

**CENTRAL ELECTRICITY REGULATORY COMMISSION**

**NEW DELHI**

**Coram:**

**Shri Jishnu Barua, Chairperson**

**Shri Arun Goyal, Member**

**Shri Ramesh Babu V., Member**

**Date of Order: 15<sup>th</sup> July, 2024**

IN THE MATTER OF

**Determination of the levellised generic tariff for the first year of the control period under Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2024.**

**PROPOSAL**

1. The Commission has notified the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2024, on 12.06.2024 (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
  - f. Refuse Derived Fuel based Municipal Solid Waste Power Projects;
2. As per Regulation 7 of the RE Tariff Regulations, the Commission shall determine project specific tariffs, on a case-to-case basis, 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 Projects, 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 municipal solid waste power projects – if a project developer opts for project specific tariff;
- 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 the Central Government.

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 prior to the commencement of year for each year of the Control Period:*

*Provided that for first year of Control Period i.e., from 01.07.2024 to 31.3.2025, 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 first year of the control period (i.e., from 01.07.2024 to 31.03.2025) as per the proposal enclosed as Annexure-I.
- 5. The comments/suggestions of the stakeholders on the above proposal are invited by 31<sup>st</sup> July 2024.

**[Ramesh Babu V.]**

**Member**

**[Arun Goyal]**

**Member**

**[Jishnu Barua]**

**Chairperson**

## ANNEXURE I

### PROPOSED LEVELLISED GENERIC TARIFF FOR VARIOUS RENEWABLE ENERGY TECHNOLOGIES FOR FIRST YEAR OF CONTROL PERIOD

1. The proposed levellised generic tariffs for Small Hydro projects, Biomass with Rankine Cycle, Non-fossil fuel-based co-generation, Biomass Gasifier, Biogas and RDF based MSW projects, for first year of the control period (i.e. from 01.07.2024 to 31.03.2025) are discussed in the 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 for determination of project specific tariff as per Regulation 8 (2) of RE Tariff Regulations.

#### A. Useful Life

3. 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, and shall mean the following:

Renewable Energy Projects	Years
Small Hydro	40
Biomass power project with Rankine Cycle technology	25
Non-fossil fuel-based co-generation	25
Biomass Gasifier	25
Biogas	25
Refuse derived fuel based municipal solid waste	20

#### 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 01.07.2024 to 31.03.2027. 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 proposed to be determined via this proposal, is for the first year of the control period, which shall be applicable for the Projects commissioned during the period from July 1, 2024 till March 31, 2025.

#### 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, biomass gasifier based projects and biogas based power project, 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, the fixed cost component shall be determined on a levellised basis considering the year of commissioning of the project while the fuel cost component shall be determined on a 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 for time value of money.

#### **F. Discount Factor**

9. Regulations 10 (2) specify 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, a discount factor equivalent to the 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) specified in the Regulations. 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 10.65%. For equity component (i.e.,30% of capital cost), the rate of Return on Equity (ROE) is considered at post-tax rate of 14% (for all technologies except SHP; for SHP ROE is considered at post-tax 15%). Further, Corporate tax rate has been considered as 34.94%<sup>1</sup>. Accordingly, the discount factor derived by this method for all technologies (except SHP) is 9.05%  $[\{(10.65\% \times 0.70) \times (1 - 34.94\%)\} + (14.0\% \times 0.30)]$  and that for SHP is 9.35%  $[\{(10.65\% \times 0.70) \times (1 - 34.94\%)\} + (15.0\% \times 0.30)]$ .

## G. Capital Cost

12. Regulation 12 of Renewable Energy Tariff Regulations, 2024 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 an interconnection point.”*

13. The Commission has considered the normative capital cost as specified in RE Tariff Regulations, 2024, applicable for the first year of control period, for various RE technologies viz. Small Hydro Power, Biomass Power based on Rankine cycle, Non-Fossil Fuel based Cogeneration, Biomass Gasifier, Biogas, refuse derived fuel-based based municipal solid waste power projects. The capital cost of RE projects is discussed as under:

### **Capital Cost of Small Hydro Projects (SHP)**

14. ‘Small hydro project’ 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 plants and machinery and with an installed capacity up to and including 25 MW.

15. The Commission, under Regulation 27 (1) of the RE Tariff Regulations has specified the normative capital cost for Small Hydro Projects for, as under:

Region	Project Size	Capital Cost (Rs. Lakh/MW)
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and	Below 5 MW	1200
	5 MW to 25 MW	1200

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

Region	Project Size	Capital Cost (Rs. Lakh/MW)
Kashmir, Union Territory of Ladakh and North Eastern States		
Other States	Below 5 MW	890
	5 MW to 25 MW	1027

### **Capital cost of Biomass power projects based on Rankine cycle technology**

16. The Commission has specified the normative capital cost under Regulation 31 of the RE Tariff Regulations, 2024, as under:

Biomass power projects based on Rankine cycle technology	Capital Cost (Rs. lakhs/ MW)
Project [other than rice straw and juliflora (plantation) based project] with water-cooled condenser	638
Project [other than rice straw and Juliflora(plantation) based project] with air-cooled condenser	685
For rice straw and juliflora (plantation) based project with water-cooled condenser	697
For rice straw and juliflora (plantation) based project with air-cooled condenser	744

### **Capital cost of Non-fossil fuel based co-generation projects**

17. 'Non-fossil fuel based co-generation project' means a generating station that uses the process in which more than one form of energy (such as steam and electricity) is produced in a sequential manner by use of biomass. As per Regulation 4(d) of the RE Tariff Regulations, 2024, a project to qualify as non-fossil based co-generation project 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. The Commission, under Regulation 39, has specified the normative capital cost for the non-fossil fuel-based co-generation projects as Rs. 562 lakhs/MW.

### **Capital cost of Biomass Gasifier-based power projects**

19. The Commission, under Regulation 50, has specified the normative capital cost for Biomass Gasifier-based power projects as Rs. 677 lakhs/MW.

### **Capital cost of Biogas based Power Projects**

20. The Commission, under Regulation 56, has specified normative capital cost for Biogas-based power projects as Rs. 1354 lakhs/MW.

### **Capital cost of refuse derived fuel (RDF) based municipal solid waste (MSW) power projects**

21. The Commission, under Regulation 62 has specified the normative capital cost for RDF based MSW power projects as Rs. 2200 Lakhs/MW

22. The capital cost for first year of control period in respect of the renewable energy power generating stations is summarized as following:

<b>Renewable Energy Projects</b>	<b>Net Capital Cost Norm for first year of Control Period (Rs. lakh/MW)</b>
<b>Small Hydro</b>	
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States (Below 5 MW)	1200
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States (5 MW to 25 MW)	1200
Other States (Below 5 MW)	890
Other States (5 MW to 25 MW)	1027
<b>Biomass Projects Based on Rankine Cycle</b>	
Project [other than rice straw and juliflora (plantation) based project] with water-cooled condenser	638
Project [other than rice straw and Juliflora(plantation) based project] with air-cooled condenser	685
For rice straw and juliflora (plantation) based project with water-cooled condenser	697
For rice straw and juliflora (plantation) based project with air-cooled condenser	744
<b>Non-fossil fuel co-generation</b>	<b>562</b>
<b>Biomass Gasifier based Power Projects</b>	<b>677</b>
<b>Biogas based Power Projects</b>	<b>1354</b>
<b>RDF based MSW project</b>	<b>2200</b>

## H. Debt-Equity Ratio

23. Sub-Regulation (1) of Regulation 13 of the RE Tariff Regulations, 2024, as stipulated below, specifies debt-equity ratio of 70:30 for determination of generic tariff.

24. 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:

<b>Renewable Energy Projects</b>	<b>Debt Amount (Rs. Lakh)</b>	<b>Equity Amount (Rs. Lakh)</b>	<b>Net Capital Cost Norm for first year of Control Period (Rs. lakh/MW)</b>
<b>Small Hydro</b>			
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States (Below 5 MW)	840.00	360.00	1,200.00
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States (5 MW to 25 MW)	840.00	360.00	1,200.00
Other States (Below 5 MW)	623.00	267.00	890.00
Other States (5 MW to 25 MW)	718.90	308.10	1,027.00
<b>Biomass Projects Based on Rankine Cycle</b>			
Project [other than rice straw and juliflora (plantation) based project] with water-cooled condenser	446.60	191.40	638.00
Project [other than rice straw and Juliflora(plantation) based project] with air-cooled condenser	479.50	205.50	685.00
For rice straw and juliflora (plantation) based project with water-cooled condenser	487.90	209.10	697.00
For rice straw and juliflora (plantation) based project with air-cooled condenser	520.80	223.20	744.00
<b>Non-fossil fuel co-generation</b>	393.40	168.60	<b>562.00</b>
<b>Biomass Gasifier based Power Projects</b>	473.90	203.10	<b>677.00</b>
<b>Biogas based Power Projects</b>	947.80	406.20	<b>1,354.00</b>
<b>Refuse derived fuel-based Municipal Solid waste power projects</b>	1,540.00	660.00	<b>2,200.00</b>



## **I. Return on Equity**

25. As regards Rate of Return on Equity, sub-Regulation (2) of Regulation 16 of the RE Tariff Regulations, 2024, specifies as under:

*“16. Return on Equity*

*... ..*

*(2) The normative Return on Equity for renewable energy projects other than small hydro projects shall be 14%, and that for the small hydro projects shall be 15%. 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.”*

26. For computation of Rate of Return on Equity, MAT Rate of 17.47% and Corporate Tax rate of 34.94% has been considered. Accordingly, Rate of Return for RE projects other than small hydro projects has been computed as 16.96% for first 20 years and 21.52% after 20 years. For small hydro projects, the rate of return has been computed as 18.18% for first 20 years and 23.06% after 20 years.

## **J. Loan tenure and Interest on Loan**

27. Sub-Regulation (1) of Regulation 14 of the RE Regulations, 2024, 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:

*“(1) Loan Tenure*

*For determination of generic tariff and project specific tariff, loan tenure of 15 years shall be considered.*

*(2) Interest on Loan*

*(a) The loans arrived at in the manner indicated in Regulation 13 shall be considered as gross normative loans for the calculation of interest on loans. For project specific tariff, the normative loan outstanding as on the 1st of April of every year shall be worked out by deducting the cumulative repayment up to the 31st of March of the previous year from the gross normative loan.*

*(b) For the purpose of computation of tariff, the 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 the project developer, the repayment of the loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.”*

28. The monthly data of MCLR for the last available six months (from 15<sup>th</sup> Dec, 2023 till 14<sup>th</sup> June, 2024) from State Bank of India and the average MCLR is shown in following table:

Effective Date	One (1) Year Tenor MCLR rates <sup>2</sup>
15.05.2024 to 14.06.2024	8.65%
15.04.2024 to 14.05.2024	8.65%
15.03.2024 to 14.04.2024	8.65%
15.02.2024 to 14.03.2024	8.65%
15.01.2024 to 14.02.2024	8.65%
15.12.2023 to 14.01.2024	8.65%
<b>Avg. for last available 6 months</b>	<b>8.65%</b>

29. Accordingly, interest rate for loan component is determined as 10.65%.

#### K. Depreciation

30. Regulation 15 of the RE Tariff Regulations, 2024, 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 a 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 the remaining depreciation shall be evenly spread during the 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 a pro rata basis.”*

31. 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:

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

Details	Small Hydro	Biomass project Based on Rankine Cycle	Non-fossil fuel co-generation	Biomass Gasifier	Biogas	RDF
Useful Life (in Years)	40	25	25	25	25	20
Rate of depreciation for 15 years (%)	4.67	4.67	4.67	4.67	4.67	4.67
Rate of depreciation from 16th year onwards (%)	0.80	2.00	2.00	2.00	2.00	4.00

## L. Interest on Working Capital

32. Regulation 17 of the RE Tariff Regulations, 2024 specifies for 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, municipal solid waste-based power projects and refuse derived fuel-based power projects and renewable energy with storage projects shall be computed in accordance with the following:*

- a) Operation and Maintenance expenses for one month;*
- b) Receivables equivalent to 45 days of tariff for the sale of electricity calculated on the 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 and non-fossil fuel-based co-generation 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 expenses for one month;*
- c) Receivables equivalent to 45 days of tariff for the sale of electricity calculated on the plant load factor; and*
- d) Maintenance spares equivalent to 15% of Operation and Maintenance expenses.*

*(3) In the case of renewable hybrid energy projects, the Working Capital requirement shall be the 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 an interest rate equivalent to the normative interest rate of three hundred and twenty-five (325) 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.”*

33. 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, non-fossil fuel-based co- generation, biomass gasifier and biogas power) have been considered.
34. Interest rate has been computed as average of State Bank of India MCLR (One Year Tenor) prevalent during the last available six months (i.e. from 15<sup>th</sup> Dec, 2023 till 14<sup>th</sup> June, 2024) plus 325 basis points (equivalent to interest rate of 11.90%).
35. The parameters considered for computation of the interest on working capital are stipulated in following table:

Details	Small Hydro and RDF based MSW	Biomass Based (Rankine Cycle), Non- Fossil Fuel Generation, Biomass Gasifier and Biogas.
<b>(a) For Fixed Charge</b>		
O&M Charges (Month)	1 month	1 month
Maintenance Spares (%) of O&M Expenses	15%	15%
Receivables (Days)	45 days	45 days
<b>(b) For Variable Charge</b>		
Biomass/Bagasse Stock (Months)	-	4 months
<b>(c) Rate of Interest (%)</b>	11.90%	11.90%

#### **M. Operation and Maintenance Expenses**

36. Regulation 19 of the RE Tariff Regulations, 2024 specifies for Operation and Maintenance Expenses (O&M expenses) in respect of RE projects as following:

*“(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 the first year of the Control Period, i.e. financial year 2024-25, under these regulations, shall be escalated at the rate of 5.25% per annum for the Tariff Period.”*

37. The normative O&M expenses for various RE technologies specified under the relevant provisions of the RE Tariff Regulations, 2024 are as under:

- I. **Small Hydro:** Regulation 30 of the RE Tariff Regulations, 2024 provide for the normative O&M expenses for small hydro projects for the first year of the

Control Period, which shall be escalated at the rate of 5.25% 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:

Region	Project Size	O&M Expenses (Rs. Lakh/MW)
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States	Below 5 MW	49.24
	5 MW to 25 MW	36.93
Other States	Below 5 MW	39.66
	5 MW to 25 MW	28.72

- II. **Biomass power projects based on Rankine cycle technology:** Normative O&M Expenses for the first year of the Control Period as per Regulation 35 of the RE Tariff Regulations, 2024, shall be Rs.54.70 lakhs per MW
- III. **Non-fossil fuel-based co-generation projects:** Normative O&M Expenses for the first year of the Control Period as per Regulation 45 of RE Tariff Regulations, 2024 shall be Rs. 28.90 lakhs per MW
- IV. **Biomass gasifier-based power projects:** Normative O&M Expenses for the first year of the Control Period as per Regulation 54 of the RE Tariff Regulations, 2024 shall be Rs. 72.25 lakhs per MW
- V. **Biogas based power projects:** Normative O&M Expenses for the first year of the Control Period as per Regulation 59 of the RE Tariff Regulations, 2024 shall be Rs. 72.25 lakhs per MW
- VI. **Refuse derived fuel based municipal solid waste power projects:** Normative O&M Expenses for the first year of the Control Period, as per Regulation 65 of the RE Tariff Regulations, 2024 shall be 8.5% of the Capital cost of RDF based MSW power project i.e. Rs. 187 lakh per MW.

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

38. Regulation 18 of the RE Tariff Regulations, 2024, as defined below, specifies number of hours for calculation of CUF/PLF as 8766.

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

39. Small Hydro Projects: Regulation 28 of the RE Tariff Regulations, 2024 specifies the norms for Capacity Utilization Factor (CUF) of units generated in a year in respect of the Small Hydro generating stations as per the details given in the table below:

<b>Renewable Energy Projects</b>	<b>CUF (%)</b>
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh, North Eastern States and Odisha	45%
Punjab	40%
Other States	30%

40. Further, the Commission has considered the Plant Load Factor (PLF) for Biomass (Rankine Cycle), Biomass Gasifier, and Biogas based renewable energy generating stations as specified in Regulations 32, 51 and 57 of the RE Tariff Regulations, 2024 which are given in the following table:

<b>Renewable Energy Projects</b>	<b>CUF (%)</b>
Biomass Based (Rankine Cycle)	80%
Biomass Gasifier	85%
Biogas	90%

41. Further, as regards Non-fossil Fuel based Co-generation projects, the Commission has considered PLF as specified in Regulation 40, which is given in the following Table:

<b>Renewable Energy Projects</b>	<b>CUF (%)</b>
Uttar Pradesh and Andhra Pradesh	45%
Tamil Nadu and Maharashtra	60%
Other States	53%

42. Plant load factor for determining tariff for refuse derived fuel-based municipal solid waste power projects, as per Regulation 63 (1) of the RE Tariff Regulations, 2024 shall be:

<b>Plant Load Factor</b>	<b>RDF</b>
During stabilization period	65%
During the remaining period of the first year (after the stabilization period)	65%
2nd Year Onwards	80%

## O. Auxiliary Consumption

43. The Commission has considered the Auxiliary Consumption as specified in Regulations 29, 33, 41, 52, 58 and 64 of the RE Tariff Regulations 2024, which is shown in the following Table:

Renewable Energy Projects	(%)
Small Hydro	1.00%
Biomass Projects based on Rankine cycle	
- Using water cooled condenser	10%
- Using air cooled condenser	12%
Non-Fossil Fuel based co-generation	8.5%
Biomass Gasifier	10%
Biogas	12%
Refuse derived fuel-based municipal solid waste power projects	15%

## P. Station Heat Rate

44. The Station Heat Rates (SHR) specified under Regulations 34 and 42 of the RE Tariff Regulations, 2024 for biomass power project based on Rankine Cycle and non-fossil fuel-based co-generation projects are as under:

Renewable Energy Projects	SHR (kcal/Kwh)
Biomass power project based on Rankine Cycle	a) For projects using travelling grate boilers: 4200 kcal/kWh b) For projects using AFBC boilers: 4125 kcal/kWh
Non-Fossil Fuel based co-generation	3600 kcal/kWh

## Q. Fuel Parameters

### a) Fuel Mix

45. Regulation 53 of the RE Tariff Regulations, 2024 specifies that the normative specific fuel consumption shall be 1.25 kg per kWh for Biomass Gasifier based power project.

46. Also, Regulation 60 of the RE Tariff Regulations, 2024 specifies that the normative specific fuel consumption shall be 3 kg of substrate mix per kWh for Biogas based power project.

47. The Commission has considered the fuel mix for Biomass Gasifier based power project and Biogas based power projects as specified above.

**b) Calorific Value**

48. The Commission has considered the calorific value for biomass fuel used as 3100 kcal/kg as per Regulation 37 of the RE Tariff Regulations, 2024.

49. 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 RE Tariff Regulations, 2024 and for the use of biomass fuels other than bagasse, the calorific value as specified in above Para shall be applicable.

**c) Fuel Cost**

50. The Commission, as per Regulation 38 of the RE Tariff Regulations, 2024 has specified the Biomass fuel price for first year of the Control Period in the table below:

<b>States</b>	<b>Biomass Fuel Price for 1<sup>st</sup> year of Control Period (Rs. /MT)</b>
Andhra Pradesh	3983
Haryana	4534
Maharashtra	4637
Punjab	4742
Rajasthan	3958
Tamil Nadu	3918
Telangana	3983
Uttar Pradesh	4053
Other States	4260

51. The Commission, as per Regulation 44 (1) of the RE Tariff Regulations, 2024 has specified the Bagasse fuel price during first year of the Control Period in the following table:

<b>States</b>	<b>Bagasse Price for 1<sup>st</sup> year of Control Period (Rs. /MT)</b>
Andhra Pradesh	2249
Haryana	3199
Maharashtra	3152
Punjab	2815
Tamil Nadu	2423
Telangana	2248
Uttar Pradesh	2509
Other States	2723



52. As per Regulation 55 of the RE Tariff Regulations, the biomass fuel price for Biomass gasifier-based power projects applicable for 1st year of Control Period shall be the same as for biomass-based power projects (Rankine cycle), as determined in accordance with Regulation 38 and as mentioned in Clause 50 of this Order.
53. The Commission, as per Regulation 61 of the RE Tariff Regulations, 2024 has specified the feed stock price for Biogas based power projects during first year of the Control Period at Rs.1702/MT.

#### **R. Subsidy or Incentives by State/Central Government**

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

*“(1) The Commission shall take into consideration any incentive, grant or subsidy from the Central or State Government, including accelerated depreciation benefit, 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:*

- i. Assessment of benefit shall be based on normative capital cost, accelerated depreciation rate and corporate income tax rate as per relevant provisions of the Income Tax Act, 1961, as amended from time to time; and*
- ii. Capitalization of renewable energy projects during the second half of the fiscal year.*
- iii. Per unit benefit shall be derived on a levelized basis at a discount factor equivalent to the weighted average cost of capital.*

*(2) Any grant, subsidy or incentive availed by renewable energy project, which is not considered at the time of determination of tariff, shall be deducted by the beneficiary in subsequent bills after receipt of such grant, subsidy or incentive in suitable instalments or within such period as may be stipulated by the Commission.*

*(3) In case the Central or State Government or their agencies provide any generation- based incentive, which is specifically over and above the tariff, such incentive shall neither be taken into account while determining the tariff nor be deducted by the beneficiary in subsequent bills raised by the particular Renewable energy project.”*

55. Capital subsidy provided by the Government as per prevailing scheme/policy has not been considered, while considering the capital cost of the project in this Tariff Order. Therefore, any grant, subsidy or incentive availed by the renewable energy project shall be deducted by the beneficiaries in subsequent bills after receipt of such grant, subsidy or incentive.

56. In terms of the above regulation, for the projects availing the benefit of accelerated depreciation, an 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 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.

57. 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 Levelised 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 Income Tax Act.

58. In the light of the discussion made in the preceding paragraphs, the generic tariffs of different RE projects for the financial year 2024-25 have been arrived as follows:

**GENERIC LEVELLISED TARIFF FOR RE TECHNOLOGIES FOR FIRST YEAR OF CONTROL PERIOD**

12. The Generic Tariff for RE Technologies computed for first year of control period is shown in the subsequent Tables:

Particulars	Levellised Total Tariff (Rs/kWh)
<b>Small Hydro Power Project</b>	
Himachal Pradesh, Uttarakhand, West Bengal, North Eastern States, Union Territories of Jammu and Kashmir & Ladakh (Below 5 MW)	6.42
Himachal Pradesh, Uttarakhand, West Bengal, North Eastern States, Union Territories of Jammu and Kashmir & Ladakh (5 MW to 25 MW)	5.82
Odisha (Below 5 MW)	4.92
Odisha (5 MW to 25 MW)	4.84
Punjab (Below 5 MW)	5.53

Particulars	Levellised Total Tariff (Rs/kWh)
<b>Small Hydro Power Project</b>	
Punjab (5 MW to 25 MW)	5.44
Others States (Below 5 MW)	7.38
Others States (5 MW to 25 MW)	7.26

State	Levellised Fixed Cost	Variable Cost	Applicable Tariff Rates (FY 2024-25)	Benefit of Accelerated Depreciation (if availed)	Net levellised tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Biomass Power Projects [other than Rice Straw and Juliflora (plantation) based project] with Water Cooled Condenser and travelling grate boiler</b>					
AP	3.22	6.00	9.21	0.14	9.07
Haryana	3.28	6.83	10.10	0.14	9.96
Maharashtra	3.29	6.98	10.27	0.14	10.13
Punjab	3.30	7.14	10.44	0.14	10.30
Rajasthan	3.21	5.96	9.17	0.14	9.03
Tamil Nadu	3.21	5.90	9.11	0.14	8.97
Telangana	3.22	6.00	9.21	0.14	9.07
UP	3.22	6.10	9.33	0.14	9.19
Others	3.25	6.41	9.66	0.14	9.52

State	Levellised Fixed Cost	Variable Cost	Applicable Tariff Rates	Benefit of Accelerated Depreciation (if availed)	Net levellised tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Biomass Power Projects [other than Rice Straw and Juliflora (plantation) based project] with Air Cooled Condenser and travelling grate boiler</b>					
AP	3.39	6.13	9.52	0.15	9.37
Haryana	3.45	6.98	10.43	0.15	10.28
Maharashtra	3.46	7.14	10.60	0.15	10.45
Punjab	3.48	7.30	10.78	0.15	10.62
Rajasthan	3.39	6.09	9.48	0.15	9.33
Tamil Nadu	3.38	6.03	9.42	0.15	9.26
Telangana	3.39	6.13	9.52	0.15	9.37
UP	3.40	6.24	9.64	0.15	9.48
Others	3.42	6.56	9.98	0.15	9.83

State	Levellised Fixed Cost	Variable Cost	Applicable Tariff Rates	Benefit of Accelerated Depreciation (if availed)	Net levelled tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Biomass Power Projects [Rice Straw and Juliflora (plantation) based project] with Water Cooled Condenser and travelling grate boiler</b>					
AP	3.34	6.00	9.34	0.15	9.18
Haryana	3.40	6.83	10.23	0.15	10.08
Maharashtra	3.41	6.98	10.39	0.15	10.24
Punjab	3.43	7.14	10.56	0.15	10.41
Rajasthan	3.34	5.96	9.30	0.15	9.14
Tamil Nadu	3.33	5.90	9.23	0.15	9.08
Telangana	3.34	6.00	9.34	0.15	9.18
UP	3.35	6.10	9.45	0.15	9.30
Others	3.37	6.41	9.78	0.15	9.63

State	Levellised Fixed Cost	Variable Cost	Applicable Tariff Rates	Benefit of Accelerated Depreciation (if availed)	Net levelled tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Biomass Power Projects [Rice Straw and Juliflora (plantation) based project] with Air Cooled Condenser and travelling grate boiler</b>					
AP	3.52	6.13	9.65	0.17	9.48
Haryana	3.58	6.98	10.56	0.17	10.39
Maharashtra	3.59	7.14	10.73	0.17	10.56
Punjab	3.60	7.30	10.91	0.17	10.74
Rajasthan	3.51	6.09	9.61	0.17	9.44
Tamil Nadu	3.51	6.03	9.54	0.17	9.38
Telangana	3.52	6.13	9.65	0.17	9.48
UP	3.53	6.24	9.77	0.17	9.60
Others	3.55	6.56	10.11	0.17	9.94

State	Levellised Fixed Cost	Variable Cost	Applicable Tariff Rates	Benefit of Accelerated Depreciation (if availed)	Net levelled tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Biomass Power Projects [other than Rice Straw and Juliflora (plantation) based project] with Water Cooled Condenser and AFBC boiler</b>					
AP	3.21	5.89	9.10	0.14	8.96
Haryana	3.27	6.70	9.97	0.14	9.83
Maharashtra	3.28	6.86	10.14	0.14	10.00
Punjab	3.29	7.01	10.30	0.14	10.16
Rajasthan	3.21	5.85	9.06	0.14	8.92
Tamil Nadu	3.20	5.79	8.99	0.14	8.85

State	Levellised Fixed Cost	Variable Cost	Applicable Tariff Rates	Benefit of Accelerated Depreciation (if availed)	Net levelled tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
Telangana	3.21	5.89	9.10	0.14	8.96
UP	3.22	5.99	9.21	0.14	9.07
Others	3.24	6.30	9.54	0.14	9.40

State	Levellised Fixed Cost	Variable Cost	Applicable Tariff Rates	Benefit of Accelerated Depreciation (if availed)	Net levelled tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Biomass Power Projects [other than Rice Straw and Juliflora (plantation) based project] with Air Cooled Condenser and AFBC boiler</b>					
AP	3.38	6.02	9.40	0.15	9.25
Haryana	3.44	6.86	10.30	0.15	10.15
Maharashtra	3.46	7.01	10.47	0.15	10.31
Punjab	3.47	7.17	10.64	0.15	10.48
Rajasthan	3.38	5.98	9.36	0.15	9.21
Tamil Nadu	3.37	5.92	9.30	0.15	9.15
Telangana	3.38	6.02	9.40	0.15	9.25
UP	3.39	6.13	9.52	0.15	9.37
Others	3.41	6.44	9.85	0.15	9.70

State	Levellised Fixed Cost	Variable Cost	Applicable Tariff Rates	Benefit of Accelerated Depreciation (if availed)	Net levelled tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Biomass Power Projects [Rice Straw and Juliflora (plantation) based project] with Water Cooled Condenser and AFBC boiler</b>					
AP	3.33	5.89	9.22	0.15	9.07
Haryana	3.39	6.70	10.10	0.15	9.94
Maharashtra	3.40	6.86	10.26	0.15	10.11
Punjab	3.42	7.01	10.43	0.15	10.28
Rajasthan	3.33	5.85	9.18	0.15	9.03
Tamil Nadu	3.33	5.79	9.12	0.15	8.97
Telangana	3.33	5.89	9.22	0.15	9.07
UP	3.34	5.99	9.33	0.15	9.18
Others	3.36	6.30	9.66	0.15	9.51

State	Levelling Fixed Cost	Variable Cost	Applicable Tariff Rates	Benefit of Accelerated Depreciation (if availed)	Net levelled tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Biomass Power Projects [Rice Straw and Juliflora (plantation) based project] with Air Cooled Condenser and AFBC boiler</b>					
AP	3.51	6.02	9.53	0.17	9.37
Haryana	3.57	6.86	10.43	0.17	10.26
Maharashtra	3.58	7.01	10.59	0.17	10.43
Punjab	3.59	7.17	10.77	0.17	10.60
Rajasthan	3.51	5.98	9.49	0.17	9.33
Tamil Nadu	3.50	5.92	9.43	0.17	9.26
Telangana	3.51	6.02	9.53	0.17	9.37
UP	3.52	6.13	9.65	0.17	9.48
Others	3.54	6.44	9.98	0.17	9.82

State	Levelling Fixed Cost	Variable Cost	Applicable Tariff Rates	Benefit of Accelerated Depreciation (if availed)	Net levelled tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Bagasse Based Co-generation Project</b>					
AP	3.68	3.93	7.61	0.21	7.40
Haryana	3.29	5.59	8.88	0.18	8.70
Maharashtra	2.95	5.51	8.46	0.16	8.30
Punjab	3.24	4.92	8.16	0.18	7.98
Tamil Nadu	2.85	4.24	7.09	0.16	6.93
Telangana	3.17	3.93	7.10	0.18	6.92
UP	3.71	4.39	8.10	0.21	7.88
Others	3.23	4.76	7.99	0.18	7.81

State	Levelling Fixed Cost	Variable Cost	Applicable Tariff Rates	Benefit of Accelerated Depreciation (if availed)	Net levelled tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Biomass Gasifier Power Project</b>					
AP	3.53	5.53	9.06	0.14	8.92
Haryana	3.58	6.30	9.88	0.14	9.74
Maharashtra	3.59	6.44	10.03	0.14	9.90
Punjab	3.61	6.59	10.19	0.14	10.05
Rajasthan	3.53	5.50	9.02	0.14	8.88
Tamil Nadu	3.52	5.44	8.96	0.14	8.82
Telangana	3.53	5.53	9.06	0.14	8.92
UP	3.53	5.63	9.16	0.14	9.02
Others	3.56	5.92	9.47	0.14	9.33

State	Levelling Fixed Cost	Variable Cost	Applicable Tariff Rates	Benefit of Accelerated Depreciation (if availed)	Net levelled tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
<b>Biogas based generation</b>					
Biogas	4.74	5.80	10.54	0.27	10.27
<b>RDF Technology</b>					
RDF	10.15	-	10.15	0.55	9.60

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

Sl. No.	Renewable Energy Projects	Annexure
<b>A</b>	<b>Small Hydro Power Projects</b>	
	<i>Projects Less than 5 MW for HP, Uttarakhand, West Bengal, Jammu and Kashmir, Ladakh and NE States</i>	<i>Annexure 1A</i>
	<i>Projects between 5 MW and 25 MW for HP, Uttarakhand, West Bengal, Jammu and Kashmir, Ladakh and NE States</i>	<i>Annexure 1B</i>
	<i>Projects less than 5 MW for Odisha</i>	<i>Annexure 1C</i>
	<i>Projects between 5 MW and 25 MW for Odisha</i>	<i>Annexure 1D</i>
	<i>Projects less than 5 MW for Punjab</i>	<i>Annexure 1E</i>
	<i>Projects between 5 MW and 25 MW for Punjab</i>	<i>Annexure 1F</i>
	<i>Projects less than 5 MW for other States</i>	<i>Annexure 1G</i>
	<i>Projects between 5 MW and 25 MW for other states</i>	<i>Annexure 1H</i>
<b>B.1</b>	<b>Biomass Power Projects [other than Rice Straw and Juliflora (plantation) based project] with Water Cooled Condenser and using Travelling Gate</b>	
	<i>Andhra Pradesh</i>	<i>Annexure 2.1A</i>
	<i>Haryana</i>	<i>Annexure 2.1B</i>
	<i>Maharashtra</i>	<i>Annexure 2.1C</i>
	<i>Punjab</i>	<i>Annexure 2.1D</i>
	<i>Rajasthan</i>	<i>Annexure 2.1E</i>
	<i>Tamil Nadu</i>	<i>Annexure 2.1F</i>
	<i>Telangana</i>	<i>Annexure 2.1G</i>
	<i>Uttar Pradesh</i>	<i>Annexure 2.1H</i>
	<i>Others</i>	<i>Annexure 2.1I</i>
<b>B.2</b>	<b>Biomass Power Projects [other than Rice Straw and Juliflora (plantation) based project] with Air Cooled Condenser and using Travelling Gate boiler</b>	
	<i>Andhra Pradesh</i>	<i>Annexure 2.2A</i>
	<i>Haryana</i>	<i>Annexure 2.2B</i>
	<i>Maharashtra</i>	<i>Annexure 2.2C</i>
	<i>Punjab</i>	<i>Annexure 2.2D</i>
	<i>Rajasthan</i>	<i>Annexure 2.2E</i>
	<i>Tamil Nadu</i>	<i>Annexure 2.2F</i>
	<i>Telangana</i>	<i>Annexure 2.2G</i>
	<i>Uttar Pradesh</i>	<i>Annexure 2.2H</i>

<b>Sl. No.</b>	<b>Renewable Energy Projects</b>	<b>Annexure</b>
	<i>Others</i>	<i>Annexure 2.2I</i>
<b>B.3</b>	<b>Biomass Power Projects [Rice Straw and Juliflora (plantation) based project] with Water Cooled Condenser and using Travelling Grate boiler</b>	
	<i>Andhra Pradesh</i>	<i>Annexure 2.3A</i>
	<i>Haryana</i>	<i>Annexure 2.3B</i>
	<i>Maharashtra</i>	<i>Annexure 2.3C</i>
	<i>Punjab</i>	<i>Annexure 2.3D</i>
	<i>Rajasthan</i>	<i>Annexure 2.3E</i>
	<i>Tamil Nadu</i>	<i>Annexure 2.3F</i>
	<i>Telangana</i>	<i>Annexure 2.3G</i>
	<i>Uttar Pradesh</i>	<i>Annexure 2.3H</i>
	<i>Others</i>	<i>Annexure 2.3I</i>
<b>B.4</b>	<b>Biomass Power Projects [Rice Straw and Juliflora (plantation) based project] with Air Cooled Condenser and using Travelling Grate boiler</b>	
	<i>Andhra Pradesh</i>	<i>Annexure 2.4A</i>
	<i>Haryana</i>	<i>Annexure 2.4B</i>
	<i>Maharashtra</i>	<i>Annexure 2.4C</i>
	<i>Punjab</i>	<i>Annexure 2.4D</i>
	<i>Rajasthan</i>	<i>Annexure 2.4E</i>
	<i>Tamil Nadu</i>	<i>Annexure 2.4F</i>
	<i>Telangana</i>	<i>Annexure 2.4G</i>
	<i>Uttar Pradesh</i>	<i>Annexure 2.4H</i>
	<i>Others</i>	<i>Annexure 2.4I</i>
<b>B.5</b>	<b>Biomass Power Projects [other than Rice Straw and Juliflora (plantation) based project] with Water Cooled Condenser and using AFBC boiler</b>	
	<i>Andhra Pradesh</i>	<i>Annexure 2.5A</i>
	<i>Haryana</i>	<i>Annexure 2.5B</i>
	<i>Maharashtra</i>	<i>Annexure 2.5C</i>
	<i>Punjab</i>	<i>Annexure 2.5D</i>
	<i>Rajasthan</i>	<i>Annexure 2.5E</i>
	<i>Tamil Nadu</i>	<i>Annexure 2.5F</i>
	<i>Telangana</i>	<i>Annexure 2.5G</i>
	<i>Uttar Pradesh</i>	<i>Annexure 2.5H</i>
	<i>Others</i>	<i>Annexure 2.5I</i>
<b>B.6</b>	<b>Biomass Power Projects [other than Rice Straw and Juliflora (plantation) based project] with Air Cooled Condenser and using AFBC</b>	
	<i>Andhra Pradesh</i>	<i>Annexure 2.6A</i>
	<i>Haryana</i>	<i>Annexure 2.6B</i>
	<i>Maharashtra</i>	<i>Annexure 2.6C</i>
	<i>Punjab</i>	<i>Annexure 2.6D</i>
	<i>Rajasthan</i>	<i>Annexure 2.6E</i>
	<i>Tamil Nadu</i>	<i>Annexure 2.6F</i>
	<i>Telangana</i>	<i>Annexure 2.6G</i>
	<i>Uttar Pradesh</i>	<i>Annexure 2.6H</i>
	<i>Others</i>	<i>Annexure 2.6I</i>



