)	%	53.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	467.00
		Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	326.90
			Total Equity Amount	Rs Lakh	140.10
		Debt Component	Loan Amount	Rs Lakh	326.90
		Debt component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	140.10
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03	·		Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	4
	Fuel Related		y ,	% Kcal/kWh	10.50% 3600.00
	Assumptions	Heat Rate	After stabilization period During stabilization period		
			Base Price	Kcal/kWh Rs/T	3600.00 2468.55
04		Bagasse	GCV-Bagasse	Kcal/kg	2250
		3	Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	25.46
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		183.50	192.68	202.31	212.43	223.05	234.20	245.91	258.20	271.12	284.67	298.90	313.85	329.54	346.02	363.32	381.49	400.56	420.59	441.62	463.70	486.88	511.23	536.79	563.63	591.81
Per unit Variable Cost	Rs/kWh		4.32	4.53	4.76	5.00	5.25	5.51	5.78	6.07	6.38	6.70	7.03	7.38	7.75	8.14	8.55	8.97	9.42	9.89	10.39	10.91	11.45	12.03	12.63	13.26	13.92
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		25.46	26.44	27.45	28.51	29.60	30.74	31.92	33.15	34.42	35.74	37.11	38.54	40.02	41.56	43.15	44.81	46.53	48.32	50.17	52.10	54.10	56.18	58.33	60.57	62.90
Depreciation	Rs Lakh		21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34
Interest on term loan	Rs Lakh		28.44	26.48	24.52	22.56	20.59	18.63	16.67	14.71	12.75	10.79	8.83	6.86	4.90	2.94	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		10.90	11.36	11.84	12.35	12.89	13.45	14.04	14.66	15.31	15.99	16.71	17.47	18.27	19.10	19.98	20.75	21.75	22.79	23.89	25.04	26.33	27.60	28.93	30.32	31.78
Return on Equity	Rs Lakh		23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	30.15	30.15	30.15	30.15	30.15
Total Fixed Cost	Rs Lakh		110.37	109.84	109.38	108.98	108.64	108.38	108.19	108.07	108.04	108.08	108.21	108.43	108.75	109.16	109.67	98.67	101.38	104.21	107.17	110.24	119.92	123.26	126.75	130.38	134.17
Per unit Fixed Cost	Rs/kWh		2.60	2.58	2.57	2.56	2.56	2.55	2.54	2.54	2.54	2.54	2.55	2.55	2.56	2.57	2.58	2.32	2.38	2.45	2.52	2.59	2.82	2.90	2.98	3.07	3.16
Levallised tariff corresponding	to Useful li	fe																									

Le vanisca tarin corresponding	io osciai ili	i C																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	6.77	4.32	4.53	4.76	5.00	5.25	5.51	5.78	6.07	6.38	6.70	7.03	7.38	7.75	8.14	8.55	8.97	9.42	9.89	10.39	10.91	11.45	12.03	12.63	13.26	13.92
O&M expn	Rs/kWh	0.84	0.60	0.62	0.65	0.67	0.70	0.72	0.75	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.05	1.09	1.14	1.18	1.23	1.27	1.32	1.37	1.42	1.48
Depreciation	Rs/kWh	0.46	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Int. on term loan	Rs/kWh	0.33	0.67	0.62	0.58	0.53	0.48	0.44	0.39	0.35	0.30	0.25	0.21	0.16	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.38	0.26	0.27	0.28	0.29	0.30	0.32	0.33	0.34	0.36	0.38	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.59	0.62	0.65	0.68	0.71	0.75
RoE	Rs/kWh	0.57	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.71	0.71	0.71	0.71	0.71
Total COG	Rs/kWh	9.35	6.91	7.12	7.33	7.56	7.80	8.06	8.33	8.62	8.92	9.24	9.58	9.93	10.31	10.71	11.13	11.29	11.81	12.35	12.91	13.50	14.27	14.93	15.61	16.33	17.08
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	4.32																										
Levlised Tariff (Fixed)	2.58	1																									
·			_																								

5.28%

Determination of Additional Depreciation Depreciation amount Book Depreciation rate

Tax Depreciation rate	40%	5																								
Additional Depreciation	20%	5																								
Income Tax (MAT)	17.47%	5																								
Income Tax (Normal Rates)	34.94%	5																								
Capital Cost	467.00	D																								
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	12.33	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	13.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																	-									
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	140.10	163.45	65.38	39.23	23.54	14.12	8.47	5.08	3.05	1.83	1.10	0.66	0.40	0.24	0.14	0.09	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	127.77	138.79	40.72	14.57 -	1.12 -	10.54	16.18	- 19.57 -	21.61 -	22.83 -	23.56 -	24.00	24.26 -	24.42	24.52	24.57 -	24.61 -	13.42	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	44.65	48.50	14.23	5.09 -	0.39 -	3.68	5.66	- 6.84 -	7.55 -	7.98 -	8.23 -	8.39	8.48 -	8.53	8.57	8.59 -	8.60 -	4.69	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	2.13	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
Per unit benefit	Rs/Unit	2.10	1.14	0.33	0.12 -	0.01 -	0.09	0.13	- 0.16 -	0.18 -	0.19 -	0.19 -	0.20	0.20 -	0.20	0.20	0.20 -	0.20 -	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	5.63	Rs/Unit				•	•								•	•							·			
Electricity Generation (Levellised)	4.07	Rs/Unit																								
Levellised benefit	0.14	Rs/Unit																								
Levellised benefit	0.14	Rs/Unit																								

Non	Fossil Fuel based Co	o-Generation Projects- T	amil Nadu		Annexure-3E
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	8.50%
	Generation		Auxiliary Consumption after stabilization	%	8.50%
01		Capacity	PLF(Stabilization for 6 months)	%	60.00%
			PLF(during first year after Stabilization)	%	60.00%
			PLF(second year onwards)	%	60.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	467.00
		Debt: Equity	Debt	%	70%
		Doon Equity	Equity	%	30%
			Total Debt Amount	Rs Lakh	326.90
			Total Equity Amount	Rs Lakh	140.10
		Debt Component	Loan Amount	Rs Lakh	326.90
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	140.10
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03	•		Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock Interest On Working Capital	Months %	4
	Fuel Related		After stabilization period	% Kcal/kWh	10.50% 3600.00
	Assumptions	Heat Rate			
	-		During stabilization period Base Price	Kcal/kWh Rs/T	3600.00 2124.15
04		Pogosoo	GCV-Bagasse	Kcal/kg	2250
04		Bagasse	Biomass Price Escalation	%	5.00%
	Omenation C		Factor		
	Operation & Maintenance		O&M Expenses	Rs Lakh	25.46
05			O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

2.27

40%

5.99 Rs/Unit

oogeneration rojects . De	ter minatio	ii oi i ai iii	Compone	J116																							
Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		178.75	187.69	197.08	206.93	217.28	228.14	239.55	251.53	264.10	277.31	291.17	305.73	321.02	337.07	353.92	371.62	390.20	409.71	430.19	451.70	474.29	498.00	522.90	549.05	576.50
Per unit Variable Cost	Rs/kWh		3.71	3.90	4.10	4.30	4.51	4.74	4.98	5.23	5.49	5.76	6.05	6.35	6.67	7.00	7.35	7.72	8.11	8.51	8.94	9.39	9.86	10.35	10.87	11.41	11.98
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		25.46	26.44	27.45	28.51	29.60	30.74	31.92	33.15	34.42	35.74	37.11	38.54	40.02	41.56	43.15	44.81	46.53	48.32	50.17	52.10	54.10	56.18	58.33	60.57	62.90
Depreciation	Rs Lakh		21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34
Interest on term loan	Rs Lakh		28.44	26.48	24.52	22.56	20.59	18.63	16.67	14.71	12.75	10.79	8.83	6.86	4.90	2.94	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		10.67	11.12	11.59	12.08	12.60	13.15	13.73	14.33	14.97	15.63	16.34	17.08	17.85	18.67	19.52	20.27	21.24	22.26	23.33	24.45	25.72	26.95	28.25	29.61	31.04
Return on Equity	Rs Lakh		23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	30.15	30.15	30.15	30.15	30.15
Total Fixed Cost	Rs Lakh		110.13	109.60	109.12	108.71	108.36	108.08	107.88	107.75	107.69	107.72	107.84	108.04	108.33	108.72	109.21	98.19	100.88	103.68	106.61	109.66	119.30	122.62	126.07	129.67	133.42
Per unit Fixed Cost	Rs/kWh		2.29	2.28	2.27	2.26	2.25	2.25	2.24	2.24	2.24	2.24	2.24	2.24	2.25	2.26	2.27	2.04	2.10	2.15	2.22	2.28	2.48	2.55	2.62	2.69	2.77
Levallised tariff corresponding	to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	5.83	3.71	3.90	4.10	4.30	4.51	4.74	4.98	5.23	5.49	5.76	6.05	6.35	6.67	7.00	7.35	7.72	8.11	8.51	8.94	9.39	9.86	10.35	10.87	11.41	11.98
O&M expn	Rs/kWh	0.74	0.53	0.55	0.57	0.59	0.62	0.64	0.66	0.69	0.72	0.74	0.77	0.80	0.83	0.86	0.90	0.93	0.97	1.00	1.04	1.08	1.12	1.17	1.21	1.26	1.31
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.29	0.59	0.55	0.51	0.47	0.43	0.39	0.35	0.31	0.26	0.22	0.18	0.14	0.10	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.33	0.22	0.23	0.24	0.25	0.26	0.27	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.39	0.41	0.42	0.44	0.46	0.48	0.51	0.53	0.56	0.59	0.62	0.64
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	8.10	6.00	6.18	6.36	6.56	6.77	6.99	7.22	7.47	7.73	8.00	8.29	8.60	8.92	9.26	9.62	9.76	10.20	10.67	11.15	11.66	12.33	12.90	13.49	14.10	14.75
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

Determination of Additional Depreciation Depreciation amount Book Depreciation rate Tax Depreciation rate

Variable Cost

Levlised Tariff (Fixed)

Levellised Tariff

Additional Depreciation	20%																									
Income Tax (MAT)	17.47%																									
Income Tax (Normal Rates)	34.94%																									
Capital Cost	467.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	12.33	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	13.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation			·			,	,	,	,	·		·	,				·			·	•	,	·			
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	140.10	163.45	65.38	39.23	23.54	14.12	8.47	5.08	3.05	1.83	1.10	0.66	0.40	0.24	0.14	0.09	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	127.77	138.79	40.72	14.57	1.12	10.54	16.18	19.57 -	21.61 -	22.83 -	23.56 -	24.00	24.26 -	24.42	- 24.52	24.57 -	24.61 -	13.42	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	44.65	48.50	14.23	5.09	0.39	3.68	5.66	6.84 -	7.55 -	7.98 -	8.23 -	8.39	8.48 -	8.53	- 8.57	8.59 -	8.60 -	4.69	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	2.41	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	0.01	0.08	0.12	0.14 -	0.16 -	0.17 -	0.17 -	0.17	0.18 -	0.18	- 0.18	0.18 -	0.18 -	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	5.63 F	Rs/Unit	· ·	·	·					·		·		·		·	·			·			·			
Electricity Generation (Levellised)	4.61 F	Rs/Unit																								
Levellised benefit	0.12	Rs/Unit																								

Non	Fossil Fuel based Co	o-Generation Projects-Te	elangana		Annexure-3F
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	8.50%
	Generation		Auxiliary Consumption after stabilization	%	8.50%
01		Capacity	PLF(Stabilization for 6 months)	%	53.00%
			PLF(during first year after Stabilization)	%	53.00%
			PLF(second year onwards)	%	53.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	467.00
		Debt: Equity	Debt	%	70%
		Doon Equity	Equity	%	30%
			Total Debt Amount	Rs Lakh	326.90
			Total Equity Amount	Rs Lakh	140.10
		D 1 1 0	Loan Amount	Rs Lakh	326.90
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	140.10
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03	•		Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Deleted		Interest On Working Capital	%	10.50%
	Fuel Related Assumptions	Heat Rate	After stabilization period	Kcal/kWh	3600.00
			During stabilization period	Kcal/kWh	3600.00
			Base Price	Rs/T	1970.85
04		Bagasse	GCV-Bagasse	Kcal/kg	2250
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	25.46
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		146.50	153.83	161.52	169.60	178.08	186.98	196.33	206.15	216.45	227.28	238.64	250.57	263.10	276.26	290.07	304.57	319.80	335.79	352.58	370.21	388.72	408.16	428.56	449.99	472.49
Per unit Variable Cost	Rs/kWh		3.45	3.62	3.80	3.99	4.19	4.40	4.62	4.85	5.09	5.35	5.61	5.89	6.19	6.50	6.82	7.16	7.52	7.90	8.29	8.71	9.14	9.60	10.08	10.59	11.11
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		25.46	26.44	27.45	28.51	29.60	30.74	31.92	33.15	34.42	35.74	37.11	38.54	40.02	41.56	43.15	44.81	46.53	48.32	50.17	52.10	54.10	56.18	58.33	60.57	62.90
Depreciation	Rs Lakh		21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34
Interest on term loan	Rs Lakh		28.44	26.48	24.52	22.56	20.59	18.63	16.67	14.71	12.75	10.79	8.83	6.86	4.90	2.94	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		9.10	9.47	9.86	10.26	10.69	11.14	11.62	12.12	12.64	13.20	13.78	14.39	15.03	15.70	16.41	17.00	17.81	18.66	19.55	20.48	21.54	22.57	23.65	24.78	25.96
Return on Equity	Rs Lakh		23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	30.15	30.15	30.15	30.15	30.15
Total Fixed Cost	Rs Lakh		108.56	107.95	107.39	106.89	106.45	106.08	105.77	105.53	105.37	105.28	105.28	105.35	105.51	105.76	106.10	94.92	97.44	100.08	102.82	105.68	115.13	118.24	121.47	124.84	128.35
Per unit Fixed Cost	Rs/kWh		2.55	2.54	2.53	2.51	2.50	2.50	2.49	2.48	2.48	2.48	2.48	2.48	2.48	2.49	2.50	2.23	2.29	2.35	2.42	2.49	2.71	2.78	2.86	2.94	3.02
Levallised tariff corresponding	to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	5.41	3.45	3.62	3.80	3.99	4.19	4.40	4.62	4.85	5.09	5.35	5.61	5.89	6.19	6.50	6.82	7.16	7.52	7.90	8.29	8.71	9.14	9.60	10.08	10.59	11.11
O&M expn	Rs/kWh	0.84	0.60	0.62	0.65	0.67	0.70	0.72	0.75	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.05	1.09	1.14	1.18	1.23	1.27	1.32	1.37	1.42	1.48
Depreciation	Rs/kWh	0.46	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Int. on term loan	Rs/kWh	0.33	0.67	0.62	0.58	0.53	0.48	0.44	0.39	0.35	0.30	0.25	0.21	0.16	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.31	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.51	0.53	0.56	0.58	0.61
RoE	Rs/kWh	0.57	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.71	0.71	0.71	0.71	0.71
Total COG	Rs/kWh	7.92	6.00	6.16	6.33	6.50	6.69	6.89	7.11	7.33	7.57	7.82	8.09	8.37	8.67	8.99	9.32	9.40	9.82	10.25	10.71	11.19	11.85	12.38	12.94	13.52	14.13
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	3.45					-											-		-								