<b>Sl. No.</b>	<b>Renewable Energy Projects</b>	<b>Annexure</b>
<b>B.7</b>	<b>Biomass Power Projects [Rice Straw and Juliflora (plantation) based project] with Water Cooled Condenser and using AFBC boiler</b>	
	<i>Andhra Pradesh</i>	<i>Annexure 2.7A</i>
	<i>Haryana</i>	<i>Annexure 2.7B</i>
	<i>Maharashtra</i>	<i>Annexure 2.7C</i>
	<i>Punjab</i>	<i>Annexure 2.7D</i>
	<i>Rajasthan</i>	<i>Annexure 2.7E</i>
	<i>Tamil Nadu</i>	<i>Annexure 2.7F</i>
	<i>Telangana</i>	<i>Annexure 2.7G</i>
	<i>Uttar Pradesh</i>	<i>Annexure 2.7H</i>
	<i>Others</i>	<i>Annexure 2.7I</i>
<b>B.8</b>	<b>Biomass Power Projects [Rice Straw and Juliflora (plantation) based project] with Air Cooled Condenser and using AFBC boiler</b>	
	<i>Andhra Pradesh</i>	<i>Annexure 2.8A</i>
	<i>Haryana</i>	<i>Annexure 2.8B</i>
	<i>Maharashtra</i>	<i>Annexure 2.8C</i>
	<i>Punjab</i>	<i>Annexure 2.8D</i>
	<i>Rajasthan</i>	<i>Annexure 2.8E</i>
	<i>Tamil Nadu</i>	<i>Annexure 2.8F</i>
	<i>Telangana</i>	<i>Annexure 2.8G</i>
	<i>Uttar Pradesh</i>	<i>Annexure 2.8H</i>
	<i>Others</i>	<i>Annexure 2.8I</i>
<b>C</b>	<b>Non-Fossil Fuel Based Cogeneration</b>	
	<i>Andhra Pradesh</i>	<i>Annexure 3A</i>
	<i>Haryana</i>	<i>Annexure 3B</i>
	<i>Maharashtra</i>	<i>Annexure 3C</i>
	<i>Punjab</i>	<i>Annexure 3D</i>
	<i>Tamil Nadu</i>	<i>Annexure 3E</i>
	<i>Telangana</i>	<i>Annexure 3F</i>
	<i>Uttar Pradesh</i>	<i>Annexure 3G</i>
	<i>Others</i>	<i>Annexure 3H</i>
<b>D</b>	<b>Biomass Gasifier Power Projects</b>	
	<i>Andhra Pradesh</i>	<i>Annexure 4A</i>
	<i>Haryana</i>	<i>Annexure 4B</i>
	<i>Maharashtra</i>	<i>Annexure 4C</i>
	<i>Punjab</i>	<i>Annexure 4D</i>
	<i>Rajasthan</i>	<i>Annexure 4E</i>
	<i>Tamil Nadu</i>	<i>Annexure 4F</i>
	<i>Telangana</i>	<i>Annexure 4G</i>
	<i>Uttar Pradesh</i>	<i>Annexure 4H</i>
	<i>Others</i>	<i>Annexure 4I</i>
<b>E</b>	<b>Biogas Power Projects</b>	<i>Annexure 5</i>
<b>F</b>	<b>RDF based MSW Power Projects</b>	<i>Annexure 6</i>

Assumption for Small Hydro based Project Parameters			Projects Less than 5 MW for HP, Uttarakhand, West Bengal, J&K, Ladakh and NE States			
S No.	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption	%	1%	
			PLF	%	45%	
			Useful Life	Years	40.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	1,200.00	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	1,200.00	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	840.00	
			Total Equity Amount	Rs Lacs	360.00	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	840.00	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	360.00	
			Return on Equity (up to 20 Years)	%	18.18%	
Return on Equity (after 20 Years)	%		23.06%			
Discount Rate (equ. To WACC)	%		9.35%			
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	0.80%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months	1.50	
		Interest on Working Capital		%	11.90%	
6	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	49.24	
		O&M Expenses Escalation		%	5.25%	
7	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components Small Hydro Based Power Project

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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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	3.91	3.91

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		49.24	51.82	54.54	57.40	60.42	63.59	66.93	70.44	74.14	78.03	82.13	86.44	90.98	95.76	100.78	106.08	111.64	117.51	123.67	130.17	137.00	144.19	151.76	159.73	168.12	176.94	186.23	196.01	206.30	217.13	228.53	240.53	253.16	266.45	280.44	295.16	310.65	326.96	344.13	362.20			
Depreciation	Rs Lakh		56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	
Interest on term loan	Rs Lakh		86.48	80.51	74.55	68.59	62.62	56.66	50.69	44.73	38.77	32.80	26.84	20.87	14.91	8.95	2.98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest on working Capital	Rs Lakh		5.27	5.29	5.32	5.35	5.39	5.44	5.50	5.56	5.63	5.71	5.79	5.89	6.00	6.11	6.24	6.37	6.52	6.67	6.84	7.01	7.19	7.38	7.54	7.97	8.31	8.68	9.06	9.46	9.88	10.33	10.80	11.29	11.81	12.36	12.93	13.54	14.17	14.85	15.55	16.29	17.08		
Return on Equity	Rs Lakh		65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>262.42</b>	<b>259.06</b>	<b>255.84</b>	<b>252.78</b>	<b>249.87</b>	<b>247.12</b>	<b>244.55</b>	<b>242.16</b>	<b>239.97</b>	<b>237.97</b>	<b>236.19</b>	<b>234.64</b>	<b>233.32</b>	<b>232.25</b>	<b>231.44</b>	<b>198.83</b>	<b>192.64</b>	<b>198.76</b>	<b>205.19</b>	<b>211.97</b>	<b>236.93</b>	<b>244.44</b>	<b>252.34</b>	<b>260.65</b>	<b>269.40</b>	<b>278.61</b>	<b>288.30</b>	<b>298.50</b>	<b>309.23</b>	<b>320.53</b>	<b>332.43</b>	<b>344.94</b>	<b>358.12</b>	<b>371.98</b>	<b>386.58</b>	<b>401.94</b>	<b>418.10</b>	<b>435.12</b>	<b>453.03</b>	<b>471.88</b>			

Levelised tariff corresponding to Useful life																																													
Per Unit Cost of 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			
O&M expn	Rs/KWh		2.32	1.26	1.33	1.40	1.47	1.55	1.63	1.71	1.80	1.90	2.00	2.10	2.21	2.33	2.45	2.58	2.72	2.86	3.01	3.17	3.33	3.51	3.69	3.89	4.09	4.30	4.53	4.77	5.02	5.28	5.56	5.85	6.16	6.48	6.82	7.18	7.56	7.95	8.37	8.81	9.27		
Depreciation	Rs/KWh		1.15	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	
Int. on term loan	Rs/KWh		1.06	2.21	2.06	1.91	1.75	1.60	1.45	1.30	1.14	0.99	0.84	0.69	0.53	0.38	0.23	0.08	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	0.00	0.00
Int. on working capital	Rs/KWh		0.16	0.13	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.15	0.16	0.16	0.15	0.15	0.16	0.17	0.17	0.19	0.20	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.28	0.29	0.30	0.32	0.33	0.35	0.36	0.38	0.40	0.42	0.44		
RoE	Rs/KWh		1.74	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88
<b>Total COG</b>	<b>Rs/KWh</b>		<b>6.42</b>	<b>6.72</b>	<b>6.63</b>	<b>6.55</b>	<b>6.47</b>	<b>6.40</b>	<b>6.33</b>	<b>6.26</b>	<b>6.20</b>	<b>6.14</b>	<b>6.09</b>	<b>6.05</b>	<b>6.01</b>	<b>5.97</b>	<b>5.95</b>	<b>5.93</b>	<b>4.78</b>	<b>4.93</b>	<b>5.09</b>	<b>5.25</b>	<b>5.43</b>	<b>6.07</b>	<b>6.26</b>	<b>6.46</b>	<b>6.67</b>	<b>6.90</b>	<b>7.13</b>	<b>7.38</b>	<b>7.64</b>	<b>7.92</b>	<b>8.21</b>	<b>8.51</b>	<b>8.83</b>	<b>9.17</b>	<b>9.52</b>	<b>9.90</b>	<b>10.29</b>	<b>10.71</b>	<b>11.14</b>	<b>11.60</b>	<b>12.08</b>		

Levelised Tariff	6.42	Rs/KWh
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Assumption for Small Hydro based Project Parameters			Projects between 5 MW and 25 MW for HP, Uttarakhand, West Bengal, J&K, Ladakh and NE States			
S No.	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption	%	1%	
			PLF	%	45%	
			Useful Life	Years	40.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	1,200.00	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	1,200.00	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	840.00	
			Total Equity Amount	Rs Lacs	360.00	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	840.00	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	360.00	
			Return on Equity (up to 20 Years)	%	18.18%	
			Return on Equity (after 20 Years)	%	23.06%	
			Discount Rate (equ. To WACC)	%	9.35%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	0.80%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months	1.50	
		Interest on Working Capital		%	11.90%	
6	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	36.93	
		O&M Expenses Escalation		%	5.25%	
7	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	



Determination of Tariff Components Small Hydro Based Power Project

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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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	3.91	3.91

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		36.93	36.87	40.91	43.06	45.32	47.70	50.20	52.84	55.61	58.53	61.60	64.84	68.24	71.82	75.59	79.56	83.74	88.14	92.76	97.63	102.76	108.15	113.83	119.81	126.10	132.72	139.68	147.02	154.74	162.85	171.41	180.41	189.88	199.85	210.34	221.39	233.01	245.24	258.12	271.67			
Depreciation	Rs Lakh		56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	
Interest on term loan	Rs Lakh		86.48	80.51	74.55	68.59	62.62	56.66	50.69	44.73	38.77	32.80	26.84	20.87	14.91	8.95	2.98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest on working Capital	Rs Lakh		4.74	4.73	4.73	4.73	4.74	4.75	4.77	4.80	4.83	4.86	4.91	4.96	5.01	5.08	5.15	4.98	4.76	4.96	5.15	5.36	5.85	6.08	6.33	6.58	6.86	7.14	7.44	7.76	8.10	8.45	8.82	9.21	9.62	10.05	10.50	10.98	11.48	12.01	12.57	13.16			
Return on Equity	Rs Lakh		65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	65.43	
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>249.58</b>	<b>245.55</b>	<b>241.62</b>	<b>237.81</b>	<b>234.11</b>	<b>230.54</b>	<b>227.10</b>	<b>223.79</b>	<b>220.63</b>	<b>217.63</b>	<b>214.78</b>	<b>212.10</b>	<b>209.60</b>	<b>207.28</b>	<b>205.16</b>	<b>199.17</b>	<b>193.53</b>	<b>188.12</b>	<b>182.94</b>	<b>178.02</b>	<b>201.21</b>	<b>206.84</b>	<b>212.76</b>	<b>219.00</b>	<b>225.56</b>	<b>232.47</b>	<b>239.74</b>	<b>247.39</b>	<b>255.44</b>	<b>263.91</b>	<b>272.83</b>	<b>282.22</b>	<b>292.10</b>	<b>302.50</b>	<b>313.45</b>	<b>324.97</b>	<b>337.10</b>	<b>349.86</b>	<b>363.29</b>	<b>377.43</b>			

Levelised tariff corresponding to Useful life																																												
Per Unit Cost of 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		
O&M expn	Rs/KWh		1.74	1.74	1.95	2.06	2.16	2.22	2.29	2.35	2.42	2.50	2.58	2.66	2.75	2.84	2.94	3.04	3.14	3.26	3.38	3.50	3.63	3.77	3.91	4.07	4.23	4.40	4.58	4.76	4.96	5.17	5.39	5.62	5.86	6.12	6.39	6.67	6.97	7.28	7.61	7.96		
Depreciation	Rs/KWh		1.15	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	
Int. on term loan	Rs/KWh		1.06	2.21	2.06	1.91	1.75	1.60	1.45	1.30	1.14	0.99	0.84	0.69	0.53	0.38	0.23	0.08	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	0.00
Int. on working capital	Rs/KWh		0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.13	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.31	0.32	0.34		
RoE	Rs/KWh		1.74	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88
<b>Total COG</b>	<b>Rs/KWh</b>		<b>5.82</b>	<b>6.39</b>	<b>6.28</b>	<b>6.18</b>	<b>6.09</b>	<b>5.99</b>	<b>5.90</b>	<b>5.81</b>	<b>5.73</b>	<b>5.65</b>	<b>5.57</b>	<b>5.50</b>	<b>5.43</b>	<b>5.37</b>	<b>5.31</b>	<b>5.25</b>	<b>4.08</b>	<b>4.19</b>	<b>4.30</b>	<b>4.43</b>	<b>4.56</b>	<b>5.15</b>	<b>5.30</b>	<b>5.45</b>	<b>5.61</b>	<b>5.78</b>	<b>5.95</b>	<b>6.14</b>	<b>6.33</b>	<b>6.54</b>	<b>6.76</b>	<b>6.99</b>	<b>7.23</b>	<b>7.48</b>	<b>7.75</b>	<b>8.03</b>	<b>8.32</b>	<b>8.63</b>	<b>8.96</b>	<b>9.30</b>	<b>9.66</b>	

Levelised Tariff      5.82      Rs/KWh

Assumption for Small Hydro based Project Parameters			Projects less than 5 MW for Odisha			
S No.	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption	%	1%	
			PLF	%	45%	
			Useful Life	Years	40.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	890.00	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	890.00	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	623.00	
			Total Equity Amount	Rs Lacs	267.00	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	623.00	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	267.00	
			Return on Equity (up to 20 Years)	%	18.18%	
			Return on Equity (after 20 Years)	%	23.06%	
			Discount Rate (equ. To WACC)	%	9.35%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	0.80%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months	1.50	
		Interest on Working Capital		%	11.90%	
6	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	39.66	
		O&M Expenses Escalation		%	5.25%	
7	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components - Small Hydro Based Power Project

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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
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	3.91

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		39.66	41.74	43.94	46.24	48.67	51.23	53.91	56.75	59.72	62.86	66.16	69.63	73.29	77.14	81.19	85.45	89.93	94.66	99.63	104.86	110.36	116.16	122.25	128.67	135.43	142.54	150.02	157.90	166.19	174.91	184.09	193.76	203.93	214.64	225.90	237.76	250.25	263.39	277.21	291.77		
Depreciation	Rs Lakh		41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	
Interest on term loan	Rs Lakh		64.14	59.71	55.29	50.87	46.44	42.02	37.60	33.17	28.75	24.33	19.90	15.48	11.06	6.63	2.21	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	0.00	0.00
Interest on working Capital	Rs Lakh		4.05	4.07	4.10	4.13	4.17	4.21	4.26	4.32	4.38	4.45	4.52	4.61	4.70	4.80	4.91	4.94	4.73	4.94	5.15	5.38	5.61	6.06	6.33	6.61	6.90	7.21	7.53	7.87	8.23	8.61	9.01	9.42	9.86	10.33	10.82	11.33	11.87	12.44	13.04	13.67		
Return on Equity	Rs Lakh		48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>197.91</b>	<b>195.59</b>	<b>193.35</b>	<b>191.30</b>	<b>189.34</b>	<b>187.52</b>	<b>185.84</b>	<b>184.30</b>	<b>182.92</b>	<b>181.70</b>	<b>180.65</b>	<b>179.78</b>	<b>179.11</b>	<b>178.63</b>	<b>178.37</b>	<b>145.64</b>	<b>150.32</b>	<b>155.24</b>	<b>160.43</b>	<b>165.98</b>	<b>171.86</b>	<b>178.00</b>	<b>184.43</b>	<b>191.16</b>	<b>198.19</b>	<b>205.52</b>	<b>213.15</b>	<b>221.07</b>	<b>229.28</b>	<b>237.79</b>	<b>246.60</b>	<b>255.71</b>	<b>265.12</b>	<b>274.83</b>	<b>284.84</b>	<b>295.15</b>	<b>305.76</b>	<b>316.67</b>	<b>327.88</b>	<b>339.39</b>	<b>351.20</b>	

Levelised 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	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40				
O&M expn	Rs/KWh	1.87	1.02	1.07	1.13	1.18	1.25	1.31	1.38	1.45	1.53	1.61	1.69	1.78	1.88	1.98	2.08	2.19	2.30	2.42	2.55	2.69	2.83	2.97	3.13	3.29	3.47	3.65	3.84	4.04	4.26	4.48	4.71	4.96	5.22	5.50	5.78	6.09	6.41	6.74	7.10	7.47			
Depreciation	Rs/KWh	0.85	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	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	0.76	1.64	1.53	1.42	1.30	1.19	1.08	0.96	0.85	0.74	0.62	0.51	0.40	0.28	0.17	0.06	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	0.12	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.13	0.12	0.12	0.13	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.28	0.29	0.30	0.32	0.33	0.35			
RoE	Rs/KWh	1.29	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58			
<b>Total CDG</b>	<b>Rs/KWh</b>	<b>4.92</b>	<b>5.07</b>	<b>5.01</b>	<b>4.95</b>	<b>4.90</b>	<b>4.85</b>	<b>4.80</b>	<b>4.76</b>	<b>4.72</b>	<b>4.68</b>	<b>4.65</b>	<b>4.63</b>	<b>4.60</b>	<b>4.59</b>	<b>4.57</b>	<b>4.57</b>	<b>3.73</b>	<b>3.85</b>	<b>3.98</b>	<b>4.11</b>	<b>4.25</b>	<b>4.37</b>	<b>4.49</b>	<b>4.66</b>	<b>4.82</b>	<b>4.99</b>	<b>5.16</b>	<b>5.32</b>	<b>5.49</b>	<b>5.69</b>	<b>5.78</b>	<b>6.00</b>	<b>6.22</b>	<b>6.46</b>	<b>6.70</b>	<b>6.96</b>	<b>7.23</b>	<b>7.52</b>	<b>7.82</b>	<b>8.14</b>	<b>8.47</b>	<b>8.82</b>	<b>9.19</b>	<b>9.58</b>

Levelised Tariff      4.92      Rs/KWh



Assumption for Small Hydro based Project Parameters			Projects between 5 MW and 25 MW for Odisha			
S No.	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption	%	1%	
			PLF	%	45%	
			Useful Life	Years	40.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	1,027.00	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	1,027.00	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	718.90	
			Total Equity Amount	Rs Lacs	308.10	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	718.90	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	308.10	
			Return on Equity (up to 20 Years)	%	18.18%	
			Return on Equity (after 20 Years)	%	23.06%	
			Discount Rate (equ. To WACC)	%	9.35%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	0.80%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months	1.50	
		Interest on Working Capital		%	11.90%	
6	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	28.72	
		O&M Expenses Escalation		%	5.25%	
7	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components Small Hydro Based Power Project

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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
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	3.91	3.91	3.91	3.91

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		28.72	30.23	31.82	33.49	35.25	37.10	39.04	41.08	43.25	45.52	47.91	50.43	53.07	55.86	58.79	61.88	65.13	68.55	72.15	75.93	79.92	84.12	88.53	93.18	98.07	103.22	108.64	114.34	120.35	126.66	133.31	140.31	147.68	155.43	163.59	172.18	181.22	190.73	200.75	211.29				
Depreciation	Rs Lakh		47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	
Interest on term loan	Rs Lakh		74.01	68.91	63.80	58.70	53.59	48.48	43.39	38.28	33.18	28.07	22.97	17.86	12.76	7.66	2.55	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	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		3.93	3.92	3.91	3.91	3.90	3.91	3.91	3.93	3.94	3.96	3.99	4.02	4.06	4.10	4.15	3.65	3.79	3.94	4.09	4.26	4.46	4.64	5.03	5.23	5.44	5.66	5.90	6.15	6.41	6.68	6.97	7.27	7.59	7.92	8.28	8.65	9.04	9.45	9.89	10.34				
Return on Equity	Rs Lakh		56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>210.59</b>	<b>206.98</b>	<b>203.45</b>	<b>200.02</b>	<b>196.67</b>	<b>193.42</b>	<b>190.27</b>	<b>187.23</b>	<b>184.30</b>	<b>181.48</b>	<b>178.80</b>	<b>176.24</b>	<b>173.82</b>	<b>171.54</b>	<b>169.42</b>	<b>126.74</b>	<b>133.13</b>	<b>136.70</b>	<b>140.45</b>	<b>144.40</b>	<b>148.53</b>	<b>152.82</b>	<b>157.36</b>	<b>162.17</b>	<b>167.24</b>	<b>172.58</b>	<b>178.19</b>	<b>184.04</b>	<b>190.14</b>	<b>196.50</b>	<b>203.14</b>	<b>210.04</b>	<b>217.19</b>	<b>224.61</b>	<b>232.31</b>	<b>240.30</b>	<b>248.58</b>	<b>257.16</b>	<b>266.04</b>	<b>275.23</b>	<b>284.73</b>	<b>294.54</b>	<b>304.66</b>	

Levelised tariff corresponding to Useful life																																														
Per Unit Cost of 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				
O&M expn	Rs/KWh		1.35	0.74	0.77	0.81	0.86	0.90	0.95	1.00	1.05	1.11	1.17	1.23	1.29	1.36	1.43	1.51	1.58	1.67	1.76	1.85	1.94	2.05	2.15	2.27	2.39	2.51	2.64	2.78	2.93	3.08	3.24	3.41	3.59	3.78	3.98	4.19	4.41	4.64	4.88	5.14	5.41			
Depreciation	Rs/KWh		0.86	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	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		0.91	1.90	1.76	1.63	1.50	1.37	1.24	1.11	0.98	0.85	0.72	0.59	0.46	0.33	0.20	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	0.00	0.00	0.00
Int. on working capital	Rs/KWh		0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.09	0.10	0.10	0.10	0.11	0.12	0.12	0.13	0.13	0.14	0.15	0.15	0.16	0.16	0.17	0.18	0.19	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26				
RoE	Rs/KWh		1.48	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43
<b>Total COG</b>	<b>Rs/KWh</b>		<b>4.84</b>	<b>5.38</b>	<b>5.30</b>	<b>5.21</b>	<b>5.12</b>	<b>5.04</b>	<b>4.96</b>	<b>4.87</b>	<b>4.79</b>	<b>4.72</b>	<b>4.65</b>	<b>4.58</b>	<b>4.51</b>	<b>4.45</b>	<b>4.39</b>	<b>4.34</b>	<b>3.32</b>	<b>3.41</b>	<b>3.50</b>	<b>3.60</b>	<b>3.70</b>	<b>3.80</b>	<b>3.91</b>	<b>4.03</b>	<b>4.16</b>	<b>4.30</b>	<b>4.45</b>	<b>4.61</b>	<b>4.78</b>	<b>4.96</b>	<b>5.14</b>	<b>5.32</b>	<b>5.51</b>	<b>5.71</b>	<b>5.92</b>	<b>6.14</b>	<b>6.37</b>	<b>6.61</b>	<b>6.86</b>	<b>7.12</b>	<b>7.40</b>	<b>7.70</b>		

Levelised Tariff **4.84** Rs/KWh

Assumption for Small Hydro based Project Parameters			Projects less than 5 MW for Punjab			
S No.	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption	%	1%	
			PLF	%	40%	
			Useful Life	Years	40.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	890.00	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	890.00	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	623.00	
			Total Equity Amount	Rs Lacs	267.00	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	623.00	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	267.00	
			Return on Equity (up to 20 Years)	%	18.18%	
Return on Equity (after 20 Years)	%		23.06%			
Discount Rate (equ. To WACC)	%		9.35%			
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	0.80%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months	1.50	
		Interest on Working Capital		%	11.90%	
6	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	39.66	
		O&M Expenses Escalation		%	5.25%	
7	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components Small Hydro Based Power Project

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	1	
Net Generation	MU		3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47

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	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40			
O&M Expenses	Rs Lakh		36.66	41.74	43.94	46.24	48.67	51.23	53.91	56.76	59.72	62.86	66.16	69.63	73.29	77.14	81.19	85.45	89.93	94.66	99.63	104.86	110.36	116.16	122.25	128.67	135.43	142.54	150.02	157.90	166.19	174.91	184.09	193.76	203.93	214.64	225.90	237.76	250.25	263.39	277.21	291.77			
Depreciation	Rs Lakh		41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12
Interest on term loan	Rs Lakh		64.14	59.71	55.29	50.87	46.44	42.02	37.60	33.17	28.75	24.33	19.90	15.48	11.06	6.63	2.21	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	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		4.05	4.07	4.10	4.13	4.17	4.21	4.26	4.32	4.38	4.45	4.52	4.61	4.70	4.80	4.91	4.94	4.73	4.94	5.15	5.38	5.61	6.06	6.33	6.61	6.90	7.21	7.53	7.87	8.23	8.61	9.01	9.42	9.86	10.33	10.82	11.33	11.87	12.44	13.04	13.67			
Return on Equity	Rs Lakh		48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>197.91</b>	<b>195.59</b>	<b>193.39</b>	<b>191.30</b>	<b>189.34</b>	<b>187.52</b>	<b>185.84</b>	<b>184.30</b>	<b>182.92</b>	<b>181.70</b>	<b>180.65</b>	<b>179.78</b>	<b>179.11</b>	<b>178.63</b>	<b>178.37</b>	<b>145.64</b>	<b>150.32</b>	<b>155.24</b>	<b>160.43</b>	<b>165.88</b>	<b>184.86</b>	<b>189.90</b>	<b>197.26</b>	<b>203.96</b>	<b>211.01</b>	<b>218.43</b>	<b>226.23</b>	<b>234.45</b>	<b>243.10</b>	<b>252.20</b>	<b>261.78</b>	<b>271.86</b>	<b>282.48</b>	<b>293.65</b>	<b>305.40</b>	<b>317.78</b>	<b>330.80</b>	<b>344.51</b>	<b>358.93</b>	<b>374.12</b>			

Levelised tariff corresponding to Useful life																																												
Per Unit Cost of 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		
O&M expn	Rs/KWh		2.10	1.14	1.20	1.27	1.33	1.40	1.48	1.55	1.63	1.72	1.81	1.91	2.01	2.11	2.22	2.34	2.46	2.59	2.73	2.87	3.02	3.18	3.35	3.52	3.71	3.90	4.11	4.32	4.55	4.79	5.04	5.30	5.58	5.87	6.18	6.51	6.85	7.21	7.59	7.99	8.41	
Depreciation	Rs/KWh		0.96	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	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		0.88	1.84	1.72	1.59	1.46	1.34	1.21	1.08	0.95	0.83	0.70	0.57	0.45	0.32	0.19	0.06	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	0.00
Int. on working capital	Rs/KWh		0.14	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.14	0.14	0.14	0.13	0.14	0.14	0.15	0.15	0.17	0.17	0.18	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.30	0.31	0.33	0.34	0.36	0.38	0.39		
RoE	Rs/KWh		1.45	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77
<b>Total COG</b>	<b>Rs/KWh</b>		<b>5.53</b>	<b>5.70</b>	<b>5.63</b>	<b>5.57</b>	<b>5.51</b>	<b>5.45</b>	<b>5.40</b>	<b>5.35</b>	<b>5.31</b>	<b>5.27</b>	<b>5.23</b>	<b>5.20</b>	<b>5.18</b>	<b>5.16</b>	<b>5.15</b>	<b>5.14</b>	<b>4.20</b>	<b>4.33</b>	<b>4.47</b>	<b>4.62</b>	<b>4.78</b>	<b>5.33</b>	<b>5.50</b>	<b>5.68</b>	<b>5.88</b>	<b>6.08</b>	<b>6.29</b>	<b>6.52</b>	<b>6.76</b>	<b>7.00</b>	<b>7.26</b>	<b>7.54</b>	<b>7.83</b>	<b>8.14</b>	<b>8.46</b>	<b>8.80</b>	<b>9.15</b>	<b>9.53</b>	<b>9.92</b>	<b>10.34</b>	<b>10.78</b>	

Levelised Tariff	5.53	Rs/KWh
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Assumption for Small Hydro based Project Parameters			Projects between 5 MW and 25 MW for Punjab			
S No.	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption	%	1%	
			PLF	%	40%	
			Useful Life	Years	40.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	1,027.00	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	1,027.00	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	718.90	
			Total Equity Amount	Rs Lacs	308.10	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	718.90	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	308.10	
			Return on Equity (up to 20 Years)	%	18.18%	
			Return on Equity (after 20 Years)	%	23.06%	
			Discount Rate (equ. To WACC)	%	9.35%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	0.80%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months	1.50	
		Interest on Working Capital		%	11.90%	
6	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	28.72	
		O&M Expenses Escalation		%	5.25%	
7	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components Small Hydro Based Power Project

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	1	
Net Generation	MU		3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47

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	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40			
O&M Expenses	Rs Lakh		28.72	30.23	31.82	33.49	35.25	37.10	39.04	41.08	43.25	45.52	47.91	50.43	53.07	55.86	58.79	61.88	65.13	68.55	72.15	75.93	79.92	84.12	88.53	93.18	98.07	103.22	108.64	114.34	120.35	126.66	133.31	140.31	147.68	155.43	163.59	172.18	181.22	190.73	200.75	211.29			
Depreciation	Rs Lakh		47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	
Interest on term loan	Rs Lakh		74.01	68.91	63.80	58.70	53.59	48.48	43.39	38.28	33.16	28.07	22.97	17.86	12.76	7.66	2.55	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	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		3.93	3.92	3.91	3.91	3.90	3.91	3.91	3.93	3.94	3.96	3.99	4.02	4.06	4.10	4.15	3.65	3.79	3.94	4.09	4.26	4.46	4.64	5.03	5.23	5.44	5.66	5.90	6.15	6.41	6.68	6.97	7.27	7.59	7.92	8.28	8.65	9.04	9.45	9.89	10.34			
Return on Equity	Rs Lakh		56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>210.59</b>	<b>206.98</b>	<b>203.45</b>	<b>200.02</b>	<b>196.67</b>	<b>193.42</b>	<b>190.27</b>	<b>187.23</b>	<b>184.30</b>	<b>181.48</b>	<b>178.80</b>	<b>176.24</b>	<b>173.82</b>	<b>171.54</b>	<b>169.42</b>	<b>129.74</b>	<b>133.13</b>	<b>136.70</b>	<b>140.45</b>	<b>144.40</b>	<b>163.83</b>	<b>168.21</b>	<b>172.82</b>	<b>177.66</b>	<b>182.77</b>	<b>188.14</b>	<b>193.79</b>	<b>199.74</b>	<b>206.01</b>	<b>212.60</b>	<b>219.54</b>	<b>226.84</b>	<b>234.52</b>	<b>242.61</b>	<b>251.13</b>	<b>260.09</b>	<b>269.52</b>	<b>279.44</b>	<b>289.89</b>	<b>300.88</b>			

Levelised tariff corresponding to Useful life

Per Unit Cost of 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	
O&M expn	Rs/KWh		1.52	0.83	0.87	0.92	0.96	1.02	1.07	1.12	1.18	1.25	1.31	1.38	1.45	1.53	1.61	1.69	1.78	1.88	1.97	2.08	2.19	2.30	2.42	2.55	2.68	2.83	2.97	3.13	3.29	3.47	3.65	3.84	4.04	4.25	4.48	4.71	4.96	5.22	5.48	5.78	6.09
Depreciation	Rs/KWh		1.11	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Int. on term loan	Rs/KWh		1.02	2.13	1.98	1.84	1.69	1.54	1.39	1.25	1.10	0.95	0.81	0.66	0.51	0.37	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		0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.10	0.11	0.11	0.12	0.12	0.13	0.14	0.14	0.15	0.16	0.16	0.17	0.18	0.18	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.30
RoE	Rs/KWh		1.68	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	1.61	1.61	1.61	1.61	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05
<b>Total COG</b>	<b>Rs/KWh</b>		<b>5.44</b>	<b>6.06</b>	<b>5.96</b>	<b>5.86</b>	<b>5.76</b>	<b>5.66</b>	<b>5.57</b>	<b>5.48</b>	<b>5.39</b>	<b>5.31</b>	<b>5.23</b>	<b>5.15</b>	<b>5.08</b>	<b>5.01</b>	<b>4.94</b>	<b>4.88</b>	<b>3.74</b>	<b>3.84</b>	<b>3.94</b>	<b>4.05</b>	<b>4.16</b>	<b>4.27</b>	<b>4.85</b>	<b>4.98</b>	<b>5.12</b>	<b>5.28</b>	<b>5.42</b>	<b>5.58</b>	<b>5.75</b>	<b>5.93</b>	<b>6.12</b>	<b>6.32</b>	<b>6.53</b>	<b>6.76</b>	<b>6.99</b>	<b>7.23</b>	<b>7.49</b>	<b>7.76</b>	<b>8.05</b>	<b>8.35</b>	<b>8.67</b>

Levelised Tariff	5.44	Rs/KWh
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Assumption for Small Hydro based Project Parameters			Projects less than 5 MW for other States			
S No.	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption	%	1%	
			PLF	%	30%	
			Useful Life	Years	40.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	890.00	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	890.00	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	623.00	
			Total Equity Amount	Rs Lacs	267.00	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	623.00	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	267.00	
			Return on Equity (up to 20 Years)	%	18.18%	
			Return on Equity (after 20 Years)	%	23.06%	
			Discount Rate (equ. To WACC)	%	9.35%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	0.80%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months	1.50	
		Interest on Working Capital		%	11.90%	
6	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	39.66	
		O&M Expenses Escalation		%	5.25%	
7	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components Small Hydro Based Power Project

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	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	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		39.66	41.74	43.94	46.24	48.67	51.23	53.91	56.75	59.72	62.86	66.16	69.63	73.29	77.14	81.19	85.45	89.93	94.66	99.63	104.86	110.36	116.16	122.25	128.67	135.43	142.54	150.02	157.90	166.19	174.91	184.09	193.76	203.93	214.64	225.90	237.76	250.25	263.39	277.21	291.77			
Depreciation	Rs Lakh		41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	41.53	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	
Interest on term loan	Rs Lakh		84.14	59.71	35.29	50.87	46.44	42.02	37.60	33.17	28.75	24.33	19.90	15.48	11.06	6.63	2.21	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	0.00	0.00	
Interest on working Capital	Rs Lakh		4.06	4.07	4.10	4.13	4.17	4.21	4.26	4.32	4.38	4.45	4.52	4.61	4.70	4.80	4.91	4.94	4.73	4.94	5.15	5.38	5.81	6.06	6.33	6.61	6.90	7.21	7.53	7.87	8.23	8.61	9.01	9.42	9.86	10.33	10.82	11.33	11.87	12.44	13.04	13.67			
Return on Equity	Rs Lakh		48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>197.91</b>	<b>195.59</b>	<b>193.39</b>	<b>191.30</b>	<b>189.34</b>	<b>187.52</b>	<b>185.84</b>	<b>184.30</b>	<b>182.92</b>	<b>181.70</b>	<b>180.65</b>	<b>179.78</b>	<b>179.11</b>	<b>178.63</b>	<b>178.37</b>	<b>145.64</b>	<b>150.32</b>	<b>155.24</b>	<b>160.43</b>	<b>165.88</b>	<b>184.86</b>	<b>190.50</b>	<b>197.26</b>	<b>203.96</b>	<b>211.01</b>	<b>218.43</b>	<b>226.23</b>	<b>234.45</b>	<b>243.10</b>	<b>252.20</b>	<b>261.78</b>	<b>271.86</b>	<b>282.48</b>	<b>293.65</b>	<b>305.40</b>	<b>317.78</b>	<b>330.80</b>	<b>344.51</b>	<b>358.93</b>	<b>374.12</b>			

Levelised tariff corresponding to Useful life																																													
Per Unit Cost of 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			
O&M expn	Rs/KWh		2.80	1.52	1.60	1.69	1.78	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.82	2.96	3.12	3.28	3.45	3.64	3.83	4.03	4.24	4.46	4.70	4.94	5.20	5.47	5.76	6.06	6.38	6.72	7.07	7.44	7.83	8.24	8.68	9.13	9.61	10.12	10.65	11.21		
Depreciation	Rs/KWh		1.28	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	
Int. on term loan	Rs/KWh		1.17	2.46	2.29	2.12	1.95	1.78	1.61	1.44	1.27	1.10	0.93	0.76	0.59	0.42	0.25	0.08	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	0.00	
Int. on working capital	Rs/KWh		0.19	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.18	0.18	0.19	0.17	0.18	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.28	0.29	0.30	0.32	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.46	0.48	0.50	0.52		
RoE	Rs/KWh		1.94	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86
<b>Total COG</b>	<b>Rs/KWh</b>		<b>7.38</b>	<b>7.60</b>	<b>7.51</b>	<b>7.42</b>	<b>7.34</b>	<b>7.27</b>	<b>7.20</b>	<b>7.14</b>	<b>7.08</b>	<b>7.02</b>	<b>6.98</b>	<b>6.94</b>	<b>6.90</b>	<b>6.88</b>	<b>6.86</b>	<b>6.85</b>	<b>5.99</b>	<b>5.77</b>	<b>5.96</b>	<b>6.16</b>	<b>6.37</b>	<b>7.10</b>	<b>7.33</b>	<b>7.58</b>	<b>7.83</b>	<b>8.10</b>	<b>8.39</b>	<b>8.69</b>	<b>9.00</b>	<b>9.34</b>	<b>9.69</b>	<b>10.05</b>	<b>10.44</b>	<b>10.85</b>	<b>11.28</b>	<b>11.73</b>	<b>12.21</b>	<b>12.71</b>	<b>13.23</b>	<b>13.79</b>	<b>14.37</b>		

Levelised Tariff	7.38	Rs/KWh
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Assumption for Small Hydro based Project Parameters			Projects between 5 MW and 25 MW for other states			
S No.	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption	%	1%	
			PLF	%	30%	
			Useful Life	Years	40.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	1,027.00	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	1,027.00	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	718.90	
			Total Equity Amount	Rs Lacs	308.10	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	718.90	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	308.10	
			Return on Equity (up to 20 Years)	%	18.18%	
			Return on Equity (after 20 Years)	%	23.06%	
			Discount Rate (equ. To WACC)	%	9.35%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	0.80%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months	1.50	
		Interest on Working Capital		%	11.90%	
6	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	28.72	
		O&M Expenses Escalation		%	5.25%	
7	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components Small Hydro Based Power Project

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	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	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		28.72	30.23	31.82	33.49	35.25	37.10	39.04	41.09	43.25	45.52	47.91	50.43	53.07	55.86	58.79	61.88	65.13	68.55	72.15	75.93	79.92	84.12	88.53	93.18	98.07	103.22	108.64	114.34	120.35	126.68	133.31	140.31	147.68	155.43	163.59	172.18	181.22	190.73	200.75	211.29				
Depreciation	Rs Lakh		47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93		
Interest on term loan	Rs Lakh		74.01	68.91	63.80	58.70	53.59	48.49	43.39	38.28	33.18	28.07	22.97	17.86	12.76	7.66	2.55	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	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		3.93	3.92	3.91	3.91	3.90	3.91	3.91	3.93	3.94	3.96	3.99	4.02	4.06	4.10	4.15	3.85	3.79	3.84	4.05	4.26	4.66	4.84	5.03	5.23	5.44	5.66	5.90	6.15	6.41	6.68	6.97	7.27	7.59	7.92	8.28	8.65	9.04	9.45	9.89	10.34				
Return on Equity	Rs Lakh		56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>210.59</b>	<b>206.98</b>	<b>203.45</b>	<b>200.02</b>	<b>196.67</b>	<b>193.42</b>	<b>190.27</b>	<b>187.23</b>	<b>184.30</b>	<b>181.48</b>	<b>178.80</b>	<b>176.24</b>	<b>173.82</b>	<b>171.54</b>	<b>169.42</b>	<b>129.74</b>	<b>133.13</b>	<b>136.70</b>	<b>140.45</b>	<b>144.40</b>	<b>148.53</b>	<b>152.82</b>	<b>157.36</b>	<b>162.15</b>	<b>167.19</b>	<b>172.48</b>	<b>178.02</b>	<b>183.81</b>	<b>189.85</b>	<b>196.14</b>	<b>202.68</b>	<b>209.47</b>	<b>216.51</b>	<b>223.80</b>	<b>231.34</b>	<b>239.13</b>	<b>247.17</b>	<b>255.46</b>	<b>264.00</b>	<b>272.79</b>	<b>281.83</b>	<b>291.12</b>	<b>300.66</b>	

Levelised 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	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40				
O&M expn	Rs/KWh	2.03	1.10	1.16	1.22	1.29	1.35	1.42	1.50	1.58	1.66	1.75	1.84	1.94	2.04	2.15	2.26	2.38	2.50	2.63	2.77	2.92	3.07	3.23	3.40	3.58	3.77	3.96	4.17	4.39	4.62	4.87	5.12	5.39	5.67	5.97	6.28	6.61	6.96	7.33	7.71	8.12			
Depreciation	Rs/KWh	1.47	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Int. on term loan	Rs/KWh	1.36	2.84	2.84	2.45	2.25	2.06	1.86	1.66	1.47	1.27	1.08	0.88	0.69	0.49	0.29	0.10	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	0.00	0.00	0.00
Int. on working capital	Rs/KWh	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.16	0.16	0.16	0.14	0.15	0.15	0.16	0.18	0.19	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30	0.32	0.33	0.35	0.36	0.38	0.40					
RoE	Rs/KWh	2.23	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73
<b>Total COG</b>	<b>Rs/KWh</b>	<b>7.26</b>	<b>8.08</b>	<b>7.95</b>	<b>7.81</b>	<b>7.68</b>	<b>7.55</b>	<b>7.43</b>	<b>7.31</b>	<b>7.19</b>	<b>7.08</b>	<b>6.97</b>	<b>6.87</b>	<b>6.77</b>	<b>6.68</b>	<b>6.59</b>	<b>6.51</b>	<b>4.98</b>	<b>5.11</b>	<b>5.25</b>	<b>5.39</b>	<b>5.55</b>	<b>6.29</b>	<b>6.46</b>	<b>6.64</b>	<b>6.82</b>	<b>7.02</b>	<b>7.23</b>	<b>7.44</b>	<b>7.67</b>	<b>7.91</b>	<b>8.17</b>	<b>8.43</b>	<b>8.71</b>	<b>9.01</b>	<b>9.32</b>	<b>9.65</b>	<b>9.99</b>	<b>10.35</b>	<b>10.73</b>	<b>11.13</b>	<b>11.56</b>			

Levelised Tariff	7.26	Rs/KWh
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Assumption for Biomass Based Rankine Cycle Project Parameters				State	Andhra Pradesh	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	638	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	638	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	447	
			Total Equity Amount	Rs Lacs	191	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	447	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	191	
			Return on Equity (up to 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b><u>For Variable Charges</u></b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b><u>Heat Rate</u></b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		3,983
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
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		378.43	391.47	404.96	418.91	433.34	448.27	463.72	479.70	496.23	513.33	531.01	549.31	568.24	587.82	608.07	629.02	650.70	673.12	696.31	720.31	745.13	770.80	797.36	824.83	853.25

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		54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78
Depreciation	Rs Lakh		29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78
Interest on term loan	Rs Lakh		45.59	42.82	39.64	36.47	33.30	30.13	26.96	23.79	20.61	17.44	14.27	11.10	7.93	4.76	1.59	-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		24.95	25.75	26.58	27.44	28.34	29.27	30.24	31.25	32.29	33.38	34.50	35.68	36.90	38.16	39.48	40.87	42.33	43.86	45.48	47.18	48.96	50.82	52.76	54.76	56.84
Return on Equity	Rs Lakh		32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48
Total Fixed Cost	Rs Lakh		187.90	188.39	189.08	189.95	191.02	192.30	193.81	195.55	197.53	199.77	202.28	205.07	208.16	211.56	215.29	203.70	211.35	219.39	227.82	236.67	254.82	264.58	274.83	285.58	296.88

Per Unit Cost of 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	
Per unit Variable Cost	Rs/kWh		8.01	6.00	6.20	6.42	6.64	6.87	7.10	7.35	7.60	7.86	8.13	8.41	8.70	9.00	9.31	9.63	9.97	10.31	10.66	11.03	11.41	11.81	12.21	12.63	13.07	13.52
O&M expn	Rs/kWh		1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96
Depreciation	Rs/kWh		0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	
Int. on term loan	Rs/kWh		0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital	Rs/kWh		0.52	0.39	0.41	0.42	0.43	0.45	0.46	0.48	0.49	0.51	0.53	0.55	0.56	0.58	0.60	0.62	0.64	0.67	0.69	0.71	0.74	0.77	0.80	0.83	0.86	0.89
RoE	Rs/kWh		0.52	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	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	
Total COG	Rs/kWh		11.23	8.97	9.19	9.41	9.65	9.89	10.15	10.42	10.70	10.99	11.30	11.62	11.95	12.30	12.66	13.04	13.19	13.66	14.14	14.64	15.16	15.84	16.40	16.99	17.59	18.22

Variable Cost	6.00	Rs/kWh
Levelised Tariff (Fixed)	3.22	Rs/kWh
<b>Levelised Tariff</b>	<b>9.21</b>	<b>Rs/kWh</b>

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	638

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	16.85	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	18.38	-	-	-	-	-	-	-

Accelerated Depreciation	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
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	191.44	223.35	89.34	53.60	32.16	19.30	11.58	6.95	4.17	2.50	1.50	0.90	0.54	0.32	0.19	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	174.59	189.65	55.64	19.91	-1.53	-14.40	-22.12	-26.75	-29.53	-31.19	-32.19	-32.79	-33.15	-33.37	-33.50	-33.58	-33.62	-18.34	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	61.01	66.27	19.44	6.96	-0.54	-5.03	-7.73	-9.35	-10.32	-10.90	-11.25	-11.46	-11.58	-11.66	-11.71	-11.73	-11.75	-6.41	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	1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levelised	8.40	Rs. Lakh
Electricity Generation (Levelised)	6.03	MU
<b>Levelised benefit</b>	<b>0.14</b>	<b>Rs/kWh</b>

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Haryana	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	638	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	638	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	447	
			Total Equity Amount	Rs Lacs	191	
		Debt Component	Loan Amount	Rs Lacs	447	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	191	
			Return on Equity (up to 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		4,534
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
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-->																									
Biomass Cost		Rs. Lakh	430.77	445.61	460.96	476.85	493.28	510.27	527.85	546.04	564.86	584.32	604.45	625.28	646.83	669.12	692.17	716.02	740.69	766.21	792.62	819.93	848.18	877.40	907.64	938.91	971.26	
Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.51	152.21	160.20	168.61	177.46	186.78	
Depreciation		Rs Lakh	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	
Interest on term loan		Rs Lakh	45.59	42.82	39.54	36.47	33.30	30.13	26.96	23.79	20.61	17.44	14.27	11.10	7.93	4.78	1.59	-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	27.85	28.75	29.68	30.65	31.66	32.70	33.79	34.92	36.09	37.31	38.57	39.88	41.25	42.66	44.13	45.43	47.06	48.76	50.51	52.34	54.36	56.33	58.36	60.48	62.67	
Return on Equity		Rs Lakh	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	
Total Fixed Cost		Rs Lakh	190.79	191.39	192.18	193.16	194.34	195.74	197.36	199.22	201.33	203.70	206.34	209.27	212.51	216.06	219.94	208.51	216.33	224.54	233.15	242.19	260.53	270.48	280.93	291.90	303.41	
Levilled tariff corresponding to Useful life																												
Per Unit Cost of Generation		Unit	Year-->																									
Per unit Variable Cost		Rs/kWh	9.12	6.83	7.06	7.30	7.56	7.82	8.08	8.36	8.65	8.95	9.26	9.58	9.91	10.25	10.60	10.97	11.34	11.74	12.14	12.56	12.99	13.44	13.90	14.38	14.88	15.39
O&M expan		Rs/kWh	1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96
Depreciation		Rs/kWh	0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	
Int. on term loan		Rs/kWh	0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital		Rs/kWh	0.58	0.44	0.45	0.47	0.48	0.50	0.52	0.53	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.70	0.74	0.77	0.80	0.83	0.86	0.89	0.92	0.96	0.99	
Return on Equity		Rs/kWh	0.52	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	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	
Total COG		Rs/kWh	12.40	9.85	10.09	10.35	10.61	10.89	11.18	11.49	11.81	12.14	12.48	12.85	13.22	13.61	14.02	14.45	14.85	15.16	15.70	16.25	16.83	17.57	18.19	18.83	19.50	20.19
Variable Cost		6.83	Rs/kWh																									
Levilled Tariff (Fixed)		3.28	Rs/kWh																									
Levilled Tariff		10.10	Rs/kWh																									
Determination of AD for Biomass based Power Project																												
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 (Rs./Lakh)		638																										
Years		>	Unit																									
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	16.85	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	18.38	-	-	-	-	-	-	-	
Accelerated Depreciation																												
Opening		%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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%		
Closing		%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.03%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%		
Accelerated Depreciation		Rs Lakh	191.44	223.35	89.34	53.60	32.16	19.30	11.58	6.95	4.17	2.50	1.50	0.90	0.54	0.32	0.19	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00		
Net Depreciation Benefit		Rs Lakh	174.59	189.65	55.64	19.91	-1.53	-14.40	-22.12	-26.75	-29.53	-31.19	-32.19	-32.79	-33.15	-33.37	-33.50	-33.58	-33.62	-18.34	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Tax Benefit		Rs Lakh	61.01	66.27	19.44	6.96	-0.54	-5.03	-7.73	-9.35	-10.32	-10.90	-11.25	-11.46	-11.58	-11.66	-11.71	-11.73	-11.75	-6.41	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	1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.19	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Discounting Factor			1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	
Tax Benefit Levilled		8.40	Rs. Lakh																									
Electricity Generation (Levilled)		6.03	MU																									
Levilled benefit		0.14	Rs/kWh																									

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Maharashtra	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	638	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	638	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	447	
			Total Equity Amount	Rs Lacs	191	
		Debt Component	Loan Amount	Rs Lacs	447	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	191	
			Return on Equity (up to 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		4,637
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		0%
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%		5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
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	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		440.55	455.73	471.43	487.68	504.48	521.86	539.84	558.45	577.69	597.59	618.18	639.49	661.52	684.31	707.89	732.28	757.52	783.62	810.62	838.55	867.44	897.33	928.25	960.24	993.32	
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		54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.26	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78	
Depreciation	Rs Lakh		29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	
Interest on term loan	Rs Lakh		45.59	42.82	39.64	36.47	33.30	30.13	26.96	23.79	20.61	17.44	14.27	11.10	7.93	4.76	1.59	-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		28.39	29.31	30.26	31.25	32.28	33.35	34.45	35.61	36.80	38.04	39.33	40.67	42.06	43.50	45.00	46.33	47.99	49.72	51.51	53.37	55.43	57.43	59.51	61.66	63.90	
Return on Equity	Rs Lakh		32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	
Total Fixed Cost	Rs Lakh		191.34	191.95	192.76	193.75	194.96	196.38	198.02	199.91	202.04	204.43	207.10	210.06	213.32	216.90	220.81	209.41	217.27	225.50	234.15	243.22	261.60	271.59	282.07	293.08	304.63	
Per Unit Cost of 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
Per unit Variable Cost	Rs/kWh		9.33	6.98	7.22	7.47	7.73	7.99	8.27	8.55	8.85	9.15	9.47	9.79	10.13	10.48	10.84	11.22	11.60	12.00	12.42	12.84	13.29	13.74	14.22	14.71	15.21	
O&M expan	Rs/kWh		1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	
Depreciation	Rs/kWh		0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	
Int. on term loan	Rs/kWh		0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital	Rs/kWh		0.59	0.45	0.46	0.48	0.49	0.51	0.53	0.55	0.56	0.58	0.60	0.62	0.64	0.67	0.69	0.71	0.73	0.76	0.79	0.81	0.84	0.88	0.91	0.94	0.98	
RoE	Rs/kWh		0.52	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	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	
Total COG	Rs/kWh		12.62	10.01	10.26	10.52	10.80	11.08	11.38	11.69	12.01	12.35	12.71	13.07	13.46	13.86	14.28	14.71	14.92	15.44	15.99	16.55	17.14	17.89	18.52	19.18	19.86	
Variable Cost		6.98	Rs/kWh																									
Levelised Tariff (Fixed)		3.29	Rs/kWh																									
Levelised Tariff		10.27	Rs/kWh																									
Determination of AD for Biomass based Power Project																												
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 (Rs./Lakh)		638																										
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		16.85	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	18.38	-	-	-	-	-	-	-	
Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25		
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
Accelerated Depreciation	Rs Lakh		191.44	223.35	89.34	53.60	32.16	19.30	11.58	6.95	4.17	2.50	1.50	0.90	0.54	0.32	0.19	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00		
Net Depreciation Benefit	Rs Lakh		174.59	189.65	55.64	19.91	-1.53	-14.40	-22.12	-26.75	-29.53	-31.19	-32.19	-32.79	-33.15	-33.37	-33.50	-33.58	-33.62	-18.34	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Tax Benefit	Rs Lakh		61.01	66.27	19.44	6.96	-0.54	-5.03	-7.73	-9.35	-10.32	-10.90	-11.25	-11.46	-11.58	-11.66	-11.71	-11.73	-11.75	-6.41	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		
Per unit benefit	Rs/Unit		1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.19	-0.10	0.00	0.00	0.00	0.00	0.00	0.00		
Discounting Factor			1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	
Tax Benefit Levelised		8.40	Rs Lakh																									
Electricity Generation (Levelised)		6.03	MU																									
Levelised benefit		0.14	Rs/kWh																									



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Punjab	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	638	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	638	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	447	
			Total Equity Amount	Rs Lacs	191	
		Debt Component	Loan Amount	Rs Lacs	447	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	191	
			Return on Equity (up to 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		4,742
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																																			
Units Generation		Unit	Year-->																																		
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		
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	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31		
Variable Cost		Unit	Year-->																																		
Biomass Cost		Rs. Lakh	450.56	466.09	482.15	498.76	515.95	533.72	552.11	571.14	590.82	611.18	632.23	654.02	676.55	699.87	723.98	748.93	774.73	801.43	829.04	857.61	887.16	917.73	949.35	982.06	1,015.90										
Fixed Cost		Unit	Year-->																																		
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.26	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.51	152.21	160.20	168.61	177.46	186.78										
Depreciation		Rs Lakh	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78		
Interest on term loan		Rs Lakh	45.99	42.82	39.64	36.47	33.30	30.13	26.96	23.79	20.61	17.44	14.27	11.10	7.93	4.76	1.59	-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		
Interest on working Capital		Rs Lakh	28.95	29.88	30.86	31.87	32.91	34.00	35.13	36.31	37.53	38.79	40.11	41.47	42.89	44.37	45.89	47.45	48.95	50.71	52.53	54.42	56.52	58.58	60.67	62.87	65.15										
Return on Equity		Rs Lakh	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48		
Total Fixed Cost		Rs Lakh	191.89	192.53	193.35	194.37	195.59	197.04	198.70	200.61	202.77	205.19	207.88	210.87	214.15	217.76	221.70	210.33	218.22	226.49	235.17	244.28	262.69	272.72	283.24	294.29	305.88										
Per Unit Cost of Generation		Unit	Year-->																																		
Per unit Variable Cost		Rs/kWh	9.54	7.14	7.38	7.64	7.90	8.17	8.46	8.75	9.05	9.36	9.68	10.02	10.36	10.72	11.09	11.47	11.87	12.27	12.70	13.14	13.59	14.06	14.54	15.04	15.56	16.10									
O&M expn		Rs/kWh	1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96									
Depreciation		Rs/kWh	0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47		
Int. on term loan		Rs/kWh	0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	0.08	0.03	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	0.61	0.46	0.47	0.49	0.50	0.52	0.54	0.56	0.57	0.59	0.61	0.63	0.66	0.68	0.70	0.73	0.75	0.77	0.80	0.83	0.86	0.89	0.93	0.96	0.99	1.03									
RoE		Rs/kWh	0.52	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	0.51	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	0.51	0.51		
Total COG		Rs/kWh	12.84	10.18	10.43	10.70	10.98	11.27	11.58	11.89	12.23	12.57	12.93	13.31	13.70	14.11	14.54	14.98	15.20	15.73	16.29	16.86	17.46	18.22	18.86	19.53	20.22	20.94									
Variable Cost		Rs/kWh	7.14																																		
Levelling Tariff (Fixed)		Rs/kWh	3.30																																		
Levelling Tariff		Rs/kWh	10.44																																		
Determination of AD for Biomass based Power Project																																					
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 (Rs./Lakh)			638																																		
Years		Unit	Year-->																																		
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%	5.28%	5.28%	5.28%	5.28%	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	16.85	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69		
Accelerated Depreciation		Unit	Year-->																																		
Opening		%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	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%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
Closing		%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	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%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
Accelerated Depreciation		Rs Lakh	191.44	223.35	89.34	53.60	32.16	19.30	11.58	6.95	4.17	2.50	1.50	0.90	0.54	0.32	0.19	0.12	0.07	0.04	0.03	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Net Depreciation Benefit		Rs Lakh	174.59	189.65	55.64	19.91	-1.53	-14.40	-22.12	-26.75	-29.53	-31.19	-32.19	-32.79	-33.15	-33.37	-33.50	-33.58	-33.62	-18.34	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Tax Benefit		Rs Lakh	61.01	66.27	19.44	6.96	-0.54	-5.03	-7.73	-9.35	-10.32	-10.90	-11.25	-11.46	-11.58	-11.66	-11.71	-11.73	-11.75	-6.41	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	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	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31		
Per unit benefit		Rs/Unit	1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.10	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		
Discounting Factor			1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13		
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13		
Tax Benefit Levellised		8.40	Rs Lakh																																		
Electricity Generation (Levellised)		6.03	MU																																		
Levellised benefit		0.14	Rs/kWh																																		

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Rajasthan	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	638	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	638	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	447	
			Total Equity Amount	Rs Lacs	191	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	447	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	191	
			Return on Equity (up to 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b><u>For Variable Charges</u></b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b><u>Heat Rate</u></b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		3,958
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																															
Units Generation		Unit	Year-->																														
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
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	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost		Unit	Year-->																														
Biomass Cost		Rs. Lakh	376.04	388.99	402.40	416.26	430.61	445.44	460.79	476.67	493.09	510.08	527.66	545.84	564.65	584.11	604.23	625.05	646.59	668.87	691.92	715.76	740.42	765.93	792.32	819.62	847.87						
Fixed Cost		Unit	Year-->																														
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78						
Depreciation		Rs Lakh	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78
Interest on term loan		Rs Lakh	45.59	42.82	39.64	36.47	33.30	30.13	26.96	23.79	20.61	17.44	14.27	11.10	7.93	4.76	1.59	-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
Interest on working Capital		Rs Lakh	24.82	25.62	26.44	27.30	28.19	29.12	30.08	31.08	32.12	33.20	34.32	35.49	36.70	37.96	39.26	40.39	41.85	43.37	44.94	46.57	48.40	50.15	51.98	53.87	55.84						
Return on Equity		Rs Lakh	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48
Total Fixed Cost		Rs Lakh	187.76	188.26	188.93	189.80	190.87	192.15	193.65	195.38	197.36	199.59	202.09	204.88	207.96	211.35	215.07	203.48	211.12	219.15	227.58	236.42	254.56	264.31	274.55	285.29	296.58						
Per Unit Cost of Generation		Unit	Levillised tariff corresponding to Useful life																														
Per unit Variable Cost		Rs/kWh	7.96	5.96	6.16	6.38	6.60	6.82	7.06	7.30	7.55	7.81	8.08	8.36	8.65	8.95	9.25	9.57	9.90	10.24	10.60	10.96	11.34	11.73	12.14	12.55	12.99	13.43					
O&M expn		Rs/kWh	1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96					
Depreciation		Rs/kWh	0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	
Int. on term loan		Rs/kWh	0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	0.08	0.03	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	0.52	0.39	0.41	0.42	0.43	0.46	0.48	0.49	0.51	0.53	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.69	0.71	0.74	0.77	0.79	0.82	0.85	0.88						
Return on Equity		Rs/kWh	0.52	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	0.51	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	
Total COG		Rs/kWh	11.17	8.93	9.14	9.37	9.60	9.85	10.10	10.37	10.65	10.94	11.24	11.56	11.89	12.24	12.60	12.98	13.13	13.59	14.07	14.57	15.09	15.76	16.32	16.90	17.51	18.13					
Variable Cost		5.96	Rs/kWh																														
Levillised Tariff (Fixed)		3.21	Rs/kWh																														
Levillised Tariff		9.17	Rs/kWh																														
Determination of AD for Biomass based Power Project																																	
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 (Rs./Lakh)		638																															
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%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%						
Book Depreciation	Rs Lakh	16.85	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	18.38	-	-	-	-	-	-	-						
Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25							
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%							
Accelerated Depreciation	Rs Lakh	191.44	223.35	89.34	53.60	32.16	19.30	11.58	6.95	4.17	2.50	1.50	0.90	0.54	0.32	0.19	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	174.59	189.65	55.64	19.91	-1.53	-14.40	-22.12	-26.75	-29.53	-31.19	-32.19	-32.79	-33.15	-33.37	-33.50	-33.58	-33.62	-18.34	0.03	0.02	0.01	0.01	0.00	0.00	0.00							
Tax Benefit	Rs Lakh	61.01	66.27	19.44	6.96	-0.54	-5.03	-7.73	-9.35	-10.32	-10.90	-11.25	-11.46	-11.58	-11.66	-11.71	-11.73	-11.75	-6.41	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	1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.19	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13							
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13							
Tax Benefit Levillised	8.40	Rs Lakh																															
Electricity Generation (Levillised)	6.03	MU																															
Levillised benefit	0.14	Rs/kWh																															

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Tamil Nadu	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	638	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	638	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	447	
			Total Equity Amount	Rs Lacs	191	
		Debt Component	Loan Amount	Rs Lacs	447	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	191	
			Return on Equity (up to 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		3,918
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components Biomass (Rankine Cycle) Based Power Project
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

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

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

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

Variable Cost 5.90 Rsk/Wh
Levelised Tariff (Fixed) 3.21 Rsk/Wh
Levelised Tariff 9.11 Rsk/Wh

Determination of AD for Biomass based Power Project
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 (Rs./Lakh) 638

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 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

Net Depreciation Benefit Rs Lakh 174.59 189.65 55.64 19.91 -1.53 -14.40 -22.12 -26.75 -29.53 -31.19 -32.19 -32.79 -33.15 -33.37 -33.50 -33.58 -33.62 -18.34 0.03 0.02 0.01 0.00 0.00 0.00

Tax Benefit Levellised 8.40 Rs. Lakh
Electricity Generation (Levellised) 6.03 MU
Levellised benefit 0.14 Rs/kWh

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Telangana	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	638	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	638	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	447	
			Total Equity Amount	Rs Lacs	191	
		Debt Component	Loan Amount	Rs Lacs	447	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	191	
			Return on Equity (up to 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		3,983
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	





Assumption for Biomass Based Rankine Cycle Project Parameters				State	Uttar Pradesh	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	638	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	638	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	447	
			Total Equity Amount	Rs Lacs	191	
		Debt Component	Loan Amount	Rs Lacs	447	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	191	
			Return on Equity (up to 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>			-	
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				-
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		4,053
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Others
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	10.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	638
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	638
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	447
			Total Equity Amount	Rs Lacs	191
		Debt Component	Loan Amount	Rs Lacs	447
			Moratorium Period	Years	-
			Repayment Period (incl. Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	191
			Return on Equity (up to 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00
			During Stabilization Period	Kcal/kWh	4,200.00
		Base Price	Base Price	Rs/MT	4,260
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Andhra Pradesh	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	685	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	685	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	479	
			Total Equity Amount	Rs Lacs	205	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	479	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	205	
			Return on Equity (up to 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b><u>For Variable Charges</u></b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b><u>Heat Rate</u></b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		3,983
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Haryana	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	685	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	685	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	479	
			Total Equity Amount	Rs Lacs	205	
		Debt Component	Loan Amount	Rs Lacs	479	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	205	
			Return on Equity (up to 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		4,534
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
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		
Variable Cost		Unit	Year-->																									
Biomass Cost		Rs. Lakh	430.77	445.61	460.96	476.85	493.28	510.27	527.85	546.04	564.86	584.32	604.45	625.28	646.83	669.12	692.17	716.02	740.69	766.21	792.62	819.93	848.18	877.40	907.64	938.91	971.26	
Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78	
Depreciation		Rs Lakh	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	
Interest on term loan		Rs Lakh	49.36	45.96	42.55	39.15	35.74	32.34	28.93	25.53	22.13	18.72	15.32	11.91	8.51	5.11	1.70	-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	27.97	28.87	29.80	30.76	31.76	32.81	33.89	35.01	36.18	37.40	38.66	39.96	41.32	42.74	44.20	45.48	47.11	48.61	50.56	52.39	54.42	56.39	58.42	60.54	62.73	
Return on Equity		Rs Lakh	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	
Total Fixed Cost		Rs Lakh	198.85	199.21	199.76	200.51	201.45	202.62	204.00	205.63	207.50	209.63	212.04	214.74	217.73	221.05	224.70	211.88	219.70	227.91	236.52	245.56	264.55	274.50	284.95	295.92	307.43	
Per Unit Cost of Generation		Unit	Levillised tariff corresponding to Useful life																									
Per unit Variable Cost		Rs/kWh	9.33	6.98	7.22	7.47	7.73	7.99	8.27	8.55	8.85	9.15	9.47	9.79	10.13	10.48	10.84	11.22	11.60	12.00	12.42	12.84	13.29	13.74	14.22	14.71	15.21	15.74
O&M expn		Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation		Rs/kWh	0.47	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan		Rs/kWh	0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	
Int. on working capital		Rs/kWh	0.60	0.45	0.47	0.48	0.50	0.51	0.53	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.69	0.72	0.74	0.76	0.79	0.82	0.85	0.88	0.91	0.95	0.98	1.02
Total COG		Rs/kWh	12.78	10.20	10.45	10.70	10.97	11.26	11.55	11.86	12.18	12.51	12.86	13.23	13.61	14.01	14.42	14.86	15.03	15.56	16.11	16.68	17.26	18.03	18.66	19.32	20.01	20.72
Variable Cost		6.98	Rs/kWh																									
Levillised Tariff (Fixed)		3.45	Rs/kWh																									
Levillised Tariff		10.43	Rs/kWh																									
Determination of AD for Biomass based Power Project																												
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 (Rs./Lakh)		685																										
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	18.08	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	19.73	-	-	-	-	-	-	-	
Accelerated Depreciation																												
Opening		%	100%	70%	35%	21%	13%	6%	5%	3%	2%	1%	0%	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%	0.99%	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		%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Accelerated Depreciation		Rs Lakh	205.48	239.73	95.89	57.53	34.52	20.71	12.43	7.46	4.47	2.68	1.61	0.97	0.58	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Net Depreciation Benefit		Rs Lakh	187.40	203.56	59.73	21.37	-1.64	-15.45	-23.74	-28.71	-31.69	-33.48	-34.55	-35.20	-35.58	-35.82	-35.96	-36.04	-36.09	-19.68	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Tax Benefit		Rs Lakh	65.48	71.13	20.87	7.47	-0.57	-5.40	-8.29	-10.03	-11.07	-11.70	-12.07	-12.30	-12.43	-12.52	-12.56	-12.59	-12.61	-6.88	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	2.12	1.15	0.34	0.12	-0.01	-0.09	-0.13	-0.16	-0.18	-0.19	-0.20	-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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	
Tax Benefit Levillised		9.02	Rs Lakh																									
Electricity Generation (Levillised)		5.89	MU																									
Levillised benefit		0.15	Rs/kWh																									



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Maharashtra
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	12.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	685
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	685
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	479
			Total Equity Amount	Rs Lacs	205
		Debt Component	Loan Amount	Rs Lacs	479
			Moratorium Period	Years	-
			Repayment Period (incl. Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	205
			Return on Equity (up to 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00
			During Stabilization Period	Kcal/kWh	4,200.00
		Base Price	Base Price	Rs/MT	4,637
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components	Biomass (Rankine Cycle) Based Power Project																									
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	440.55	455.73	471.43	487.68	504.48	521.86	539.84	558.45	577.69	597.59	618.18	639.49	661.52	684.31	707.89	732.28	757.52	783.62	810.62	838.55	867.44	897.33	928.25	960.24	993.32

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	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78
Depreciation	Rs Lakh	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96
Interest on term loan	Rs Lakh	49.36	45.96	42.55	39.15	35.74	32.34	28.93	25.53	22.13	18.72	15.32	11.91	8.51	5.11	1.70	-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	28.51	29.43	30.38	31.36	32.38	33.45	34.55	35.70	36.89	38.13	39.42	40.75	42.14	43.58	45.07	46.38	48.04	49.77	51.56	53.42	55.49	57.49	59.57	61.72	63.95
Return on Equity	Rs Lakh	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86
Total Fixed Cost	Rs Lakh	199.39	199.78	200.34	201.11	202.07	203.26	204.67	206.31	208.21	210.37	212.80	215.52	218.55	221.89	225.57	212.78	220.63	228.87	237.52	246.59	265.61	275.60	286.09	297.10	308.65

Per Unit Cost of 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	
Per unit Variable Cost	Rs/kWh	9.54	7.14	7.38	7.64	7.90	8.17	8.46	8.75	9.05	9.36	9.68	10.02	10.36	10.72	11.09	11.47	11.87	12.27	12.70	13.14	13.59	14.06	14.54	15.04	15.56	16.10
O&M expn	Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation	Rs/kWh	0.47	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan	Rs/kWh	0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	
Int. on working capital	Rs/kWh	0.61	0.46	0.48	0.49	0.51	0.52	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.68	0.71	0.73	0.75	0.78	0.81	0.83	0.86	0.90	0.93	0.96	1.00	1.03
ReE	Rs/kWh	0.58	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	0.56	0.56	0.56	0.56	
Total COG	Rs/kWh	13.00	10.37	10.62	10.88	11.16	11.45	11.75	12.06	12.39	12.73	13.09	13.46	13.85	14.26	14.68	15.12	15.31	15.85	16.41	16.98	17.58	18.36	19.01	19.68	20.37	21.10

Variable Cost	7.14	Rs/kWh
Levelised Tariff (Fixed)	3.46	Rs/kWh
<b>Levelised Tariff</b>	<b>10.60</b>	<b>Rs/kWh</b>

  

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	685

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	18.08	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	19.73	-	-	-	-	-	-	-

Accelerated Depreciation	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
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.03%	0.03%	0.03%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	205.48	239.73	95.89	57.53	34.52	20.71	12.43	7.46	4.47	2.68	1.61	0.97	0.58	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00

  

Net Depreciation Benefit	Rs Lakh	187.40	203.56	59.73	21.37	-1.64	-15.45	-23.74	-28.71	-31.69	-33.48	-34.55	-35.20	-35.58	-35.82	-35.96	-36.04	-36.09	-19.68	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	65.48	71.13	20.87	7.47	-0.57	-5.40	-8.29	-10.03	-11.07	-11.70	-12.07	-12.30	-12.43	-12.52	-12.56	-12.59	-12.61	-6.88	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	2.12	1.15	0.34	0.12	-0.01	-0.09	-0.13	-0.16	-0.18	-0.19	-0.20	-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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levelised	9.02	Rs Lakh
Electricity Generation (Levelised)	5.89	MU
<b>Levelised benefit</b>	<b>0.15</b>	<b>Rs/kWh</b>

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Punjab
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	12.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	685
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	685
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	479
			Total Equity Amount	Rs Lacs	205
		Debt Component	Loan Amount	Rs Lacs	479
			Moratorium Period	Years	-
			Repayment Period (incl. Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	205
			Return on Equity (up to 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00
			During Stabilization Period	Kcal/kWh	4,200.00
		Base Price	Base Price	Rs/MT	4,742
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
Units Generation		Unit	Year-->																								
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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	

Variable Cost		Unit	Year-->																								
Biomass Cost		Rs. Lakh	450.56	466.09	482.15	498.76	515.95	533.72	552.11	571.14	590.82	611.18	632.23	654.02	676.55	699.87	723.98	748.93	774.73	801.43	829.04	857.61	887.16	917.73	949.35	982.06	1,015.90

Fixed Cost		Unit	Year-->																								
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.26	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78
Depreciation		Rs Lakh	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96
Interest on term loan		Rs Lakh	49.36	45.96	42.55	39.15	35.74	32.34	28.93	25.53	22.13	18.72	15.32	11.91	8.51	5.11	1.70	-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	29.07	30.00	30.97	31.97	33.02	34.11	35.23	36.40	37.62	38.88	40.19	41.56	42.97	44.44	45.96	47.53	49.00	50.76	52.58	54.47	56.58	58.62	60.73	62.93	65.20
Return on Equity		Rs Lakh	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86
Total Fixed Cost		Rs Lakh	199.95	200.35	200.94	201.72	202.71	203.91	205.35	207.02	208.94	211.12	213.58	216.33	219.38	222.75	226.46	231.70	221.59	229.86	238.54	247.64	266.70	276.73	287.26	298.31	309.90

Per Unit Cost of Generation		Unit	Levilled tariff corresponding to Useful life																									
Per unit Variable Cost		Rs/kWh	9.76	7.30	7.55	7.81	8.08	8.36	8.65	8.95	9.25	9.57	9.90	10.24	10.60	10.96	11.34	11.73	12.14	12.55	12.99	13.43	13.90	14.38	14.87	15.38	15.91	16.46
O&M expn		Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation		Rs/kWh	0.47	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan		Rs/kWh	0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	
Int. on working capital		Rs/kWh	0.62	0.47	0.49	0.50	0.52	0.53	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.70	0.72	0.74	0.77	0.79	0.82	0.85	0.88	0.92	0.95	0.98	1.02	1.06
RetE		Rs/kWh	0.58	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	0.56	0.56	0.56	0.56	
Total COG		Rs/kWh	13.23	10.54	10.80	11.07	11.35	11.64	11.95	12.27	12.61	12.96	13.32	13.70	14.10	14.52	14.95	15.40	15.60	16.14	16.71	17.30	17.91	18.70	19.35	20.04	20.75	21.48

Variable Cost	7.30	Rs/kWh
Levelised Tariff (Fixed)	3.48	Rs/kWh
<b>Levelised Tariff</b>	<b>10.78</b>	<b>Rs/kWh</b>

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	685

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	18.08	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	19.73	-	-	-	-	-	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	205.48	239.73	95.89	57.53	34.52	20.71	12.43	7.46	4.47	2.68	1.61	0.97	0.58	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit		Rs Lakh	187.40	203.56	59.73	21.37	-1.64	-15.45	-23.74	-28.71	-31.69	-33.48	-34.55	-35.20	-35.58	-35.82	-35.96	-36.04	-36.09	-19.68	0.03 <th>0.02<th>0.01<th>0.01<th>0.00<th>0.00<th>0.00 </th></th></th></th></th></th>	0.02 <th>0.01<th>0.01<th>0.00<th>0.00<th>0.00 </th></th></th></th></th>	0.01 <th>0.01<th>0.00<th>0.00<th>0.00 </th></th></th></th>	0.01 <th>0.00<th>0.00<th>0.00 </th></th></th>	0.00 <th>0.00<th>0.00 </th></th>	0.00 <th>0.00 </th>	0.00
Tax Benefit	Rs Lakh	65.48	-71.13	20.87	7.47	-0.57	-5.40	-8.29	-10.03	-11.07	-11.70	-12.07	-12.30	-12.43	-12.52	-12.57	-12.56	-12.59	-12.61	-6.88	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	6.17
Per unit benefit	Rs/Unit	2.12	1.15	0.34	0.12	-0.01	-0.09	-0.13	-0.16	-0.18	-0.19	-0.20	-0.20	-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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	0.13