Determination of Additional Depreciation

Levlised Tariff (Fixed)

Levellised Tariff

Depreciation amount	90%																									
Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.47%																									
Income Tax (Normal Rates)	34.94%																									
Capital Cost	467.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	12.33	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	13.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Depm.	Rs Lakh	140.10	163.45	65.38	39.23	23.54	14.12	8.47	5.08	3.05	1.83	1.10	0.66	0.40	0.24	0.14	0.09	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	127.77	138.79	40.72	14.57	- 1.12	- 10.54	16.18	19.57 -	21.61 -	22.83 -	23.56	- 24.00	- 24.26 -	24.42	24.52 -	24.57 -	24.61 -	13.42	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	44.65	48.50	14.23	5.09	- 0.39	- 3.68	5.66	6.84 -	7.55 -	7.98 -	8.23	- 8.39	- 8.48 -	8.53	8.57 -	8.59 -	8.60 -	4.69	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	2.13	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
Per unit benefit	Rs/Unit	2.10	1.14	0.33	0.12	- 0.01	- 0.09	0.13	0.16 -	0.18 -	0.19 -	0.19	- 0.20	- 0.20 -	0.20	0.20 -	0.20 -	0.20 -	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	5.63 F	Rs/Unit																								
Electricity Generation (Levellised)	4.07 F	Rs/Unit																								
Levellised benefit	0.14 F	Rs/Unit																								

Non	Fossil Fuel based Co	o-Generation Projects- U	Ittar Pradesh		Annexure-3G
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	8.50%
	Generation		Auxiliary Consumption after stabilization	%	8.50%
01		Capacity	PLF(Stabilization for 6 months)	%	45.00%
			PLF(during first year after Stabilization)	%	45.00%
			PLF(second year onwards)	%	45.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	467.00
		Debt: Equity	Debt	%	70%
		Debt. Equity	Equity	%	30%
			Total Debt Amount	Rs Lakh	326.90
			Total Equity Amount	Rs Lakh	140.10
			Loan Amount	Rs Lakh	326.90
		Debt Component	Moratorium Period	years	0
02	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	140.10
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
03			Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Deleted	I I I I I I I I I I I I I I I I I I I	Interest On Working Capital	%	10.50%
	Fuel Related Assumptions	Heat Rate	After stabilization period	Kcal/kWh	3600.00
	Assumptions		During stabilization period	Kcal/kWh	3600.00
			Base Price	Rs/T	2199.75
04		Bagasse	GCV-Bagasse	Kcal/kg	2250
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	25.46
05	Maintenance		O & M Expenses Escalation	%	3.84%
06	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		138.84	145.78	153.07	160.72	168.76	177.20	186.06	195.36	205.13	215.38	226.15	237.46	249.33	261.80	274.89	288.63	303.07	318.22	334.13	350.84	368.38	386.80	406.14	426.44	447.77
Per unit Variable Cost	Rs/kWh		3.85	4.04	4.24	4.45	4.68	4.91	5.15	5.41	5.68	5.97	6.27	6.58	6.91	7.25	7.62	8.00	8.40	8.82	9.26	9.72	10.21	10.72	11.25	11.81	12.41
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		25.46	26.44	27.45	28.51	29.60	30.74	31.92	33.15	34.42	35.74	37.11	38.54	40.02	41.56	43.15	44.81	46.53	48.32	50.17	52.10	54.10	56.18	58.33	60.57	62.90
Depreciation	Rs Lakh		21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34
Interest on term loan	Rs Lakh		28.44	26.48	24.52	22.56	20.59	18.63	16.67	14.71	12.75	10.79	8.83	6.86	4.90	2.94	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		8.73	9.08	9.44	9.83	10.24	10.67	11.12	11.59	12.09	12.62	13.17	13.75	14.36	15.00	15.67	16.22	16.99	17.80	18.65	19.54	20.55	21.53	22.55	23.63	24.76
Return on Equity	Rs Lakh		23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	30.15	30.15	30.15	30.15	30.15
Total Fixed Cost	Rs Lakh		108.19	107.55	106.97	106.46	106.00	105.60	105.27	105.01	104.82	104.70	104.67	104.71	104.84	105.05	105.36	94.14	96.63	99.22	101.92	104.74	114.14	117.19	120.38	123.69	127.15
Per unit Fixed Cost	Rs/kWh		3.00	2.98	2.96	2.95	2.94	2.93	2.92	2.91	2.90	2.90	2.90	2.90	2.90	2.91	2.92	2.61	2.68	2.75	2.82	2.90	3.16	3.25	3.34	3.43	3.52
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Levallised tariff corresponding to Useful life

Ec vanisca tarin corresponding	, 10 000141111																										
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	6.03	3.85	4.04	4.24	4.45	4.68	4.91	5.15	5.41	5.68	5.97	6.27	6.58	6.91	7.25	7.62	8.00	8.40	8.82	9.26	9.72	10.21	10.72	11.25	11.81	12.41
O&M expn	Rs/kWh	0.99	0.71	0.73	0.76	0.79	0.82	0.85	0.88	0.92	0.95	0.99	1.03	1.07	1.11	1.15	1.20	1.24	1.29	1.34	1.39	1.44	1.50	1.56	1.62	1.68	1.74
Depreciation	Rs/kWh	0.54	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Int. on term loan	Rs/kWh	0.39	0.79	0.73	0.68	0.62	0.57	0.52	0.46	0.41	0.35	0.30	0.24	0.19	0.14	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.35	0.24	0.25	0.26	0.27	0.28	0.30	0.31	0.32	0.33	0.35	0.36	0.38	0.40	0.42	0.43	0.45	0.47	0.49	0.52	0.54	0.57	0.60	0.62	0.65	0.69
RoE	Rs/kWh	0.67	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.84	0.84	0.84	0.84	0.84
Total COG	Rs/kWh	8.98	6.84	7.02	7.20	7.40	7.61	7.83	8.07	8.32	8.59	8.87	9.17	9.48	9.81	10.16	10.53	10.60	11.07	11.57	12.08	12.62	13.37	13.96	14.59	15.24	15.93
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

Levellised Tariff (Fixed) 2.94

Levellised Tariff 6.79 Rs/Unit

Determination of Additional Depreciation Depreciation amount 90%

Book Depreciation rate	5.28%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17.47%
Income Tax (Normal Rates)	34.94%
Capital Cost	467.00
Years>	Unit
Book Depreciation	%
	D 1 11

Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	12.33	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	13.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	140.10	163.45	65.38	39.23	23.54	14.12	8.47	5.08	3.05	1.83	1.10	0.66	0.40	0.24	0.14	0.09	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	127.77	138.79	40.72	14.57	1.12 -	10.54 -	16.18 -	19.57 -	21.61	- 22.83	- 23.56	- 24.00	- 24.26	- 24.42	- 24.52	- 24.57 -	24.61 -	13.42	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	44.65	48.50	14.23	5.09	0.39 -	3.68 -	5.66 -	6.84 -	7.55	- 7.98	- 8.23	- 8.39	- 8.48	- 8.53	- 8.57	- 8.59 -	8.60 -	4.69	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	1.80	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61
Per unit benefit	Rs/Unit	2.47	1.34	0.39	0.14	0.01 -	0.10 -	0.16 -	0.19 -	0.21	- 0.22	0.23	- 0.23	- 0.23	- 0.24	- 0.24	- 0.24 -	0.24 -	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15

		o-Generation Projects-O	ther States		Annexure-3H
S. lo.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
	Power Generation		Auxiliary Consumption during stabilization	%	8.50%
	Generation		Auxiliary Consumption after stabilization	%	8.50%
1		Capacity	PLF(Stabilization for 6 months)	%	53.00%
			PLF(during first year after Stabilization)	%	53.00%
			PLF(second year onwards)	%	53.00%
			Useful Life	Years	25
		Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	467.00
		Debt: Equity	Debt	%	70%
		Debt. Equity	Equity	%	30%
			Total Debt Amount	Rs Lakh	326.90
			Total Equity Amount	Rs Lakh	140.10
		Dobt Common = = t	Loan Amount	Rs Lakh	326.90
		Debt Component	Moratorium Period	years	0
)2	Sources of Fund		Repayment Period(incld Moratorium)	years	15
			Interest Rate	%	9.00%
			Equity amount	Rs Lakh	140.10
		Equity Component	Return on Equity (upto 20 years)	% p.a	16.96%
			Return on Equity (After 20 years)		21.52%
			Discount Rate (equiv. to WACC)	%	8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
	Financial Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
)3	r		Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
		For Fixed Charges	Maintenance Spare		15.00%
			Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
	Fuel Beleted		Interest On Working Capital	%	10.50%
	Fuel Related Assumptions	Heat Rate	After stabilization period	Kcal/kWh	3600.00
			During stabilization period	Kcal/kWh	3600.00
			Base Price	Rs/T	2387.70
)4		Bagasse	GCV-Bagasse	Kcal/kg	2250
			Biomass Price Escalation Factor	%	5.00%
	Operation &		O&M Expenses	Rs Lakh	25.46
5	Maintenance		O & M Expenses Escalation	%	3.84%
6	Generation & Sale of Energy		Total No .Of Hours	Hrs	8766.00

Rs/kWh

4.18

2.57

5.28%

6.76

6.96

7.17 7.39

7.62 7.87

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		177.49	186.37	195.68	205.47	215.74	226.53	237.86	249.75	262.24	275.35	289.11	303.57	318.75	334.69	351.42	368.99	387.44	406.81	427.15	448.51	470.94	494.48	519.21	545.17	572.43
Per unit Variable Cost	Rs/kWh		4.18	4.38	4.60	4.83	5.07	5.33	5.60	5.87	6.17	6.48	6.80	7.14	7.50	7.87	8.27	8.68	9.11	9.57	10.05	10.55	11.08	11.63	12.21	12.82	13.47
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		25.46	26.44	27.45	28.51	29.60	30.74	31.92	33.15	34.42	35.74	37.11	38.54	40.02	41.56	43.15	44.81	46.53	48.32	50.17	52.10	54.10	56.18	58.33	60.57	62.90
Depreciation	Rs Lakh		21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34
Interest on term loan	Rs Lakh		28.44	26.48	24.52	22.56	20.59	18.63	16.67	14.71	12.75	10.79	8.83	6.86	4.90	2.94	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		10.61	11.05	11.52	12.01	12.53	13.07	13.64	14.24	14.88	15.54	16.24	16.97	17.74	18.55	19.40	20.14	21.11	22.12	23.18	24.30	25.55	26.78	28.07	29.42	30.84
Return on Equity	Rs Lakh		23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	30.15	30.15	30.15	30.15	30.15
Total Fixed Cost	Rs Lakh		110.07	109.53	109.05	108.64	108.29	108.01	107.80	107.66	107.60	107.63	107.74	107.93	108.22	108.61	109.09	98.06	100.74	103.54	106.46	109.50	119.14	122.44	125.89	129.48	133.23
Per unit Fixed Cost	Rs/kWh		2.59	2.58	2.57	2.56	2.55	2.54	2.54	2.53	2.53	2.53	2.53	2.54	2.55	2.55	2.57	2.31	2.37	2.44	2.50	2.58	2.80	2.88	2.96	3.05	3.13
Levallised tariff corresponding	to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	6.55	4.18	4.38	4.60	4.83	5.07	5.33	5.60	5.87	6.17	6.48	6.80	7.14	7.50	7.87	8.27	8.68	9.11	9.57	10.05	10.55	11.08	11.63	12.21	12.82	13.47
O&M expn	Rs/kWh	0.84	0.60	0.62	0.65	0.67	0.70	0.72	0.75	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.05	1.09	1.14	1.18	1.23	1.27	1.32	1.37	1.42	1.48
Depreciation	Rs/kWh	0.46	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Int. on term loan	Rs/kWh	0.33	0.67	0.62	0.58	0.53	0.48	0.44	0.39	0.35	0.30	0.25	0.21	0.16	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.37	0.25	0.26	0.27	0.28	0.29	0.31	0.32	0.34	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.47	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.69	0.73
RoE	Rs/kWh	0.57	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.71	0.71	0.71	0.71	0.71