Tax Benefit Levilled	9.02	Rs Lakh
Electricity Generation (Levilled)	5.89	MU
<b>Levilled benefit</b>	<b>0.15</b>	<b>Rs/kWh</b>

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Rajasthan
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	12.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	685
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	685
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	479
			Total Equity Amount	Rs Lacs	205
		Debt Component	Loan Amount	Rs Lacs	479
			Moratorium Period	Years	-
			Repayment Period (incl. Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	205
			Return on Equity (up to 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00
			During Stabilization Period	Kcal/kWh	4,200.00
		Base Price	Base Price	Rs/MT	3,958
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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		376.04	388.99	402.40	416.26	430.61	445.44	460.79	476.67	493.09	510.08	527.66	545.84	564.65	584.11	604.23	625.05	646.59	668.87	691.92	715.76	740.42	765.93	792.32	819.62	847.87

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			54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.51	152.21	160.20	168.61	177.46	186.78
Depreciation	Rs Lakh			31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96
Interest on term loan	Rs Lakh			49.36	45.96	42.55	39.15	35.74	32.34	28.93	25.53	22.13	18.72	15.32	11.91	8.51	5.11	1.70	-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			24.94	25.73	26.55	27.41	28.29	29.22	30.18	31.17	32.21	33.29	34.40	35.57	36.77	38.03	39.33	40.64	41.99	43.42	44.99	46.62	48.46	50.21	52.04	53.93	55.90
Return on Equity	Rs Lakh			34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86
Total Fixed Cost	Rs Lakh			195.82	196.08	196.52	197.15	197.98	199.03	200.29	201.79	203.53	205.52	207.79	210.34	213.18	216.34	219.83	206.84	214.49	222.52	230.95	239.79	258.58	268.33	278.57	289.31	300.60

Per Unit Cost of 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	
Per unit Variable Cost	Rs/kWh			8.14	6.09	6.30	6.52	6.75	6.98	7.22	7.47	7.72	7.99	8.27	8.55	8.84	9.15	9.46	9.79	10.13	10.48	10.84	11.21	11.60	12.00	12.41	12.84	13.28	13.74
O&M expn	Rs/kWh			1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation	Rs/kWh			0.47	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan	Rs/kWh			0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	
Int. on working capital	Rs/kWh			0.53	0.40	0.42	0.43	0.44	0.46	0.47	0.49	0.50	0.52	0.54	0.56	0.58	0.60	0.62	0.64	0.65	0.68	0.70	0.73	0.75	0.78	0.81	0.84	0.87	0.90
RsE	Rs/kWh			0.58	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	0.56	0.56	0.56	0.56	
Total COG	Rs/kWh			11.53	9.26	9.48	9.70	9.94	10.18	10.44	10.71	10.99	11.29	11.59	11.92	12.25	12.60	12.97	13.35	13.48	13.95	14.44	14.95	15.48	16.19	16.76	17.35	17.97	18.61

Variable Cost	6.09	Rs/kWh
Levelised Tariff (Fixed)	3.39	Rs/kWh
Levelised Tariff	9.48	Rs/kWh

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	685

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%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	18.08	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	19.73	-	-	-	-	-	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	205.48	239.73	95.89	57.53	34.52	20.71	12.43	7.46	4.47	2.68	1.61	0.97	0.58	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	187.40	203.56	59.73	21.37	-1.64	-15.45	-23.74	-28.71	-31.69	-33.48	-34.55	-35.20	-35.58	-35.82	-35.96	-36.04	-36.09	-19.68	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	65.48	71.13	20.87	7.47	-0.57	-5.40	-8.29	-10.03	-11.07	-11.70	-12.07	-12.30	-12.43	-12.52	-12.56	-12.59	-12.61	-6.88	0.01	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	6.17
Per unit benefit	Rs/Unit	2.12	1.15	0.34	0.12	-0.01	-0.09	-0.13	-0.18	-0.19	-0.20	-0.20	-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	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	0.13

Tax Benefit Levelised	9.02	Rs Lakh
Electricity Generation (Levelised)	5.89	MU
Levelised benefit	0.15	Rs/kWh

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Tamil Nadu	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	685	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	685	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	479	
			Total Equity Amount	Rs Lacs	205	
		Debt Component	Loan Amount	Rs Lacs	479	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	205	
			Return on Equity (up to 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		3,918
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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		372.28	385.11	398.38	412.11	426.31	441.00	456.19	471.91	488.17	504.99	522.39	540.39	559.01	578.27	598.20	618.81	640.13	662.19	685.01	708.61	733.03	758.28	784.41	811.44	839.40

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		54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.26	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78
Depreciation	Rs Lakh		31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96
Interest on term loan	Rs Lakh		49.36	45.96	42.55	39.15	35.74	32.34	28.93	25.53	22.13	18.72	15.32	11.91	8.51	5.11	1.70	-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		24.73	25.52	26.33	27.18	28.06	28.97	29.92	30.91	31.94	33.00	34.11	35.26	36.46	37.71	39.00	40.09	41.54	43.05	44.61	46.23	48.05	49.79	51.60	53.48	55.43
Return on Equity	Rs Lakh		34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86
Total Fixed Cost	Rs Lakh		195.61	195.87	196.30	196.92	197.75	198.78	200.03	201.52	203.25	205.24	207.50	210.04	212.87	216.02	219.49	226.50	234.13	242.15	250.56	259.40	268.61	278.13	288.86	300.13	

Per Unit Cost of 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	
Per unit Variable Cost	Rs/kWh		8.06	6.03	6.24	6.46	6.68	6.91	7.15	7.39	7.65	7.91	8.18	8.46	8.76	9.06	9.37	9.69	10.03	10.37	10.73	11.10	11.48	11.88	12.29	12.71	13.15	13.60
O&M expn	Rs/kWh		1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation	Rs/kWh		0.47	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan	Rs/kWh		0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	
Int. on working capital	Rs/kWh		0.53	0.40	0.41	0.43	0.44	0.45	0.47	0.48	0.50	0.52	0.53	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.70	0.72	0.75	0.78	0.81	0.83	0.87	0.90
RsE	Rs/kWh		0.58	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	0.56	0.56	0.56	0.56	
Total COG	Rs/kWh		11.44	9.20	9.41	9.63	9.87	10.11	10.37	10.63	10.91	11.20	11.51	11.83	12.16	12.51	12.87	13.25	13.37	13.84	14.33	14.83	15.36	16.06	16.63	17.22	17.83	18.46

Variable Cost	6.03	Rs/kWh
Levelised Tariff (Fixed)	3.38	Rs/kWh
Levelised Tariff	9.42	Rs/kWh

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	685

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		18.08	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	19.73	-	-	-	-	-	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%		100%	70%	35%	21%	13%	8%	5%	3%	2%	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%
Closing	%		70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh		205.48	239.73	95.89	57.53	34.52	20.71	12.43	7.46	4.47	2.68	1.61	0.97	0.58	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00

Net Depreciation Benefit	Rs Lakh		187.40	203.56	59.73	21.37	-1.64	-15.45	-23.74	-28.71	-31.69	-33.48	-34.55	-35.20	-35.58	-35.82	-35.96	-36.04	-36.09	-19.68	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh		65.48	71.13	20.87	7.47	-0.57	-5.40	-8.29	-10.03	-11.07	-11.70	-12.07	-12.30	-12.43	-12.52	-12.56	-12.59	-12.61	-6.88	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	
Per unit benefit	Rs/Unit		2.12	1.15	0.34	0.12	-0.01	-0.09	-0.13	-0.18	-0.19	-0.20	-0.20	-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	
Discounting Factor			1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levelised	9.02	Rs Lakh
Electricity Generation (Levelised)	5.89	MU
Levelised benefit	0.15	Rs/kWh



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Telangana
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	12.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	685
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	685
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	479
			Total Equity Amount	Rs Lacs	205
		Debt Component	Loan Amount	Rs Lacs	479
			Moratorium Period	Years	-
			Repayment Period (incl. Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	205
			Return on Equity (up to 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00
			During Stabilization Period	Kcal/kWh	4,200.00
		Base Price	Base Price	Rs/MT	3,983
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
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		
Variable Cost		Unit	Year-->																									
Biomass Cost		Rs. Lakh	378.43	391.47	404.96	418.91	433.34	448.27	463.72	479.70	496.23	513.33	531.01	549.31	568.24	587.82	608.07	629.02	650.70	673.12	696.31	720.31	745.13	770.80	797.36	824.83	853.25	
Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.51	152.21	160.20	168.61	177.46	186.78	
Depreciation		Rs Lakh	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	
Interest on term loan		Rs Lakh	49.36	45.96	42.55	39.15	35.74	32.34	28.93	25.53	22.13	18.72	15.32	11.91	8.51	5.11	1.70	-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	25.07	25.87	26.69	27.55	28.45	29.37	30.34	31.34	32.38	33.46	34.59	35.76	36.97	38.24	39.55	40.96	42.13	43.65	45.23	46.87	48.72	50.48	52.32	54.22	56.20	
Return on Equity		Rs Lakh	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	
Total Fixed Cost		Rs Lakh	195.95	196.22	196.66	197.30	198.13	199.18	200.45	201.95	203.70	205.70	207.97	210.53	213.38	216.55	220.04	207.06	214.72	222.75	231.19	240.04	258.84	268.60	278.84	289.60	300.89	
Per Unit Cost of Generation		Unit	Year-->																									
Per unit Variable Cost		Rs/kWh	8.19	6.13	6.34	6.56	6.79	7.02	7.26	7.51	7.77	8.04	8.32	8.60	8.90	9.21	9.53	9.85	10.19	10.54	10.91	11.28	11.67	12.07	12.49	12.92	13.37	13.83
O&M expn		Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation		Rs/kWh	0.47	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Int. on term loan		Rs/kWh	0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	0.54	0.41	0.42	0.43	0.45	0.46	0.48	0.49	0.51	0.52	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.68	0.71	0.73	0.76	0.79	0.82	0.85	0.88	0.91
Return on Equity		Rs/kWh	0.58	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	0.56	0.56	0.56	0.56	0.56
Total COG		Rs/kWh	11.58	9.31	9.52	9.75	9.98	10.23	10.49	10.76	11.04	11.34	11.65	11.97	12.31	12.66	13.03	13.42	13.85	14.02	14.52	15.03	15.56	16.27	16.84	17.44	18.70	
Variable Cost		6.13	Rs/kWh																									
Levelised Tariff (Fixed)		3.39	Rs/kWh																									
Levelised Tariff		9.52	Rs/kWh																									
Determination of AD for Biomass based Power Project																												
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 (Rs./Lakh)		685																										
Years	>	Unit	Year-->																									
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%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	
Book Depreciation		Rs Lakh	18.08	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	
Accelerated Depreciation																												
Opening		%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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		%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Accelerated Depreciation		Rs Lakh	205.48	239.73	95.89	57.53	34.52	20.71	12.43	7.46	4.47	2.68	1.61	0.97	0.58	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Net Depreciation Benefit		Rs Lakh	187.40	203.56	59.73	21.37	-1.64	-15.45	-23.74	-28.71	-31.69	-33.48	-34.55	-35.20	-35.58	-35.82	-35.96	-36.04	-36.09	-19.68	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Tax Benefit		Rs Lakh	65.48	71.13	20.87	7.47	-0.57	-5.40	-8.29	-10.03	-11.07	-11.70	-12.07	-12.30	-12.43	-12.52	-12.56	-12.59	-12.61	-6.88	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	2.12	1.15	0.34	0.12	-0.01	-0.09	-0.13	-0.16	-0.18	-0.19	-0.20	-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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	0.13	
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	0.13	
Tax Benefit Levelised		9.02	Rs Lakh																									
Electricity Generation (Levelised)		5.89	MU																									
Levelised benefit		0.15	Rs/kWh																									

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Uttar Pradesh
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	12.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	685
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	685
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	479
			Total Equity Amount	Rs Lacs	205
		Debt Component	Loan Amount	Rs Lacs	479
			Moratorium Period	Years	-
			Repayment Period (incl. Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	205
			Return on Equity (up to 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00
			During Stabilization Period	Kcal/kWh	4,200.00
		Base Price	Base Price	Rs/MT	4,053
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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		385.08	398.35	412.08	426.28	440.97	456.16	471.88	488.14	504.96	522.36	540.35	558.97	578.23	598.16	618.77	640.09	662.15	684.96	708.56	732.98	758.23	784.36	811.39	839.34	868.26

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		54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.26	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78
Depreciation	Rs Lakh		31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96
Interest on term loan	Rs Lakh		49.36	45.96	42.55	39.15	35.74	32.34	28.93	25.53	22.13	18.72	15.32	11.91	8.51	5.11	1.70	-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		25.44	26.25	27.09	27.96	28.87	29.81	30.79	31.81	32.87	33.96	35.11	36.29	37.53	38.81	40.14	41.27	42.76	44.31	45.91	47.57	49.44	51.23	53.10	55.03	57.03
Return on Equity	Rs Lakh		34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86
Total Fixed Cost	Rs Lakh		196.32	196.60	197.06	197.71	198.56	199.62	200.90	202.42	204.18	206.20	208.49	211.06	213.94	217.12	220.63	207.68	215.35	223.41	231.87	240.74	250.57	260.35	270.62	280.40	301.72

Per Unit Cost of Generation		Unit	Levillised tariff corresponding to Useful life																									
			1	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		8.34	8.34	8.34	8.34	8.34	8.34	8.34	8.34	8.34	8.34	8.34	8.34	8.34	8.34	8.34	8.34	8.34	8.34	8.34	8.34	8.34	8.34	8.34	8.34	8.34	
O&M expn	Rs/kWh		1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation	Rs/kWh		0.47	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan	Rs/kWh		0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	
Int. on working capital	Rs/kWh		0.54	0.41	0.42	0.44	0.45	0.47	0.48	0.50	0.51	0.53	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.69	0.72	0.74	0.77	0.80	0.83	0.86	0.89	0.92
Return on Equity	Rs/kWh		0.58	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	0.56	0.56	0.56	0.56	
Total COG	Rs/kWh		11.74	9.42	9.64	9.87	10.11	10.36	10.62	10.90	11.19	11.49	11.80	12.13	12.48	12.84	13.21	13.60	13.74	14.22	14.72	15.24	15.78	16.49	17.07	17.68	18.31	18.96

Variable Cost	6.24	Rs/kWh
Levillised Tariff (Fixed)	3.40	Rs/kWh
Levillised Tariff	9.64	Rs/kWh

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	685

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		18.08	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	19.73	-	-	-	-	-	-	-

Accelerated Depreciation			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%		100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%		70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh		205.48	239.73	95.89	57.53	34.52	20.71	12.43	7.46	4.47	2.68	1.61	0.97	0.58	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh		187.40	203.56	59.73	21.37	-1.64	-15.45	-23.74	-28.71	-31.69	-33.48	-34.55	-35.20	-35.58	-35.82	-35.96	-36.04	-36.09	-19.68	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh		65.48	71.13	20.87	7.47	-0.57	-5.40	-8.29	-10.03	-11.07	-11.70	-12.07	-12.30	-12.43	-12.52	-12.56	-12.59	-12.61	-6.88	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		2.12	1.15	0.34	0.12	-0.01	-0.09	-0.13	-0.18	-0.19	-0.20	-0.20	-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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levillised	9.02	Rs Lakh
Electricity Generation (Levillised)	5.89	MU
Levillised benefit	0.15	Rs/kWh

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Others	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	685	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	685	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	479	
			Total Equity Amount	Rs Lacs	205	
		Debt Component	Loan Amount	Rs Lacs	479	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	205	
			Return on Equity (up to 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		4,260
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
Units Generation		Unit	Year-->																								
Installed Capacity	MW		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Net Generation	MU		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Variable Cost		Unit	Year-->																								
Biomass Cost	Rs. Lakh		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
			404.71	418.65	433.08	448.00	463.44	479.41	495.93	513.01	530.69	548.98	567.89	587.46	607.70	628.64	650.30	672.71	695.89	719.87	744.67	770.33	796.87	824.33	852.74	882.12	912.51

Fixed Cost		Unit	Year-->																								
O&M Expenses	Rs Lakh		54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.26	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78
Depreciation	Rs Lakh		31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96
Interest on term loan	Rs Lakh		49.36	45.96	42.55	39.15	35.74	32.34	28.93	25.53	22.13	18.72	15.32	11.91	8.51	5.11	1.70	-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		26.53	27.37	28.25	29.16	30.11	31.10	32.12	33.19	34.44	36.63	37.87	39.16	40.50	41.89	43.08	44.63	46.24	47.91	49.64	51.58	53.45	55.38	57.39	59.48	
Return on Equity	Rs Lakh		34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86
Total Fixed Cost	Rs Lakh		197.41	197.72	198.22	198.91	199.80	200.91	202.23	203.80	205.61	207.68	210.02	212.64	215.57	218.81	222.38	209.48	217.22	225.34	233.87	242.81	261.71	271.56	281.91	292.77	304.17

Per Unit Cost of Generation		Unit	Levilled tariff corresponding to Useful life																									
Per unit Variable Cost	Rs/kWh		8.76	6.56	6.78	7.02	7.26	7.51	7.77	8.04	8.31	8.60	8.90	9.20	9.52	9.85	10.19	10.54	10.90	11.28	11.66	12.07	12.48	12.91	13.36	13.82	14.29	14.79
O&M expn	Rs/kWh		1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation	Rs/kWh		0.47	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan	Rs/kWh		0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	
Int. on working capital	Rs/kWh		0.57	0.43	0.44	0.46	0.47	0.49	0.50	0.52	0.54	0.55	0.57	0.59	0.61	0.63	0.66	0.68	0.70	0.72	0.75	0.78	0.80	0.83	0.86	0.90	0.93	0.96
RoE	Rs/kWh		0.58	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	0.56	0.56	0.56	0.56	
Total COG	Rs/kWh		12.18	9.75	9.99	10.23	10.48	10.75	11.02	11.31	11.61	11.93	12.26	12.60	12.96	13.34	13.73	14.14	14.29	14.80	15.32	15.86	16.42	17.15	17.76	18.38	19.04	19.71

Variable Cost	6.56	Rs/kWh
Levilled Tariff (Fixed)	3.42	Rs/kWh
Levilled Tariff	9.98	Rs/kWh

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	685

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	18.08	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	19.73	-	-	-	-	-	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	205.48	239.73	95.89	57.53	34.52	20.71	12.43	7.46	4.47	2.68	1.61	0.97	0.58	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	187.40	203.56	59.73	21.37	-1.64	-15.45	-23.74	-28.71	-31.69	-33.48	-34.55	-35.20	-35.58	-35.82	-35.96	-36.04	-36.09	-19.68	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	65.48	-71.13	20.87	7.47	-0.57	-5.40	-8.29	-10.03	-11.07	-11.70	-12.07	-12.30	-12.43	-12.52	-12.56	-12.59	-12.61	-6.88	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	2.12	1.15	0.34	0.12	-0.01	-0.09	-0.13	-0.18	-0.19	-0.20	-0.20	-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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levilled	9.02	Rs Lakh
Electricity Generation (Levilled)	5.89	MU
Levilled benefit	0.15	Rs/kWh

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Andhra Pradesh	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	697	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	697	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	488	
			Total Equity Amount	Rs Lacs	209	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	488	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	209	
			Return on Equity (up to 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b><u>For Variable Charges</u></b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b><u>Heat Rate</u></b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		3,983
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		0%
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity	MW		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
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	6.31
Variable Cost		Unit	Year-->																									
Biomass Cost	Rs. Lakh		378.43	391.47	404.96	418.91	433.34	448.27	463.72	479.70	496.23	513.33	531.01	549.31	568.24	587.82	608.07	629.02	650.70	673.12	696.31	720.31	745.13	770.80	797.36	824.83	853.25	
Fixed Cost		Unit	Year-->																									
O&M Expenses	Rs Lakh		54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78	
Depreciation	Rs Lakh		32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	
Interest on term loan	Rs Lakh		50.26	46.80	43.33	39.87	36.40	32.93	29.47	26.00	22.53	19.07	15.60	12.13	8.67	5.20	1.73	-	-	-	-	-	-	-	-	-	-	
Interest on working capital	Rs Lakh		25.11	25.90	26.73	27.58	28.47	29.40	30.36	31.37	32.41	33.49	34.61	35.78	36.99	38.26	39.57	40.97	42.44	43.96	45.52	46.89	48.73	50.50	52.33	54.24	56.22	
Return on Equity	Rs Lakh		35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	
Total Fixed Cost	Rs Lakh		198.12	198.32	198.70	199.27	200.04	201.03	202.23	203.67	205.36	207.29	209.50	212.00	214.78	217.89	221.32	225.09	229.17	233.66	238.59	243.96	249.79	256.01	262.64	269.68	277.12	
Per Unit Cost of Generation		Unit	Year-->																									
Per unit Variable Cost	Rs/kWh		8.01	6.00	6.20	6.42	6.64	6.87	7.10	7.35	7.60	7.86	8.13	8.41	8.70	9.00	9.31	9.63	9.97	10.31	10.66	11.03	11.41	11.81	12.21	12.63	13.07	13.52
O&M expan	Rs/kWh		1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96
Depreciation	Rs/kWh		0.46	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan	Rs/kWh		0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	
Int. on working capital	Rs/kWh		0.52	0.40	0.41	0.42	0.44	0.45	0.47	0.48	0.50	0.51	0.53	0.55	0.57	0.59	0.61	0.63	0.64	0.67	0.69	0.72	0.74	0.77	0.80	0.83	0.86	0.89
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	0.56	0.56	0.56	0.56	
Total COG	Rs/kWh		11.35	9.13	9.34	9.56	9.79	10.03	10.29	10.55	10.83	11.11	11.42	11.73	12.06	12.41	12.76	13.14	13.56	13.93	14.21	14.71	15.23	15.92	16.48	17.07	17.67	18.30
Variable Cost		6.00																										
Levelised Tariff (Fixed)		3.34																										
Levelised Tariff		9.34																										
Determination of AD for Biomass based Power Project																												
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 (Rs./Lakh)		697																										
Years >		Unit	Year-->																									
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		18.41	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	20.09	-	-	-	-	-	-	-	
Accelerated Depreciation																												
Opening	%		100%	70%	35%	21%	13%	6%	3%	2%	1%	0%	0%	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%	0.99%	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	%		70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Accelerated Depreciation	Rs Lakh		209.25	244.12	97.65	58.59	35.15	21.09	12.66	7.59	4.56	2.73	1.64	0.98	0.59	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Net Depreciation Benefit	Rs Lakh		190.83	207.29	60.82	21.76	-1.67	-15.74	-24.17	-29.23	-32.27	-34.09	-35.19	-35.84	-36.24	-36.47	-36.61	-36.70	-36.75	-20.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Tax Benefit	Rs Lakh		66.68	72.44	21.25	7.60	-0.58	-5.50	-8.45	-10.22	-11.28	-11.91	-12.30	-12.53	-12.66	-12.75	-12.79	-12.82	-12.84	-7.00	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		2.11	1.15	0.34	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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	
Tax Benefit Levelised		9.18																										
Electricity Generation (Levelised)		6.03																										
Levelised benefit		0.15																										



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Haryana	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	697	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	697	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	488	
			Total Equity Amount	Rs Lacs	209	
		Debt Component	Loan Amount	Rs Lacs	488	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	209	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		4,534
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Maharashtra	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	697	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	697	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	488	
			Total Equity Amount	Rs Lacs	209	
		Debt Component	Loan Amount	Rs Lacs	488	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	209	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		4,637
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Punjab
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	10.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	697
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	697
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	488
			Total Equity Amount	Rs Lacs	209
		Debt Component	Loan Amount	Rs Lacs	488
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	209
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00
			During Stabilization Period	Kcal/kWh	4,200.00
		Base Price	Base Price	Rs/MT	4,742
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Rajasthan
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	10.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	697
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	697
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	488
			Total Equity Amount	Rs Lacs	209
		Debt Component	Loan Amount	Rs Lacs	488
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	209
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00
			During Stabilization Period	Kcal/kWh	4,200.00
		Base Price	Base Price	Rs/MT	3,958
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00





Assumption for Biomass Based Rankine Cycle Project Parameters				State	Tamil Nadu
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	10.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	697
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	697
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	488
			Total Equity Amount	Rs Lacs	209
		Debt Component	Loan Amount	Rs Lacs	488
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	209
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00
			During Stabilization Period	Kcal/kWh	4,200.00
		Base Price	Base Price	Rs/MT	3,918
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																							
Units Generation	Unit	Year-->																							
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
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

Variable Cost	Unit	Year-->																								
Biomass Cost	Rs. Lakh	372.28	385.11	398.38	412.11	426.31	441.00	456.19	471.91	488.17	504.99	522.39	540.39	559.01	578.27	598.20	618.81	640.13	662.19	685.01	708.61	733.03	758.28	784.41	811.44	839.40

Fixed Cost	Unit	Year-->																								
O&M Expenses	Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78
Depreciation	Rs Lakh	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55
Interest on term loan	Rs Lakh	50.26	46.80	43.33	39.87	36.40	32.93	29.47	26.00	22.53	19.07	15.60	12.13	8.67	5.20	1.73	-	-	-	-	-	-	-	-	-	-
Interest on working Capital	Rs Lakh	24.77	25.55	26.36	27.21	28.09	29.00	29.95	30.94	31.96	33.03	34.13	35.29	36.48	37.73	39.02	40.11	41.56	43.06	44.62	46.24	48.06	49.81	51.62	53.50	55.45
Return on Equity	Rs Lakh	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50
Total Fixed Cost	Rs Lakh	197.78	197.96	198.33	198.89	199.65	200.62	201.82	203.24	204.91	206.83	209.03	211.50	214.27	217.36	220.77	207.40	215.04	223.05	231.47	240.30	259.25	268.98	279.21	289.94	301.20

Per Unit Cost of Generation		Levilled tariff corresponding to Useful life																									
Unit	Unit	Year-->																									
Per unit Variable Cost	Rs/kWh	7.88	5.90	6.10	6.31	6.53	6.75	6.99	7.23	7.48	7.73	8.00	8.28	8.56	8.86	9.16	9.48	9.80	10.14	10.49	10.85	11.23	11.61	12.01	12.43	12.86	13.30
O&M expn	Rs/kWh	1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96
Depreciation	Rs/kWh	0.46	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan	Rs/kWh	0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	
Int. on working capital	Rs/kWh	0.52	0.39	0.40	0.42	0.43	0.44	0.46	0.47	0.49	0.51	0.52	0.54	0.56	0.58	0.60	0.62	0.63	0.66	0.68	0.71	0.73	0.76	0.79	0.82	0.85	0.88
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	0.56	0.56	0.56	0.56	
Total COG	Rs/kWh	11.21	9.03	9.24	9.45	9.68	9.92	10.16	10.42	10.70	10.98	11.28	11.59	11.91	12.25	12.61	12.97	13.09	13.55	14.02	14.52	15.03	15.72	16.27	16.85	17.45	18.07

Variable Cost	5.90	Rs/kWh
Levilled Tariff (Fixed)	3.33	Rs/kWh
<b>Levilled Tariff</b>	<b>9.23</b>	<b>Rs/kWh</b>

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	697

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	18.41	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	20.09	-	-	-	-	-	-	-

Accelerated Depreciation	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
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	209.25	244.12	97.65	58.59	35.15	21.09	12.66	7.59	4.56	2.73	1.64	0.98	0.59	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	190.83	207.29	60.82	21.76	-1.67	-15.74	-24.17	-29.23	-32.27	-34.09	-35.19	-35.84	-36.24	-36.47	-36.61	-36.70	-36.75	-20.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	66.68	72.44	21.25	7.60	-0.58	-5.50	-8.45	-10.22	-11.28	-11.91	-12.30	-12.53	-12.66	-12.75	-12.79	-12.82	-12.84	-7.00	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	2.11	1.15	0.34	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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levilled	9.18	Rs Lakh
Electricity Generation (Levilled)	6.03	MU
<b>Levilled benefit</b>	<b>0.15</b>	<b>Rs/kWh</b>

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Telangana	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	697	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	697	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	488	
			Total Equity Amount	Rs Lacs	209	
		Debt Component	Loan Amount	Rs Lacs	488	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	209	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		3,983
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%		5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
Units Generation		Unit	Year-->																								
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		
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		

Variable Cost		Unit	Year-->																								
Biomass Cost		Rs. Lakh	378.43	391.47	404.96	418.91	433.34	448.27	463.72	479.70	496.23	513.33	531.01	549.31	568.24	587.82	608.07	629.02	650.70	673.12	696.31	720.31	745.13	770.80	797.36	824.83	853.25
Fixed Cost		Unit	Year-->																								
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78
Depreciation		Rs Lakh	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55
Interest on term loan		Rs Lakh	50.26	46.80	43.33	39.87	36.40	32.93	29.47	26.00	22.53	19.07	15.60	12.13	8.67	5.20	1.73	-	-	-	-	-	-	-	-	-	-
Interest on working Capital		Rs Lakh	25.11	25.90	26.73	27.58	28.47	29.40	30.36	31.37	32.41	33.49	34.61	35.78	36.99	38.26	39.57	40.97	42.44	43.66	45.25	46.89	48.73	50.50	52.33	54.24	56.22
Return on Equity		Rs Lakh	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50
Total Fixed Cost		Rs Lakh	198.12	198.32	198.70	199.27	200.04	201.03	202.23	203.67	205.36	207.29	209.50	212.00	214.78	217.89	221.32	225.07	229.13	233.50	238.09	242.91	247.97	253.28	258.84	264.66	270.74

Per Unit Cost of Generation		Unit	Levilled tariff corresponding to Useful life																									
Per unit Variable Cost		Rs/kWh	8.01	6.00	6.20	6.42	6.64	6.87	7.10	7.35	7.60	7.86	8.13	8.41	8.70	9.00	9.31	9.63	9.97	10.31	10.66	11.03	11.41	11.81	12.21	12.63	13.07	13.52
O&M expn		Rs/kWh	1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96
Depreciation		Rs/kWh	0.46	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Int. on term loan		Rs/kWh	0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	0.52	0.40	0.41	0.42	0.44	0.45	0.47	0.48	0.50	0.51	0.53	0.55	0.57	0.59	0.61	0.63	0.64	0.67	0.69	0.72	0.74	0.77	0.80	0.83	0.86	0.89
Return on Equity		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	0.56	0.56	0.56	0.56	0.56
Total COG		Rs/kWh	11.35	9.13	9.34	9.56	9.79	10.03	10.29	10.55	10.83	11.11	11.42	11.73	12.06	12.41	12.76	13.14	13.26	13.73	14.21	14.71	15.23	15.92	16.48	17.07	17.67	18.30

Variable Cost	6.00	Rs/kWh
Levilled Tariff (Fixed)	3.34	Rs/kWh
Levilled Tariff	9.34	Rs/kWh

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	697

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%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	18.41	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	20.09	-	-	-	-	-	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	209.25	244.12	97.65	58.59	35.15	21.09	12.66	7.59	4.56	2.73	1.64	0.98	0.59	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	190.83	207.29	60.82	21.76	-1.67	-15.74	-24.17	-29.23	-32.27	-34.09	-35.19	-35.84	-36.24	-36.47	-36.61	-36.70	-36.75	-20.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	66.68	72.44	21.25	7.60	-0.58	-5.50	-8.45	-10.22	-11.28	-11.91	-12.30	-12.53	-12.66	-12.75	-12.79	-12.82	-12.84	-7.00	0.01	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	6.31
Per unit benefit	Rs/Unit	2.11	1.15	0.34	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	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	

Tax Benefit Levilled	9.18	Rs Lakh
Electricity Generation (Levilled)	6.03	MU
Levilled benefit	0.15	Rs/kWh

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Uttar Pradesh	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	697	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	697	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	488	
			Total Equity Amount	Rs Lacs	209	
		Debt Component	Loan Amount	Rs Lacs	488	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	209	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		4,053
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Others	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	697	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	697	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	488	
			Total Equity Amount	Rs Lacs	209	
		Debt Component	Loan Amount	Rs Lacs	488	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	209	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		4,260
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
Units Generation		Unit	Year-->																								
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	
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	

Variable Cost		Unit	Year-->																								
Biomass Cost		Rs. Lakh	404.71	418.65	433.08	448.00	463.44	479.41	495.93	513.01	530.69	548.98	567.89	587.46	607.70	628.64	650.30	672.71	695.89	719.87	744.67	770.33	796.87	824.33	852.74	882.12	912.51

Fixed Cost		Unit	Year-->																								
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78
Depreciation		Rs Lakh	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55
Interest on term loan		Rs Lakh	50.28	46.80	43.33	39.87	36.40	32.93	29.47	26.00	22.53	19.07	15.60	12.13	8.67	5.20	1.73	-	-	-	-	-	-	-	-	-	-
Interest on working Capital		Rs Lakh	26.56	27.41	28.28	29.19	30.14	31.13	32.15	33.21	34.31	35.46	36.65	37.89	39.18	40.52	41.90	43.09	44.64	46.25	47.92	49.66	51.60	53.46	55.40	57.41	59.50
Return on Equity		Rs Lakh	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50
Total Fixed Cost		Rs Lakh	199.57	199.82	200.25	200.88	201.71	202.75	204.02	205.52	207.26	209.27	211.55	214.11	216.97	220.15	223.65	210.39	218.13	226.25	234.77	243.72	262.78	272.64	282.99	293.85	305.25

Per Unit Cost of Generation		Unit	Levillised tariff corresponding to Useful life																									
Per unit Variable Cost		Rs/kWh	8.57	6.41	6.63	6.86	7.10	7.34	7.60	7.86	8.13	8.41	8.70	9.00	9.31	9.63	9.96	10.30	10.66	11.03	11.41	11.80	12.21	12.63	13.06	13.51	13.98	14.46
O&M exn		Rs/kWh	1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96
Depreciation		Rs/kWh	0.46	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan		Rs/kWh	0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	
Int. on working capital		Rs/kWh	0.55	0.42	0.43	0.45	0.46	0.48	0.49	0.51	0.53	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.68	0.71	0.73	0.76	0.79	0.82	0.85	0.88	0.91	0.94
Return on Equity		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	0.56	0.56	0.56	0.56	
Total COG		Rs/kWh	11.94	9.57	9.80	10.03	10.28	10.54	10.81	11.09	11.38	11.69	12.01	12.35	12.70	13.07	13.45	13.85	13.99	14.48	14.99	15.52	16.07	16.79	17.38	17.99	18.63	19.29

Variable Cost	6.41	Rs/kWh
Levelised Tariff (Fixed)	3.37	Rs/kWh
<b>Levelised Tariff</b>	<b>9.78</b>	<b>Rs/kWh</b>

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	697

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%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	18.41	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	20.09	-	-	-	-	-	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	209.25	244.12	97.65	58.59	35.15	21.09	12.66	7.59	4.56	2.73	1.64	0.98	0.59	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit		Rs Lakh	190.83	207.29	60.82	21.76	-1.67	-15.74	-24.17	-29.23	-32.27	-34.09	-35.19	-35.84	-36.24	-36.47	-36.61	-36.70	-36.75	-20.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit		Rs Lakh	66.68	72.44	21.25	7.60	-0.58	-5.50	-8.45	-10.22	-11.28	-11.91	-12.30	-12.53	-12.66	-12.75	-12.79	-12.82	-12.84	-7.00	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	2.11	1.15	0.34	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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levillised	9.18	Rs Lakh
Electricity Generation (Levillised)	6.03	MU
<b>Levillised benefit</b>	<b>0.15</b>	<b>Rs/kWh</b>



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Andhra Pradesh	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	744	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	744	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	521	
			Total Equity Amount	Rs Lacs	223	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	521	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	223	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b><u>For Variable Charges</u></b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b><u>Heat Rate</u></b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		3,983
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Haryana	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	744	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	744	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	521	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	521	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	223	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
		4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%
MAT Rate	%				17.47%	
<u>Depreciation</u>	Depreciation Rate (Power Plant)			%	4.67%	
	Depreciation Rate 16th year onwards			%	2.00%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months	1.50	
		<b><u>For Variable Charges</u></b>				
		Biomass Stock		Months	4.00	
		Interest on Working Capital		%	11.90%	
6	Fuel Related Assumptions	<b><u>Heat Rate</u></b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT	4,534	
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00	
			Biomass Price Escalation Factor	%	3.45%	
			Specific Fuel Consumption	kg/kWh		
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Maharashtra	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	744	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	744	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	521	
			Total Equity Amount	Rs Lacs	223	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	521	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	223	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months	1.50	
		<b>For Variable Charges</b>				
		Biomass Stock		Months	4.00	
		Interest on Working Capital		%	11.90%	
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT	4,637	
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00	
			Biomass Price Escalation Factor	%	3.45%	
			Specific Fuel Consumption	kg/kWh		
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
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		
Variable Cost		Unit	Year-->																									
Biomass Cost		Rs. Lakh	440.55	455.73	471.43	487.68	504.48	521.86	539.84	558.45	577.69	597.59	618.18	639.49	661.52	684.31	707.89	732.28	757.52	783.62	810.62	838.55	867.44	897.33	928.25	960.24	993.32	
Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.51	152.21	160.20	168.61	177.46	186.78	
Depreciation		Rs Lakh	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	
Interest on term loan		Rs Lakh	53.64	49.94	46.24	42.54	38.84	35.14	31.44	27.74	24.04	20.35	16.65	12.95	9.25	5.55	1.85	-	-	-	-	-	-	-	-	-	-	
Interest on working Capital		Rs Lakh	28.67	29.57	30.52	31.50	32.52	33.58	34.68	35.82	37.01	38.24	39.52	40.85	42.24	43.67	45.16	46.44	48.11	49.83	51.62	53.48	55.56	57.57	59.64	61.80	64.03	
Return on Equity		Rs Lakh	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	
Total Fixed Cost		Rs Lakh	209.62	209.70	209.96	210.43	211.10	211.98	213.09	214.44	216.04	217.89	220.03	222.45	225.17	228.22	231.60	217.05	224.91	233.14	241.79	250.86	270.71	280.70	291.19	302.19	313.74	
Per Unit Cost of Generation		Unit	Year-->																									
Per unit Variable Cost		Rs/kWh	9.54	7.14	7.38	7.64	7.90	8.17	8.46	8.75	9.05	9.36	9.68	10.02	10.36	10.72	11.09	11.47	11.87	12.27	12.70	13.14	13.59	14.06	14.54	15.04	15.56	16.10
O&M expn		Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation		Rs/kWh	0.51	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	0.56	0.56	0.56	0.56	
Int. on term loan		Rs/kWh	0.45	0.87	0.81	0.75	0.69	0.63	0.57	0.51	0.45	0.39	0.33	0.27	0.21	0.15	0.09	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital		Rs/kWh	0.61	0.46	0.48	0.49	0.51	0.53	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.68	0.71	0.73	0.75	0.78	0.81	0.84	0.87	0.90	0.93	0.97	1.00	1.04
Return on Equity		Rs/kWh	0.63	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	
Total COG		Rs/kWh	13.13	10.53	10.78	11.04	11.31	11.59	11.89	12.20	12.52	12.86	13.21	13.58	13.97	14.37	14.79	15.22	15.38	15.92	16.47	17.05	17.65	18.44	19.09	19.76	20.46	21.18
Variable Cost			7.14	Rs/kWh																								
Levelised Tariff (Fixed)			3.59	Rs/kWh																								
Levelised Tariff			10.73	Rs/kWh																								
Determination of AD for Biomass based Power Project																												
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 (Rs./Lakh)		744																										
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	19.65	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	21.44	-	-	-	-	-	-	-	
Accelerated Depreciation		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	
Opening		%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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		%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%		
Accelerated Depreciation		Rs Lakh	223.29	260.50	104.20	62.52	37.51	22.51	13.50	8.10	4.86	2.92	1.75	1.05	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	
Net Depreciation Benefit		Rs Lakh	203.64	221.20	64.90	23.22	-1.79	-16.79	-25.79	-31.20	-34.44	-36.38	-37.55	-38.25	-38.67	-38.92	-39.07	-39.16	-39.22	-21.39	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Tax Benefit		Rs Lakh	71.16	77.30	22.68	8.11	-0.62	-5.87	-9.01	-10.90	-12.03	-12.71	-13.12	-13.37	-13.51	-13.60	-13.65	-13.68	-13.70	-7.47	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	2.31	1.25	0.37	0.13	-0.01	-0.10	-0.15	-0.18	-0.19	-0.21	-0.21	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Discounting Factor			1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	0.13	
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	
Tax Benefit Levelised		9.80	Rs Lakh																									
Electricity Generation (Levelised)		5.89	MU																									
Levelised benefit		0.17	Rs/kWh																									

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Punjab	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	744	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	744	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	521	
			Total Equity Amount	Rs Lacs	223	
		Debt Component	Loan Amount	Rs Lacs	521	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	223	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		4,742
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
Units Generation		Unit	Year-->																								
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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	
Variable Cost		Unit	Year-->																								
Biomass Cost		Rs. Lakh	450.56	466.09	482.15	498.76	515.95	533.72	552.11	571.14	590.82	611.18	632.23	654.02	676.55	699.87	723.98	748.93	774.73	801.43	829.04	857.61	887.16	917.73	949.35	982.06	1,015.90
Fixed Cost		Unit	Year-->																								
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.26	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78
Depreciation		Rs Lakh	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73
Interest on term loan		Rs Lakh	53.64	49.94	46.24	42.54	38.84	35.14	31.44	27.74	24.04	20.35	16.65	12.95	9.25	5.55	1.85	-	-	-	-	-	-	-	-	-	-
Interest on working capital		Rs Lakh	29.22	30.15	31.11	32.11	33.15	34.23	35.36	36.52	37.74	38.99	40.30	41.66	43.07	44.53	46.05	47.36	49.06	50.82	52.64	54.54	56.66	58.69	60.81	63.00	65.28
Return on Equity		Rs Lakh	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88
Total Fixed Cost		Rs Lakh	210.17	210.27	210.56	211.04	211.73	212.64	213.77	215.14	216.76	218.65	220.81	223.25	226.01	229.08	232.49	217.97	225.86	234.13	242.81	251.92	271.80	281.83	292.35	303.40	314.99

Per Unit Cost of Generation		Unit	Levillised tariff corresponding to Useful life																									
Per unit Variable Cost		Rs/kWh	9.76	7.30	7.55	7.81	8.08	8.36	8.65	8.95	9.25	9.57	9.90	10.24	10.60	10.96	11.34	11.73	12.14	12.55	12.99	13.43	13.90	14.38	14.87	15.38	15.91	16.46
O&M expn		Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation		Rs/kWh	0.51	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	0.56	0.56	0.56	0.56	
Int. on term loan		Rs/kWh	0.45	0.87	0.81	0.75	0.69	0.63	0.57	0.51	0.45	0.39	0.33	0.27	0.21	0.15	0.09	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital		Rs/kWh	0.62	0.47	0.49	0.50	0.52	0.54	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.70	0.72	0.75	0.77	0.79	0.82	0.85	0.88	0.92	0.95	0.98	1.02	1.06
RoE		Rs/kWh	0.63	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	
Total COG		Rs/kWh	13.36	10.70	10.96	11.22	11.50	11.79	12.09	12.41	12.74	13.08	13.45	13.82	14.21	14.62	15.05	15.50	15.67	16.21	16.78	17.37	17.98	18.78	19.44	20.12	20.83	21.56

Variable Cost	7.30	Rs/kWh
Levelised Tariff (Fixed)	3.60	Rs/kWh
<b>Levelised Tariff</b>	<b>10.91</b>	<b>Rs/kWh</b>

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	744

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	19.65	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	21.44	-	-	-	-	-	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	223.29	260.50	104.20	62.52	37.51	22.51	13.50	8.10	4.86	2.92	1.75	1.05	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

Net Depreciation Benefit	Rs Lakh	203.64	221.20	64.90	23.22	-1.79	-16.79	-25.79	-31.20	-34.44	-36.38	-37.55	-38.25	-38.67	-38.92	-39.07	-39.16	-39.22	-21.39	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	71.16	77.30	22.68	8.11	-0.62	-5.87	-9.01	-10.90	-12.03	-12.71	-13.12	-13.37	-13.51	-13.60	-13.65	-13.68	-13.70	-7.47	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	2.31	1.25	0.37	0.13	-0.01	-0.10	-0.15	-0.18	-0.19	-0.21	-0.21	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levillised	9.80	Rs Lakh
Electricity Generation (Levillised)	5.89	MU
<b>Levillised benefit</b>	<b>0.17</b>	<b>Rs/kWh</b>



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Rajasthan	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	744	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	744	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	521	
			Total Equity Amount	Rs Lacs	223	
		Debt Component	Loan Amount	Rs Lacs	521	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	223	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		3,958
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Tamil Nadu
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	12.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	744
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	744
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	521
			Total Equity Amount	Rs Lacs	223
		Debt Component	Loan Amount	Rs Lacs	521
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	223
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00
			During Stabilization Period	Kcal/kWh	4,200.00
		Base Price	Base Price	Rs/MT	3,918
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Telangana	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	744	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	744	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	521	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	521	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	223	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
		4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%
MAT Rate	%				17.47%	
<u>Depreciation</u>	Depreciation Rate (Power Plant)			%	4.67%	
	Depreciation Rate 16th year onwards			%	2.00%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months	1.50	
		<b><u>For Variable Charges</u></b>				
		Biomass Stock		Months	4.00	
		Interest on Working Capital		%	11.90%	
6	Fuel Related Assumptions	<b><u>Heat Rate</u></b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT	3,983	
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00	
			Biomass Price Escalation Factor	%	3.45%	
			Specific Fuel Consumption	kg/kWh		
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity		MW	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
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	6.17
Variable Cost		Unit	Year-->																									
Biomass Cost		Rs. Lakh	378.43	391.47	404.96	418.91	433.34	448.27	463.72	479.70	496.23	513.33	531.01	549.31	568.24	587.82	608.07	629.02	650.70	673.12	696.31	720.31	745.13	770.80	797.36	824.83	853.25	
Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.51	152.21	160.20	168.61	177.46	186.78	
Depreciation		Rs Lakh	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	
Interest on term loan		Rs Lakh	53.64	49.94	46.24	42.54	38.84	35.14	31.44	27.74	24.04	20.35	16.65	12.95	9.25	5.55	1.85	-	-	-	-	-	-	-	-	-	-	
Interest on working Capital		Rs Lakh	25.23	26.02	26.84	27.69	28.58	29.50	30.46	31.46	32.50	33.58	34.70	35.86	37.07	38.33	39.64	40.72	42.19	43.71	45.30	46.94	48.79	50.56	52.39	54.30	56.28	
Return on Equity		Rs Lakh	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	
Total Fixed Cost		Rs Lakh	206.18	206.14	206.28	206.62	207.16	207.91	208.88	210.08	211.52	213.23	215.20	217.46	220.01	222.88	226.07	231.34	238.99	247.03	235.46	244.31	263.94	273.69	283.94	294.70	305.99	
Per Unit Cost of Generation		Unit	Year-->																									
Per unit Variable Cost		Rs/kWh	8.19	6.13	6.34	6.56	6.79	7.02	7.26	7.51	7.77	8.04	8.32	8.60	8.90	9.21	9.53	9.85	10.19	10.54	10.91	11.28	11.67	12.07	12.49	12.92	13.37	
O&M expn		Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	
Depreciation		Rs/kWh	0.51	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	0.56	0.56	0.56	0.56	
Int. on term loan		Rs/kWh	0.45	0.87	0.81	0.75	0.69	0.63	0.57	0.51	0.45	0.39	0.33	0.27	0.21	0.15	0.09	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital		Rs/kWh	0.54	0.41	0.42	0.43	0.45	0.46	0.48	0.49	0.51	0.53	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.68	0.71	0.73	0.76	0.79	0.82	0.85	0.88	
Return on Equity		Rs/kWh	0.63	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	
Total COG		Rs/kWh	11.71	9.47	9.68	9.90	10.13	10.38	10.63	10.90	11.18	11.47	11.77	12.09	12.42	12.77	13.14	13.52	13.62	14.09	14.59	15.10	15.63	16.35	16.92	17.52	18.14	
Variable Cost		6.13	Rs/kWh																									
Levelised Tariff (Fixed)		3.52	Rs/kWh																									
Levelised Tariff		9.65	Rs/kWh																									
Determination of AD for Biomass based Power Project																												
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 (Rs./Lakh)		744																										
Years		Unit	Year-->																									
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%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	
Book Depreciation		Rs Lakh	19.65	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	21.44	-	-	-	-	-	-	
Accelerated Depreciation		%	Year-->																									
Opening		%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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		%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Accelerated Depreciation		Rs Lakh	223.29	260.50	104.20	62.52	37.51	22.51	13.50	8.10	4.86	2.92	1.75	1.05	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	
Net Depreciation Benefit		Rs Lakh	203.64	221.20	64.90	23.22	-1.79	-16.79	-25.79	-31.20	-34.44	-36.38	-37.55	-38.25	-38.67	-38.92	-39.07	-39.16	-39.22	-21.39	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Tax Benefit		Rs Lakh	71.16	77.30	22.68	8.11	-0.62	-5.87	-9.01	-10.90	-12.03	-12.71	-13.12	-13.37	-13.51	-13.60	-13.65	-13.68	-13.70	-7.47	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	2.31	1.25	0.37	0.13	-0.01	-0.10	-0.15	-0.18	-0.19	-0.21	-0.21	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	0.13	
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	0.13	
Tax Benefit Levelised		9.80	Rs Lakh																									
Electricity Generation (Levelised)		5.89	MU																									
Levelised benefit		0.17	Rs/kWh																									

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Uttar Pradesh	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	744	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	744	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	521	
			Total Equity Amount	Rs Lacs	223	
		Debt Component	Loan Amount	Rs Lacs	521	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	223	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		4,053
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	





Assumption for Biomass Based Rankine Cycle Project Parameters				State	Others	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	744	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	744	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	521	
			Total Equity Amount	Rs Lacs	223	
		Debt Component	Loan Amount	Rs Lacs	521	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	223	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,200.00	
			During Stabilization Period	Kcal/kWh	4,200.00	
		Base Price	Base Price	Rs/MT		4,260
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Andhra Pradesh	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	638	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	638	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	447	
			Total Equity Amount	Rs Lacs	191	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	447	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	191	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b><u>For Variable Charges</u></b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b><u>Heat Rate</u></b>	After Stabilization Period	Kcal/kWh	4,125.00	
			During Stabilization Period	Kcal/kWh	4,125.00	
		Base Price	Base Price	Rs/MT		3,983
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Haryana
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	10.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	638
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	638
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	447
			Total Equity Amount	Rs Lacs	191
		Debt Component	Loan Amount	Rs Lacs	447
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	191
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	4,534
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity		MW	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
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	6.31

Variable Cost		Unit	Year-->																								
Biomass Cost		Rs. Lakh	423.07	437.65	452.73	468.33	484.47	501.16	518.43	536.29	554.77	573.89	593.66	614.12	635.28	657.17	679.81	703.23	727.47	752.53	778.46	805.29	833.03	861.74	891.43	922.14	953.92

Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.26	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78	
Depreciation		Rs Lakh	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78
Interest on term loan		Rs Lakh	45.59	42.82	39.64	36.47	33.30	30.13	26.96	23.79	20.61	17.44	14.27	11.10	7.93	4.76	1.59	-0.00	-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	27.43	28.31	29.23	30.18	31.17	32.20	33.27	34.38	35.53	36.73	37.97	39.27	40.61	42.00	43.45	44.72	46.33	48.00	49.73	51.53	53.52	55.46	57.47	59.55	61.71	
Return on Equity		Rs Lakh	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48
Total Fixed Cost		Rs Lakh	190.37	190.95	191.72	192.68	193.85	195.23	196.84	198.68	200.77	203.12	205.75	208.66	211.87	215.40	219.26	207.81	215.60	223.78	232.37	241.38	250.69	260.22	270.00	280.03	290.27	302.45

Per Unit Cost of Generation		Unit	Levillised tariff corresponding to Useful life																									
Per unit Variable Cost		Rs/kWh	8.96	6.70	6.93	7.17	7.42	7.68	7.94	8.21	8.50	8.79	9.09	9.41	9.73	10.07	10.41	10.77	11.14	11.53	11.92	12.33	12.76	13.20	13.65	14.12	14.61	15.11
O&M expn		Rs/kWh	1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96
Depreciation		Rs/kWh	0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Int. on term loan		Rs/kWh	0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	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	0.57	0.43	0.45	0.46	0.48	0.49	0.51	0.53	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.69	0.71	0.73	0.76	0.79	0.82	0.85	0.88	0.91	0.94	0.98
Total COG		Rs/kWh	12.23	9.72	9.96	10.21	10.47	10.75	11.03	11.33	11.64	11.97	12.31	12.66	13.03	13.42	13.82	14.24	14.43	14.94	15.47	16.01	16.58	17.31	17.92	18.56	19.22	19.90

Variable Cost	6.70	Rs/kWh
Levelised Tariff (Fixed)	3.27	Rs/kWh
<b>Levelised Tariff</b>	<b>9.97</b>	<b>Rs/kWh</b>

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	638

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	16.85	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	18.38	-	-	-	-	-	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	191.44	223.35	89.34	53.60	32.16	19.30	11.58	6.95	4.17	2.50	1.50	0.90	0.54	0.32	0.19	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	174.59	189.65	55.64	19.91	-1.53	-14.40	-22.12	-26.75	-29.53	-31.19	-32.19	-32.79	-33.15	-33.37	-33.50	-33.58	-33.62	-18.34	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit		Rs Lakh	61.01	66.27	19.44	6.96	-0.54	-5.03	-7.73	-9.35	-10.32	-10.90	-11.25	-11.46	-11.58	-11.66	-11.71	-11.73	-11.75	-6.41	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	1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.19	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor			1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levillised	8.40	Rs Lakh
Electricity Generation (Levillised)	6.03	MU
<b>Levillised benefit</b>	<b>0.14</b>	<b>Rs/kWh</b>

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Maharashtra	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	638	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	638	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	447	
			Total Equity Amount	Rs Lacs	191	
		Debt Component	Loan Amount	Rs Lacs	447	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	191	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00	
			During Stabilization Period	Kcal/kWh	4,125.00	
		Base Price	Base Price	Rs/MT		4,637
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	





Assumption for Biomass Based Rankine Cycle Project Parameters				State	Punjab
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	10.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	638
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	638
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	447
			Total Equity Amount	Rs Lacs	191
		Debt Component	Loan Amount	Rs Lacs	447
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	191
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	4,742
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
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
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	6.31
Variable Cost		Unit	Year-->																									
Biomass Cost		Rs. Lakh	442.52	457.76	473.54	489.85	506.73	524.19	542.25	560.94	580.27	600.26	620.94	642.34	664.47	687.37	711.05	735.55	760.90	787.12	814.24	842.29	871.32	901.34	932.40	964.52	997.76	
Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78	
Depreciation		Rs Lakh	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	
Interest on term loan		Rs Lakh	45.59	42.82	39.64	36.47	33.30	30.13	26.96	23.79	20.61	17.44	14.27	11.10	7.93	4.76	1.59	-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	28.50	29.42	30.38	31.37	32.40	33.48	34.59	35.74	36.94	38.19	39.48	40.83	42.22	43.67	45.18	46.74	48.34	49.99	51.71	53.58	55.64	57.95	60.50	63.30	66.34	
Return on Equity		Rs Lakh	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	
Total Fixed Cost		Rs Lakh	191.44	192.07	192.87	193.88	195.08	196.51	198.16	200.05	202.18	204.58	207.26	210.22	213.49	217.07	220.99	209.59	217.45	225.70	234.35	243.43	261.81	271.81	282.30	293.32	304.88	
Per Unit Cost of Generation		Unit	Year-->																									
Per unit Variable Cost		Rs/kWh	9.37	7.01	7.25	7.50	7.76	8.03	8.31	8.59	8.89	9.19	9.51	9.84	10.18	10.53	10.89	11.27	11.65	12.06	12.47	12.90	13.35	13.81	14.28	14.77	15.28	
O&M expn		Rs/kWh	1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	
Depreciation		Rs/kWh	0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	
Int. on term loan		Rs/kWh	0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital		Rs/kWh	0.60	0.45	0.47	0.48	0.50	0.51	0.53	0.55	0.57	0.58	0.60	0.62	0.65	0.67	0.69	0.71	0.74	0.76	0.79	0.82	0.85	0.88	0.91	0.95	1.01	
Return on Equity		Rs/kWh	0.52	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	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	
Total COG		Rs/kWh	12.66	10.04	10.29	10.56	10.83	11.12	11.42	11.73	12.06	12.40	12.75	13.12	13.51	13.91	14.33	14.77	14.97	15.50	16.05	16.61	17.20	17.95	18.59	19.24	19.93	
Variable Cost		7.01	Rs/kWh																									
Levelised Tariff (Fixed)		3.29	Rs/kWh																									
Levelised Tariff		10.30	Rs/kWh																									
Determination of AD for Biomass based Power Project																												
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 (Rs./Lakh)		638																										
Years >	Unit	Year-->																										
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	16.85	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	18.38	-	-	-	-	-	-	-	
Accelerated Depreciation																												
Opening		%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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		%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.03%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Accelerated Depreciation		Rs Lakh	191.44	223.35	89.34	53.60	32.16	19.30	11.58	6.95	4.17	2.50	1.50	0.90	0.54	0.32	0.19	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	174.59	189.65	55.64	19.91	-1.53	-14.40	-22.12	-26.75	-29.53	-31.19	-32.19	-32.79	-33.15	-33.37	-33.50	-33.58	-33.62	-18.34	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Tax Benefit		Rs Lakh	61.01	66.27	19.44	6.96	-0.54	-5.03	-7.73	-9.35	-10.32	-10.90	-11.25	-11.46	-11.58	-11.66	-11.71	-11.73	-11.75	-6.41	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	1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.19	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13		
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13		
Tax Benefit Levelised		8.40	Rs Lakh																									
Electricity Generation (Levelised)		6.03	MU																									
Levelised benefit		0.14	Rs/kWh																									

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Rajasthan	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	638	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	638	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	447	
			Total Equity Amount	Rs Lacs	191	
		Debt Component	Loan Amount	Rs Lacs	447	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	191	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00	
			During Stabilization Period	Kcal/kWh	4,125.00	
		Base Price	Base Price	Rs/MT		3,958
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Tamil Nadu
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	10.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	638
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	638
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	447
			Total Equity Amount	Rs Lacs	191
		Debt Component	Loan Amount	Rs Lacs	447
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	191
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	3,918
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
Units Generation		Unit	Year-->																								
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-->																								
Biomass Cost		Rs. Lakh	365.63	378.23	391.27	404.75	418.69	433.12	448.04	463.48	479.45	495.97	513.06	530.74	549.03	567.95	587.52	607.76	628.70	650.37	672.77	695.96	719.94	744.74	770.40	796.95	824.41

Fixed Cost		Unit	Year-->																								
O&M Expenses	Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78	
Depreciation	Rs Lakh	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78
Interest on term loan	Rs Lakh	45.59	42.82	39.64	36.47	33.30	30.13	26.96	23.79	20.61	17.44	14.27	11.10	7.93	4.76	1.59	-0.00	-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	24.25	25.02	25.82	26.66	27.53	28.43	29.37	30.35	31.36	32.42	33.51	34.65	35.83	37.06	38.34	39.43	40.86	42.34	43.88	45.47	47.26	48.98	50.77	52.62	54.54	
Return on Equity	Rs Lakh	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48
Total Fixed Cost	Rs Lakh	187.19	187.66	188.32	189.16	190.21	191.47	192.94	194.65	196.60	198.81	201.28	204.04	207.09	210.46	214.15	202.52	210.13	218.13	226.52	235.33	253.43	263.14	273.33	284.04	295.28	

Per Unit Cost of Generation		Unit	Year-->																								
Per unit Variable Cost	Rs/kWh	7.74	5.79	5.99	6.20	6.41	6.63	6.86	7.10	7.34	7.60	7.86	8.13	8.41	8.70	9.00	9.31	9.63	9.96	10.30	10.66	11.03	11.41	11.80	12.21	12.63	13.06
O&M exptn	Rs/kWh	1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96
Depreciation	Rs/kWh	0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Int. on term loan	Rs/kWh	0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	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	0.51	0.38	0.40	0.41	0.42	0.44	0.45	0.46	0.48	0.50	0.51	0.53	0.55	0.57	0.59	0.61	0.62	0.65	0.67	0.69	0.72	0.75	0.77	0.80	0.83	0.86
RoE	Rs/kWh	0.52	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	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
Total COG	Rs/kWh	10.94	8.76	8.96	9.18	9.41	9.65	9.89	10.15	10.43	10.71	11.01	11.32	11.64	11.98	12.33	12.70	12.84	13.29	13.76	14.25	14.75	15.42	15.97	16.54	17.13	17.74

Variable Cost	5.79	Rs/kWh
Levelised Tariff (Fixed)	3.20	Rs/kWh
Levelised Tariff	8.99	Rs/kWh

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	638

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	16.85	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	18.38	-	-	-	-	-	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	191.44	223.35	89.34	53.60	32.16	19.30	11.58	6.95	4.17	2.50	1.50	0.90	0.54	0.32	0.19	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	174.59	189.65	55.64	19.91	-1.53	-14.40	-22.12	-26.75	-29.53	-31.19	-32.19	-32.79	-33.15	-33.37	-33.50	-33.58	-33.62	-18.34	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	61.01	66.27	19.44	6.96	-0.54	-5.03	-7.73	-9.35	-10.32	-10.90	-11.25	-11.46	-11.58	-11.66	-11.71	-11.73	-11.75	-6.41	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	1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.19	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levelised	8.40	Rs Lakh
Electricity Generation (Levelised)	6.03	MU
Levelised benefit	0.14	Rs/kWh

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Telangana
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	10.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	638
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	638
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	447
			Total Equity Amount	Rs Lacs	191
		Debt Component	Loan Amount	Rs Lacs	447
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	191
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	3,983
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
Units Generation		Unit	Year-->																								
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		
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			

Variable Cost		Unit	Year-->																								
Biomass Cost		Rs. Lakh	371.67	384.48	397.72	411.43	425.60	440.27	455.44	471.13	487.37	504.16	521.53	539.50	558.09	577.32	597.21	617.79	639.08	661.10	683.88	707.44	731.82	757.04	783.12	810.10	838.02

Fixed Cost		Unit	Year-->																								
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78
Depreciation		Rs Lakh	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78
Interest on term loan		Rs Lakh	45.59	42.82	39.64	36.47	33.30	30.13	26.96	23.79	20.61	17.44	14.27	11.10	7.93	4.78	1.59	-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	24.58	25.37	26.18	27.03	27.91	28.83	29.78	30.77	31.80	32.87	33.98	35.13	36.33	37.58	38.88	39.99	41.43	42.94	44.49	46.11	47.92	49.66	51.47	53.35	55.30
Return on Equity		Rs Lakh	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48
Total Fixed Cost		Rs Lakh	187.52	188.01	188.68	189.53	190.59	191.86	193.35	195.07	197.04	199.26	201.75	204.53	207.60	210.98	214.69	203.07	210.71	218.72	227.13	235.96	254.09	263.82	274.04	284.77	296.03

Per Unit Cost of Generation		Unit	Levillised tariff corresponding to Useful life																									
Per unit Variable Cost		Rs/kWh	7.87	5.89	6.09	6.30	6.52	6.74	6.98	7.22	7.46	7.72	7.99	8.26	8.55	8.84	9.15	9.46	9.79	10.13	10.47	10.84	11.21	11.59	11.99	12.41	12.84	13.28
O&M expn		Rs/kWh	1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96
Depreciation		Rs/kWh	0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	
Int. on term loan		Rs/kWh	0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital		Rs/kWh	0.51	0.39	0.40	0.41	0.43	0.44	0.46	0.47	0.49	0.50	0.52	0.54	0.56	0.57	0.59	0.62	0.63	0.66	0.68	0.70	0.73	0.76	0.79	0.81	0.84	0.87
RoE		Rs/kWh	0.52	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	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	
Total COG		Rs/kWh	11.08	8.86	9.07	9.29	9.52	9.76	10.01	10.28	10.55	10.84	11.14	11.46	11.79	12.13	12.49	12.86	13.00	13.46	13.94	14.43	14.95	15.62	16.17	16.75	17.35	17.97

Variable Cost	5.89	Rs/kWh
Levelised Tariff (Fixed)	3.21	Rs/kWh
<b>Levelised Tariff</b>	<b>9.10</b>	<b>Rs/kWh</b>

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	638

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%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.85	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	18.38	-	-	-	-	-	

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	191.44	223.35	89.34	53.60	32.16	19.30	11.58	6.95	4.17	2.50	1.50	0.90	0.54	0.32	0.19	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	174.59	189.65	55.64	19.91	-1.53	-14.40	-22.12	-26.75	-29.53	-31.19	-32.19	-32.79	-33.15	-33.37	-33.50	-33.58	-33.62	-18.34	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit		Rs Lakh	61.01	66.27	19.44	6.96	-0.54	-5.03	-7.73	-9.35	-10.32	-10.90	-11.25	-11.46	-11.58	-11.66	-11.71	-11.73	-11.75	-6.41	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	1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.19	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor			1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levillised	8.40	Rs Lakh
Electricity Generation (Levillised)	6.03	MU
<b>Levillised benefit</b>	<b>0.14</b>	<b>Rs/kWh</b>



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Uttar Pradesh
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	10.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	638
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	638
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	447
			Total Equity Amount	Rs Lacs	191
		<u>Debt Component</u>	Loan Amount	Rs Lacs	447
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		<u>Equity Component</u>	Equity Amount	Rs Lacs	191
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b><u>For Fixed Charges</u></b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b><u>For Variable Charges</u></b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b><u>Heat Rate</u></b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	4,053
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Others
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	10.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	638
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	638
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	447
			Total Equity Amount	Rs Lacs	191
		Debt Component	Loan Amount	Rs Lacs	447
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	191
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	4,260
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity		MW	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
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	6.31

Variable Cost		Unit	Year-->																								
Biomass Cost		Rs. Lakh	397.48	411.18	425.35	440.00	455.16	470.85	487.07	503.85	521.21	539.17	557.75	576.97	596.85	617.42	638.69	660.70	683.46	707.01	731.37	756.58	782.64	809.61	837.51	866.37	896.22

Fixed Cost		Unit	Year-->																								
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.26	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78
Depreciation		Rs Lakh	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78
Interest on term loan		Rs Lakh	45.59	42.82	39.64	36.47	33.30	30.13	26.96	23.79	20.61	17.44	14.27	11.10	7.93	4.76	1.59	-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	26.01	26.84	27.71	28.61	29.55	30.52	31.53	32.58	33.67	34.81	35.99	37.21	38.48	39.80	41.17	42.36	43.89	45.48	47.12	48.83	50.73	52.57	54.48	56.46	58.52
Return on Equity		Rs Lakh	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48	32.48
Total Fixed Cost		Rs Lakh	188.95	189.49	190.20	191.12	192.23	193.55	195.10	196.88	198.91	201.20	203.76	206.60	209.74	213.20	216.98	205.45	213.17	221.26	229.76	238.68	256.90	266.73	277.05	287.88	299.26

Per Unit Cost of Generation		Unit	Levillised tariff corresponding to Useful life																									
Per unit Variable Cost		Rs/kWh	8.42	6.30	6.51	6.74	6.97	7.21	7.46	7.72	7.98	8.26	8.54	8.84	9.14	9.46	9.78	10.12	10.47	10.83	11.20	11.59	11.99	12.40	12.83	13.27	13.73	14.20
O&M expn		Rs/kWh	1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96
Depreciation		Rs/kWh	0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	
Int. on term loan		Rs/kWh	0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital		Rs/kWh	0.54	0.41	0.42	0.44	0.45	0.47	0.48	0.50	0.52	0.53	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.69	0.72	0.75	0.77	0.80	0.83	0.86	0.89	0.93
Return on Equity		Rs/kWh	0.52	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	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	
Total COG		Rs/kWh	11.65	9.29	9.52	9.75	10.00	10.26	10.53	10.81	11.10	11.41	11.73	12.06	12.41	12.78	13.16	13.56	13.72	14.21	14.71	15.23	15.77	16.47	17.05	17.66	18.29	18.94

Variable Cost	6.30	Rs/kWh
Levelised Tariff (Fixed)	3.24	Rs/kWh
<b>Levelised Tariff</b>	<b>9.54</b>	<b>Rs/kWh</b>

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	638

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	16.85	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69	18.38	-	-	-	-	-	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	191.44	223.35	89.34	53.60	32.16	19.30	11.58	6.95	4.17	2.50	1.50	0.90	0.54	0.32	0.19	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	174.59	189.65	55.64	19.91	-1.53	-14.40	-22.12	-26.75	-29.53	-31.19	-32.19	-32.79	-33.15	-33.37	-33.50	-33.58	-33.62	-18.34	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	61.01	66.27	19.44	6.96	-0.54	-5.03	-7.73	-9.35	-10.32	-10.90	-11.25	-11.46	-11.58	-11.66	-11.71	-11.73	-11.75	-6.41	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	1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.19	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levillised	8.40	Rs Lakh
Electricity Generation (Levillised)	6.03	MU
<b>Levillised benefit</b>	<b>0.14</b>	<b>Rs/kWh</b>

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Andhra Pradesh	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	685	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	685	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	479	
			Total Equity Amount	Rs Lacs	205	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	479	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	205	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b><u>For Variable Charges</u></b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b><u>Heat Rate</u></b>	After Stabilization Period	Kcal/kWh	4,125.00	
			During Stabilization Period	Kcal/kWh	4,125.00	
		Base Price	Base Price	Rs/MT		3,983
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	6.17

Variable Cost		Unit	Year-->																								
Biomass Cost		Rs. Lakh	371.67	384.48	397.72	411.43	425.60	440.27	455.44	471.13	487.37	504.16	521.53	539.50	558.09	577.32	597.21	617.79	639.08	661.10	683.88	707.44	731.82	757.04	783.12	810.10	838.02

Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78	
Depreciation		Rs Lakh	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96
Interest on term loan		Rs Lakh	49.36	45.96	42.55	39.15	35.74	32.34	28.93	25.53	22.13	18.72	15.32	11.91	8.51	5.11	1.70	-0.00	-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	24.70	25.48	26.29	27.14	28.02	28.93	29.88	30.87	31.89	32.96	34.06	35.22	36.41	37.65	38.95	40.04	41.48	42.99	44.54	46.16	47.98	49.72	51.53	53.41	55.36	
Return on Equity		Rs Lakh	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86
Total Fixed Cost		Rs Lakh	195.58	195.83	196.26	196.88	197.71	198.74	199.99	201.48	203.21	205.19	207.45	209.99	212.82	215.97	219.44	226.44	234.08	242.22	250.50	259.33	268.10	277.04	286.12	295.46	305.05	

Per Unit Cost of Generation		Unit	Levillised tariff corresponding to Useful life																									
Per unit Variable Cost		Rs/kWh	8.05	6.02	6.23	6.44	6.67	6.90	7.13	7.38	7.63	7.90	8.17	8.45	8.74	9.04	9.35	9.68	10.01	10.36	10.71	11.08	11.46	11.86	12.27	12.69	13.13	13.58
O&M expn		Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation		Rs/kWh	0.47	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Int. on term loan		Rs/kWh	0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	0.53	0.40	0.41	0.43	0.44	0.45	0.47	0.48	0.50	0.52	0.53	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.70	0.72	0.75	0.78	0.80	0.83	0.86	0.90
Total COG		Rs/kWh	11.43	9.19	9.40	9.62	9.86	10.10	10.35	10.62	10.90	11.19	11.49	11.81	12.14	12.49	12.85	13.23	13.36	13.82	14.31	14.82	15.34	16.04	16.61	17.19	17.81	18.44

Variable Cost	6.02	Rs/kWh
Levelised Tariff (Fixed)	3.38	Rs/kWh
<b>Levelised Tariff</b>	<b>9.40</b>	<b>Rs/kWh</b>

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	685

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%	0.00%
Book Depreciation	Rs Lakh	18.08	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	19.73	-	-	-	-	-	-	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	205.48	239.73	95.89	57.53	34.52	20.71	12.43	7.46	4.47	2.68	1.61	0.97	0.58	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit		Rs Lakh	187.40	203.56	59.73	21.37	-1.64	-15.45	-23.74	-28.71	-31.69	-33.48	-34.55	-35.20	-35.58	-35.82	-35.96	-36.04	-36.09	-19.68	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit		Rs Lakh	65.48	71.13	20.87	7.47	-0.57	-5.40	-8.29	-10.03	-11.07	-11.70	-12.07	-12.30	-12.43	-12.52	-12.56	-12.59	-12.61	-6.88	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	2.12	1.15	0.34	0.12	-0.01	-0.09	-0.13	-0.16	-0.18	-0.19	-0.20	-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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levillised	9.02	Rs Lakh
Electricity Generation (Levillised)	5.89	MU
<b>Levillised benefit</b>	<b>0.15</b>	<b>Rs/kWh</b>

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Haryana
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	12.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	685
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	685
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	479
			Total Equity Amount	Rs Lacs	205
		Debt Component	Loan Amount	Rs Lacs	479
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	205
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	4,534
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00