9.01 9.34

9.68

10.04 10.43 10.83 10.99 11.48 12.01 12.55 13.13 13.88

8.13 8.41 8.70

Determination of Additional Depreciation Depreciation amount

Total COG

Discount Factor Variable Cost

Levlised Tariff (Fixed)

Levellised Tariff

Book Depreciation rate

Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.47%																									
Income Tax (Normal Rates)	34.94%																									
Capital Cost	467.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	12.33	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	13.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation				•		•	•	•				•		•	•	•			•	•	•	•	•			
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Depm.	Rs Lakh	140.10	163.45	65.38	39.23	23.54	14.12	8.47	5.08	3.05	1.83	1.10	0.66	0.40	0.24	0.14	0.09	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	127.77	138.79	40.72	14.57	- 1.12 -	10.54	- 16.18	- 19.57 -	21.61	- 22.83	- 23.56	- 24.00	- 24.26	24.42	- 24.52	- 24.57 -	24.61	13.42	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	44.65	48.50	14.23	5.09	- 0.39 -	3.68	- 5.66	- 6.84 -	7.55	- 7.98	- 8.23	- 8.39	- 8.48	8.53	- 8.57	- 8.59 -	8.60	4.69	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	2.13	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
Per unit benefit	Rs/Unit	2.10	1.14	0.33	0.12	- 0.01 -	0.09	- 0.13	- 0.16 -	0.18	- 0.19	- 0.19	- 0.20	- 0.20	0.20	- 0.20	- 0.20 -	0.20	- 0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	5.63	Rs/Unit																								
Electricity Generation (Levellised)	4.07	Rs/Unit																								
Levellised benefit	0.14	Rs/Unit																								

14.51 15.17 15.87 16.60

Bioma	ss Gasifier Powe	er Projects- Andhr	a Pradesh		Annexure-4A
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity Auxiliary Consumption during stabilisation	MW %	10%
	_		Auxiliary Consumption after stabilisation	% For First 6	10%
1	Power Generation	Capacity	PLF(Stablization for 6 months)	Months	85%
			PLF(during first year after Stablization)	Next six months 2 nd Year	85%
			PLF(second year onwards)	Onwards	85%
		Canital	Useful Life	Years	25
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	443.00
			Debt	%	70%
		Debt: Equity	Equity	%	30%
		Dobt. Equity	Total Debt Amount	Rs Lakh	310.10
			Total Equity Amout	Rs Lakh	132.90
			Loan Amount	Rs Lakh	310.10
3	Sources of	Debt	Moratorium Period	years	0
	Fund	Component	Repayment Period(incld Moratorium)	years	15.00
			Interest Rate	%	9.00%
			Equity amount	Rs Lacs	132.90
		Equity	Return on Equity (upto 20 years)	% p.a	16.96%
		Component	Return on Equity (after 20 years)	% p.a	21.52%
			Discount Rate (Equiv. to WACC)		8.30%
		Fiscal	Income Tax	%	34.94%
4	Financial	Assumptions	MAT Rate	%	17.47%
	Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
		Far Fired	O&M Charges	Months	1
	Working	For Fixed Charges	Maintenance Spare	(% of O&M exepenses)	15.00%
5	Capital		Receivables for Debtors	Months	1.5
		For Variable	Biomass Stock	Months	4
		Charges	Interest On Working Capital	%	10.50%
	Fuel Related		Specific Fuel Consumption	kg/kWh	1.25
6	Assumptions	Biomass	Base Price	Rs/T	3492.30
			Biomass Price Escalation Factor	%	5.00%
7	Operation &		O&M Cost of power plant	Rs Lakh	63.66
	Maintenance		Total O & M Expenses Escalation	%	3.84%
8	Generation & Sale of Energy		Total No .Of Hours		8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
nstalled Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
/ariable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		325.27	341.53	358.61	376.54	395.37	415.13	435.89	457.69	480.57	504.60	529.83	556.32	584.14	613.34	644.01	676.21	710.02	745.52	782.80	821.94	863.03	906.19	951.50	999.07	1049.02
Per unit Variable Cost	Rs/kWh		4.85	5.09	5.35	5.61	5.90	6.19	6.50	6.83	7.17	7.52	7.90	8.30	8.71	9.15	9.60	10.08	10.59	11.12	11.67	12.26	12.87	13.51	14.19	14.90	15.64
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
D&M Expenses	Rs Lakh		63.66	66.11	68.65	71.28	74.02	76.86	79.81	82.88	86.06	89.37	92.80	96.36	100.06	103.91	107.90	112.04	116.34	120.81	125.45	130.26	135.27	140.46	145.85	151.46	157.27
Depreciation	Rs Lakh		20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86
nterest on term loan	Rs Lakh		26.98	25.12	23.25	21.39	19.53	17.67	15.81	13.94	12.08	10.22	8.36	6.50	4.63	2.77	0.91	-	-	-	-	-	-	-	-	-	-
nterest on working Capital	Rs Lakh		19.22	20.08	20.99	21.94	22.94	23.98	25.08	26.24	27.45	28.72	30.06	31.46	32.94	34.48	36.11	37.66	39.48	41.38	43.37	45.47	47.74	50.04	52.46	54.99	57.65
Return on Equity	Rs Lakh		22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	28.60	28.60	28.60	28.60	28.60
Total Fixed Cost	Rs Lakh		153.10	154.54	156.12	157.85	159.72	161.75	163.94	166.30	168.83	171.55	174.45	177.56	180.87	184.39	188.15	181.11	187.22	193.59	200.23	207.14	220.47	227.96	235.77	243.91	252.38
Per unit Fixed Cost	Rs/kWh	2.58	2.28	2.30	2.33	2.35	2.38	2.41	2.44	2.48	2.52	2.56	2.60	2.65	2.70	2.75	2.81	2.70	2.79	2.89	2.99	3.09	3.29	3.40	3.52	3.64	3.76
evallised tariff corresponding	to Useful lit	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	7.61	4.85	5.09	5.35	5.61	5.90	6.19	6.50	6.83	7.17	7.52	7.90	8.30	8.71	9.15	9.60	10.08	10.59	11.12	11.67	12.26	12.87	13.51	14.19	14.90	15.64
D&M expn	Rs/kWh	1.33	0.95	0.99	1.02	1.06	1.10	1.15	1.19	1.24	1.28	1.33	1.38	1.44	1.49	1.55	1.61	1.67	1.73	1.80	1.87	1.94	2.02	2.09	2.17	2.26	2.35
Depreciation	Rs/kWh	0.27	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
nt. on term loan	Rs/kWh	0.20	0.40	0.37	0.35	0.32	0.29	0.26	0.24	0.21	0.18	0.15	0.12	0.10	0.07	0.04	0.01	-	-	-	-	-	-	-	-	-	
nt. on working capital	Rs/kWh	0.43	0.29	0.30	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.59	0.62	0.65	0.68	0.71	0.75	0.78	0.82	0.86
RoE	Rs/kWh	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.43	0.43	0.43	0.43	0.43
Total COG	Rs/kWh	10.19	7.13	7.40	7.68	7.97	8.28	8.60	8.94	9.30	9.68	10.08	10.50	10.94	11.41	11.90	12.41	12.78	13.38	14.00	14.66	15.35	16.16	16.91	17.70	18.54	19.41
Discount Factor	Levellised		1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.1
Variable Cost	4.85																										
_evllised Tariff (Fixed)	2.58																										

Determination of Additional I	Depreciation	for Biomas	ss Gasifier	Power Pro	jects																					
Depreciation amount	90%																									
Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	443.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	11.70	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	12.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	132.90	155.05	62.02	37.21	22.33	13.40	8.04	4.82	2.89	1.74	1.04	0.63	0.38	0.23	0.14	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	121.20	131.66	38.63	13.82	-1.06	-9.99	-15.35	-18.57	-20.50	-21.65	-22.35	-22.77	-23.02	-23.17	-23.26	-23.31	-23.34	-12.73	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	42.35	46.01	13.50	4.83	-0.37	-3,49	-5.36	-6.49	-7.16	-7.57	-7.81	-7.96	-8.04	-8.09	-8.13	-8.15	-8.16	-4.45	0.01	0.00	0.00	0.00	0.00	0.00	0.00

Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	132.90	155.05	62.02	37.21	22.33	13.40	8.04	4.82	2.89	1.74	1.04	0.63	0.38	0.23	0.14	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	121.20	131.66	38.63	13.82	-1.06	-9.99	-15.35	-18.57	-20.50	-21.65	-22.35	-22.77	-23.02	-23.17	-23.26	-23.31	-23.34	-12.73	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	42.35	46.01	13.50	4.83	-0.37	-3.49	-5.36	-6.49	-7.16	-7.57	-7.81	-7.96	-8.04	-8.09	-8.13	-8.15	-8.16	-4.45	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.35	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Per unit benefit	Rs/Unit	1.26	0.69	0.20	0.07	-0.01	-0.05	-0.08	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	5.34	Rs/Unit																								
Electricity Generation (Levellised)	6.42	Rs/Unit																								
Levellised benefit	0.08	Rs/Unit																								

Bioma	ss Gasifier Powe	er Projects- Harya	na		Annexure-4B
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity Auxiliary Consumption during stabilisation	MW %	10%
			Auxiliary Consumption after stabilisation	%	10%
1	Power Generation	Capacity	PLF(Stablization for 6 months)	For First 6 Months	85%
			PLF(during first year after Stablization)	Next six months 2 nd Year	85%
			PLF(second year onwards)	Onwards	85%
		Conital	Useful Life	Years	25
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	443.00
			Debt	%	70%
		Debt: Equity	Equity	%	30%
		Dobt. Equity	Total Debt Amount	Rs Lakh	310.10
			Total Equity Amout	Rs Lakh	132.90
			Loan Amount	Rs Lakh	310.10
3	Sources of	Debt	Moratorium Period	years	0
	Fund	Component	Repayment Period(incld Moratorium)	years	15.00
			Interest Rate	%	9.00%
			Equity amount	Rs Lacs	132.90
		Equity	Return on Equity (upto 20 years)	% p.a	16.96%
		Component	Return on Equity (after 20 years)	% p.a	21.52%
			Discount Rate (Equiv. to WACC)		8.30%
		Fiscal	Income Tax	%	34.94%
4	Financial Assumptions	Assumptions	MAT Rate	%	17.47%
	Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
		-	Depreciation Rate 16th year onwards	%	2.00%
		For Fixed	O&M Charges	Months (% of O&M	1
	Working	Charges	Maintenance Spare	exepenses)	15.00%
5	Capital		Receivables for Debtors	Months	1.5
		For Variable	Biomass Stock	Months	4
		Charges	Interest On Working Capital	%	10.50%
	Fuel Related		Specific Fuel Consumption	kg/kWh	1.25
6	Assumptions	Biomass	Base Price	Rs/T	3975.30
			Biomass Price Escalation Factor	%	5.00%
7	Operation & Maintenance		O&M Cost of power plant	Rs Lakh	63.66
	Generation &		Total O & M Expenses Escalation	%	3.84%
8	Sale of Energy		Total No .Of Hours		8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		370.25	388.77	408.21	428.62	450.05	472.55	496.18	520.99	547.03	574.39	603.11	633.26	664.92	698.17	733.08	769.73	808.22	848.63	891.06	935.61	982.40	1031.52	1083.09	1137.25	1194.11
Per unit Variable Cost	Rs/kWh		5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.57	8.99	9.44	9.92	10.41	10.93	11.48	12.05	12.65	13.29	13.95	14.65	15.38	16.15	16.96	17.81
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		63.66	66.11	68.65	71.28	74.02	76.86	79.81	82.88	86.06	89.37	92.80	96.36	100.06	103.91	107.90	112.04	116.34	120.81	125.45	130.26	135.27	140.46	145.85	151.46	157.27
Depreciation	Rs Lakh		20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86
Interest on term loan	Rs Lakh		26.98	25.12	23.25	21.39	19.53	17.67	15.81	13.94	12.08	10.22	8.36	6.50	4.63	2.77	0.91	-	-	-	-	-	-		-	-	-
Interest on working Capital	Rs Lakh		21.42	22.39	23.41	24.48	25.60	26.78	28.02	29.33	30.69	32.13	33.63	35.22	36.88	38.62	40.45	42.23	44.27	46.41	48.65	51.01	53.56	56.16	58.88	61.73	64.72
Return on Equity	Rs Lakh		22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	28.60	28.60	28.60	28.60	28.60
Total Fixed Cost	Rs Lakh		155.29	156.85	158.54	160.39	162.39	164.55	166.88	169.38	172.07	174.95	178.03	181.31	184.81	188.53	192.49	185.67	192.01	198.62	205.51	212.68	226.29	234.08	242.19	250.65	259.46
Per unit Fixed Cost	Rs/kWh	2.63	2.32	2.34	2.36	2.39	2.42	2.45	2.49	2.53	2.57	2.61	2.65	2.70	2.76	2.81	2.87	2.77	2.86	2.96	3.06	3.17	3.37	3.49	3.61	3.74	3.87
Levallised tariff corresponding	g to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.66	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.57	8.99	9.44	9.92	10.41	10.93	11.48	12.05	12.65	13.29	13.95	14.65	15.38	16.15	16.96	17.81
O&M expn	Rs/kWh	1.33	0.95	0.99	1.02	1.06	1.10	1.15	1.19	1.24	1.28	1.33	1.38	1.44	1.49	1.55	1.61	1.67	1.73	1.80	1.87	1.94	2.02	2.09	2.17	2.26	2.35
Depreciation	Rs/kWh	0.27	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Int. on term loan	Rs/kWh	0.20	0.40	0.37	0.35	0.32	0.29	0.26	0.24	0.21	0.18	0.15	0.12	0.10	0.07	0.04	0.01	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.48	0.32	0.33	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.73	0.76	0.80	0.84	0.88	0.92	0.97
RoE	Rs/kWh	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.43	0.43	0.43	0.43	0.43
Total COG	Rs/kWh	11.29	7.84	8.14	8.45	8.78	9.13	9.50	9.89	10.29	10.72	11.17	11.65	12.15	12.67	13.22	13.80	14.25	14.92	15.62	16.35	17.12	18.02	18.87	19.76	20.70	21.68
Discount Factor	Levellised		1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.52																										
Levilised Tariff (Fixed)	2.63		_																								
Levellised Tariff	8.15	Rs/Unit																									