Assumption for Biomass Based Rankine Cycle Project Parameters				State	Maharashtra
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	12.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	685
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	685
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	479
			Total Equity Amount	Rs Lacs	205
		Debt Component	Loan Amount	Rs Lacs	479
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	205
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	4,637
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	6.17
Variable Cost		Unit	Year-->																									
Biomass Cost		Rs. Lakh	432.68	447.59	463.01	478.97	495.47	512.54	530.20	548.47	567.37	586.92	607.15	628.07	649.71	672.09	695.25	719.21	743.99	769.63	796.14	823.58	851.95	881.31	911.68	943.09	975.59	
Fixed Cost		Unit	Year-->																									
O&M Expenses	Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78		
Depreciation	Rs Lakh	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	
Interest on term loan	Rs Lakh	49.36	45.96	42.55	39.15	35.74	32.34	28.93	25.53	22.13	18.72	15.32	11.91	8.51	5.11	1.70	-0.00	-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	28.08	28.98	29.91	30.88	31.89	32.93	34.02	35.15	36.32	37.54	38.80	40.12	41.48	42.90	44.37	45.65	47.29	48.99	50.76	52.59	54.63	56.60	58.65	60.77	62.97		
Return on Equity	Rs Lakh	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	
Total Fixed Cost	Rs Lakh	198.96	199.32	199.88	200.62	201.57	202.74	204.13	205.76	207.64	209.78	212.19	214.89	217.89	221.21	224.87	228.87	233.22	237.92	242.96	248.34	254.06	260.12	266.53	273.29	280.40	287.87	
Per Unit Cost of Generation		Unit	Year-->																									
Per unit Variable Cost	Rs/kWh	9.37	7.01	7.25	7.50	7.76	8.03	8.31	8.59	8.89	9.19	9.51	9.84	10.18	10.53	10.89	11.27	11.65	12.06	12.47	12.90	13.35	13.81	14.28	14.77	15.28	15.81	
O&M expn	Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03	
Depreciation	Rs/kWh	0.47	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan	Rs/kWh	0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	0.60	0.45	0.47	0.48	0.50	0.52	0.53	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.70	0.72	0.74	0.77	0.79	0.82	0.85	0.89	0.92	0.95	0.98	1.02	
RoE	Rs/kWh	0.58	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	0.56	0.56	0.56	0.56	0.56	
Total COG	Rs/kWh	12.82	10.24	10.48	10.74	11.01	11.30	11.59	11.90	12.22	12.56	12.91	13.28	13.66	14.06	14.48	14.91	15.09	15.62	16.17	16.74	17.33	18.10	18.73	19.39	20.08	20.79	
Variable Cost	7.01	Rs/kWh																										
Levelised Tariff (Fixed)	3.46	Rs/kWh																										
Levelised Tariff	10.47	Rs/kWh																										
Determination of AD for Biomass based Power Project																												
Depreciation amount	90%																											
Book Depreciation rate	5.28%																											
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Additional Depreciation	20%																											
Income Tax (MAT)	17.47%																											
Income Tax (Normal Rates)	34.94%																											
Capital Cost (Rs./Lakh)	685																											
Years	>	Unit	Year-->																									
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%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%
Book Depreciation	Rs Lakh	18.08	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16
Accelerated Depreciation																												
Opening	%	100%	70%	35%	21%	13%	6%	5%	3%	2%	1%	0%	0%	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%	0.00%	
Closing	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	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	Rs Lakh	205.48	239.73	95.89	57.53	34.52	20.71	12.43	7.46	4.47	2.68	1.61	0.97	0.58	0.35	0.21	0.13	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	187.40	203.56	59.73	21.37	-1.64	-15.45	-23.74	-28.71	-31.69	-33.48	-34.55	-35.20	-35.58	-35.82	-35.96	-36.04	-36.09	-19.68	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00	
Tax Benefit	Rs Lakh	65.48	71.13	20.87	7.47	-0.57	-5.40	-8.29	-10.03	-11.07	-11.70	-12.07	-12.30	-12.43	-12.52	-12.56	-12.59	-12.61	-6.88	0.01	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	6.17	
Per unit benefit	Rs/Unit	2.12	1.15	0.34	0.12	-0.01	-0.09	-0.13	-0.18	-0.19	-0.20	-0.20	-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	0.00	
Discounting Factor	1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	0.13		
Applicable Discounting Factor	1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	0.13		
Tax Benefit Levelised	9.02	Rs Lakh																										
Electricity Generation (Levelised)	5.89	MU																										
Levelised benefit	0.15	Rs/kWh																										

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Punjab
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	12.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	685
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	685
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	479
			Total Equity Amount	Rs Lacs	205
		Debt Component	Loan Amount	Rs Lacs	479
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	205
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	4,742
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity		MW	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
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-->																									
Biomass Cost		Rs. Lakh	442.52	457.76	473.54	489.85	506.73	524.19	542.25	560.94	580.27	600.26	620.94	642.34	664.47	687.37	711.05	735.55	760.90	787.12	814.24	842.29	871.32	901.34	932.40	964.52	997.76	
Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.51	152.21	160.20	168.61	177.46	186.78	
Depreciation		Rs Lakh	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	
Interest on term loan		Rs Lakh	49.36	45.96	42.55	39.15	35.74	32.34	28.93	25.53	22.13	18.72	15.32	11.91	8.51	5.11	1.70	-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	28.62	29.54	30.49	31.48	32.51	33.58	34.69	35.84	37.04	38.28	39.57	40.91	42.30	43.75	45.25	46.56	48.23	49.96	51.76	53.63	55.70	57.71	59.80	61.96	64.20	
Return on Equity		Rs Lakh	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	
Total Fixed Cost		Rs Lakh	199.50	199.89	200.46	201.23	202.20	203.39	204.80	206.45	208.35	210.52	212.95	215.68	218.71	222.06	225.74	229.07	237.72	246.80	265.83	275.83	286.32	297.33	308.89			
Per Unit Cost of Generation		Unit	Year-->																									
Per unit Variable Cost		Rs/kWh	9.58	7.17	7.42	7.67	7.94	8.21	8.49	8.79	9.09	9.40	9.73	10.06	10.41	10.77	11.14	11.52	11.92	12.33	12.75	13.19	13.65	14.12	14.61	15.11	15.63	16.17
O&M expn		Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation		Rs/kWh	0.47	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan		Rs/kWh	0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	
Int. on working capital		Rs/kWh	0.61	0.46	0.48	0.49	0.51	0.53	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.68	0.71	0.73	0.75	0.78	0.81	0.84	0.87	0.90	0.93	0.97	1.00	1.04
Return on Equity		Rs/kWh	0.58	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	0.56	0.56	0.56	0.56	
Total COG		Rs/kWh	13.05	10.40	10.65	10.92	11.20	11.49	11.79	12.10	12.43	12.78	13.14	13.51	13.90	14.31	14.74	15.18	15.37	15.91	16.47	17.04	17.65	18.43	19.07	19.75	20.45	21.17
Variable Cost		7.17	Rs/kWh																									
Levelised Tariff (Fixed)		3.47	Rs/kWh																									
Levelised Tariff		10.64	Rs/kWh																									
Determination of AD for Biomass based Power Project																												
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 (Rs./Lakh)		685																										
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	18.08	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	19.73	-	-	-	-	-	-	-	
Accelerated Depreciation			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Opening		%	100%	70%	35%	21%	13%	6%	5%	3%	2%	1%	0%	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		%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Accelerated Depreciation		Rs Lakh	205.48	239.73	95.89	57.53	34.52	20.71	12.43	7.46	4.47	2.68	1.61	0.97	0.58	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Net Depreciation Benefit		Rs Lakh	187.40	203.56	59.73	21.37	-1.64	-15.45	-23.74	-28.71	-31.69	-33.48	-34.55	-35.20	-35.58	-35.82	-35.96	-36.04	-36.09	-19.68	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Tax Benefit		Rs Lakh	65.48	71.13	20.87	7.47	-0.57	-5.40	-8.29	-10.03	-11.07	-11.70	-12.07	-12.30	-12.43	-12.52	-12.56	-12.59	-12.61	-6.88	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	2.12	1.15	0.34	0.12	-0.01	-0.09	-0.13	-0.16	-0.18	-0.19	-0.20	-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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	
Tax Benefit Levelised		9.02	Rs Lakh																									
Electricity Generation (Levelised)		5.89	MU																									
Levelised benefit		0.15	Rs/kWh																									

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Rajasthan	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	685	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	685	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	479	
			Total Equity Amount	Rs Lacs	205	
		Debt Component	Loan Amount	Rs Lacs	479	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	205	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00	
			During Stabilization Period	Kcal/kWh	4,125.00	
		Base Price	Base Price	Rs/MT		3,958
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity	MW		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Net Generation	MU		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
			6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	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-->																									
Biomass Cost	Rs. Lakh		369.32	382.05	395.21	408.83	422.92	437.49	452.56	468.16	484.29	500.98	518.24	536.09	554.57	573.67	593.44	613.89	635.04	656.92	679.56	702.97	727.20	752.25	778.17	804.99	832.72	
Fixed Cost		Unit	Year-->																									
O&M Expenses	Rs Lakh		54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78	
Depreciation	Rs Lakh		31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	
Interest on term loan	Rs Lakh		49.36	45.96	42.55	39.15	35.74	32.34	28.93	25.53	22.13	18.72	15.32	11.91	8.51	5.11	1.70	-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		24.57	25.35	26.16	27.00	27.87	28.78	29.72	30.70	31.72	32.78	33.88	35.03	36.22	37.45	38.74	39.82	41.26	42.75	44.30	45.91	47.72	49.46	51.26	53.12	55.06	
Return on Equity	Rs Lakh		34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	
Total Fixed Cost	Rs Lakh		195.45	195.70	196.12	196.74	197.56	198.59	199.83	201.31	203.04	205.02	207.27	209.80	212.63	215.76	219.23	206.23	213.85	221.86	230.26	239.08	257.85	267.57	277.78	288.50	299.76	
Per Unit Cost of Generation		Unit	Year-->																									
Per unit Variable Cost	Rs/kWh		8.00	5.98	6.19	6.40	6.62	6.85	7.09	7.33	7.59	7.85	8.12	8.40	8.69	8.99	9.30	9.62	9.95	10.29	10.64	11.01	11.39	11.78	12.19	12.61	13.04	13.49
O&M expn	Rs/kWh		1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation	Rs/kWh		0.47	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan	Rs/kWh		0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	
Int. on working capital	Rs/kWh		0.52	0.40	0.41	0.42	0.44	0.45	0.47	0.48	0.50	0.51	0.53	0.55	0.57	0.59	0.61	0.63	0.64	0.67	0.69	0.72	0.74	0.77	0.80	0.83	0.89	
Return on Equity	Rs/kWh		0.58	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	0.56	0.56	0.56	0.56	
Total COG	Rs/kWh		11.38	9.15	9.36	9.58	9.81	10.05	10.31	10.57	10.85	11.14	11.44	11.76	12.09	12.43	12.79	13.17	13.29	13.75	14.24	14.74	15.26	15.96	16.52	17.11	17.72	18.35
Variable Cost	5.98	Rs/kWh																										
Levelised Tariff (Fixed)	3.38	Rs/kWh																										
Levelised Tariff	9.36	Rs/kWh																										
Determination of AD for Biomass based Power Project																												
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 (Rs./Lakh)	685																											
Years	>	Unit	Year-->																									
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		18.08	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	19.73	-	-	-	-	-	-	-	
Accelerated Depreciation		Unit	Year-->																									
Opening	%		100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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%	0.99%	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	%		70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Accelerated Depreciation	Rs Lakh		205.48	239.73	95.89	57.53	34.52	20.71	12.43	7.46	4.47	2.68	1.61	0.97	0.58	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Net Depreciation Benefit	Rs Lakh		187.40	203.56	59.73	21.37	-1.64	-15.45	-23.74	-28.71	-31.69	-33.48	-34.55	-35.20	-35.58	-35.82	-35.96	-36.04	-36.09	-19.68	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Tax Benefit	Rs Lakh		65.48	71.13	20.87	7.47	-0.57	-5.40	-8.29	-10.03	-11.07	-11.70	-12.07	-12.30	-12.43	-12.52	-12.56	-12.59	-12.61	-6.88	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		2.12	1.15	0.34	0.12	-0.01	-0.09	-0.13	-0.18	-0.19	-0.20	-0.20	-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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	
Tax Benefit Levelised	9.02	Rs Lakh																										
Electricity Generation (Levelised)	5.89	MU																										
Levelised benefit	0.15	Rs/kWh																										

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Tamil Nadu	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	685	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	685	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	479	
			Total Equity Amount	Rs Lacs	205	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	479	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	205	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b><u>For Variable Charges</u></b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b><u>Heat Rate</u></b>	After Stabilization Period	Kcal/kWh	4,125.00	
			During Stabilization Period	Kcal/kWh	4,125.00	
		Base Price	Base Price	Rs/MT		3,918
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	





Assumption for Biomass Based Rankine Cycle Project Parameters				State	Telangana
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	12.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	685
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	685
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	479
			Total Equity Amount	Rs Lacs	205
		Debt Component	Loan Amount	Rs Lacs	479
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	205
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	3,983
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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-->																									
Biomass Cost		Rs. Lakh	371.67	384.48	397.72	411.43	425.60	440.27	455.44	471.13	487.37	504.16	521.53	539.50	558.09	577.32	597.21	617.79	639.08	661.10	683.88	707.44	731.82	757.04	783.12	810.10	838.02	
Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78	
Depreciation		Rs Lakh	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	
Interest on term loan		Rs Lakh	49.36	45.96	42.55	39.15	35.74	32.34	28.93	25.53	22.13	18.72	15.32	11.91	8.51	5.11	1.70	-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	24.70	25.48	26.29	27.14	28.02	28.93	29.88	30.87	31.89	32.96	34.06	35.22	36.41	37.65	38.95	40.04	41.48	42.99	44.54	46.16	47.98	49.72	51.53	53.41	55.36	
Return on Equity		Rs Lakh	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	
Total Fixed Cost		Rs Lakh	195.58	195.83	196.26	196.88	197.71	198.74	199.99	201.48	203.21	205.19	207.45	209.99	212.82	215.97	219.44	226.44	234.08	242.22	250.50	259.33	268.10	277.04	286.12	295.41	305.05	
Per Unit Cost of Generation		Unit	Year-->																									
Per unit Variable Cost		Rs/kWh	8.05	6.02	6.23	6.44	6.67	6.90	7.13	7.38	7.63	7.90	8.17	8.45	8.74	9.04	9.35	9.68	10.01	10.36	10.71	11.08	11.46	11.86	12.27	12.69	13.13	13.58
O&M expn		Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation		Rs/kWh	0.47	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan		Rs/kWh	0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	
Int. on working capital		Rs/kWh	0.53	0.40	0.41	0.43	0.44	0.45	0.47	0.48	0.50	0.52	0.53	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.70	0.72	0.75	0.78	0.80	0.83	0.86	0.90
Return on Equity		Rs/kWh	0.58	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	0.56	0.56	0.56	0.56	
Total COG		Rs/kWh	11.43	9.19	9.40	9.62	9.86	10.10	10.35	10.62	10.90	11.19	11.49	11.81	12.14	12.49	12.85	13.23	13.66	14.13	14.62	15.14	15.69	16.27	16.87	17.49	18.14	
Variable Cost		6.02	Rs/kWh																									
Levelised Tariff (Fixed)		3.38	Rs/kWh																									
Levelised Tariff		9.40	Rs/kWh																									
Determination of AD for Biomass based Power Project																												
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 (Rs./Lakh)		685																										
Years	>	Unit	Year-->																									
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%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	
Book Depreciation	Rs Lakh	18.08	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	
Accelerated Depreciation			Year-->																									
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	0%	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%	0.00%	
Closing	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	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	Rs Lakh	205.48	239.73	95.89	57.53	34.52	20.71	12.43	7.46	4.47	2.68	1.61	0.97	0.58	0.35	0.21	0.13	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	187.40	203.56	59.73	21.37	-1.64	-15.45	-23.74	-28.71	-31.69	-33.48	-34.55	-35.20	-35.58	-35.82	-35.96	-36.04	-36.09	-19.68	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00	
Tax Benefit	Rs Lakh	65.48	-71.13	20.87	7.47	-0.57	-5.40	-8.29	-10.03	-11.07	-11.70	-12.07	-12.30	-12.43	-12.52	-12.56	-12.59	-12.61	-6.88	0.01	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	6.17	
Per unit benefit	Rs/Unit	2.12	1.15	0.34	0.12	-0.01	-0.09	-0.13	-0.18	-0.19	-0.20	-0.20	-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	0.00	
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	0.13	
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	0.13	
Tax Benefit Levelised	9.02	Rs Lakh																										
Electricity Generation (Levelised)	5.89	MU																										
Levelised benefit	0.15	Rs/kWh																										

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Uttar Pradesh	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	685	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	685	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	479	
			Total Equity Amount	Rs Lacs	205	
		Debt Component	Loan Amount	Rs Lacs	479	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	205	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00	
			During Stabilization Period	Kcal/kWh	4,125.00	
		Base Price	Base Price	Rs/MT		4,053
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
Units Generation		Unit	Year-->																								
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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	

Variable Cost		Unit	Year-->																								
Biomass Cost		Rs. Lakh	378.21	391.24	404.72	418.67	433.09	448.01	463.45	479.42	495.94	513.03	530.71	548.99	567.91	587.48	607.72	628.66	650.32	672.73	695.91	719.89	744.69	770.35	796.90	824.36	852.76

  

Fixed Cost		Unit	Year-->																								
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.51	152.21	160.20	168.61	177.46	186.78
Depreciation		Rs Lakh	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96
Interest on term loan		Rs Lakh	49.36	45.96	42.55	39.15	35.74	32.34	28.93	25.53	22.13	18.72	15.32	11.91	8.51	5.11	1.70	-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	25.06	25.86	26.68	27.54	28.43	29.36	30.32	31.33	32.37	33.45	34.57	35.74	36.96	38.22	39.53	40.64	42.11	43.63	45.21	46.85	48.69	50.46	52.29	54.20	56.17
Return on Equity		Rs Lakh	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86
Total Fixed Cost		Rs Lakh	195.94	196.20	196.65	197.28	198.12	199.17	200.44	201.94	203.68	205.69	207.96	210.51	213.36	216.53	220.02	207.04	214.70	222.73	231.17	240.02	258.82	268.57	278.82	289.57	300.87

Per Unit Cost of Generation		Unit	Levillised tariff corresponding to Useful life																									
Per unit Variable Cost		Rs/kWh	8.19	6.13	6.34	6.56	6.78	7.02	7.26	7.51	7.77	8.04	8.31	8.60	8.90	9.20	9.52	9.85	10.19	10.54	10.90	11.28	11.67	12.07	12.48	12.91	13.36	13.82
O&M expn		Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation		Rs/kWh	0.47	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan		Rs/kWh	0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	
Int. on working capital		Rs/kWh	0.54	0.41	0.42	0.43	0.45	0.46	0.48	0.49	0.51	0.52	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.68	0.71	0.73	0.76	0.79	0.82	0.85	0.88	0.91
Total COG		Rs/kWh	11.58	9.30	9.52	9.74	9.98	10.23	10.49	10.76	11.04	11.34	11.64	11.97	12.31	12.66	13.03	13.41	13.84	14.02	14.51	15.02	15.55	16.26	16.83	17.43	18.05	18.69

Variable Cost	6.13	Rs/kWh
Levelised Tariff (Fixed)	3.39	Rs/kWh
<b>Levelised Tariff</b>	<b>9.52</b>	<b>Rs/kWh</b>

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	685

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	18.08	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	19.73	-	-	-	-	-	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	205.48	239.73	95.89	57.53	34.52	20.71	12.43	7.46	4.47	2.68	1.61	0.97	0.58	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit		Rs Lakh	187.40	203.56	59.73	21.37	-1.64	-15.45	-23.74	-28.71	-31.69	-33.48	-34.55	-35.20	-35.58	-35.82	-35.96	-36.04	-36.09	-19.68	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit		Rs Lakh	65.48	71.13	20.87	7.47	-0.57	-5.40	-8.29	-10.03	-11.07	-11.70	-12.07	-12.30	-12.43	-12.52	-12.56	-12.59	-12.61	-6.88	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	
Per unit benefit		Rs/Unit	2.12	1.15	0.34	0.12	-0.01	-0.09	-0.13	-0.16	-0.18	-0.19	-0.20	-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	
Discounting Factor			1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levillised	9.02	Rs Lakh
Electricity Generation (Levillised)	5.89	MU
<b>Levillised benefit</b>	<b>0.15</b>	<b>Rs/kWh</b>

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Others	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	685	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	685	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	479	
			Total Equity Amount	Rs Lacs	205	
		Debt Component	Loan Amount	Rs Lacs	479	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	205	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For Variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00	
			During Stabilization Period	Kcal/kWh	4,125.00	
		Base Price	Base Price	Rs/MT		4,260
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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-->																									
Biomass Cost		Rs. Lakh	397.48	411.18	425.35	440.00	455.16	470.85	487.07	503.85	521.21	539.17	557.75	576.97	596.85	617.42	638.69	660.70	683.46	707.01	731.37	756.58	782.64	809.61	837.51	866.37	896.22	
Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78	
Depreciation		Rs Lakh	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	31.96	
Interest on term loan		Rs Lakh	49.36	45.96	42.55	39.15	35.74	32.34	28.93	25.53	22.13	18.72	15.32	11.91	8.51	5.11	1.70	-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	26.13	26.96	27.82	28.72	29.65	30.62	31.63	32.68	33.77	34.90	36.07	37.29	38.56	39.87	41.24	42.61	43.94	45.53	47.17	48.88	50.79	52.63	54.54	56.52	58.58	
Return on Equity		Rs Lakh	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	
Total Fixed Cost		Rs Lakh	197.01	197.31	197.79	198.47	199.34	200.43	201.74	203.29	205.08	207.13	209.46	212.06	214.97	218.19	221.74	226.82	233.13	240.05	247.62	255.92	264.92	274.67	285.17	296.43	308.47	
Per Unit Cost of Generation		Unit	Year-->																									
Per unit Variable Cost		Rs/kWh	8.61	6.44	6.66	6.89	7.13	7.38	7.63	7.89	8.16	8.45	8.74	9.04	9.35	9.67	10.00	10.35	10.71	11.07	11.46	11.85	12.26	12.68	13.12	13.57	14.04	14.52
O&M expn		Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation		Rs/kWh	0.47	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan		Rs/kWh	0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	
Int. on working capital		Rs/kWh	0.56	0.42	0.44	0.45	0.46	0.48	0.50	0.51	0.53	0.55	0.56	0.58	0.60	0.62	0.65	0.67	0.69	0.71	0.74	0.76	0.79	0.82	0.85	0.88	0.91	0.95
Return on Equity		Rs/kWh	0.58	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	0.56	0.56	0.56	0.56	0.56
Total COG		Rs/kWh	12.02	9.63	9.86	10.10	10.34	10.60	10.88	11.16	11.46	11.77	12.09	12.43	12.78	13.15	13.54	13.94	14.09	14.58	15.10	15.63	16.18	16.91	17.51	18.12	18.77	19.44
Variable Cost		6.44	Rs/kWh																									
Levelised Tariff (Fixed)		3.41	Rs/kWh																									
Levelised Tariff		9.85	Rs/kWh																									
Determination of AD for Biomass based Power Project																												
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 (Rs./Lakh)		685																										
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	18.08	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	36.16	19.73	-	-	-	-	-	-	-	
Accelerated Depreciation			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Opening		%	100%	70%	35%	21%	13%	6%	5%	3%	2%	1%	0%	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		%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Accelerated Depreciation		Rs Lakh	205.48	239.73	95.89	57.53	34.52	20.71	12.43	7.46	4.47	2.68	1.61	0.97	0.58	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Net Depreciation Benefit		Rs Lakh	187.40	203.56	59.73	21.37	-1.64	-15.45	-23.74	-28.71	-31.69	-33.48	-34.55	-35.20	-35.58	-35.82	-35.96	-36.04	-36.09	-19.68	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Tax Benefit		Rs Lakh	65.48	71.13	20.87	7.47	-0.57	-5.40	-8.29	-10.03	-11.07	-11.70	-12.07	-12.30	-12.43	-12.52	-12.56	-12.59	-12.61	-6.88	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	2.12	1.15	0.34	0.12	-0.01	-0.09	-0.13	-0.18	-0.19	-0.20	-0.20	-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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	
Tax Benefit Levelised		9.02	Rs Lakh																									
Electricity Generation (Levelised)		5.89	MU																									
Levelised benefit		0.15	Rs/kWh																									

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Andhra Pradesh	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	697	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	697	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	488	
			Total Equity Amount	Rs Lacs	209	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	488	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	209	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b><u>For Variable Charges</u></b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b><u>Heat Rate</u></b>	After Stabilization Period	Kcal/kWh	4,125.00	
			During Stabilization Period	Kcal/kWh	4,125.00	
		Base Price	Base Price	Rs/MT		3,983
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity	MW		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
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	6.31
Variable Cost		Unit	Year-->																									
Biomass Cost	Rs. Lakh		371.67	384.48	397.72	411.43	425.60	440.27	455.44	471.13	487.37	504.16	521.53	539.50	558.09	577.32	597.21	617.79	639.08	661.10	683.88	707.44	731.82	757.04	783.12	810.10	838.02	
Fixed Cost		Unit	Year-->																									
O&M Expenses	Rs Lakh		54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78	
Depreciation	Rs Lakh		32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	
Interest on term loan	Rs Lakh		50.28	46.80	43.33	39.87	36.40	32.93	29.47	26.00	22.53	19.07	15.60	12.13	8.67	5.20	1.73	-	-	-	-	-	-	-	-	-	-	
Interest on working Capital	Rs Lakh		24.73	25.51	26.32	27.17	28.05	28.96	29.91	30.89	31.92	32.98	34.09	35.24	36.43	37.67	38.97	40.05	41.50	43.00	44.56	46.17	48.00	49.74	51.55	53.42	55.37	
Return on Equity	Rs Lakh		35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	
Total Fixed Cost	Rs Lakh		197.74	197.93	198.30	198.86	199.62	200.58	201.78	203.20	204.86	206.79	208.98	211.45	214.22	217.30	220.71	207.35	214.98	222.99	231.40	240.23	259.18	268.92	279.13	289.86	301.13	

  

Per Unit Cost of Generation		Unit	Levillised tariff corresponding to Useful life																									
Per unit Variable Cost	Rs/kWh		7.87	5.89	6.09	6.30	6.52	6.74	6.98	7.22	7.46	7.72	7.99	8.26	8.55	8.84	9.15	9.46	9.79	10.13	10.47	10.84	11.21	11.59	11.99	12.41	12.84	13.28
O&M expn	Rs/kWh		1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96
Depreciation	Rs/kWh		0.46	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan	Rs/kWh		0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	
Int. on working capital	Rs/kWh		0.52	0.39	0.40	0.42	0.43	0.44	0.46	0.47	0.49	0.50	0.52	0.54	0.56	0.58	0.60	0.62	0.63	0.66	0.68	0.70	0.73	0.76	0.79	0.82	0.85	0.88
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	0.56	0.56	0.56	0.56	
Total COG	Rs/kWh		11.20	9.02	9.23	9.44	9.67	9.90	10.15	10.41	10.68	10.97	11.26	11.57	11.90	12.24	12.59	12.96	13.07	13.53	14.01	14.50	15.01	15.70	16.25	16.83	17.43	18.05

  

Variable Cost	5.89	Rs/kWh
Levillised Tariff (Fixed)	3.33	Rs/kWh
Levillised Tariff	9.22	Rs/kWh

  

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	697

  

Years	>	Unit	Year-->																								
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		18.41	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	20.09	-	-	-	-	-	-	-

  

Accelerated Depreciation		Year-->																									
Opening	%		100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%		70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh		209.25	244.12	97.65	58.59	35.15	21.09	12.66	7.59	4.56	2.73	1.64	0.98	0.59	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00

  

Net Depreciation Benefit	Rs Lakh		190.83	207.29	60.82	21.76	-1.67	-15.74	-24.17	-29.23	-32.27	-34.09	-35.19	-35.84	-36.24	-36.47	-36.61	-36.70	-36.75	-20.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh		66.68	72.44	21.25	7.60	-0.58	-5.50	-8.45	-10.22	-11.28	-11.91	-12.30	-12.53	-12.66	-12.75	-12.79	-12.82	-12.84	-7.00	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		2.11	1.15	0.34	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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

  

Tax Benefit Levillised	9.18	Rs Lakh
Electricity Generation (Levillised)	6.03	MU
Levillised benefit	0.15	Rs/kWh



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Haryana	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	697	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	697	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	488	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	488	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	209	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
		4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%
MAT Rate	%				17.47%	
<u>Depreciation</u>	Depreciation Rate (Power Plant)			%	4.67%	
	Depreciation Rate 16th year onwards			%	2.00%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months	1.50	
		<b><u>For Variable Charges</u></b>				
		Biomass Stock		Months	4.00	
		Interest on Working Capital		%	11.90%	
6	Fuel Related Assumptions	<b><u>Heat Rate</u></b>	After Stabilization Period	Kcal/kWh	4,125.00	
			During Stabilization Period	Kcal/kWh	4,125.00	
		Base Price	Base Price	Rs/MT	4,534	
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00	
			Biomass Price Escalation Factor	%	3.45%	
			Specific Fuel Consumption	kg/kWh	-	
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Maharashtra	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	697	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	697	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	488	
			Total Equity Amount	Rs Lacs	209	
		Debt Component	Loan Amount	Rs Lacs	488	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	209	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00	
			During Stabilization Period	Kcal/kWh	4,125.00	
		Base Price	Base Price	Rs/MT		4,637
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
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		
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		
Variable Cost		Unit	Year-->																									
Biomass Cost		Rs. Lakh	432.68	447.59	463.01	478.97	495.47	512.54	530.20	548.47	567.37	586.92	607.15	628.07	649.71	672.09	695.25	719.21	743.99	769.63	796.14	823.58	851.95	881.31	911.68	943.09	975.59	
Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78	
Depreciation		Rs Lakh	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	
Interest on term loan		Rs Lakh	50.28	46.80	43.33	39.87	36.40	32.93	29.47	26.00	22.53	19.07	15.60	12.13	8.67	5.20	1.73	-	-	-	-	-	-	-	-	-	-	
Interest on working Capital		Rs Lakh	28.11	29.01	29.94	30.91	31.91	32.96	34.05	35.17	36.35	37.56	38.83	40.14	41.50	42.92	44.39	45.67	47.31	49.01	50.77	52.60	54.65	56.62	58.66	60.79	62.99	
Return on Equity		Rs Lakh	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	
Total Fixed Cost		Rs Lakh	201.12	201.42	201.91	202.60	203.48	204.59	205.91	207.48	209.29	211.37	213.72	216.36	219.29	222.55	226.14	230.02	234.19	238.66	243.44	248.54	253.97	259.74	265.83	272.23	278.94	
Per Unit Cost of Generation		Unit	Levillised tariff corresponding to Useful life																									
Per unit Variable Cost		Rs/kWh	9.16	6.86	7.09	7.34	7.59	7.85	8.12	8.40	8.69	8.99	9.30	9.62	9.95	10.29	10.65	11.02	11.40	11.79	12.19	12.61	13.05	13.50	13.96	14.44	14.94	15.46
O&M expn		Rs/kWh	1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96
Depreciation		Rs/kWh	0.46	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan		Rs/kWh	0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	
Int. on working capital		Rs/kWh	0.59	0.44	0.46	0.47	0.49	0.50	0.52	0.54	0.56	0.58	0.59	0.61	0.64	0.66	0.68	0.70	0.72	0.75	0.78	0.80	0.83	0.86	0.90	0.93	0.96	1.00
Return on Equity		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	0.56	0.56	0.56	0.56	
Total COG		Rs/kWh	12.56	10.04	10.28	10.53	10.80	11.07	11.36	11.66	11.98	12.30	12.65	13.00	13.38	13.77	14.17	14.60	14.77	15.28	15.82	16.38	16.96	17.71	18.33	18.98	19.65	20.35
Variable Cost		6.86	Rs/kWh																									
Levillised Tariff (Fixed)		3.40	Rs/kWh																									
Levillised Tariff		10.26	Rs/kWh																									
Determination of AD for Biomass based Power Project																												
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 (Rs./Lakh)		697																										
Years	>	Unit	Levillised tariff corresponding to Useful life																									
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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Book Depreciation		Rs Lakh	18.41	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	20.09	-	-	-	-	-	-	-	
Accelerated Depreciation		Unit	Levillised tariff corresponding to Useful life																									
Opening		%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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		%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Accelerated Depreciation		Rs Lakh	209.25	244.12	97.65	58.59	35.15	21.09	12.66	7.59	4.56	2.73	1.64	0.98	0.59	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Net Depreciation Benefit		Rs Lakh	190.83	207.29	60.82	21.76	-1.67	-15.74	-24.17	-29.23	-32.27	-34.09	-35.19	-35.84	-36.24	-36.47	-36.61	-36.70	-36.75	-20.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Tax Benefit		Rs Lakh	66.68	72.44	21.25	7.60	-0.58	-5.50	-8.45	-10.22	-11.28	-11.91	-12.30	-12.53	-12.66	-12.75	-12.79	-12.82	-12.84	-7.00	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	2.11	1.15	0.34	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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	
Tax Benefit Levillised		9.18	Rs Lakh																									
Electricity Generation (Levillised)		6.03	MU																									
Levillised benefit		0.15	Rs/kWh																									

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Punjab
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	10.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	697
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	697
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	488
			Total Equity Amount	Rs Lacs	209
		Debt Component	Loan Amount	Rs Lacs	488
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	209
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	4,742
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																											
Units Generation		Unit	Year-->																										
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	
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	6.31	6.31
Variable Cost		Unit	Year-->																										
Biomass Cost	Rs. Lakh		442.52	457.76	473.54	489.85	506.73	524.19	542.25	560.94	580.27	600.26	620.94	642.34	664.47	687.37	711.05	735.55	760.90	787.12	814.24	842.29	871.32	901.34	932.40	964.52	997.76		
Fixed Cost		Unit	Year-->																										
O&M Expenses	Rs Lakh		54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78		
Depreciation	Rs Lakh		32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	
Interest on term loan	Rs Lakh		50.26	46.80	43.33	39.87	36.40	32.93	29.47	26.00	22.53	19.07	15.60	12.13	8.67	5.20	1.73	-	-	-	-	-	-	-	-	-	-	-	
Interest on working Capital	Rs Lakh		28.65	29.57	30.52	31.51	32.54	33.60	34.71	35.86	37.06	38.30	39.59	40.93	42.32	43.77	45.27	46.82	48.42	49.98	51.77	53.64	55.72	57.73	59.81	61.97	64.22		
Return on Equity	Rs Lakh		35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	
Total Fixed Cost	Rs Lakh		201.67	201.99	202.49	203.20	204.11	205.23	206.58	208.17	210.01	212.11	214.48	217.15	220.11	223.40	227.02	231.87	237.04	242.59	248.58	254.97	261.77	268.99	276.64	284.73	293.26	302.24	
Per Unit Cost of Generation		Unit	Levillised tariff corresponding to Useful life																										
Per unit Variable Cost	Rs/kWh		9.37	7.01	7.25	7.50	7.76	8.03	8.31	8.59	8.89	9.19	9.51	9.84	10.18	10.53	10.89	11.27	11.65	12.06	12.47	12.90	13.35	13.81	14.28	14.77	15.28	15.81	
O&M expn	Rs/kWh		1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96	
Depreciation	Rs/kWh		0.46	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan	Rs/kWh		0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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		0.60	0.45	0.47	0.48	0.50	0.52	0.53	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.69	0.72	0.74	0.76	0.79	0.82	0.85	0.88	0.91	0.95	0.98	1.02	
Return on Equity	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	0.56	0.56	0.56	0.56	0.56	
Total COG	Rs/kWh		12.78	10.21	10.45	10.71	10.98	11.26	11.56	11.86	12.19	12.52	12.87	13.24	13.62	14.02	14.43	14.86	15.04	15.57	16.11	16.68	17.27	18.03	18.67	19.33	20.01	20.72	
Variable Cost		7.01	Rs/kWh																										
Levillised Tariff (Fixed)		3.42	Rs/kWh																										
Levillised Tariff		10.43	Rs/kWh																										
Determination of AD for Biomass based Power Project																													
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 (Rs./Lakh)		697																											
Years	>	Unit	Year-->																										
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%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Book Depreciation	Rs Lakh		18.41	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	20.09	-	-	-	-	-	-	-	
Accelerated Depreciation			Year-->																										
Opening	%		100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	0%	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%	0.00%	
Closing	%		70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	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	Rs Lakh		209.25	244.12	97.65	58.59	35.15	21.09	12.66	7.59	4.56	2.73	1.64	0.98	0.59	0.35	0.21	0.13	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		190.83	207.29	60.82	21.76	-1.67	-15.74	-24.17	-29.23	-32.27	-34.09	-35.19	-35.84	-36.24	-36.47	-36.61	-36.70	-36.75	-20.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00	
Tax Benefit	Rs Lakh		66.68	72.44	21.25	7.60	-0.58	-5.50	-8.45	-10.22	-11.28	-11.91	-12.30	-12.53	-12.66	-12.75	-12.79	-12.82	-12.84	-7.00	0.01	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	6.31	
Per unit benefit	Rs/Unit		2.11	1.15	0.34	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	0.00	
Discounting Factor			1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	0.12	
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	0.12	
Tax Benefit Levillised		9.18	Rs Lakh																										
Electricity Generation (Levillised)		6.03	MU																										
Levillised benefit		0.15	Rs/kWh																										

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Rajasthan
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	10.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	697
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	697
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	488
			Total Equity Amount	Rs Lacs	209
		Debt Component	Loan Amount	Rs Lacs	488
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	209
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	3,958
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
Units Generation		Unit	Year-->																								
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		
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		
Variable Cost		Unit	Year-->																								
Biomass Cost		Rs. Lakh	369.32	382.05	395.21	408.83	422.92	437.49	452.56	468.16	484.29	500.98	518.24	536.09	554.57	573.67	593.44	613.89	635.04	656.92	679.56	702.97	727.20	752.25	778.17	804.99	832.72
Fixed Cost		Unit	Year-->																								
O&M Expenses	Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78	
Depreciation	Rs Lakh	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55
Interest on term loan	Rs Lakh	50.28	46.80	43.33	39.87	36.40	32.93	29.47	26.00	22.53	19.07	15.60	12.13	8.67	5.20	1.73	-	-	-	-	-	-	-	-	-	-	-
Interest on working Capital	Rs Lakh	24.60	25.38	26.19	27.02	27.90	28.80	29.75	30.73	31.75	32.80	33.90	35.05	36.24	37.47	38.76	39.84	41.27	42.77	44.32	45.93	47.74	49.47	51.27	53.14	55.08	
Return on Equity	Rs Lakh	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50
Total Fixed Cost	Rs Lakh	197.61	197.79	198.16	198.71	199.47	200.43	201.62	203.03	204.69	206.61	208.80	211.26	214.03	217.10	220.51	207.13	214.76	222.76	231.17	239.99	258.93	268.65	278.86	289.58	300.83	