Determination of Additional D	Depreciation	for Biomas	s Gasifier	Power Pro	jects																					
Depreciation amount	90%																									
Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	443.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	11.70	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	12.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Opening Allowed during the year	%	100% 30.00%	70% 35.00%	35% 14.00%	21% 8.40%	13% 5.04%	3.02%	5% 1.81%	1.09%	2% 0.65%	0.39%	1% 0.24%	0% 0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	% %										.,,,	170														
Allowed during the year	% % % Rs Lakh	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Allowed during the year Closing	% % Rs Lakh Rs Lakh	30.00% 70.0%	35.00% 35.0%	14.00% 21.0%	8.40% 12.6%	5.04% 7.6%	3.02% 4.5%	1.81% 2.7%	1.09% 1.6%	0.65% 1.0%	0.39%	0.24%	0.14% 0.2%	0.08%	0.05% 0.1%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Allowed during the year Closing Accelrated Deprn.		30.00% 70.0% 132.90	35.00% 35.0% 155.05	14.00% 21.0% 62.02	8.40% 12.6% 37.21	5.04% 7.6% 22.33	3.02% 4.5% 13.40	1.81% 2.7% 8.04	1.09% 1.6% 4.82	0.65% 1.0% 2.89	0.39% 0.6% 1.74	0.24% 0.4% 1.04	0.14% 0.2% 0.63	0.08% 0.1% 0.38	0.05% 0.1% 0.23	0.03% 0.0% 0.14	0.02% 0.0% 0.08	0.01% 0.0% 0.05	0.01% 0.0% 0.03	0.00% 0.0% 0.02	0.00% 0.0% 0.01	0.00% 0.0% 0.01	0.00% 0.0% 0.00	0.00% 0.0% 0.00	0.00% 0.0% 0.00	0.00% 0.0% 0.00
Allowed during the year Closing Accelrated Deprn. Net Depreciation Benefit	Rs Lakh	30.00% 70.0% 132.90 121.20	35.00% 35.0% 155.05 131.66	14.00% 21.0% 62.02 38.63	8.40% 12.6% 37.21 13.82	5.04% 7.6% 22.33 -1.06	3.02% 4.5% 13.40 -9.99	1.81% 2.7% 8.04 -15.35	1.09% 1.6% 4.82 -18.57	0.65% 1.0% 2.89 -20.50	0.39% 0.6% 1.74 -21.65	0.24% 0.4% 1.04 -22.35	0.14% 0.2% 0.63 -22.77	0.08% 0.1% 0.38 -23.02	0.05% 0.1% 0.23 -23.17	0.03% 0.0% 0.14 -23.26	0.02% 0.0% 0.08 -23.31	0.01% 0.0% 0.05 -23.34	0.01% 0.0% 0.03 -12.73	0.00% 0.0% 0.02 0.02	0.00% 0.0% 0.01 0.01	0.00% 0.0% 0.01 0.01	0.00% 0.0% 0.00 0.00	0.00% 0.0% 0.00 0.00	0.00% 0.0% 0.00 0.00	0.00% 0.0% 0.00 0.00
Allowed during the year Closing Accelrated Deprn. Net Depreciation Benefit Tax Benefit	Rs Lakh Rs Lakh	30.00% 70.0% 132.90 121.20 42.35	35.00% 35.0% 155.05 131.66 46.01	14.00% 21.0% 62.02 38.63 13.50	8.40% 12.6% 37.21 13.82 4.83	5.04% 7.6% 22.33 -1.06 -0.37	3.02% 4.5% 13.40 -9.99 -3.49	1.81% 2.7% 8.04 -15.35 -5.36	1.09% 1.6% 4.82 -18.57 -6.49	0.65% 1.0% 2.89 -20.50 -7.16	0.39% 0.6% 1.74 -21.65 -7.57	0.24% 0.4% 1.04 -22.35 -7.81	0.14% 0.2% 0.63 -22.77 -7.96	0.08% 0.1% 0.38 -23.02 -8.04	0.05% 0.1% 0.23 -23.17 -8.09	0.03% 0.0% 0.14 -23.26 -8.13	0.02% 0.0% 0.08 -23.31 -8.15	0.01% 0.0% 0.05 -23.34 -8.16	0.01% 0.0% 0.03 -12.73 -4.45	0.00% 0.0% 0.02 0.02 0.01	0.00% 0.0% 0.01 0.01 0.00	0.00% 0.0% 0.01 0.01 0.00	0.00% 0.0% 0.00 0.00 0.00	0.00% 0.0% 0.00 0.00 0.00	0.00% 0.0% 0.00 0.00 0.00	0.00% 0.0% 0.00 0.00 0.00
Allowed during the year Closing Accelrated Deprn. Neetlreated Depreciation Benefit Tax Benefit Energy generation	Rs Lakh Rs Lakh MU	30.00% 70.0% 132.90 121.20 42.35 3.35	35.00% 35.0% 155.05 131.66 46.01 6.71	14.00% 21.0% 62.02 38.63 13.50 6.71	8.40% 12.6% 37.21 13.82 4.83 6.71	5.04% 7.6% 22.33 -1.06 -0.37 6.71	3.02% 4.5% 13.40 -9.99 -3.49 6.71	1.81% 2.7% 8.04 -15.35 -5.36 6.71	1.09% 1.6% 4.82 -18.57 -6.49 6.71	0.65% 1.0% 2.89 -20.50 -7.16 6.71	0.39% 0.6% 1.74 -21.65 -7.57 6.71	0.24% 0.4% 1.04 -22.35 -7.81 6.71	0.14% 0.2% 0.63 -22.77 -7.96 6.71	0.08% 0.1% 0.38 -23.02 -8.04 6.71	0.05% 0.1% 0.23 -23.17 -8.09 6.71	0.03% 0.0% 0.14 -23.26 -8.13 6.71	0.02% 0.0% 0.08 -23.31 -8.15 6.71	0.01% 0.0% 0.05 -23.34 -8.16 6.71	0.01% 0.0% 0.03 -12.73 -4.45 6.71	0.00% 0.0% 0.02 0.02 0.01 6.71	0.00% 0.0% 0.01 0.01 0.00 6.71	0.00% 0.0% 0.01 0.01 0.00 6.71	0.00% 0.0% 0.00 0.00 0.00 0.00 6.71	0.00% 0.0% 0.00 0.00 0.00 0.00 6.71	0.00% 0.0% 0.00 0.00 0.00 0.00 6.71	0.00% 0.0% 0.00 0.00 0.00 0.00 6.71
Allowed during the year Closing Accelrated Deprn. Net Depreciation Benefit Tax Benefit Energy generation Per unit benefit	Rs Lakh Rs Lakh MU	30.00% 70.0% 132.90 121.20 42.35 3.35 1.26	35.00% 35.0% 155.05 131.66 46.01 6.71 0.69	14.00% 21.0% 62.02 38.63 13.50 6.71 0.20	8.40% 12.6% 37.21 13.82 4.83 6.71 0.07	5.04% 7.6% 22.33 -1.06 -0.37 6.71 -0.01	3.02% 4.5% 13.40 -9.99 -3.49 6.71 -0.05	1.81% 2.7% 8.04 -15.35 -5.36 6.71 -0.08	1.09% 1.6% 4.82 -18.57 -6.49 6.71 -0.10	0.65% 1.0% 2.89 -20.50 -7.16 6.71 -0.11	0.39% 0.6% 1.74 -21.65 -7.57 6.71 -0.11	0.24% 0.4% 1.04 -22.35 -7.81 6.71 -0.12	0.14% 0.2% 0.63 -22.77 -7.96 6.71 -0.12	0.08% 0.1% 0.38 -23.02 -8.04 6.71 -0.12	0.05% 0.1% 0.23 -23.17 -8.09 6.71 -0.12	0.03% 0.0% 0.14 -23.26 -8.13 6.71 -0.12	0.02% 0.0% 0.08 -23.31 -8.15 6.71 -0.12	0.01% 0.0% 0.05 -23.34 -8.16 6.71 -0.12	0.01% 0.0% 0.03 -12.73 -4.45 6.71 -0.07	0.00% 0.0% 0.02 0.02 0.01 6.71 0.00	0.00% 0.0% 0.01 0.01 0.00 6.71 0.00	0.00% 0.0% 0.01 0.01 0.00 6.71 0.00	0.00% 0.0% 0.00 0.00 0.00 0.00 6.71 0.00	0.00% 0.00% 0.00 0.00 0.00 6.71 0.00	0.00% 0.00 0.00 0.00 0.00 6.71 0.00	0.00% 0.0% 0.00 0.00 0.00 0.00 6.71 0.00
Allowed during the year Closing Accelrated Deprn. Net Depreciation Benefit Tax Benefit Energy generation Per unit benefit Discounting Factor	Rs Lakh Rs Lakh MU Rs/Unit	30.00% 70.0% 132.90 121.20 42.35 3.35 1.26 1.00	35.00% 35.0% 155.05 131.66 46.01 6.71 0.69 0.92	14.00% 21.0% 62.02 38.63 13.50 6.71 0.20	8.40% 12.6% 37.21 13.82 4.83 6.71 0.07	5.04% 7.6% 22.33 -1.06 -0.37 6.71 -0.01 0.73	3.02% 4.5% 13.40 -9.99 -3.49 6.71 -0.05 0.67	1.81% 2.7% 8.04 -15.35 -5.36 6.71 -0.08 0.62	1.09% 1.6% 4.82 -18.57 -6.49 6.71 -0.10 0.57	0.65% 1.0% 2.89 -20.50 -7.16 6.71 -0.11 0.53	0.39% 0.6% 1.74 -21.65 -7.57 6.71 -0.11 0.49	0.24% 0.4% 1.04 -22.35 -7.81 6.71 -0.12 0.45	0.14% 0.2% 0.63 -22.77 -7.96 6.71 -0.12 0.42	0.08% 0.1% 0.38 -23.02 -8.04 6.71 -0.12 0.38	0.05% 0.1% 0.23 -23.17 -8.09 6.71 -0.12 0.35	0.03% 0.0% 0.14 -23.26 -8.13 6.71 -0.12 0.33	0.02% 0.0% 0.08 -23.31 -8.15 6.71 -0.12 0.30	0.01% 0.0% 0.05 -23.34 -8.16 6.71 -0.12 0.28	0.01% 0.0% 0.03 -12.73 -4.45 6.71 -0.07 0.26	0.00% 0.0% 0.02 0.02 0.01 6.71 0.00 0.24	0.00% 0.0% 0.01 0.01 0.00 6.71 0.00 0.22	0.00% 0.0% 0.01 0.01 0.00 6.71 0.00 0.20	0.00% 0.00 0.00 0.00 0.00 6.71 0.00 0.19	0.00% 0.00% 0.00 0.00 0.00 6.71 0.00 0.17	0.00% 0.00% 0.00 0.00 0.00 6.71 0.00 0.16	0.00% 0.0% 0.00 0.00 0.00 6.71 0.00 0.15

Bioma	ss Gasifier Powe	er Projects- Mahar	rashtra		Annexure-4C
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity Auxiliary Consumption during	MW	10%
			stabilisation Auxiliary Consumption after stabilisation	% % For First 6	10% 10%
1	Power Generation	Capacity	PLF(Stablization for 6 months)	Months	85%
			PLF(during first year after Stablization)	Next six months 2 nd Year	85%
			PLF(second year onwards)	Onwards	85%
		0 "1	Useful Life	Years	25
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	443.00
			Debt	%	70%
		Debt: Equity	Equity	%	30%
		Dobt. Equity	Total Debt Amount	Rs Lakh	310.10
			Total Equity Amout	Rs Lakh	132.90
			Loan Amount	Rs Lakh	310.10
3	Sources of	Debt	Moratorium Period	years	0
	Fund	Component	Repayment Period(incld Moratorium)	years	15.00
			Interest Rate	%	9.00%
			Equity amount	Rs Lacs	132.90
		Equity	Return on Equity (upto 20 years)	% p.a	16.96%
		Component	Return on Equity (after 20 years)	% p.a	21.52%
·			Discount Rate (Equiv. to WACC)		8.30%
		Fiscal	Income Tax	%	34.94%
4	Financial Assumptions	Assumptions	MAT Rate	%	17.47%
	Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
		For Fixed	O&M Charges	Months (% of O&M	1
	Working	Charges	Maintenance Spare	exepenses)	15.00%
5	Capital		Receivables for Debtors	Months	1.5
		For Variable	Biomass Stock	Months	4
		Charges	Interest On Working Capital	%	10.50%
	Fuel Related		Specific Fuel Consumption	kg/kWh	1.25
6	Assumptions	Biomass	Base Price	Rs/T	4065.60
			Biomass Price Escalation Factor	%	5.00%
7	Operation &		O&M Cost of power plant	Rs Lakh	63.66
	Maintenance		Total O & M Expenses Escalation	%	3.84%
8	Generation & Sale of Energy		Total No .Of Hours		8766.00