  

		Levillised tariff corresponding to Useful life																									
Per Unit Cost of Generation		Unit	Year-->																								
Per unit Variable Cost	Rs/kWh	7.82	5.85	6.05	6.26	6.48	6.70	6.93	7.17	7.42	7.67	7.94	8.21	8.49	8.79	9.09	9.40	9.73	10.06	10.41	10.77	11.14	11.52	11.92	12.33	12.75	13.19
O&M expn	Rs/kWh	1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96
Depreciation	Rs/kWh	0.46	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Int. on term loan	Rs/kWh	0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	0.51	0.39	0.40	0.41	0.43	0.44	0.46	0.47	0.49	0.50	0.52	0.54	0.55	0.57	0.59	0.61	0.63	0.65	0.68	0.70	0.73	0.76	0.78	0.81	0.84	0.87
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	0.56	0.56	0.56	0.56	0.56
Total COG	Rs/kWh	11.15	8.98	9.19	9.40	9.62	9.86	10.11	10.36	10.63	10.91	11.21	11.52	11.84	12.18	12.53	12.90	13.01	13.46	13.94	14.43	14.94	15.62	16.17	16.75	17.34	17.96

  

Variable Cost	5.85	Rs/kWh
Levelised Tariff (Fixed)	3.33	Rs/kWh
Levelised Tariff	9.18	Rs/kWh

  

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	697

  

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	18.41	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	20.09	-	-	-	-	-	-	-
Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	209.25	244.12	97.65	58.59	35.15	21.09	12.66	7.59	4.56	2.73	1.64	0.98	0.59	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	190.83	207.29	60.82	21.76	-1.67	-15.74	-24.17	-29.23	-32.27	-34.09	-35.19	-35.84	-36.24	-36.47	-36.61	-36.70	-36.75	-20.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	66.68	72.44	21.25	7.60	-0.58	-5.50	-8.45	-10.22	-11.28	-11.91	-12.30	-12.53	-12.66	-12.75	-12.79	-12.82	-12.84	-7.00	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	2.11	1.15	0.34	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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

  

Tax Benefit Levillised	9.18	Rs Lakh
Electricity Generation (Levillised)	6.03	MU
Levillised benefit	0.15	Rs/kWh



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Tamil Nadu
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	10.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	697
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	697
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	488
			Total Equity Amount	Rs Lacs	209
		Debt Component	Loan Amount	Rs Lacs	488
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	209
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	3,918
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
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		365.63	378.23	391.27	404.75	418.69	433.12	448.04	463.48	479.45	495.97	513.06	530.74	549.03	567.95	587.52	607.76	628.70	650.37	672.77	695.96	719.94	744.74	770.40	796.95	824.41
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		54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78
Depreciation	Rs Lakh		32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55
Interest on term loan	Rs Lakh		50.26	46.80	43.33	39.87	36.40	32.93	29.47	26.00	22.53	19.07	15.60	12.13	8.67	5.20	1.73	-	-	-	-	-	-	-	-	-	-
Interest on working Capital	Rs Lakh		24.40	25.17	25.97	26.80	27.66	28.56	29.50	30.47	31.48	32.53	33.62	34.75	35.93	37.16	38.43	39.50	40.92	42.41	43.94	45.54	47.34	49.06	50.84	52.70	54.62
Return on Equity	Rs Lakh		35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50
Total Fixed Cost	Rs Lakh		197.41	197.58	197.94	198.49	199.23	200.19	201.37	202.77	204.43	206.33	208.51	210.97	213.72	216.79	220.18	206.79	214.41	222.40	230.79	239.60	258.52	268.23	278.43	289.13	300.37
Levillised 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	7.74	5.79	5.99	6.20	6.41	6.63	6.86	7.10	7.34	7.60	7.86	8.13	8.41	8.70	9.00	9.31	9.63	9.96	10.30	10.66	11.03	11.41	11.80	12.21	12.63	13.06
O&M expn	Rs/kWh	1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96
Depreciation	Rs/kWh	0.46	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Int. on term loan	Rs/kWh	0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	0.51	0.39	0.40	0.41	0.42	0.44	0.45	0.47	0.48	0.50	0.52	0.53	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.70	0.72	0.75	0.78	0.81	0.83	0.87
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	0.56	0.71	0.71	0.71	0.71
Total COG	Rs/kWh	11.07	8.92	9.12	9.34	9.56	9.79	10.03	10.29	10.56	10.84	11.13	11.43	11.75	12.09	12.43	12.80	12.91	13.36	13.83	14.32	14.82	15.50	16.05	16.62	17.21	17.82
Variable Cost		5.79	Rs/kWh																								
Levelised Tariff (Fixed)		3.32	Rs/kWh																								
Levelised Tariff		9.12	Rs/kWh																								
Determination of AD for Biomass based Power Project																											
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 (Rs./Lakh)		697																									
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%	5.28%	5.28%	5.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	18.41	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	20.09	-	-	-	-	-	
Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Accelerated Depreciation	Rs Lakh	209.25	244.12	97.65	58.59	35.15	21.09	12.66	7.59	4.56	2.73	1.64	0.98	0.59	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Net Depreciation Benefit	Rs Lakh	190.83	207.29	60.82	21.76	-1.67	-15.74	-24.17	-29.23	-32.27	-34.09	-35.19	-35.84	-36.24	-36.47	-36.61	-36.70	-36.75	-20.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Tax Benefit	Rs Lakh	66.68	72.44	21.25	7.60	-0.58	-5.50	-8.45	-10.22	-11.28	-11.91	-12.30	-12.53	-12.66	-12.75	-12.79	-12.82	-12.84	-7.00	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	2.11	1.15	0.34	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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	
Tax Benefit Levillised		9.18	Rs Lakh																								
Electricity Generation (Levillised)		6.03	MU																								
Levillised benefit		0.15	Rs/kWh																								

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Telangana	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	697	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	697	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	488	
			Total Equity Amount	Rs Lacs	209	
		Debt Component	Loan Amount	Rs Lacs	488	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	209	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00	
			During Stabilization Period	Kcal/kWh	4,125.00	
		Base Price	Base Price	Rs/MT		3,983
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
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-->																									
Biomass Cost	Rs. Lakh			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
			371.67	384.48	397.72	411.43	425.60	440.27	455.44	471.13	487.37	504.16	521.53	539.50	558.09	577.32	597.21	617.79	639.08	661.10	683.88	707.44	731.82	757.04	783.12	810.10	838.02	

Fixed Cost		Unit	Year-->																									
O&M Expenses	Rs Lakh			1	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		54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78	
Depreciation	Rs Lakh		32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	
Interest on term loan	Rs Lakh		50.26	46.80	43.33	39.87	36.40	32.93	29.47	26.00	22.53	19.07	15.60	12.13	8.67	5.20	1.73	-	-	-	-	-	-	-	-	-	-	
Interest on working capital	Rs Lakh		24.73	25.51	26.32	27.17	28.05	28.96	29.91	30.89	31.92	32.98	34.09	35.24	36.43	37.67	38.97	40.05	41.50	43.00	44.56	46.17	48.00	49.74	51.55	53.42	55.37	
Return on Equity	Rs Lakh		35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>197.74</b>	<b>197.93</b>	<b>198.30</b>	<b>198.86</b>	<b>199.62</b>	<b>200.58</b>	<b>201.78</b>	<b>203.20</b>	<b>204.86</b>	<b>206.79</b>	<b>208.98</b>	<b>211.45</b>	<b>214.22</b>	<b>217.30</b>	<b>220.71</b>	<b>207.35</b>	<b>214.98</b>	<b>222.99</b>	<b>231.40</b>	<b>240.23</b>	<b>259.18</b>	<b>268.92</b>	<b>279.13</b>	<b>289.86</b>	<b>301.13</b>	

Per Unit Cost of Generation		Unit	Levallised tariff corresponding to Useful life																									
Per unit Variable Cost	Rs/kWh		1	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 expn	Rs/kWh		1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96
Depreciation	Rs/kWh		0.46	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan	Rs/kWh		0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	
Int. on working capital	Rs/kWh		0.52	0.39	0.40	0.42	0.43	0.44	0.46	0.47	0.49	0.50	0.52	0.54	0.56	0.58	0.60	0.62	0.63	0.66	0.68	0.70	0.73	0.76	0.79	0.82	0.85	0.88
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	0.56	0.56	0.56	0.56	
<b>Total COG</b>	<b>Rs/kWh</b>		<b>11.20</b>	<b>9.02</b>	<b>9.23</b>	<b>9.44</b>	<b>9.67</b>	<b>9.90</b>	<b>10.15</b>	<b>10.41</b>	<b>10.68</b>	<b>10.97</b>	<b>11.26</b>	<b>11.57</b>	<b>11.90</b>	<b>12.24</b>	<b>12.59</b>	<b>12.96</b>	<b>13.07</b>	<b>13.53</b>	<b>14.01</b>	<b>14.50</b>	<b>15.01</b>	<b>15.70</b>	<b>16.25</b>	<b>16.83</b>	<b>17.43</b>	<b>18.05</b>

Variable Cost	5.89	Rs/kWh
Levillised Tariff (Fixed)	3.33	Rs/kWh
<b>Levillised Tariff</b>	<b>9.22</b>	<b>Rs/kWh</b>

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	697

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	18.41	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	20.09	-	-	-	-	-	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	209.25	244.12	97.65	58.59	35.15	21.09	12.66	7.59	4.56	2.73	1.64	0.98	0.59	0.35	0.21	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	190.83	207.29	60.82	21.76	-1.67	-15.74	-24.17	-29.23	-32.27	-34.09	-35.19	-35.84	-36.24	-36.47	-36.61	-36.70	-36.75	-20.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	66.68	72.44	21.25	7.60	-0.58	-5.50	-8.45	-10.22	-11.28	-11.91	-12.30	-12.53	-12.66	-12.75	-12.79	-12.82	-12.84	-7.00	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	2.11	1.15	0.34	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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levillised	9.18	Rs Lakh
Electricity Generation (Levillised)	6.03	MU
<b>Levillised benefit</b>	<b>0.15</b>	<b>Rs/kWh</b>

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Uttar Pradesh
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	10.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	697
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	697
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	488
			Total Equity Amount	Rs Lacs	209
		Debt Component	Loan Amount	Rs Lacs	488
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	209
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	4,053
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																															
Units Generation		Unit	Year-->																														
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
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	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost		Unit	Year-->																														
Biomass Cost		Rs. Lakh	378.21	391.24	404.72	418.67	433.09	448.01	463.45	479.42	495.94	513.03	530.71	548.99	567.91	587.48	607.72	628.66	650.32	672.73	695.91	719.89	744.69	770.35	796.90	824.36	852.76						
Fixed Cost		Unit	Year-->																														
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78						
Depreciation		Rs Lakh	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	
Interest on term loan		Rs Lakh	50.26	46.80	43.33	39.87	36.40	32.93	29.47	26.00	22.53	19.07	15.60	12.13	8.67	5.20	1.73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest on working Capital		Rs Lakh	25.09	25.89	26.71	27.57	28.46	29.39	30.35	31.35	32.39	33.47	34.60	35.76	36.98	38.24	39.55	40.95	42.12	43.64	45.22	46.86	48.71	50.48	52.31	54.21	56.19						
Return on Equity		Rs Lakh	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	
Total Fixed Cost		Rs Lakh	198.10	198.30	198.68	199.26	200.03	201.01	202.22	203.66	205.34	207.28	209.49	211.98	214.77	217.87	221.30	207.95	215.60	223.64	232.07	240.92	259.90	269.65	279.90	290.65	301.94						
Per Unit Cost of Generation		Unit	Year-->																														
Per unit Variable Cost		Rs/kWh	8.01	5.99	6.20	6.41	6.63	6.86	7.10	7.34	7.60	7.86	8.13	8.41	8.70	9.00	9.31	9.63	9.96	10.30	10.66	11.03	11.41	11.80	12.21	12.63	13.06	13.51					
O&M expn		Rs/kWh	1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96					
Depreciation		Rs/kWh	0.46	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan		Rs/kWh	0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	0.00	0.00	0.00	0.00	
Int. on working capital		Rs/kWh	0.52	0.40	0.41	0.42	0.44	0.45	0.46	0.48	0.50	0.51	0.53	0.55	0.57	0.59	0.60	0.63	0.64	0.67	0.69	0.72	0.74	0.77	0.80	0.83	0.86	0.89					
RetE		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	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	
Total COG		Rs/kWh	11.35	9.13	9.34	9.56	9.79	10.03	10.28	10.55	10.82	11.11	11.41	11.73	12.06	12.40	12.76	13.13	13.25	13.72	14.20	14.70	15.22	15.92	16.48	17.06	17.66	18.29					
Variable Cost		5.99	Rs/kWh																														
Levelised Tariff (Fixed)		3.34	Rs/kWh																														
Levelised Tariff		9.33	Rs/kWh																														
Determination of AD for Biomass based Power Project																																	
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 (Rs./Lakh)		697																															
Years	>	Unit	Year-->																														
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%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
Book Depreciation		Rs Lakh	18.41	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	20.09	-	-	-	-	-	-	-	-	-	-		
Accelerated Depreciation			Year-->																														
Opening		%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	0%	0%	0%	0%	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%	0.00%	0.00%	0.00%	0.00%		
Closing		%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	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%	0.00%	0.00%	0.00%		
Accelerated Depreciation		Rs Lakh	209.25	244.12	97.65	58.59	35.15	21.09	12.66	7.59	4.56	2.73	1.64	0.98	0.59	0.35	0.21	0.13	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	190.83	207.29	60.82	21.76	-1.67	-15.74	-24.17	-29.23	-32.27	-34.09	-35.19	-35.84	-36.24	-36.47	-36.61	-36.70	-36.75	-20.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Tax Benefit		Rs Lakh	66.68	72.44	21.25	7.60	-0.58	-5.50	-8.45	-10.22	-11.28	-11.91	-12.30	-12.53	-12.66	-12.75	-12.79	-12.82	-12.84	-7.00	0.01	0.01	0.00	0.00	0.00	0.00	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	6.31	6.31	6.31	6.31		
Per unit benefit		Rs/Unit	2.11	1.15	0.34	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	0.00	0.00	0.00	0.00		
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13							
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13							
Tax Benefit Levelised		9.18	Rs Lakh																														
Electricity Generation (Levelised)		6.03	MU																														
Levelised benefit		0.15	Rs/kWh																														

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Others
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	10.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	697
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	697
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	488
			Total Equity Amount	Rs Lacs	209
		Debt Component	Loan Amount	Rs Lacs	488
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	209
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	4,260
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																												
Units Generation		Unit	Year-->																											
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	
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	6.31	6.31	6.31
Variable Cost		Unit	Year-->																											
Biomass Cost		Rs. Lakh	397.48	411.18	425.35	440.00	455.16	470.85	487.07	503.85	521.21	539.17	557.75	576.97	596.85	617.42	638.69	660.70	683.46	707.01	731.37	756.58	782.64	809.61	837.51	866.37	896.22	-	-	
Fixed Cost		Unit	Year-->																											
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78	-	-	
Depreciation		Rs Lakh	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	
Interest on term loan		Rs Lakh	50.28	46.80	43.33	39.87	36.40	32.93	29.47	26.00	22.53	19.07	15.60	12.13	8.67	5.20	1.73	-	-	-	-	-	-	-	-	-	-	-	-	
Interest on working Capital		Rs Lakh	26.16	26.99	27.85	28.75	29.68	30.65	31.66	32.70	33.79	34.92	36.09	37.31	38.58	39.89	41.26	42.63	43.96	45.34	46.79	48.29	49.84	51.45	53.11	54.83	56.59	58.40	-	
Return on Equity		Rs Lakh	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	35.50	
Total Fixed Cost		Rs Lakh	199.17	199.41	199.83	200.44	201.25	202.28	203.53	205.01	206.74	208.73	210.98	213.53	216.37	219.52	223.01	209.72	217.44	225.53	234.03	242.95	262.00	271.83	282.14	292.98	304.35	-	-	
Per Unit Cost of Generation		Unit	Year-->																											
Per unit Variable Cost		Rs/kWh	8.42	6.30	6.51	6.74	6.97	7.21	7.46	7.72	7.98	8.26	8.54	8.84	9.14	9.46	9.78	10.12	10.47	10.83	11.20	11.59	11.99	12.40	12.83	13.27	13.73	14.20	-	
O&M expn		Rs/kWh	1.37	0.87	0.91	0.96	1.01	1.06	1.12	1.18	1.24	1.31	1.37	1.45	1.52	1.60	1.69	1.77	1.87	1.97	2.07	2.18	2.29	2.41	2.54	2.67	2.81	2.96	-	
Depreciation		Rs/kWh	0.46	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
Int. on term loan		Rs/kWh	0.41	0.80	0.74	0.69	0.63	0.58	0.52	0.47	0.41	0.36	0.30	0.25	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	0.00	
Int. on working capital		Rs/kWh	0.55	0.41	0.43	0.44	0.45	0.47	0.48	0.50	0.52	0.53	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.70	0.72	0.75	0.77	0.80	0.83	0.86	0.89	0.93	-	
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	0.56	0.56	0.56	0.56	0.56	0.56	
Total COG		Rs/kWh	11.78	9.45	9.67	9.90	10.15	10.40	10.66	10.94	11.23	11.53	11.85	12.18	12.52	12.88	13.26	13.65	13.79	14.27	14.77	15.29	15.84	16.55	17.13	17.74	18.37	19.02	-	
Variable Cost		6.30																												
Levelised Tariff (Fixed)		3.36																												
Levelised Tariff		9.66																												
Determination of AD for Biomass based Power Project																														
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 (Rs./Lakh)		697																												
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%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
Book Depreciation		Rs Lakh	18.41	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	36.83	20.09	-	-	-	-	-	-	-		
Accelerated Depreciation																														
Opening		%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	0%	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%	0.00%		
Closing		%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	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		Rs Lakh	209.25	244.12	97.65	58.59	35.15	21.09	12.66	7.59	4.56	2.73	1.64	0.98	0.59	0.35	0.21	0.13	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	190.83	207.29	60.82	21.76	-1.67	-15.74	-24.17	-29.23	-32.27	-34.09	-35.19	-35.84	-36.24	-36.47	-36.61	-36.70	-36.75	-20.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00		
Tax Benefit		Rs Lakh	66.68	72.44	21.25	7.60	-0.58	-5.50	-8.45	-10.22	-11.28	-11.91	-12.30	-12.53	-12.66	-12.75	-12.79	-12.82	-12.84	-7.00	0.01	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	6.31		
Per unit benefit		Rs/Unit	2.11	1.15	0.34	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	0.00		
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	0.13	-		
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	-	-		
Tax Benefit Levelised		9.18																												
Electricity Generation (Levelised)		6.03																												
Levelised benefit		0.15																												



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Andhra Pradesh	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	744	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	744	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	521	
			Total Equity Amount	Rs Lacs	223	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	521	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	223	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b><u>For variable Charges</u></b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b><u>Heat Rate</u></b>	After Stabilization Period	Kcal/kWh	4,125.00	
			During Stabilization Period	Kcal/kWh	4,125.00	
		Base Price	Base Price	Rs/MT		3,983
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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-->																									
Biomass Cost		Rs. Lakh	371.67	384.48	397.72	411.43	425.60	440.27	455.44	471.13	487.37	504.16	521.53	539.50	558.09	577.32	597.21	617.79	639.08	661.10	683.88	707.44	731.82	757.04	783.12	810.10	838.02	
Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.26	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78	
Depreciation		Rs Lakh	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	
Interest on term loan		Rs Lakh	53.64	49.94	46.24	42.54	38.84	35.14	31.44	27.74	24.04	20.35	16.65	12.95	9.25	5.55	1.85	-	-	-	-	-	-	-	-	-	-	
Interest on working Capital		Rs Lakh	24.85	25.63	26.44	27.28	28.15	29.06	30.01	30.99	32.01	33.07	34.17	35.32	36.51	37.75	39.04	40.10	41.55	43.05	44.61	46.22	48.06	49.80	51.61	53.48	55.43	
Return on Equity		Rs Lakh	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	
Total Fixed Cost		Rs Lakh	205.80	205.75	205.88	206.21	206.73	207.46	208.42	209.60	211.03	212.72	214.68	216.91	219.45	222.29	225.47	210.71	218.35	226.36	234.77	243.60	263.20	272.93	283.15	293.88	305.15	
Per Unit Cost of Generation		Unit	Year-->																									
Per unit Variable Cost		Rs/kWh	8.05	6.02	6.23	6.44	6.67	6.90	7.13	7.38	7.63	7.90	8.17	8.45	8.74	9.04	9.35	9.68	10.01	10.36	10.71	11.08	11.46	11.86	12.27	12.69	13.13	13.58
O&M expn		Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation		Rs/kWh	0.51	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	0.56	0.56	0.56	0.56	
Int. on term loan		Rs/kWh	0.45	0.87	0.81	0.75	0.69	0.63	0.57	0.51	0.45	0.39	0.33	0.27	0.21	0.15	0.09	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital		Rs/kWh	0.53	0.40	0.41	0.43	0.44	0.46	0.47	0.49	0.50	0.52	0.54	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.70	0.72	0.75	0.78	0.81	0.84	0.87	0.90
Return on Equity		Rs/kWh	0.63	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	
Total COG		Rs/kWh	11.56	9.36	9.56	9.78	10.01	10.24	10.49	10.76	11.03	11.32	11.62	11.93	12.26	12.60	12.96	13.33	13.42	13.89	14.38	14.88	15.41	16.12	16.69	17.28	17.89	18.52
Variable Cost		6.02	Rs/kWh																									
Levelised Tariff (Fixed)		3.51	Rs/kWh																									
Levelised Tariff		9.53	Rs/kWh																									
Determination of AD for Biomass based Power Project																												
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 (Rs./Lakh)		744																										
Years	>	Unit	Year-->																									
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%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%
Book Depreciation	Rs Lakh	19.65	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30
Accelerated Depreciation		Unit	Year-->																									
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	0%	0%	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%	0.00%	0.00%
Closing	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	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%	0.00%
Accelerated Depreciation	Rs Lakh	223.29	260.50	104.20	62.52	37.51	22.51	13.50	8.10	4.86	2.92	1.75	1.05	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	0.00
Net Depreciation Benefit	Rs Lakh	203.64	221.20	64.90	23.22	-1.79	-16.79	-25.79	-31.20	-34.44	-36.38	-37.55	-38.25	-38.67	-38.92	-39.07	-39.16	-39.22	-21.39	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	71.16	77.30	22.68	8.11	-0.62	-5.87	-9.01	-10.90	-12.03	-12.71	-13.12	-13.37	-13.51	-13.60	-13.65	-13.68	-13.70	-7.47	0.01	0.01	0.00	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	6.17	6.17
Per unit benefit	Rs/Unit	2.31	1.25	0.37	0.13	-0.01	-0.10	-0.15	-0.18	-0.19	-0.21	-0.21	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor	1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	0.13	0.13	0.13
Applicable Discounting Factor	1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.14	0.13	0.13	0.13
Tax Benefit Levelised	9.80	Rs Lakh																										
Electricity Generation (Levelised)	5.89	MU																										
Levelised benefit	0.17	Rs/kWh																										

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Haryana
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	12.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	744
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	744
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	521
			Total Equity Amount	Rs Lacs	223
		Debt Component	Loan Amount	Rs Lacs	521
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	223
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	4,534
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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-->																									
Biomass Cost	Rs. Lakh	423.07	437.65	452.73	468.33	484.47	501.16	518.43	536.29	554.77	573.89	593.66	614.12	635.28	657.17	679.81	703.23	727.47	752.53	778.46	805.29	833.03	861.74	891.43	922.14	953.92	
Fixed Cost	Unit	Year-->																									
O&M Expenses	Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.26	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.51	152.21	160.20	168.61	177.46	186.78	
Depreciation	Rs Lakh	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	
Interest on term loan	Rs Lakh	53.64	49.94	46.24	42.54	38.84	35.14	31.44	27.74	24.04	20.34	16.65	12.95	9.25	5.55	1.85	-	-	-	-	-	-	-	-	-	-	
Interest on working Capital	Rs Lakh	27.70	28.57	29.48	30.43	31.41	32.43	33.49	34.59	35.74	36.93	38.17	39.46	40.78	42.17	43.61	44.83	46.44	48.11	49.84	51.64	53.66	55.59	57.60	59.69	61.85	
Return on Equity	Rs Lakh	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>	<b>208.65</b>	<b>208.70</b>	<b>208.93</b>	<b>209.36</b>	<b>209.99</b>	<b>210.83</b>	<b>211.90</b>	<b>213.21</b>	<b>214.77</b>	<b>216.58</b>	<b>218.67</b>	<b>221.04</b>	<b>223.72</b>	<b>226.71</b>	<b>230.04</b>	<b>215.44</b>	<b>223.24</b>	<b>231.42</b>	<b>240.01</b>	<b>249.02</b>	<b>268.80</b>	<b>278.73</b>	<b>289.15</b>	<b>300.08</b>	<b>311.56</b>	
Levillised tariff corresponding to Useful life																											
Per Unit Cost of Generation	Unit																										
Per unit Variable Cost	Rs/kWh	9.16	6.86	7.09	7.34	7.59	7.85	8.12	8.40	8.69	8.99	9.30	9.62	9.95	10.29	10.65	11.02	11.40	11.79	12.19	12.61	13.05	13.50	13.96	14.44	14.94	15.46
O&M exptn	Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation	Rs/kWh	0.51	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	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Int. on term loan	Rs/kWh	0.45	0.87	0.81	0.75	0.69	0.63	0.57	0.51	0.45	0.39	0.33	0.27	0.21	0.15	0.09	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	0.59	0.45	0.46	0.48	0.49	0.51	0.52	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.68	0.71	0.73	0.75	0.78	0.81	0.84	0.87	0.90	0.93	0.97	1.00
RsE	Rs/kWh	0.63	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61
<b>Total COG</b>	<b>Rs/kWh</b>	<b>12.73</b>	<b>10.23</b>	<b>10.47</b>	<b>10.72</b>	<b>10.98</b>	<b>11.25</b>	<b>11.54</b>	<b>11.83</b>	<b>12.14</b>	<b>12.47</b>	<b>12.81</b>	<b>13.16</b>	<b>13.53</b>	<b>13.92</b>	<b>14.32</b>	<b>14.74</b>	<b>14.89</b>	<b>15.40</b>	<b>15.94</b>	<b>16.50</b>	<b>17.08</b>	<b>17.85</b>	<b>18.48</b>	<b>19.13</b>	<b>19.80</b>	<b>20.50</b>
Variable Cost	6.86	Rs/kWh																									
Levelised Tariff (Fixed)	3.57	Rs/kWh																									
<b>Levelised Tariff</b>	<b>10.43</b>	<b>Rs/kWh</b>																									
Determination of AD for Biomass based Power Project																											
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 (Rs./Lakh)	744																										
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%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	19.65	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	21.44	-	-	-	-	-	-	-	
Accelerated Depreciation		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
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Accelerated Depreciation	Rs Lakh	223.29	260.50	104.20	62.52	37.51	22.51	13.50	8.10	4.86	2.92	1.75	1.05	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	
Net Depreciation Benefit	Rs Lakh	203.64	221.20	64.90	23.22	-1.79	-16.79	-25.79	-31.20	-34.44	-36.38	-37.55	-38.25	-38.67	-38.92	-39.07	-39.16	-39.22	-21.39	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Tax Benefit	Rs Lakh	71.16	77.30	22.68	8.11	-0.62	-5.87	-9.01	-10.90	-12.03	-12.71	-13.12	-13.37	-13.51	-13.60	-13.65	-13.68	-13.70	-7.47	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	2.31	1.25	0.37	0.13	-0.01	-0.10	-0.15	-0.18	-0.19	-0.21	-0.21	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Discounting Factor	1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	0.13	
Applicable Discounting Factor	1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.14	0.13	
Tax Benefit Levillised	9.80	Rs Lakh																									
Electricity Generation (Levillised)	5.89	MU																									
<b>Levillised benefit</b>	<b>0.17</b>	<b>Rs/kWh</b>																									

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Maharashtra	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	744	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	744	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	521	
			Total Equity Amount	Rs Lacs	223	
		Debt Component	Loan Amount	Rs Lacs	521	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	223	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00	
			During Stabilization Period	Kcal/kWh	4,125.00	
		Base Price	Base Price	Rs/MT		4,637
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																								
Units Generation	Unit	Year-->																								
Installed Capacity	MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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	

Variable Cost	Unit	Year-->																								
Biomass Cost	Rs. Lakh	432.68	447.59	463.01	478.97	495.47	512.54	530.20	548.47	567.37	586.92	607.15	628.07	649.71	672.09	695.25	719.21	743.99	769.63	796.14	823.58	851.95	881.31	911.68	943.09	975.59

Fixed Cost	Unit	Year-->																								
O&M Expenses	Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78
Depreciation	Rs Lakh	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73
Interest on term loan	Rs Lakh	53.64	49.94	46.24	42.54	38.84	35.14	31.44	27.74	24.04	20.35	16.65	12.95	9.25	5.55	1.85	-	-	-	-	-	-	-	-	-	-
Interest on working Capital	Rs Lakh	28.23	29.12	30.05	31.02	32.02	33.06	34.14	35.27	36.44	37.65	38.91	40.22	41.58	43.00	44.46	45.72	47.36	49.06	50.82	52.65	54.71	56.68	58.72	60.85	63.05
Return on Equity	Rs Lakh	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88
Total Fixed Cost	Rs Lakh	209.18	209.25	209.50	209.95	210.60	211.46	212.56	213.89	215.46	217.30	219.42	221.82	224.52	227.54	230.90	234.63	238.71	243.16	248.01	253.18	258.71	264.64	270.91	277.58	284.69

Per Unit Cost of Generation		Unit	Levillised tariff corresponding to Useful life																								
Per unit Variable Cost	Rs/kWh	9.37	7.01	7.25	7.50	7.76	8.03	8.31	8.59	8.89	9.19	9.51	9.84	10.18	10.53	10.89	11.27	11.65	12.06	12.47	12.90	13.35	13.81	14.28	14.77	15.28	15.81
O&M expn	Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation	Rs/kWh	0.51	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	0.56	0.56	0.56	0.56	0.56
Int. on term loan	Rs/kWh	0.45	0.87	0.81	0.75	0.69	0.63	0.57	0.51	0.45	0.39	0.33	0.27	0.21	0.15	0.09	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	0.60	0.46	0.47	0.49	0.50	0.52	0.53	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.70	0.72	0.74	0.77	0.79	0.82	0.85	0.89	0.92	0.95	0.98	1.02
RoE	Rs/kWh	0.63	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61
Total COG	Rs/kWh	12.95	10.40	10.64	10.90	11.16	11.44	11.73	12.03	12.35	12.68	13.03	13.39	13.77	14.16	14.58	15.01	15.16	15.69	16.24	16.80	17.40	18.18	18.81	19.48	20.16	20.88

Variable Cost	7.01	Rs/kWh
Levelised Tariff (Fixed)	3.58	Rs/kWh
Levelised Tariff	10.59	Rs/kWh

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	744

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%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	19.65	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	21.44	-	-	-	-	-	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	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%	
Closing	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Accelerated Depreciation	Rs Lakh	223.29	260.50	104.20	62.52	37.51	22.51	13.50	8.10	4.86	2.92	1.75	1.05	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

Net Depreciation Benefit		Rs Lakh	203.64	221.20	64.90	23.22	-1.79	-16.79	-25.79	-31.20	-34.44	-36.38	-37.55	-38.25	-38.67	-38.92	-39.07	-39.16	-39.22	-21.39	0.03 <th>0.02 <th>0.01 <th>0.01 <th>0.00 <th>0.00 </th></th></th></th></th>	0.02 <th>0.01 <th>0.01 <th>0.00 <th>0.00 </th></th></th></th>	0.01 <th>0.01 <th>0.00 <th>0.00 </th></th></th>	0.01 <th>0.00 <th>0.00 </th></th>	0.00 <th>0.00 </th>	0.00
Tax Benefit	Rs Lakh	71.16	77.30	22.68	8.11	-0.62	-5.87	-9.01	-10.90	-12.03	-12.71	-13.12	-13.37	-13.51	-13.60	-13.65	-13.68	-13.70	-13.70	-7.47	0.01	0.01	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	2.31	1.25	0.37	0.13	-0.01	-0.10	-0.15	-0.18	-0.19	-0.21	-0.21	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.12	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levillised	9.80	Rs Lakh
Electricity Generation (Levillised)	5.89	MU
Levelised benefit	0.17	Rs/kWh

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Punjab
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	12.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	744
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	744
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	521
			Total Equity Amount	Rs Lacs	223
		Debt Component	Loan Amount	Rs Lacs	521
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	223
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	4,742
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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		442.52	457.76	473.54	489.85	506.73	524.19	542.25	560.94	580.27	600.26	620.94	642.34	664.47	687.37	711.05	735.55	760.90	787.12	814.24	842.29	871.32	901.34	932.40	964.52	997.76

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		54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.51	152.21	160.20	168.61	177.46	186.78
Depreciation	Rs Lakh		34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73
Interest on term loan	Rs Lakh		53.64	49.94	46.24	42.54	38.84	35.14	31.44	27.74	24.04	20.35	16.65	12.95	9.25	5.55	1.85	-	-	-	-	-	-	-	-	-	-
Interest on working Capital	Rs Lakh		28.77	29.69	30.63	31.62	32.64	33.71	34.81	35.96	37.15	38.39	39.68	41.01	42.40	43.84	45.34	46.62	48.29	50.03	51.82	53.69	55.78	57.79	59.87	62.03	64.28
Return on Equity	Rs Lakh		37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>209.72</b>	<b>209.81</b>	<b>210.08</b>	<b>210.55</b>	<b>211.22</b>	<b>212.11</b>	<b>213.22</b>	<b>214.58</b>	<b>216.18</b>	<b>218.04</b>	<b>220.18</b>	<b>222.61</b>	<b>225.34</b>	<b>228.39</b>	<b>231.77</b>	<b>217.23</b>	<b>225.09</b>	<b>233.34</b>	<b>241.99</b>	<b>251.07</b>	<b>270.92</b>	<b>280.92</b>	<b>291.42</b>	<b>302.43</b>	<b>313.99</b>

Variable Cost	7.17	Rsk/Wh
Levelised Tariff (Fixed)	3.59	Rsk/Wh
<b>Levelised Tariff</b>	<b>10.77</b>	<b>Rsk/Wh</b>

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	744

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	19.65	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	21.44	-	-	-	-	-	-	-

Accelerated Depreciation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	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%	
Closing	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	
Accelerated Depreciation	Rs Lakh	223.29	260.50	104.20	62.52	37.51	22.51	13.50	8.10	4.86	2.92	1.75	1.05	0.63	0.38	0.23	0.14	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00

Net Depreciation Benefit	Rs Lakh	203.64	221.20	64.90	23.22	-1.79	-16.79	-25.79	-31.20	-34.44	-36.38	-37.55	-38.25	-38.67	-38.92	-39.07	-39.16	-39.22	-21.39	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	71.16	77.30	22.68	8.11	-0.62	-5.87	-9.01	-10.90	-12.03	-12.71	-13.12	-13.37	-13.51	-13.60	-13.65	-13.68	-13.70	-7.47	0.01	0.01	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	
Per unit benefit	Rs/Unit	2.31	1.25	0.37	0.13	-0.01	-0.10	-0.15	-0.18	-0.19	-0.21	-0.21	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.12	0.00	0.00	0.00	0.00	0.00	0.00	
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levelised	9.80	Rs Lakh
Electricity Generation (Levelised)	5.89	MU
<b>Levelised benefit</b>	<b>0.17</b>	<b>Rs/kWh</b>