Biomass Gasifier : Determin	nation of T	ariff Comp	onent
Units Generation	Unit	Year>	1

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		378.66	397.60	417.48	438.35	460.27	483.28	507.45	532.82	559.46	587.43	616.81	647.65	680.03	714.03	749.73	787.22	826.58	867.91	911.30	956.87	1004.71	1054.95	1107.69	1163.08	1221.23
Per unit Variable Cost	Rs/kWh		5.65	5.93	6.23	6.54	6.86	7.21	7.57	7.95	8.34	8.76	9.20	9.66	10.14	10.65	11.18	11.74	12.33	12.94	13.59	14.27	14.98	15.73	16.52	17.34	18.21
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		63.66	66.11	68.65	71.28	74.02	76.86	79.81	82.88	86.06	89.37	92.80	96.36	100.06	103.91	107.90	112.04	116.34	120.81	125.45	130.26	135.27	140.46	145.85	151.46	157.27
Depreciation	Rs Lakh		20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86
Interest on term loan	Rs Lakh		26.98	25.12	23.25	21.39	19.53	17.67	15.81	13.94	12.08	10.22	8.36	6.50	4.63	2.77	0.91	-	-	-	-	-		-	-	-	-
Interest on working Capital	Rs Lakh		21.83	22.82	23.86	24.95	26.10	27.31	28.57	29.90	31.30	32.76	34.30	35.92	37.61	39.39	41.26	43.08	45.16	47.35	49.64	52.05	54.65	57.30	60.08	62.99	66.05
Return on Equity	Rs Lakh		22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	28.60	28.60	28.60	28.60	28.60
Total Fixed Cost	Rs Lakh		155.70	157.28	158.99	160.86	162.89	165.07	167.43	169.96	172.68	175.59	178.69	182.01	185.54	189.30	193.30	186.52	192.91	199.56	206.49	213.71	227.38	235.22	243.39	251.91	260.78
Per unit Fixed Cost	Rs/kWh	2.64	2.32	2.35	2.37	2.40	2.43	2.46	2.50	2.53	2.57	2.62	2.66	2.71	2.77	2.82	2.88	2.78	2.88	2.98	3.08	3.19	3.39	3.51	3.63	3.76	3.89
Levallised tariff corresponding	to Useful li	e																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.86	5.65	5.93	6.23	6.54	6.86	7.21	7.57	7.95	8.34	8.76	9.20	9.66	10.14	10.65	11.18	11.74	12.33	12.94	13.59	14.27	14.98	15.73	16.52	17.34	18.21
O&M expn	Rs/kWh	1.33	0.95	0.99	1.02	1.06	1.10	1.15	1.19	1.24	1.28	1.33	1.38	1.44	1.49	1.55	1.61	1.67	1.73	1.80	1.87	1.94	2.02	2.09	2.17	2.26	2.35
Depreciation	Rs/kWh	0.27	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Int. on term loan	Rs/kWh	0.20	0.40	0.37	0.35	0.32	0.29	0.26	0.24	0.21	0.18	0.15	0.12	0.10	0.07	0.04	0.01	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.49	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.59	0.62	0.64	0.67	0.71	0.74	0.78	0.81	0.85	0.90	0.94	0.98
RoE	Rs/kWh	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.43	0.43	0.43	0.43	0.43
Total COG	Rs/kWh	11.50	7.97	8.27	8.60	8.94	9.29	9.67	10.06	10.48	10.92	11.38	11.86	12.37	12.91	13.47	14.06	14.52	15.20	15.92	16.67	17.46	18.37	19.24	20.15	21.10	22.10
Discount Factor	Levellised		1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.65																										
Levlised Tariff (Fixed)	2.64		_																								

<u>Determination of Additional Depreciation</u> for Biomass Gasifier Power Projects

2.64 **8.29**

Determination of Additional D	cpi colatioi	i ioi bioina	oo oaoiiici		jouru																					
Depreciation amount	90%	1																								
Book Depreciation rate	5.28%	1																								
Tax Depreciation rate	40%	1																								
Additional Depreciation	20%	1																								
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	443.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	11.70	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	12.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	132.90	155.05	62.02	37.21	22.33	13.40	8.04	4.82	2.89	1.74	1.04	0.63	0.38	0.23	0.14	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	121.20	131.66	38.63	13.82	-1.06	-9.99	-15.35	-18.57	-20.50	-21.65	-22.35	-22.77	-23.02	-23.17	-23.26	-23.31	-23.34	-12.73	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	42.35	46.01	13.50	4.83	-0.37	-3.49	-5.36	-6.49	-7.16	-7.57	-7.81	-7.96	-8.04	-8.09	-8.13	-8.15	-8.16	-4.45	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.35	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Per unit benefit	Rs/Unit	1.26	0.69	0.20	0.07	-0.01	-0.05	-0.08	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	5.34	Rs/Unit																								
Electricity Generation (Levellised)	6.42	Rs/Unit																								
	0.00	n																								

Bioma	ass Gasifier Powe	er Projects- Punjal	b		Annexure-4D
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity Auxiliary Consumption during	MW	1
			stabilisation	%	10%
	Power		Auxiliary Consumption after stabilisation	% For First 6	10%
1	Generation	Capacity	PLF(Stablization for 6 months)	Months Next six	85%
			PLF(during first year after Stablization)	months 2 nd Year	85%
			PLF(second year onwards)	Onwards	85%
			Useful Life	Years	25
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	443.00
	•		Debt	%	70%
		Dobt. Fauity	Equity	%	30%
		Debt: Equity	Total Debt Amount	Rs Lakh	310.10
			Total Equity Amout	Rs Lakh	132.90
			Loan Amount	Rs Lakh	310.10
3	Sources of	Debt	Moratorium Period	years	0
	Fund	Component	Repayment Period(incld Moratorium)	years	15.00
			Interest Rate	%	9.00%
			Equity amount	Rs Lacs	132.90
		Equity	Return on Equity (upto 20 years)	% p.a	16.96%
		Component	Return on Equity (after 20 years)	% p.a	21.52%
			Discount Rate (Equiv. to WACC)		8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
4	Financial Assumptions	Assumptions	MAT Rate	%	17.47%
	Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
		For Fixed	O&M Charges	Months (% of O&M	1
	Working	Charges	Maintenance Spare	exepenses)	15.00%
5	Capital		Receivables for Debtors	Months	1.5
		For Variable	Biomass Stock	Months	4
		Charges	Interest On Working Capital	%	10.50%
	Fuel Related	5.	Specific Fuel Consumption	kg/kWh	1.25
6	Assumptions	Biomass	Base Price	Rs/T	4158
			Biomass Price Escalation Factor	%	5.00%
7	Operation & Maintenance		O&M Cost of power plant	Rs Lakh	63.66
	Generation &		Total O & M Expenses Escalation	%	3.84%
8	Sale of Energy		Total No .Of Hours		8766.00

Bi	omass	Gasifier	: Determ	ination of	Tariff	Com	ponent

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		387.27	406.63	426.97	448.31	470.73	494.27	518.98	544.93	572.18	600.78	630.82	662.36	695.48	730.26	766.77	805.11	845.36	887.63	932.01	978.61	1027.55	1078.92	1132.87	1189.51	1248.99
Per unit Variable Cost	Rs/kWh		5.78	6.06	6.37	6.69	7.02	7.37	7.74	8.13	8.53	8.96	9.41	9.88	10.37	10.89	11.43	12.01	12.61	13.24	13.90	14.59	15.32	16.09	16.89	17.74	18.62
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		63.66	66.11	68.65	71.28	74.02	76.86	79.81	82.88	86.06	89.37	92.80	96.36	100.06	103.91	107.90	112.04	116.34	120.81	125.45	130.26	135.27	140.46	145.85	151.46	157.27
Depreciation	Rs Lakh		20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86
Interest on term loan	Rs Lakh		26.98	25.12	23.25	21.39	19.53	17.67	15.81	13.94	12.08	10.22	8.36	6.50	4.63	2.77	0.91	-	-	-	-	-	-	-	-	-	-
Interest on working Capital	Rs Lakh		22.25	23.26	24.32	25.44	26.61	27.84	29.14	30.49	31.92	33.42	34.99	36.64	38.37	40.18	42.09	43.95	46.08	48.31	50.65	53.11	55.76	58.47	61.30	64.28	67.40
Return on Equity	Rs Lakh		22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	28.60	28.60	28.60	28.60	28.60
Total Fixed Cost	Rs Lakh		156.12	157.72	159.46	161.35	163.40	165.61	167.99	170.55	173.30	176.24	179.38	182.73	186.30	190.10	194.13	187.39	193.82	200.52	207.50	214.78	228.49	236.39	244.62	253.19	262.13
Per unit Fixed Cost	Rs/kWh	2.65	2.33	2.35	2.38	2.41	2.44	2.47	2.51	2.54	2.58	2.63	2.67	2.72	2.78	2.83	2.89	2.79	2.89	2.99	3.09	3.20	3.41	3.53	3.65	3.78	3.91
Levallised tariff corresponding	g to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	9.06	5.78	6.06	6.37	6.69	7.02	7.37	7.74	8.13	8.53	8.96	9.41	9.88	10.37	10.89	11.43	12.01	12.61	13.24	13.90	14.59	15.32	16.09	16.89	17.74	18.62
O&M expn	Rs/kWh	1.33	0.95	0.99	1.02	1.06	1.10	1.15	1.19	1.24	1.28	1.33	1.38	1.44	1.49	1.55	1.61	1.67	1.73	1.80	1.87	1.94	2.02	2.09	2.17	2.26	2.35
Depreciation	Rs/kWh	0.27	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Int. on term loan	Rs/kWh	0.20	0.40	0.37	0.35	0.32	0.29	0.26	0.24	0.21	0.18	0.15	0.12	0.10	0.07	0.04	0.01	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.50	0.33	0.35	0.36	0.38	0.40	0.42	0.43	0.45	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.69	0.72	0.76	0.79	0.83	0.87	0.91	0.96	1.01
RoE	Rs/kWh	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.43	0.43	0.43	0.43	0.43
Total COG	Rs/kWh	11.71	8.10	8.42	8.74	9.09	9.46	9.84	10.24	10.67	11.12	11.59	12.08	12.60	13.15	13.72	14.33	14.80	15.50	16.23	16.99	17.80	18.73	19.61	20.54	21.51	22.53
Discount Factor	Levellised		1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.78																										
Levllised Tariff (Fixed)	2.65																										

<u>Determination of Additional Depreciation</u> for Biomass Gasifier Power Projects Depreciation amount 90% 5.28%

8.43 Rs/Unit

Levellised Tariff

Book Depreciation rate

Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	443.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	11.70	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	12.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation					•		•				•	•							•			•				
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	132.90	155.05	62.02	37.21	22.33	13.40	8.04	4.82	2.89	1.74	1.04	0.63	0.38	0.23	0.14	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	121.20	131.66	38.63	13.82	-1.06	-9.99	-15.35	-18.57	-20.50	-21.65	-22.35	-22.77	-23.02	-23.17	-23.26	-23.31	-23.34	-12.73	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	42.35	46.01	13.50	4.83	-0.37	-3.49	-5.36	-6.49	-7.16	-7.57	-7.81	-7.96	-8.04	-8.09	-8.13	-8.15	-8.16	-4.45	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.35	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Per unit benefit	Rs/Unit	1.26	0.69	0.20	0.07	-0.01	-0.05	-0.08	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	5.34	Rs/Unit																								
Electricity Generation (Levellised)	6.42	Rs/Unit																								
Levellised benefit	0.08	Rs/Unit																								

Bioma	ss Gasifier Powe	er Projects- Rajast	than		Annexure-4E
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity Auxiliary Consumption during stabilisation	MW %	10%
			Auxiliary Consumption after stabilisation	%	10%
1	Power Generation	Capacity	PLF(Stablization for 6 months)	For First 6 Months	85%
			PLF(during first year after Stablization)	Next six months 2 nd Year	85%
			PLF(second year onwards)	Onwards	85%
		Canital	Useful Life	Years Rs	25
2	Project Cost	Capital Cost/MW	Power Plant Cost	Lakh/MW	443.00
			Debt	%	70%
		Debt: Equity	Equity	%	30%
		Dobt. Equity	Total Debt Amount	Rs Lakh	310.10
			Total Equity Amout	Rs Lakh	132.90
			Loan Amount	Rs Lakh	310.10
3	Sources of	Debt	Moratorium Period	years	0
	Fund	Component	Repayment Period(incld Moratorium)	years	15.00
			Interest Rate	%	9.00%
			Equity amount	Rs Lacs	132.90
		Equity	Return on Equity (upto 20 years)	% p.a	16.96%
		Component	Return on Equity (after 20 years)	% p.a	21.52%
			Discount Rate (Equiv. to WACC)		8.30%
		Fiscal	Income Tax	%	34.94%
4	Financial	Assumptions	MAT Rate	%	17.47%
	Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
		For Fixed	O&M Charges	Months	1
	Working	Charges	Maintenance Spare	(% of O&M exepenses)	15.00%
5	Capital		Receivables for Debtors	Months	1.5
		For Variable	Biomass Stock	Months	4
		Charges	Interest On Working Capital	%	10.50%
	Fuel Related		Specific Fuel Consumption	kg/kWh	1.25
6	Assumptions	Biomass	Base Price	Rs/T	3470.25
			Biomass Price Escalation Factor	%	5.00%
7	Operation &		O&M Cost of power plant	Rs Lakh	63.66
	Maintenance Generation &		Total O & M Expenses Escalation	%	3.84%
8	Sale of Energy		Total No .Of Hours		8766.00

Biomass Gasifier : Determination of Tariff Comp

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		323.21	339.38	356.34	374.16	392.87	412.51	433.14	454.80	477.54	501.41	526.48	552.81	580.45	609.47	639.94	671.94	705.54	740.81	777.85	816.75	857.58	900.46	945.49	992.76	1042.40
Per unit Variable Cost	Rs/kWh		4.82	5.06	5.31	5.58	5.86	6.15	6.46	6.78	7.12	7.48	7.85	8.24	8.66	9.09	9.54	10.02	10.52	11.05	11.60	12.18	12.79	13.43	14.10	14.80	15.54
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		63.66	66.11	68.65	71.28	74.02	76.86	79.81	82.88	86.06	89.37	92.80	96.36	100.06	103.91	107.90	112.04	116.34	120.81	125.45	130.26	135.27	140.46	145.85	151.46	157.27
Depreciation	Rs Lakh		20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86
Interest on term loan	Rs Lakh		26.98	25.12	23.25	21.39	19.53	17.67	15.81	13.94	12.08	10.22	8.36	6.50	4.63	2.77	0.91	-	-	-	-	-	-	-	-	-	-
Interest on working Capital	Rs Lakh		19.12	19.98	20.88	21.82	22.82	23.86	24.95	26.10	27.30	28.57	29.90	31.29	32.76	34.29	35.91	37.46	39.26	41.15	43.13	45.21	47.48	49.76	52.17	54.68	57.33
Return on Equity	Rs Lakh		22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	28.60	28.60	28.60	28.60	28.60
Total Fixed Cost	Rs Lakh		153.00	154.44	156.01	157.73	159.60	161.62	163.80	166.16	168.68	171.39	174.29	177.39	180.69	184.21	187.95	180.90	187.00	193.36	199.98	206.88	220.20	227.68	235.48	243.60	252.06
Per unit Fixed Cost	Rs/kWh	2.58	2.28	2.30	2.33	2.35	2.38	2.41	2.44	2.48	2.52	2.56	2.60	2.65	2.69	2.75	2.80	2.70	2.79	2.88	2.98	3.09	3.28	3.40	3.51	3.63	3.76
Levallised tariff corresponding	g to Useful lif	e																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	7.56	4.82	5.06	5.31	5.58	5.86	6.15	6.46	6.78	7.12	7.48	7.85	8.24	8.66	9.09	9.54	10.02	10.52	11.05	11.60	12.18	12.79	13.43	14.10	14.80	15.54
O&M expn	Rs/kWh	1.33	0.95	0.99	1.02	1.06	1.10	1.15	1.19	1.24	1.28	1.33	1.38	1.44	1.49	1.55	1.61	1.67	1.73	1.80	1.87	1.94	2.02	2.09	2.17	2.26	2.35
Depreciation	Rs/kWh	0.27	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Int. on term loan	Rs/kWh	0.20	0.40	0.37	0.35	0.32	0.29	0.26	0.24	0.21	0.18	0.15	0.12	0.10	0.07	0.04	0.01	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.43	0.29	0.30	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.59	0.61	0.64	0.67	0.71	0.74	0.78	0.82	0.85
RoE	Rs/kWh	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.43	0.43	0.43	0.43	0.43
Total COG	Rs/kWh	10.14	7.10	7.36	7.64	7.93	8.24	8.56	8.90	9.26	9.64	10.03	10.45	10.89	11.35	11.84	12.35	12.72	13.31	13.93	14.58	15.26	16.07	16.82	17.61	18.44	19.30
Discount Factor	Levellised		1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	4.82																										
Levilised Tariff (Fixed)	2.58																										
Levellised Tariff	7.40	Rs/Unit																									

Determination of Additional Depreciation for Biomass Gasifier Power Projects

6.42 Rs/Unit 0.08 Rs/Unit

Levellised benefit

Determination of Additional D	epreciation	IUI DIUINAS	o Gasillei	FOWEI FIG	yeus																					
Depreciation amount	90%																									
Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	443.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	11.70	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	12.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	132.90	155.05	62.02	37.21	22.33	13.40	8.04	4.82	2.89	1.74	1.04	0.63	0.38	0.23	0.14	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	121.20	131.66	38.63	13.82	-1.06	-9.99	-15.35	-18.57	-20.50	-21.65	-22.35	-22.77	-23.02	-23.17	-23.26	-23.31	-23.34	-12.73	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	42.35	46.01	13.50	4.83	-0.37	-3.49	-5.36	-6.49	-7.16	-7.57	-7.81	-7.96	-8.04	-8.09	-8.13	-8.15	-8.16	-4.45	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.35	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Per unit benefit	Rs/Unit	1.26	0.69	0.20	0.07	-0.01	-0.05	-0.08	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised		Rs/Unit																								
Electricity Generation (Levellised)		Rs/Unit																								
Control Description of the Control Description	0.00																									

Bioma	ss Gasifier Powe	er Projects- Tamil	Nadu		Annexure-4F
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity Auxiliary Consumption during stabilisation	MW %	10%
	D		Auxiliary Consumption after stabilisation	% For First 6	10%
1	Power Generation	Capacity	PLF(Stablization for 6 months)	Months	85%
			PLF(during first year after Stablization)	Next six months 2 nd Year	85%
			PLF(second year onwards)	Onwards	85%
		Conital	Useful Life	Years	25
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	443.00
			Debt	%	70%
		Debt: Equity	Equity	%	30%
		Dobt. Equity	Total Debt Amount	Rs Lakh	310.10
			Total Equity Amout	Rs Lakh	132.90
			Loan Amount	Rs Lakh	310.10
3	Sources of	Debt	Moratorium Period	years	0
	Fund	Component	Repayment Period(incld Moratorium)	years	15.00
			Interest Rate	%	9.00%
			Equity amount	Rs Lacs	132.90
		Equity	Return on Equity (upto 20 years)	% p.a	16.96%
		Component	Return on Equity (after 20 years)	% p.a	21.52%
			Discount Rate (Equiv. to WACC)		8.30%
		Fiscal	Income Tax	%	34.94%
4	Financial Assumptions	Assumptions	MAT Rate	%	17.47%
	Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
		For Fixed	O&M Charges	Months (% of O&M	1
	Working	Charges	Maintenance Spare	exepenses)	15.00%
5	Capital		Receivables for Debtors	Months	1.5
		For Variable	Biomass Stock	Months	4
		Charges	Interest On Working Capital	%	10.50%
	Fuel Related		Specific Fuel Consumption	kg/kWh	1.25
6	Assumptions	Biomass	Base Price	Rs/T	3435.6
			Biomass Price Escalation Factor	%	5.00%
7	Operation &		O&M Cost of power plant	Rs Lakh	63.66
	Maintenance		Total O & M Expenses Escalation	%	3.84%
8	Generation & Sale of Energy		Total No .Of Hours		8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		319.99	335.99	352.79	370.43	388.95	408.39	428.81	450.25	472.77	496.41	521.23	547.29	574.65	603.38	633.55	665.23	698.49	733.42	770.09	808.59	849.02	891.47	936.05	982.85	1031.99
Per unit Variable Cost	Rs/kWh		4.77	5.01	5.26	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.57	9.00	9.45	9.92	10.42	10.94	11.48	12.06	12.66	13.29	13.96	14.66	15.39
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		63.66	66.11	68.65	71.28	74.02	76.86	79.81	82.88	86.06	89.37	92.80	96.36	100.06	103.91	107.90	112.04	116.34	120.81	125.45	130.26	135.27	140.46	145.85	151.46	157.27
Depreciation	Rs Lakh		20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86
Interest on term loan	Rs Lakh		26.98	25.12	23.25	21.39	19.53	17.67	15.81	13.94	12.08	10.22	8.36	6.50	4.63	2.77	0.91	-	-	-	-	-	-	-	-	-	-
Interest on working Capital	Rs Lakh		18.97	19.81	20.71	21.64	22.62	23.66	24.74	25.88	27.07	28.33	29.64	31.02	32.47	34.00	35.60	37.13	38.92	40.79	42.75	44.82	47.06	49.33	51.71	54.20	56.82
Return on Equity	Rs Lakh		22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	28.60	28.60	28.60	28.60	28.60
Total Fixed Cost	Rs Lakh		152.84	154.27	155.84	157.55	159.41	161.42	163.59	165.93	168.45	171.15	174.03	177.12	180.41	183.91	187.64	180.57	186.66	193.00	199.61	206.48	219.78	227.25	235.02	243.12	251.55
Per unit Fixed Cost	Rs/kWh	2.58	2.28	2.30	2.32	2.35	2.38	2.41	2.44	2.47	2.51	2.55	2.60	2.64	2.69	2.74	2.80	2.69	2.78	2.88	2.98	3.08	3.28	3.39	3.50	3.63	3.75
Levallised tariff correspondin	g to Useful lit	e																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	7.48	4.77	5.01	5.26	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.57	9.00	9.45	9.92	10.42	10.94	11.48	12.06	12.66	13.29	13.96	14.66	15.39
O&M expn	Rs/kWh	1.33	0.95	0.99	1.02	1.06	1.10	1.15	1.19	1.24	1.28	1.33	1.38	1.44	1.49	1.55	1.61	1.67	1.73	1.80	1.87	1.94	2.02	2.09	2.17	2.26	2.35
Depreciation	Rs/kWh	0.27	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Int. on term loan	Rs/kWh	0.20	0.40	0.37	0.35	0.32	0.29	0.26	0.24	0.21	0.18	0.15	0.12	0.10	0.07	0.04	0.01	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.43	0.28	0.30	0.31	0.32	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.51	0.53	0.55	0.58	0.61	0.64	0.67	0.70	0.74	0.77	0.81	0.85
RoE	Rs/kWh	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.43	0.43	0.43	0.43	0.43
Total COG	Rs/kWh	10.06	7.05	7.31	7.58	7.87	8.18	8.50	8.83	9.19	9.56	9.95	10.37	10.80	11.26	11.74	12.25	12.61	13.20	13.81	14.46	15.14	15.94	16.68	17.46	18.28	19.14
Discount Factor	Levellised		1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.1
Variable Cost	4.77																										
Levlised Tariff (Fixed)	2.58																										
Levellised Tariff	7.35	Rs/Unit																									

Determination of Additional De	preciation	for Biomass	Gasifier P	ower Projects	
Depreciation amount	90%				

Depreciation amount	90%																									
Book Depreciation rate	5.28%	Ī																								
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	443.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	11.70	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	12.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	132.90	155.05	62.02	37.21	22.33	13.40	8.04	4.82	2.89	1.74	1.04	0.63	0.38	0.23	0.14	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	121.20	131.66	38.63	13.82	-1.06	-9.99	-15.35	-18.57	-20.50	-21.65	-22.35	-22.77	-23.02	-23.17	-23.26	-23.31	-23.34	-12.73	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	42.35	46.01	13.50	4.83	-0.37	-3.49	-5.36	-6.49	-7.16	-7.57	-7.81	-7.96	-8.04	-8.09	-8.13	-8.15	-8.16	-4.45	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.35	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Per unit benefit	Rs/Unit	1.26	0.69	0.20	0.07	-0.01	-0.05	-0.08	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	5.34	Rs/Unit																								
Electricity Generation (Levellised)	6.42	Rs/Unit																								
and the same of th																										

Bioma	ss Gasifier Powe	er Projects- Telanç	gana		Annexure-4G
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity Auxiliary Consumption during stabilisation	MW %	10%
			Auxiliary Consumption after stabilisation	%	10%
1	Power Generation	Capacity	PLF(Stablization for 6 months)	For First 6 Months	85%
			PLF(during first year after Stablization)	Next six months 2 nd Year	85%
			PLF(second year onwards)	Onwards	85%
		Conital	Useful Life	Years	25
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	443.00
			Debt	%	70%
		Debt: Equity	Equity	%	30%
		Dobt. Equity	Total Debt Amount	Rs Lakh	310.10
			Total Equity Amout	Rs Lakh	132.90
			Loan Amount	Rs Lakh	310.10
3	Sources of	Debt	Moratorium Period	years	0
	Fund	Component	Repayment Period(incld Moratorium)	years	15.00
			Interest Rate	%	9.00%
			Equity amount	Rs Lacs	132.90
		Equity	Return on Equity (upto 20 years)	% p.a	16.96%
		Component	Return on Equity (after 20 years)	% p.a	21.52%
			Discount Rate (Equiv. to WACC)		8.30%
		Fiscal	Income Tax	%	34.94%
4	Financial	Assumptions	MAT Rate	%	17.47%
	Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
		For Fixed	O&M Charges	Months	1
	Working	Charges	Maintenance Spare	(% of O&M exepenses)	15.00%
5	Capital		Receivables for Debtors	Months	1.5
		For Variable	Biomass Stock	Months	4
		Charges	Interest On Working Capital	%	10.50%
	Fuel Related		Specific Fuel Consumption	kg/kWh	1.25
6	Assumptions	Biomass	Base Price	Rs/T	3492.3
			Biomass Price Escalation Factor	%	5.00%
7	Operation &		O&M Cost of power plant	Rs Lakh	63.66
	Maintenance Generation &		Total O & M Expenses Escalation	%	3.84%
8	Sale of Energy		Total No .Of Hours		8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
nstalled Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		325.27	341.53	358.61	376.54	395.37	415.13	435.89	457.69	480.57	504.60	529.83	556.32	584.14	613.34	644.01	676.21	710.02	745.52	782.80	821.94	863.03	906.19	951.50	999.07	1049.02
Per unit Variable Cost	Rs/kWh		4.85	5.09	5.35	5.61	5.90	6.19	6.50	6.83	7.17	7.52	7.90	8.30	8.71	9.15	9.60	10.08	10.59	11.12	11.67	12.26	12.87	13.51	14.19	14.90	15.64
ixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		63.66	66.11	68.65	71.28	74.02	76.86	79.81	82.88	86.06	89.37	92.80	96.36	100.06	103.91	107.90	112.04	116.34	120.81	125.45	130.26	135.27	140.46	145.85	151.46	157.27
Depreciation	Rs Lakh		20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86
Interest on term loan	Rs Lakh		26.98	25.12	23.25	21.39	19.53	17.67	15.81	13.94	12.08	10.22	8.36	6.50	4.63	2.77	0.91	-	-	-	-		-	-	-	-	-
Interest on working Capital	Rs Lakh		19.22	20.08	20.99	21.94	22.94	23.98	25.08	26.24	27.45	28.72	30.06	31.46	32.94	34.48	36.11	37.66	39.48	41.38	43.37	45.47	47.74	50.04	52.46	54.99	57.65
Return on Equity	Rs Lakh		22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	28.60	28.60	28.60	28.60	28.60
Total Fixed Cost	Rs Lakh		153.10	154.54	156.12	157.85	159.72	161.75	163.94	166.30	168.83	171.55	174.45	177.56	180.87	184.39	188.15	181.11	187.22	193.59	200.23	207.14	220.47	227.96	235.77	243.91	252.38
Per unit Fixed Cost	Rs/kWh	2.58	2.28	2.30	2.33	2.35	2.38	2.41	2.44	2.48	2.52	2.56	2.60	2.65	2.70	2.75	2.81	2.70	2.79	2.89	2.99	3.09	3.29	3.40	3.52	3.64	3.76
Levallised tariff corresponding	to Useful li	fe																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	7.61	4.85	5.09	5.35	5.61	5.90	6.19	6.50	6.83	7.17	7.52	7.90	8.30	8.71	9.15	9.60	10.08	10.59	11.12	11.67	12.26	12.87	13.51	14.19	14.90	15.64
O&M expn	Rs/kWh	1.33	0.95	0.99	1.02	1.06	1.10	1.15	1.19	1.24	1.28	1.33	1.38	1.44	1.49	1.55	1.61	1.67	1.73	1.80	1.87	1.94	2.02	2.09	2.17	2.26	2.35
Depreciation	Rs/kWh	0.27	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
nt. on term loan	Rs/kWh	0.20	0.40	0.37	0.35	0.32	0.29	0.26	0.24	0.21	0.18	0.15	0.12	0.10	0.07	0.04	0.01	-	-	-	-	-	-	-	-	-	-
nt. on working capital	Rs/kWh	0.43	0.29	0.30	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.59	0.62	0.65	0.68	0.71	0.75	0.78	0.82	0.86
RoE	Rs/kWh	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.43	0.43	0.43	0.43	0.43
Total COG	Rs/kWh	10.19	7.13	7.40	7.68	7.97	8.28	8.60	8.94	9.30	9.68	10.08	10.50	10.94	11.41	11.90	12.41	12.78	13.38	14.00	14.66	15.35	16.16	16.91	17.70	18.54	19.41
Discount Factor	Levellised		1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.1
/ariable Cost	4.85																										
Levlised Tariff (Fixed)	2.58																										
Levellised Tariff	7.43	Rs/Unit																									

Determination of Additional	Depreciation	for Bioma	ss Gasifie	r Power Pro	ojects																					
Depreciation amount	90%																									
Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	443.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	11.70	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	12.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Depm.	Rs Lakh	132.90	155.05	62.02	37.21	22.33	13.40	8.04	4.82	2.89	1.74	1.04	0.63	0.38	0.23	0.14	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	121.20	131.66	38.63	13.82	-1.06	-9.99	-15.35	-18.57	-20.50	-21.65	-22.35	-22.77	-23.02	-23.17	-23.26	-23.31	-23.34	-12.73	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Accelrated Deprn.	Rs Lakh	132.90	155.05	62.02	37.21	22.33	13.40	8.04	4.82	2.89	1.74	1.04	0.63	0.38	0.23	0.14	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	121.20	131.66	38.63	13.82	-1.06	-9.99	-15.35	-18.57	-20.50	-21.65	-22.35	-22.77	-23.02	-23.17	-23.26	-23.31	-23.34	-12.73	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	42.35	46.01	13.50	4.83	-0.37	-3.49	-5.36	-6.49	-7.16	-7.57	-7.81	-7.96	-8.04	-8.09	-8.13	-8.15	-8.16	-4.45	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.35	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Per unit benefit	Rs/Unit	1.26	0.69	0.20	0.07	-0.01	-0.05	-0.08	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	5.34	Rs/Unit																								
Electricity Generation (Levellised)	6.42	Rs/Unit																								
Levellised benefit	0.08	Rs/Unit																								

Bioma	ss Gasifier Powe	er Projects- Uttar I	Pradesh		Annexure-4H
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity Auxiliary Consumption during	MW	1
			stabilisation	%	10%
	Power		Auxiliary Consumption after stabilisation	% For First 6	10%
1	Generation	Capacity	PLF(Stablization for 6 months)	Months Next six	85%
			PLF(during first year after Stablization)	months	85%
			PLF(second year onwards)	2 nd Year Onwards	85%
			Useful Life	Years	25
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	443.00
	,		Debt	%	70%
		Dobt. Fauity	Equity	%	30%
		Debt: Equity	Total Debt Amount	Rs Lakh	310.10
			Total Equity Amout	Rs Lakh	132.90
			Loan Amount	Rs Lakh	310.10
3	Sources of	Debt	Moratorium Period	years	0
	Fund	Component	Repayment Period(incld Moratorium)	years	15.00
			Interest Rate	%	9.00%
			Equity amount	Rs Lacs	132.90
		Equity	Return on Equity (upto 20 years)	% p.a	16.96%
		Component	Return on Equity (after 20 years)	% p.a	21.52%
			Discount Rate (Equiv. to WACC)		8.30%
		Fiscal Assumptions	Income Tax	%	34.94%
4	Financial Assumptions	7.030111110113	MAT Rate	%	17.47%
	7.000	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
·			Depreciation Rate 16th year onwards	%	2.00%
		For Fixed	O&M Charges	Months (% of O&M	1
5	Working	Charges	Maintenance Spare	exepenses)	15.00%
5	Capital		Receivables for Debtors	Months	1.5
		For Variable Charges	Biomass Stock	Months	4
		Charges	Interest On Working Capital	%	10.50%
6	Fuel Related	Biomass	Specific Fuel Consumption Base Price	kg/kWh	1.25
0	Assumptions	Biomass		Rs/T	3553.2
	0		Biomass Price Escalation Factor	%	5.00%
7	Operation & Maintenance		O&M Cost of power plant	Rs Lakh	63.66
	Generation &		Total O & M Expenses Escalation	%	3.84%
8	Sale of Energy		Total No .Of Hours		8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		330.94	347.49	364.86	383.11	402.26	422.37	443.49	465.67	488.95	513.40	539.07	566.02	594.32	624.04	655.24	688.00	722.40	758.52	796.45	836.27	878.08	921.99	968.09	1016.49	1067.32
Per unit Variable Cost	Rs/kWh		4.94	5.18	5.44	5.71	6.00	6.30	6.61	6.94	7.29	7.66	8.04	8.44	8.86	9.31	9.77	10.26	10.77	11.31	11.88	12.47	13.09	13.75	14.44	15.16	15.92
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		63.66	66.11	68.65	71.28	74.02	76.86	79.81	82.88	86.06	89.37	92.80	96.36	100.06	103.91	107.90	112.04	116.34	120.81	125.45	130.26	135.27	140.46	145.85	151.46	157.27
Depreciation	Rs Lakh		20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86
Interest on term loan	Rs Lakh		26.98	25.12	23.25	21.39	19.53	17.67	15.81	13.94	12.08	10.22	8.36	6.50	4.63	2.77	0.91	-	-	-	-		-		-		-
Interest on working Capital	Rs Lakh		19.50	20.37	21.29	22.26	23.27	24.34	25.46	26.63	27.86	29.15	30.51	31.94	33.43	35.00	36.65	38.24	40.08	42.01	44.04	46.16	48.48	50.81	53.27	55.84	58.54
Return on Equity	Rs Lakh		22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	28.60	28.60	28.60	28.60	28.60
Total Fixed Cost	Rs Lakh		153.37	154.83	156.43	158.17	160.06	162.10	164.31	166.69	169.24	171.97	174.90	178.03	181.36	184.92	188.69	181.68	187.83	194.23	200.89	207.83	221.20	228.73	236.58	244.76	253.27
Per unit Fixed Cost	Rs/kWh	2.59	2.29	2.31	2.33	2.36	2.39	2.42	2.45	2.49	2.52	2.56	2.61	2.65	2.70	2.76	2.81	2.71	2.80	2.90	3.00	3.10	3.30	3.41	3.53	3.65	3.78
Levallised tariff corresponding	to Useful li	ie																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	7.74	4.94	5.18	5.44	5.71	6.00	6.30	6.61	6.94	7.29	7.66	8.04	8.44	8.86	9.31	9.77	10.26	10.77	11.31	11.88	12.47	13.09	13.75	14.44	15.16	15.92
O&M expn	Rs/kWh	1.33	0.95	0.99	1.02	1.06	1.10	1.15	1.19	1.24	1.28	1.33	1.38	1.44	1.49	1.55	1.61	1.67	1.73	1.80	1.87	1.94	2.02	2.09	2.17	2.26	2.35
Depreciation	Rs/kWh	0.27	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Int. on term loan	Rs/kWh	0.20	0.40	0.37	0.35	0.32	0.29	0.26	0.24	0.21	0.18	0.15	0.12	0.10	0.07	0.04	0.01	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.44	0.29	0.30	0.32	0.33	0.35	0.36	0.38	0.40	0.42	0.43	0.45	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.69	0.72	0.76	0.79	0.83	0.87
RoE	Rs/kWh	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.43	0.43	0.43	0.43	0.43
Total COG	Rs/kWh	10.33	7.22	7.49	7.77	8.07	8.39	8.72	9.06	9.43	9.81	10.22	10.65	11.10	11.57	12.06	12.58	12.97	13.57	14.21	14.87	15.57	16.39	17.16	17.96	18.81	19.69
Discount Factor	Levellised		1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.1
Variable Cost	4.94																										
Levllised Tariff (Fixed)	2.59																										

Determination of Additional	Depreciation for Riomas	Gasifier Power Projects
Determination of Additional	Debleciation for Biolias	s Gasillei Fowel Fluiecis

Determination of Additional	Depresidenti	i ioi Bioilia	oo oaoiiioi		jooto																					
Depreciation amount	90%																									
Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	443.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	11.70	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	12.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	132.90	155.05	62.02	37.21	22.33	13.40	8.04	4.82	2.89	1.74	1.04	0.63	0.38	0.23	0.14	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	121.20	131.66	38.63	13.82	-1.06	-9.99	-15.35	-18.57	-20.50	-21.65	-22.35	-22.77	-23.02	-23.17	-23.26	-23.31	-23.34	-12.73	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	42.35	46.01	13.50	4.83	-0.37	-3.49	-5.36	-6.49	-7.16	-7.57	-7.81	-7.96	-8.04	-8.09	-8.13	-8.15	-8.16	-4.45	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.35	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Per unit benefit	Rs/Unit	1.26	0.69	0.20	0.07	-0.01	-0.05	-0.08	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	5.34	Rs/Unit																								
Electricity Generation (Levellised)	6.42	Rs/Unit																								
Lavalliand Lawrells	0.00	D-/11-14																								

Bioma	ss Gasifier Powe	er Projects- Other	States		Annexure-4I
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity Auxiliary Consumption during stabilisation	MW %	10%
			Auxiliary Consumption after stabilisation	%	10%
1	Power Generation	Capacity	PLF(Stablization for 6 months)	For First 6 Months	85%
			PLF(during first year after Stablization)	Next six months 2 nd Year	85%
			PLF(second year onwards)	Onwards	85%
		0 11	Useful Life	Years	25
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	443.00
			Debt	%	70%
		Debt: Equity	Equity	%	30%
		Dobt. Equity	Total Debt Amount	Rs Lakh	310.10
			Total Equity Amout	Rs Lakh	132.90
			Loan Amount	Rs Lakh	310.10
3	Sources of	Debt	Moratorium Period	years	0
	Fund	Component	Repayment Period(incld Moratorium)	years	15.00
			Interest Rate	%	9.00%
			Equity amount	Rs Lacs	132.90
		Equity	Return on Equity (upto 20 years)	% p.a	16.96%
		Component	Return on Equity (after 20 years)	% p.a	21.52%
			Discount Rate (Equiv. to WACC)		8.30%
		Fiscal	Income Tax	%	34.94%
4	Financial Assumptions	Assumptions	MAT Rate	%	17.47%
	Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
		·	Depreciation Rate 16th year onwards	%	2.00%
		For Fixed	O&M Charges	Months (% of O&M	1
	Working	Charges	Maintenance Spare	exepenses)	15.00%
5	Capital		Receivables for Debtors	Months	1.5
		For Variable	Biomass Stock	Months	4
		Charges	Interest On Working Capital	%	10.50%
	Fuel Related		Specific Fuel Consumption	kg/kWh	1.25
6	Assumptions	Biomass	Base Price	Rs/T	3734.85
			Biomass Price Escalation Factor	%	5.00%
7	Operation & Maintenance		O&M Cost of power plant	Rs Lakh	63.66
	Generation &		Total O & M Expenses Escalation	%	3.84%
8	Sale of Energy		Total No .Of Hours		8766.00

Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		347.86	365.25	383.51	402.69	422.83	443.97	466.16	489.47	513.95	539.64	566.63	594.96	624.71	655.94	688.74	723.17	759.33	797.30	837.16	879.02	922.97	969.12	1017.58	1068.46	1121.88
Per unit Variable Cost	Rs/kWh		5.19	5.45	5.72	6.00	6.31	6.62	6.95	7.30	7.66	8.05	8.45	8.87	9.32	9.78	10.27	10.78	11.32	11.89	12.48	13.11	13.76	14.45	15.17	15.93	16.73
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		63.66	66.11	68.65	71.28	74.02	76.86	79.81	82.88	86.06	89.37	92.80	96.36	100.06	103.91	107.90	112.04	116.34	120.81	125.45	130.26	135.27	140.46	145.85	151.46	157.27
Depreciation	Rs Lakh		20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86
Interest on term loan	Rs Lakh		26.98	25.12	23.25	21.39	19.53	17.67	15.81	13.94	12.08	10.22	8.36	6.50	4.63	2.77	0.91	-	-	-		-		-		-	-
Interest on working Capital	Rs Lakh		20.32	21.24	22.20	23.21	24.28	25.39	26.56	27.79	29.08	30.43	31.86	33.35	34.92	36.56	38.29	39.95	41.88	43.90	46.02	48.25	50.66	53.11	55.68	58.38	61.20
Return on Equity	Rs Lakh		22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	28.60	28.60	28.60	28.60	28.60
Total Fixed Cost	Rs Lakh		154.20	155.70	157.34	159.12	161.06	163.16	165.42	167.85	170.46	173.25	176.25	179.44	182.85	186.47	190.33	183.40	189.63	196.12	202.88	209.92	223.39	231.03	239.00	247.29	255.93
Per unit Fixed Cost	Rs/kWh	2.61	2.30	2.32	2.35	2.37	2.40	2.43	2.47	2.50	2.54	2.58	2.63	2.68	2.73	2.78	2.84	2.73	2.83	2.92	3.03	3.13	3.33	3.45	3.56	3.69	3.82
Levallised tariff corresponding	to Useful li	ie																									
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	8.14	5.19	5.45	5.72	6.00	6.31	6.62	6.95	7.30	7.66	8.05	8.45	8.87	9.32	9.78	10.27	10.78	11.32	11.89	12.48	13.11	13.76	14.45	15.17	15.93	16.73
O&M expn	Rs/kWh	1.33	0.95	0.99	1.02	1.06	1.10	1.15	1.19	1.24	1.28	1.33	1.38	1.44	1.49	1.55	1.61	1.67	1.73	1.80	1.87	1.94	2.02	2.09	2.17	2.26	2.35
Depreciation	Rs/kWh	0.27	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Int. on term loan	Rs/kWh	0.20	0.40	0.37	0.35	0.32	0.29	0.26	0.24	0.21	0.18	0.15	0.12	0.10	0.07	0.04	0.01	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.46	0.30	0.32	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.48	0.50	0.52	0.55	0.57	0.60	0.62	0.65	0.69	0.72	0.76	0.79	0.83	0.87	0.91
RoE	Rs/kWh	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.43	0.43	0.43	0.43	0.43
Total COG	Rs/kWh	10.74	7.49	7.77	8.07	8.38	8.71	9.05	9.42	9.80	10.21	10.63	11.08	11.55	12.04	12.56	13.11	13.52	14.15	14.81	15.51	16.24	17.09	17.90	18.74	19.62	20.55
Discount Factor	Levellised		1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.19																										
Levlised Tariff (Fixed)	2.61																										
Levellised Tariff	7.79	Rs/Unit																									

Determination of Additional De	preciation	for Biomass Gasifier Power Projects
Depreciation amount	90%	
Book Depreciation rate	5.28%	

6.42 Rs/Unit

0.08 Rs/Unit

Electricity Generation (Levellised) Levellised benefit

Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	443.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	11.70	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	12.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation			•					·			•	•					•					•				
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	132.90	155.05	62.02	37.21	22.33	13.40	8.04	4.82	2.89	1.74	1.04	0.63	0.38	0.23	0.14	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	121.20	131.66	38.63	13.82	-1.06	-9.99	-15.35	-18.57	-20.50	-21.65	-22.35	-22.77	-23.02	-23.17	-23.26	-23.31	-23.34	-12.73	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	42.35	46.01	13.50	4.83	-0.37	-3.49	-5.36	-6.49	-7.16	-7.57	-7.81	-7.96	-8.04	-8.09	-8.13	-8.15	-8.16	-4.45	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.35	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Per unit benefit	Rs/Unit	1.26	0.69	0.20	0.07	-0.01	-0.05	-0.08	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Applicable Discounting Factor		1.00	0.96	0.89	0.82	0.76	0.70	0.65	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.18	0.17	0.15
Tax Benefit Levellised	5.34	Rs/Unit										•														

Bioga	s Power Projects	;			Annexure-5A
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameters
			Installed Power Generation Capacity	MW	1
1	Power	Capacity	Auxiliary Consumption	%	12%
'	Generation	Capacity	PLF	%	90%
			Useful Life	Years	25
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lakh/MW	886.00
	•		Debt	%	70%
		Dahti Faviti	Equity	%	30%
		Debt: Equity	Total Debt Amount	Rs Lakh	620.20
			Total Equity Amout	Rs Lakh	265.80
			Loan Amount	Rs Lakh	620.20
3	Sources of	Debt	Moratorium Period	years	0
3	Fund	Component	Repayment Period(incld Moratorium)	years	15.00
			Interest Rate	%	9.00%
			Rs Lacs	265.80	
		Equity	Return on Equity (upto 20 years)	% p.a	16.96%
		Component	Return on Equity (after 20 years)	% p.a	21.52%
			Discount Rate (Equiv. to WACC)		8.30%
		Fiscal	Income Tax	%	34.94%
4	Financial	Assumptions	MAT Rate	%	17.47%
	Assumptions	Depreciation	Depreciation Rate(Power Plant)	%	4.67%
		- оргосия	Depreciation Rate 16th year onwards	%	2.00%
			O&M Charges	Months	1
	Working	For Fixed Charges	Maintenance Spare	(% of O&M exepenses)	15.00%
5	Capital		Receivables for Debtors	Months	1.5
		For Variable	Biomass Stock	Months	4
		Charges	Interest On Working Capital	%	10.50%
	Fuel Deleted		Specific Fuel Consumption	kg/kWh	3
6	Fuel Related Assumptions	Biogas	Biogas Price	Rs/T	1493.10
			Substrate Pice Escalation Factor	%	5.00%
7	Operation &		O&M Cost of power plant	Rs Lakh	63.66
	Maintenance		Total O & M Expenses Escalation	%	3.84%
8	Generation & Sale of		Total No .Of Hours		
	Energy				8766.00

Biogas : Determination	of Tariff	Component
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- Ogas i setti i minimi e i i minimi e i i minimi e i i minimi e i minimi e i minimi e i minimi e i minimi e i																											
Units Generation	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94
Variable Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		353.39	371.06	389.61	409.09	429.55	451.03	473.58	497.26	522.12	548.22	575.63	604.42	634.64	666.37	699.69	734.67	771.41	809.98	850.47	893.00	937.65	984.53	1,033.76	1,085.45	1,139.72
Per unit Variable Cost	Rs/kWh		5.09	5.34	5.61	5.89	6.19	6.50	6.82	7.16	7.52	7.90	8.29	8.71	9.14	9.60	10.08	10.58	11.11	11.67	12.25	12.86	13.51	14.18	14.89	15.63	16.42
Fixed Cost	Unit	Year>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		63.66	66.11	68.65	71.28	74.02	76.86	79.81	82.88	86.06	89.37	92.80	96.36	100.06	103.91	107.90	112.04	116.34	120.81	125.45	130.26	135.27	140.46	145.85	151.46	157.27
Depreciation	Rs Lakh		41.35	41.35	41.35	41.35	41.35	41.35	41.35	41.35	41.35	41.35	41.35	41.35	41.35	41.35	41.35	17.72	17.72	17.72	17.72	17.72	17.72	17.72	17.72	17.72	17.72
Interest on term loan	Rs Lakh		53.96	50.24	46.52	42.79	39.07	35.35	31.63	27.91	24.19	20.47	16.75	13.02	9.30	5.58	1.86	-		-	-			-	-	-	-
Interest on working Capital	Rs Lakh		21.53	22.43	23.38	24.39	25.44	26.54	27.71	28.93	30.21	31.56	32.98	34.47	36.04	37.68	39.41	40.93	42.89	44.94	47.09	49.35	51.88	54.36	56.97	59.70	62.57
Return on Equity	Rs Lakh		45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	57.20	57.20	57.20	57.20	57.20
Total Fixed Cost	Rs Lakh		225.59	225.21	224.98	224.90	224.97	225.20	225.59	226.15	226.90	227.83	228.96	230.29	231.84	233.60	235.60	215.78	222.04	228.56	235.35	242.42	262.06	269.74	277.74	286.08	294.76
Per unit Fixed Cost	Rs/kWh	3.33	3.25	3.24	3.24	3.24	3.24	3.24	3.25	3.26	3.27	3.28	3.30	3.32	3.34	3.36	3.39	3.11	3.20	3.29	3.39	3.49	3.77	3.89	4.00	4.12	4.25
Levellised tariff corresponding	to Useful li	fe																									

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	Unit		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh		5.09	5.34	5.61	5.89	6.19	6.50	6.82	7.16	7.52	7.90	8.29	8.71	9.14	9.60	10.08	10.58	11.11	11.67	12.25	12.86	13.51	14.18	14.89	15.63	16.42
O&M expn	Rs/kWh	1.29	0.92	0.95	0.99	1.03	1.07	1.11	1.15	1.19	1.24	1.29	1.34	1.39	1.44	1.50	1.55	1.61	1.68	1.74	1.81	1.88	1.95	2.02	2.10	2.18	2.27
Depreciation	Rs/kWh	0.53	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Int. on term loan	Rs/kWh	0.39	0.78	0.72	0.67	0.62	0.56	0.51	0.46	0.40	0.35	0.29	0.24	0.19	0.13	0.08	0.03	-	-	-	-		-	-	-	-	-
Int. on working capital	Rs/kWh	0.46	0.31	0.32	0.34	0.35	0.37	0.38	0.40	0.42	0.44	0.45	0.48	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.75	0.78	0.82	0.86	0.90
RoE	Rs/kWh	0.66	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.82	0.82	0.82	0.82	0.82
Total COG	Rs/kWh	3.33	8.34	8.59	8.85	9.13	9.43	9.74	10.07	10.42	10.79	11.18	11.59	12.02	12.48	12.96	13.47	13.69	14.31	14.96	15.64	16.35	17.28	18.07	18.89	19.75	20.66
Discount Factor			1	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15
Variable Cost	5.09																										

 LevIlised Tariff (Fixed)
 3.33

 LeveIlised Tariff
 8.42
 Rs/Unit

Determination of Additional Depreciation

Applicable Discounting Factor

Electricity Generation (Levellised) 6.65 Rs/Unit
Levellised benefit 0.16 Rs/Unit

Tax Benefit Levellised

1.00

10.69 Rs/Unit

Determination of Additional	Depreciation																									
Depreciation amount	90%																									
Book Depreciation rate	5.28%																									
Tax Depreciation rate	40%																									
Additional Depreciation	20%																									
Income Tax (MAT)	17.472%																									
Income Tax (Normal Rates)	34.944%																									
Capital Cost	886.00																									
Years>	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	23.39	46.78	46.78	46.78	46.78	46.78	46.78	46.78	46.78	46.78	46.78	46.78	46.78	46.78	46.78	46.78	46.78	25.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.0%	35.0%	21.0%	12.6%	7.6%	4.5%	2.7%	1.6%	1.0%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accelrated Deprn.	Rs Lakh	265.80	310.10	124.04	74.42	44.65	26.79	16.08	9.65	5.79	3.47	2.08	1.25	0.75	0.45	0.27	0.16	0.10	0.06	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	242.41	263.32	77.26	27.64	-2.13	-19.99	-30.71	-37.14	-40.99	-43.31	-44.70	-45.53	-46.03	-46.33	-46.51	-46.62	-46.68	-25.46	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	84.71	92.01	27.00	9.66	-0.74	-6.98	-10.73	-12.98	-14.32	-15.13	-15.62	-15.91	-16.08	-16.19	-16.25	-16.29	-16.31	-8.90	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.47	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94
Per unit benefit	Rs/Unit	2.44	1.33	0.39	0.14	-0.01	-0.10	-0.15	-0.19	-0.21	-0.22	-0.22	-0.23	-0.23	-0.23	-0.23	-0.23	-0.23	-0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.15

0.43