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Rajasthan	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	12.00%	
			PLF	%	80%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	744	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	744	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	521	
			Total Equity Amount	Rs Lacs	223	
		Debt Component	Loan Amount	Rs Lacs	521	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	223	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00	
			During Stabilization Period	Kcal/kWh	4,125.00	
		Base Price	Base Price	Rs/MT		3,958
		GCV-Biomass	GCV-Biomass	Kcal/kg		3,100.00
			Biomass Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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-->																									
Biomass Cost		Rs. Lakh	369.32	382.05	395.21	408.83	422.92	437.49	452.56	468.16	484.29	500.98	518.24	536.09	554.57	573.67	593.44	613.89	635.04	656.92	679.56	702.97	727.20	752.25	778.17	804.99	832.72	
Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.26	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78	
Depreciation		Rs Lakh	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	
Interest on term loan		Rs Lakh	53.64	49.94	46.24	42.54	38.84	35.14	31.44	27.74	24.04	20.34	16.65	12.95	9.25	5.55	1.85	-	-	-	-	-	-	-	-	-	-	
Interest on working Capital		Rs Lakh	24.72	25.49	26.30	27.13	28.00	28.91	29.85	30.82	31.84	32.89	33.99	35.13	36.31	37.55	38.83	39.89	41.32	42.82	44.37	45.98	47.80	49.53	51.33	53.20	55.14	
Return on Equity		Rs Lakh	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	
Total Fixed Cost		Rs Lakh	205.67	205.62	205.74	206.06	206.58	207.31	208.26	209.44	210.86	212.54	214.49	216.72	219.25	222.09	225.26	210.50	218.12	226.13	234.53	243.36	262.94	272.67	282.88	293.60	304.85	
Per Unit Cost of Generation		Unit	Year-->																									
Per unit Variable Cost		Rs/kWh	8.00	5.98	6.19	6.40	6.62	6.85	7.09	7.33	7.59	7.85	8.12	8.40	8.69	8.99	9.30	9.62	9.95	10.29	10.64	11.01	11.39	11.78	12.19	12.61	13.04	13.49
O&M expn		Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation		Rs/kWh	0.51	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	0.56	0.56	0.56	0.56	
Int. on term loan		Rs/kWh	0.45	0.87	0.81	0.75	0.69	0.63	0.57	0.51	0.45	0.39	0.33	0.27	0.21	0.15	0.09	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital		Rs/kWh	0.53	0.40	0.41	0.43	0.44	0.45	0.47	0.48	0.50	0.52	0.53	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.69	0.72	0.74	0.77	0.80	0.83	0.89	
RetE		Rs/kWh	0.63	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	
Total COG		Rs/kWh	11.50	9.32	9.52	9.74	9.96	10.20	10.45	10.71	10.98	11.26	11.56	11.87	12.20	12.54	12.89	13.27	13.36	13.82	14.31	14.81	15.33	16.04	16.61	17.19	17.80	18.43
Variable Cost		5.98	Rs/kWh																									
Levelised Tariff (Fixed)		3.51	Rs/kWh																									
Levelised Tariff		9.49	Rs/kWh																									
Determination of AD for Biomass based Power Project																												
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 (Rs./Lakh)		744																										
Years	>	Unit	Year-->																									
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%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	
Book Depreciation		Rs Lakh	19.65	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	
Accelerated Depreciation			Year-->																									
Opening		%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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		%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Accelerated Depreciation		Rs Lakh	223.29	260.50	104.20	62.52	37.51	22.51	13.50	8.10	4.86	2.92	1.75	1.05	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	
Net Depreciation Benefit		Rs Lakh	203.64	221.20	64.90	23.22	-1.79	-16.79	-25.79	-31.20	-34.44	-36.38	-37.55	-38.25	-38.67	-38.92	-39.07	-39.16	-39.22	-39.22	-21.39	0.03	0.02	0.01	0.01	0.00	0.00	
Tax Benefit		Rs Lakh	71.16	77.30	22.68	8.11	-0.62	-5.87	-9.01	-10.90	-12.03	-12.71	-13.12	-13.37	-13.51	-13.60	-13.65	-13.68	-13.70	-13.70	-7.47	0.01	0.01	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	2.31	1.25	0.37	0.13	-0.01	-0.10	-0.15	-0.18	-0.19	-0.21	-0.21	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.12	0.00	0.00	0.00	0.00	0.00	0.00	
Discounting Factor			1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	
Tax Benefit Levelised		9.80	Rs Lakh																									
Electricity Generation (Levelised)		5.89	MU																									
Levelised benefit		0.17	Rs/kWh																									

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Tamil Nadu
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	12.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	744
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	744
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	521
			Total Equity Amount	Rs Lacs	223
		Debt Component	Loan Amount	Rs Lacs	521
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	223
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	3,918
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
Units Generation		Unit	Year-->																								
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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	

Variable Cost		Unit	Year-->																								
Biomass Cost		Rs. Lakh	365.63	378.23	391.27	404.75	418.69	433.12	448.04	463.48	479.45	495.97	513.06	530.74	549.03	567.95	587.52	607.76	628.70	650.37	672.77	695.96	719.94	744.74	770.40	796.95	824.41

Fixed Cost		Unit	Year-->																								
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78
Depreciation		Rs Lakh	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73
Interest on term loan		Rs Lakh	53.64	49.94	46.24	42.54	38.84	35.14	31.44	27.74	24.04	20.35	16.65	12.95	9.25	5.55	1.85	-	-	-	-	-	-	-	-	-	-
Interest on working Capital		Rs Lakh	24.52	25.28	26.08	26.91	27.77	28.66	29.60	30.56	31.57	32.62	33.70	34.83	36.01	37.23	38.50	39.85	40.97	42.46	43.99	45.59	47.40	49.12	50.90	52.76	54.68
Return on Equity		Rs Lakh	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88
Total Fixed Cost		Rs Lakh	205.47	205.41	205.53	205.84	206.35	207.07	208.01	209.18	210.60	212.27	214.21	216.43	218.95	221.77	224.93	210.16	217.77	225.77	234.16	242.97	262.54	272.25	282.45	293.15	304.39

		Unit	Levilled tariff corresponding to Useful life																									
Per Unit Cost of Generation		Rs/kWh	7.92	5.92	6.13	6.34	6.56	6.78	7.02	7.26	7.51	7.77	8.04	8.31	8.60	8.90	9.20	9.52	9.85	10.19	10.54	10.90	11.28	11.67	12.07	12.48	12.91	13.36
Per unit Variable Cost		Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
O&M expn		Rs/kWh	0.51	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	0.56	0.56	0.56	0.56	
Depreciation		Rs/kWh	0.45	0.87	0.81	0.75	0.69	0.63	0.57	0.51	0.45	0.39	0.33	0.27	0.21	0.15	0.09	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on term loan		Rs/kWh	0.52	0.40	0.41	0.42	0.44	0.45	0.46	0.48	0.49	0.51	0.53	0.55	0.56	0.58	0.60	0.62	0.64	0.66	0.69	0.71	0.74	0.77	0.79	0.82	0.85	0.88
Int. on working capital		Rs/kWh	0.63	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	
Return on Equity		Rs/kWh	11.42	9.25	9.46	9.67	9.89	10.13	10.37	10.63	10.90	11.18	11.48	11.78	12.11	12.44	12.80	13.16	13.25	13.72	14.20	14.70	15.21	15.92	16.48	17.06	17.66	18.29
Total COG		Rs/kWh	11.42	9.25	9.46	9.67	9.89	10.13	10.37	10.63	10.90	11.18	11.48	11.78	12.11	12.44	12.80	13.16	13.25	13.72	14.20	14.70	15.21	15.92	16.48	17.06	17.66	18.29

Variable Cost	5.92	Rs/kWh
Levelised Tariff (Fixed)	3.50	Rs/kWh
Levelised Tariff	9.43	Rs/kWh

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	744

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%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	19.65	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	21.44	-	-	-	-	-	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	223.29	260.50	104.20	62.52	37.51	22.51	13.50	8.10	4.86	2.92	1.75	1.05	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

Net Depreciation Benefit		Rs Lakh	203.64	221.20	64.90	23.22	-1.79	-16.79	-25.79	-31.20	-34.44	-36.38	-37.55	-38.25	-38.67	-38.92	-39.07	-39.16	-39.22	-21.39	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	71.16	77.30	22.68	8.11	-0.62	-5.87	-9.01	-10.90	-12.03	-12.71	-13.12	-13.37	-13.51	-13.60	-13.65	-13.68	-13.70	-13.70	-7.47	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	6.17
Per unit benefit	Rs/Unit	2.31	1.25	0.37	0.13	-0.01	-0.10	-0.15	-0.18	-0.19	-0.21	-0.21	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	

Tax Benefit Levilled	9.80	Rs Lakh
Electricity Generation (Levilled)	5.89	MU
Levilled benefit	0.17	Rs/kWh

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Telangana
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	12.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	744
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	744
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	521
			Total Equity Amount	Rs Lacs	223
		Debt Component	Loan Amount	Rs Lacs	521
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	223
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	3,983
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	55.03
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
Units Generation		Unit	Year-->																								
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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	

Variable Cost		Unit	Year-->																								
Biomass Cost		Rs. Lakh	371.67	384.48	397.72	411.43	425.60	440.27	455.44	471.13	487.37	504.16	521.53	539.50	558.09	577.32	597.21	617.79	639.08	661.10	683.88	707.44	731.82	757.04	783.12	810.10	838.02

  

Fixed Cost		Unit	Year-->																								
O&M Expenses	Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.26	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.61	152.21	160.20	168.61	177.46	186.78	
Depreciation	Rs Lakh	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	
Interest on term loan	Rs Lakh	53.64	49.94	46.24	42.54	38.84	35.14	31.44	27.74	24.04	20.35	16.65	12.95	9.25	5.55	1.85	-	-	-	-	-	-	-	-	-	-	
Interest on working Capital	Rs Lakh	24.85	25.63	26.44	27.28	28.15	29.06	30.01	30.99	32.01	33.07	34.17	35.32	36.51	37.75	39.04	40.10	41.55	43.05	44.61	46.22	48.06	49.80	51.61	53.48	55.43	
Return on Equity	Rs Lakh	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>	<b>205.80</b>	<b>205.75</b>	<b>205.88</b>	<b>206.21</b>	<b>206.73</b>	<b>207.46</b>	<b>208.42</b>	<b>209.60</b>	<b>211.03</b>	<b>212.72</b>	<b>214.68</b>	<b>216.91</b>	<b>219.45</b>	<b>222.29</b>	<b>225.47</b>	<b>210.71</b>	<b>218.35</b>	<b>226.36</b>	<b>234.77</b>	<b>243.60</b>	<b>263.20</b>	<b>272.93</b>	<b>283.15</b>	<b>293.88</b>	<b>305.15</b>	

Per Unit Cost of Generation		Unit	Levillised tariff corresponding to Useful life																								
Per unit Variable Cost	Rs/kWh	8.05	6.02	6.23	6.44	6.67	6.90	7.13	7.38	7.63	7.90	8.17	8.45	8.74	9.04	9.35	9.68	10.01	10.36	10.71	11.08	11.46	11.86	12.27	12.69	13.13	13.58
O&M expn	Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation	Rs/kWh	0.51	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	0.56	0.56	0.56	0.56	
Int. on term loan	Rs/kWh	0.45	0.87	0.81	0.75	0.69	0.63	0.57	0.51	0.45	0.39	0.33	0.27	0.21	0.15	0.09	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital	Rs/kWh	0.53	0.40	0.41	0.43	0.44	0.46	0.47	0.49	0.50	0.52	0.54	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.70	0.72	0.75	0.78	0.81	0.84	0.87	0.90
Return on Equity	Rs/kWh	0.63	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	
<b>Total COG</b>	<b>Rs/kWh</b>	<b>11.56</b>	<b>9.36</b>	<b>9.56</b>	<b>9.78</b>	<b>10.01</b>	<b>10.24</b>	<b>10.49</b>	<b>10.76</b>	<b>11.03</b>	<b>11.32</b>	<b>11.62</b>	<b>11.93</b>	<b>12.26</b>	<b>12.60</b>	<b>12.96</b>	<b>13.33</b>	<b>13.42</b>	<b>13.89</b>	<b>14.38</b>	<b>14.88</b>	<b>15.41</b>	<b>16.12</b>	<b>16.69</b>	<b>17.28</b>	<b>17.89</b>	<b>18.52</b>

Variable Cost	6.02	Rs/kWh
Levillised Tariff (Fixed)	3.51	Rs/kWh
<b>Levillised Tariff</b>	<b>9.53</b>	<b>Rs/kWh</b>

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	744

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%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	19.65	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	21.44	-	-	-	-	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	223.29	260.50	104.20	62.52	37.51	22.51	13.50	8.10	4.86	2.92	1.75	1.05	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

Net Depreciation Benefit	Rs Lakh	203.64	221.20	64.90	23.22	-1.79	-16.79	-25.79	-31.20	-34.44	-36.38	-37.55	-38.25	-38.67	-38.92	-39.07	-39.16	-39.22	-21.39	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	71.16	77.30	22.68	8.11	-0.62	-5.87	-9.01	-10.90	-12.03	-12.71	-13.12	-13.37	-13.51	-13.60	-13.65	-13.68	-13.70	-7.47	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	2.31	1.25	0.37	0.13	-0.01	-0.10	-0.15	-0.18	-0.19	-0.21	-0.21	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levillised	9.80	Rs Lakh
Electricity Generation (Levillised)	5.89	MU
<b>Levillised benefit</b>	<b>0.17</b>	<b>Rs/kWh</b>

Assumption for Biomass Based Rankine Cycle Project Parameters				State	Uttar Pradesh
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	12.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	744
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	744
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	521
			Total Equity Amount	Rs Lacs	223
		Debt Component	Loan Amount	Rs Lacs	521
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	223
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	4,053
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
Units Generation		Unit	Year-->																								
Installed Capacity		MW	1.00																								
Net Generation		MU	6.17																								
Variable Cost		Unit	Year-->																								
Biomass Cost		Rs. Lakh	378.21	391.24	404.72	418.67	433.09	448.01	463.45	479.42	495.94	513.03	530.71	548.99	567.91	587.48	607.72	628.66	650.32	672.73	695.91	719.89	744.69	770.35	796.90	824.36	852.76
Fixed Cost		Unit	Year-->																								
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.51	152.21	160.20	168.61	177.46	186.78
Depreciation		Rs Lakh	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73
Interest on term loan		Rs Lakh	53.64	49.94	46.24	42.54	38.84	35.14	31.44	27.74	24.04	20.35	16.65	12.95	9.25	5.55	1.85	-	-	-	-	-	-	-	-	-	-
Interest on working Capital		Rs Lakh	25.21	26.00	26.82	27.68	28.57	29.49	30.45	31.45	32.48	33.56	34.68	35.84	37.05	38.31	39.62	40.70	42.17	43.69	45.27	46.91	48.77	50.54	52.37	54.27	56.25
Return on Equity		Rs Lakh	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88
Total Fixed Cost		Rs Lakh	206.16	206.13	206.27	206.61	207.14	207.89	208.86	210.06	211.51	213.21	215.18	217.44	219.99	222.86	226.05	231.32	238.44	244.29	263.91	273.67	283.91	294.67	305.96		

  

Per Unit Cost of Generation		Unit	Levillised tariff corresponding to Useful life																									
Per unit Variable Cost		Rs/kWh	8.19																									
O&M expn		Rs/kWh	1.40																									
Depreciation		Rs/kWh	0.51																									
Int. on term loan		Rs/kWh	0.45																									
Int. on working capital		Rs/kWh	0.54																									
RetE		Rs/kWh	0.63																									
Total COG		Rs/kWh	11.71	9.47	9.68	9.90	10.13	10.37	10.63	10.89	11.17	11.46	11.77	12.09	12.42	12.77	13.13	13.51	13.61	14.09	14.58	15.09	15.62	16.34	16.92	17.51	18.13	18.77

  

Variable Cost	6.13	Rs/kWh
Levelised Tariff (Fixed)	3.52	Rs/kWh
<b>Levelised Tariff</b>	<b>9.65</b>	<b>Rs/kWh</b>

  

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	744

  

Years	>	Unit																											
Book Depreciation	%	2.64%	5.28%																										
Book Depreciation	Rs Lakh	19.65	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30

  

Accelerated Depreciation																												
Opening	%	100%																										
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%	0.00%	0.00%
Closing	%	70.00%																										
Accelerated Depreciation	Rs Lakh	223.29	260.50	104.20	62.52	37.51	22.51	13.50	8.10	4.86	2.92	1.75	1.05	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	203.64	221.20	64.90	23.22	-1.79	-16.79	-25.79	-31.20	-34.44	-36.38	-37.55	-38.25	-38.67	-38.92	-39.07	-39.16	-39.22	-21.39	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	71.16	77.30	22.68	8.11	-0.62	-5.87	-9.01	-10.90	-12.03	-12.71	-13.12	-13.37	-13.51	-13.60	-13.65	-13.68	-13.70	-7.47	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	6.17
Per unit benefit	Rs/Unit	2.31	1.25	0.37	0.13	-0.01	-0.10	-0.15	-0.18	-0.19	-0.21	-0.21	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	

  

Tax Benefit Levillised	9.80	Rs Lakh
Electricity Generation (Levillised)	5.89	MU
<b>Levillised benefit</b>	<b>0.17</b>	<b>Rs/kWh</b>



Assumption for Biomass Based Rankine Cycle Project Parameters				State	Others
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	12.00%
			PLF	%	80%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	744
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	744
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	521
			Total Equity Amount	Rs Lacs	223
		Debt Component	Loan Amount	Rs Lacs	521
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	223
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For Variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	4,125.00
			During Stabilization Period	Kcal/kWh	4,125.00
		Base Price	Base Price	Rs/MT	4,260
		GCV-Biomass	GCV-Biomass	Kcal/kg	3,100.00
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	54.70
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
Units Generation		Unit	Year-->																								
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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	

Variable Cost		Unit	Year-->																								
Biomass Cost		Rs. Lakh	397.48	411.18	425.35	440.00	455.16	470.85	487.07	503.85	521.21	539.17	557.75	576.97	596.85	617.42	638.69	660.70	683.46	707.01	731.37	756.58	782.64	809.61	837.51	866.37	896.22

Fixed Cost		Unit	Year-->																								
O&M Expenses		Rs Lakh	54.70	57.57	60.59	63.78	67.12	70.65	74.36	78.28	82.37	86.69	91.25	96.04	101.08	106.38	111.97	117.85	124.04	130.55	137.40	144.51	152.21	160.20	168.61	177.46	186.78
Depreciation		Rs Lakh	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73	34.73
Interest on term loan		Rs Lakh	53.64	49.94	46.24	42.54	38.84	35.14	31.44	27.74	24.04	20.35	16.65	12.95	9.25	5.55	1.85	-	-	-	-	-	-	-	-	-	-
Interest on working Capital		Rs Lakh	26.28	27.11	27.97	28.86	29.79	30.75	31.76	32.80	33.88	35.01	36.18	37.39	38.66	39.97	41.33	42.48	44.01	45.59	47.24	48.94	50.87	52.71	54.62	56.60	58.65
Return on Equity		Rs Lakh	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88	37.88
Total Fixed Cost		Rs Lakh	207.23	207.23	207.41	207.79	208.37	209.16	210.17	211.42	212.91	214.66	216.68	218.99	221.59	224.51	227.76	231.09	234.40	237.40	246.32	266.01	275.84	286.16	297.00	308.37	

Per Unit Cost of Generation		Unit	Levillised tariff corresponding to Useful life																									
Per unit Variable Cost		Rs/kWh	8.61	6.44	6.66	6.89	7.13	7.38	7.63	7.89	8.16	8.45	8.74	9.04	9.35	9.67	10.00	10.35	10.71	11.07	11.46	11.85	12.26	12.68	13.12	13.57	14.04	14.52
O&M expn		Rs/kWh	1.40	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40	1.48	1.56	1.64	1.72	1.81	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73	2.88	3.03
Depreciation		Rs/kWh	0.51	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	0.56	0.56	0.56	0.56	
Int. on term loan		Rs/kWh	0.45	0.87	0.81	0.75	0.69	0.63	0.57	0.51	0.45	0.39	0.33	0.27	0.21	0.15	0.09	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital		Rs/kWh	0.56	0.43	0.44	0.45	0.47	0.48	0.50	0.51	0.53	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.69	0.71	0.74	0.76	0.79	0.82	0.85	0.88	0.92	0.95
Return on Equity		Rs/kWh	0.63	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61
Total COG		Rs/kWh	12.15	9.80	10.02	10.25	10.50	10.75	11.02	11.30	11.59	11.89	12.21	12.55	12.90	13.26	13.64	14.04	14.16	14.65	15.16	15.70	16.25	16.99	17.59	18.21	18.85	19.52

Variable Cost	6.44	Rs/kWh
Levillised Tariff (Fixed)	3.54	Rs/kWh
<b>Levillised Tariff</b>	<b>9.98</b>	<b>Rs/kWh</b>

Determination of AD for Biomass based Power Project	
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 (Rs./Lakh)	744

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%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	19.65	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30	21.44	-	-	-	-	-	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.83%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	223.29	260.50	104.20	62.52	37.51	22.51	13.50	8.10	4.86	2.92	1.75	1.05	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

Net Depreciation Benefit		Rs Lakh	203.64	221.20	64.90	23.22	-1.79	-16.79	-25.79	-31.20	-34.44	-36.38	-37.55	-38.25	-38.67	-38.92	-39.07	-39.16	-39.22	-21.39	0.03 <th>0.02<th>0.01<th>0.01<th>0.00<th>0.00<th>0.00 </th></th></th></th></th></th>	0.02 <th>0.01<th>0.01<th>0.00<th>0.00<th>0.00 </th></th></th></th></th>	0.01 <th>0.01<th>0.00<th>0.00<th>0.00 </th></th></th></th>	0.01 <th>0.00<th>0.00<th>0.00 </th></th></th>	0.00 <th>0.00<th>0.00 </th></th>	0.00 <th>0.00 </th>	0.00
Tax Benefit	Rs Lakh	71.16	77.30	22.68	8.11	-0.62	-5.87	-9.01	-10.90	-12.03	-12.71	-13.12	-13.37	-13.51	-13.60	-13.65	-13.68	-13.70	-13.70	-7.47	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	6.17
Per unit benefit	Rs/Unit	2.31	1.25	0.37	0.13	-0.01	-0.10	-0.15	-0.18	-0.19	-0.21	-0.21	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	0.13

Tax Benefit Levillised	9.80	Rs Lakh
Electricity Generation (Levillised)	5.89	MU
<b>Levillised benefit</b>	<b>0.17</b>	<b>Rs/kWh</b>

Assumption for Bagasse based Cogeneration Project Parameters				State	Andhra Pradesh	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	8.50%	
			PLF	%	45%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	562	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	562	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	393	
			Total Equity Amount	Rs Lacs	168	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	393	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	168	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months	1.50	
		<b><u>For variable Charges</u></b>				
		Bagasse Stock		Months	4.00	
		Interest on Working Capital		%	11.90%	
6	Fuel Related Assumptions	<b><u>Heat Rate</u></b>	After Stabilization Period	Kcal/kWh	3600	
			During Stabilization Period	Kcal/kWh	3600	
		Base Price	Base Price	Rs/MT	2,249	
		GCV	GCV-Bagasse	Kcal/kg	2,250	
			Price Escalation Factor	%	3.45%	
			Specific Fuel Consumption	kg/kWh	-	
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	28.90	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Bagasse Based Power Project																										
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			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Bagasse Cost	Rs. Lakh			141.94	146.83	151.89	157.13	162.54	168.14	173.93	179.93	186.13	192.54	199.17	206.04	213.14	220.48	228.08	235.94	244.07	252.48	261.18	270.17	279.48	289.11	299.08	309.38	320.04
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			28.90	30.41	32.01	33.69	35.46	37.32	39.28	41.34	43.51	45.80	48.20	50.73	53.40	56.20	59.15	62.26	65.52	68.95	72.58	76.40	80.41	84.63	89.07	93.75	98.67
Depreciation	Rs Lakh			28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21
Interest on term loan	Rs Lakh			40.47	37.68	34.89	32.10	29.31	26.52	23.73	20.94	18.14	15.35	12.56	9.77	6.98	4.19	1.40	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			10.55	10.84	11.15	11.47	11.80	12.15	12.52	12.89	13.29	13.70	14.13	14.58	15.04	15.53	16.04	16.36	16.95	17.56	18.20	18.87	19.67	20.39	21.13	21.90	22.71
Return on Equity	Rs Lakh			28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>			<b>134.71</b>	<b>133.73</b>	<b>132.85</b>	<b>132.05</b>	<b>131.37</b>	<b>130.79</b>	<b>130.32</b>	<b>129.97</b>	<b>129.74</b>	<b>129.65</b>	<b>129.69</b>	<b>129.87</b>	<b>130.21</b>	<b>130.71</b>	<b>131.38</b>	<b>118.43</b>	<b>122.29</b>	<b>126.35</b>	<b>130.60</b>	<b>135.08</b>	<b>147.57</b>	<b>152.61</b>	<b>157.69</b>	<b>163.14</b>	<b>168.87</b>

Levallised tariff corresponding to Useful life		Unit	Year-->	1	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			5.26	3.93	4.07	4.21	4.35	4.50	4.66	4.82	4.98	5.16	5.33	5.52	5.71	5.91	6.11	6.32	6.54	6.76	6.99	7.24	7.49	7.74	8.01	8.29	8.57	8.87
O&M expn	Rs/KWh			1.27	0.80	0.84	0.89	0.93	0.98	1.03	1.09	1.15	1.21	1.27	1.34	1.41	1.48	1.56	1.64	1.72	1.82	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73
Depreciation	Rs/KWh			0.65	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	
Int. on term loan	Rs/KWh			0.58	1.12	1.04	0.97	0.89	0.81	0.73	0.66	0.58	0.50	0.42	0.35	0.27	0.19	0.12	0.04	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	0.29	0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40	0.42	0.43	0.44	0.45	0.47	0.49	0.50	0.52	0.54	0.56	0.58	0.61	0.63
RoE	Rs/KWh			0.81	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	1.00	1.00	1.00	1.00	
<b>Total COG</b>	<b>Rs/KWh</b>			<b>8.93</b>	<b>7.66</b>	<b>7.79</b>	<b>7.89</b>	<b>8.01</b>	<b>8.14</b>	<b>8.28</b>	<b>8.43</b>	<b>8.58</b>	<b>8.75</b>	<b>8.93</b>	<b>9.11</b>	<b>9.31</b>	<b>9.51</b>	<b>9.73</b>	<b>9.96</b>	<b>9.82</b>	<b>10.15</b>	<b>10.49</b>	<b>10.85</b>	<b>11.23</b>	<b>11.83</b>	<b>12.23</b>	<b>12.65</b>	<b>13.09</b>	<b>13.54</b>

Variable Cost	5.93	Rs/KWh
Levallised Tariff (Fixed)	3.68	Rs/KWh
<b>Levallised Tariff</b>	<b>7.61</b>	<b>Rs/KWh</b>

Determination of AD for Bagasse based Power Project	
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 (Rs./Lakh)	562

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%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.83	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	16.18	-	-	-	-	-	-	-	
Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Accelerated Depreciation	Rs Lakh	168.49	196.58	78.63	47.18	28.31	16.98	10.19	6.11	3.67	2.20	1.32	0.79	0.48	0.29	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	153.67	166.92	48.98	17.52	-1.35	-12.67	-19.46	-23.54	-25.99	-27.45	-28.33	-28.86	-29.18	-29.37	-29.48	-29.55	-29.59	-16.14	0.02	0.01	0.01	0.00	0.00	0.00	0.00	
Tax Benefit	Rs Lakh	53.70	58.33	17.11	6.12	-0.47	-4.43	-6.80	-8.23	-9.08	-9.59	-9.90	-10.09	-10.20	-10.26	-10.30	-10.33	-10.34	-5.64	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	2.98	1.62	0.47	0.17	-0.01	-0.12	-0.19	-0.23	-0.25	-0.27	-0.27	-0.28	-0.28	-0.28	-0.29	-0.29	-0.29	-0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	
Applicable Discounting Factor		1.00	0.95	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	
Tax Benefit Levallised	7.39	Rs Lakh																									
Electricity Generation (Levallised)	3.45	MU																									
<b>Levallised benefit</b>	<b>0.21</b>	<b>Rs/KWh</b>																									

Assumption for Bagasse based Cogeneration Project Parameters				State	Haryana	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	8.50%	
			PLF	%	53%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	562	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	562	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	393	
			Total Equity Amount	Rs Lacs	168	
		Debt Component	Loan Amount	Rs Lacs	393	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	168	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For variable Charges</b>				
		Bagasse Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	3600	
			During Stabilization Period	Kcal/kWh	3600	
		Base Price	Base Price	Rs/MT		3199
		GCV	GCV- Bagasse	Kcal/kg		2,250
			Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	28.90	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Bagasse Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity		MW	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
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-->																									
Bagasse Cost		Rs. Lakh	237.77	245.96	254.43	263.20	272.27	281.65	291.36	301.40	311.78	322.52	333.64	345.13	357.03	369.33	382.05	395.22	408.84	422.92	437.50	452.57	468.16	484.30	500.98	518.25	536.10	
Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	28.90	30.41	32.01	33.69	35.46	37.32	39.28	41.34	43.51	45.80	48.20	50.73	53.40	56.20	59.15	62.26	65.52	68.95	72.58	76.40	80.41	84.63	89.07	93.75	98.67	
Depreciation		Rs Lakh	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	
Interest on term loan		Rs Lakh	40.47	37.68	34.89	32.10	29.31	26.52	23.73	20.94	18.14	15.35	12.56	9.77	6.98	4.19	1.40	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	15.85	16.33	16.83	17.34	17.88	18.44	19.02	19.62	20.25	20.90	21.58	22.28	23.01	23.77	24.56	25.18	26.07	27.00	27.97	28.96	30.12	31.19	32.11	33.47	34.67	
Return on Equity		Rs Lakh	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	
Total Fixed Cost		Rs Lakh	140.02	139.22	138.52	137.93	137.44	137.07	136.82	136.69	136.70	136.84	137.13	137.58	138.18	138.95	139.90	127.25	131.41	135.78	140.37	145.18	150.02	163.31	168.87	174.71	180.83	
Levelised tariff corresponding to Useful life		Unit	Year-->																									
Per Unit Cost of Generation		Rs/kWh	7.47	5.59	5.79	5.99	6.19	6.40	6.63	6.85	7.09	7.33	7.59	7.85	8.12	8.40	8.69	8.99	9.30	9.62	9.95	10.29	10.65	11.01	11.39	11.78	12.19	12.61
Per unit Variable Cost		Rs/kWh	1.08	0.68	0.72	0.75	0.79	0.83	0.88	0.92	0.97	1.02	1.08	1.13	1.19	1.26	1.32	1.39	1.46	1.54	1.62	1.71	1.80	1.89	1.99	2.10	2.21	2.32
O&M expn		Rs/kWh	0.55	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	
Int. on term loan		Rs/kWh	0.49	0.95	0.89	0.82	0.75	0.69	0.62	0.56	0.49	0.43	0.36	0.30	0.23	0.16	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital		Rs/kWh	0.49	0.37	0.38	0.40	0.41	0.42	0.43	0.45	0.46	0.48	0.49	0.51	0.52	0.54	0.56	0.58	0.59	0.61	0.63	0.66	0.68	0.71	0.73	0.76	0.79	0.81
RoE		Rs/kWh	0.59	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	
Total COG		Rs/kWh	10.76	8.88	9.06	9.24	9.43	9.64	9.85	10.07	10.30	10.55	10.80	11.07	11.35	11.65	11.96	12.28	12.29	12.71	13.14	13.59	14.06	14.73	15.23	15.76	16.30	16.88
Variable Cost		5.59	Rs/kWh																									
Levelised Tariff (Fixed)		3.29	Rs/kWh																									
Levelised Tariff		8.88	Rs/kWh																									
Determination of AD for Bagasse based Power Project																												
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 (Rs./Lakh)		562																										
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%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Book Depreciation	Rs Lakh	14.83	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	16.18	-	-	-	-	-	-	-	
Accelerated Depreciation	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Opening	%	30.00%	35.00%	14.00%	9.40%	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%	0.00%	
Closing	%	70.00%	65.00%	21.00%	12.60%	7.58%	4.94%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	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	Rs Lakh	168.49	196.58	78.63	47.18	28.31	16.98	10.19	6.11	3.67	2.20	1.32	0.79	0.48	0.29	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	
Net Depreciation Benefit	Rs Lakh	153.67	166.92	48.98	17.52	-1.35	-12.67	-19.46	-23.54	-25.99	-27.45	-28.33	-28.86	-29.18	-29.37	-29.48	-29.55	-29.59	-16.14	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	
Tax Benefit	Rs Lakh	53.70	58.33	17.11	6.12	-0.47	-4.43	-6.80	-8.23	-9.08	-9.59	-9.90	-10.09	-10.20	-10.26	-10.30	-10.33	-10.34	-5.64	0.01	0.00	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	4.25	
Per unit benefit	Rs/unit	2.53	1.37	0.40	0.14	-0.01	-0.10	-0.16	-0.19	-0.21	-0.23	-0.23	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Discounting Factor	1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	0.13		
Applicable Discounting Factor	1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	0.13		
Tax Benefit Levelised	7.39	Rs/Lakh																										
Electricity Generation (Levelised)	4.06	MU																										
Levelised benefit	0.18	Rs/kWh																										

Assumption for Bagasse based Cogeneration Project Parameters				State	Maharashtra
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	8.50%
			PLF	%	60%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	562
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	562
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	393
			Total Equity Amount	Rs Lacs	168
		Debt Component	Loan Amount	Rs Lacs	393
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	168
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For variable Charges</b>			
		Bagasse Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	3600
			During Stabilization Period	Kcal/kWh	3600
		Base Price	Base Price	Rs/MT	3152
		GCV	GCV- Bagasse	Kcal/kg	2,250
			Bagasse Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	28.90
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Bagasse Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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-->																									
Bagasse Cost		Rs. Lakh	265.24	274.38	283.83	293.61	303.73	314.20	325.02	336.22	347.81	359.79	372.19	385.01	398.28	412.00	426.20	440.88	456.08	471.79	488.05	504.86	522.26	540.25	558.87	578.13	598.05	
Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	28.90	30.41	32.01	33.69	35.46	37.32	39.28	41.34	43.51	45.80	48.20	50.73	53.40	56.20	59.15	62.26	65.52	68.95	72.58	76.40	80.41	84.63	89.07	93.75	98.67	
Depreciation		Rs Lakh	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	
Interest on term loan		Rs Lakh	40.47	37.68	34.89	32.10	29.31	26.52	23.73	20.94	18.14	15.35	12.56	9.77	6.98	4.19	1.40	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	17.37	17.90	18.45	19.03	19.62	20.24	20.88	21.55	22.24	22.96	23.71	24.49	25.29	26.13	27.01	27.71	28.69	29.71	30.76	31.86	33.11	34.29	35.51	36.78	38.10	
Return on Equity		Rs Lakh	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	
Total Fixed Cost		Rs Lakh	141.54	140.79	140.15	139.61	139.18	138.87	138.68	138.62	138.69	138.91	139.27	139.78	140.46	141.31	142.34	143.78	144.58	145.79	147.43	149.58	152.26	155.51	159.36	163.84	168.98	
Levelised tariff corresponding to Useful life		Unit	Year-->																									
Per Unit Cost of Generation		Rs/kWh	7.37	5.51	5.70	5.90	6.10	6.31	6.53	6.75	6.99	7.23	7.48	7.73	8.00	8.28	8.56	8.86	9.16	9.48	9.80	10.14	10.49	10.85	11.23	11.61	12.01	12.43
Per unit Variable Cost		Rs/kWh	0.95	0.60	0.63	0.67	0.70	0.74	0.78	0.82	0.86	0.90	0.95	1.00	1.05	1.11	1.17	1.23	1.29	1.36	1.43	1.51	1.59	1.67	1.76	1.85	1.95	2.05
O&M expn		Rs/kWh	0.49	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	0.54	0.54	0.54	0.54	
Depreciation		Rs/kWh	0.43	0.84	0.78	0.72	0.67	0.61	0.55	0.49	0.43	0.38	0.32	0.26	0.20	0.14	0.09	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on term loan		Rs/kWh	0.47	0.36	0.37	0.38	0.39	0.41	0.42	0.43	0.45	0.46	0.48	0.49	0.51	0.52	0.54	0.56	0.57	0.60	0.62	0.64	0.68	0.69	0.71	0.74	0.76	0.79
Int. on working capital		Rs/kWh	0.51	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	
RoE		Rs/kWh	10.31	8.45	8.63	8.81	9.00	9.20	9.41	9.63	9.87	10.11	10.36	10.63	10.90	11.19	11.50	11.81	12.16	12.56	13.01	13.51	14.06	14.66	15.31	16.01	16.75	
Total COG		Rs/kWh	10.31	8.45	8.63	8.81	9.00	9.20	9.41	9.63	9.87	10.11	10.36	10.63	10.90	11.19	11.50	11.81	12.16	12.56	13.01	13.51	14.06	14.66	15.31	16.01	16.75	
Variable Cost		5.51	Rs/kWh																									
Levelised Tariff (Fixed)		2.95	Rs/kWh																									
Levelised Tariff		8.46	Rs/kWh																									
Determination of AD for Bagasse based Power Project																												
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 (Rs./Lakh)		562																										
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		14.83	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	16.18	-	-	-	-	-	-	-	
Accelerated Depreciation			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Opening	%		100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Allowed during the year	%		30.00%	35.00%	14.00%	9.40%	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	%		70.00%	35.00%	21.00%	12.60%	7.56%	4.94%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Accumulated Depreciation	Rs Lakh		168.49	196.58	78.63	47.18	28.31	16.98	10.19	6.11	3.67	2.20	1.32	0.79	0.48	0.29	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		153.67	166.92	48.98	17.52	-1.35	-12.67	-19.46	-23.54	-25.99	-27.45	-28.33	-28.86	-29.18	-29.37	-29.48	-29.55	-29.59	-16.14	0.02	0.01	0.01	0.00	0.00	0.00	0.00	
Tax Benefit	Rs Lakh		53.70	58.33	17.11	6.12	-0.47	-4.43	-6.80	-8.23	-9.08	-9.59	-9.90	-10.09	-10.20	-10.26	-10.30	-10.33	-10.34	-5.64	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		2.23	1.21	0.36	0.13	-0.01	-0.09	-0.14	-0.17	-0.19	-0.20	-0.21	-0.21	-0.21	-0.21	-0.21	-0.21	-0.21	-0.21	-0.21	0.00	0.00	0.00	0.00	0.00	0.00	
Discounting Factor			1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	
Tax Benefit Levelised	7.39	Rs. Lakh																										
Electricity Generation (Levelised)	4.60	MU																										
Levelised benefit	0.16	Rs/kWh																										



Assumption for Bagasse based Cogeneration Project Parameters				State	Punjab	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	8.50%	
			PLF	%	53%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	562	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	562	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	393	
			Total Equity Amount	Rs Lacs	168	
		Debt Component	Loan Amount	Rs Lacs	393	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	168	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For variable Charges</b>				
		Bagasse Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	3600	
			During Stabilization Period	Kcal/kWh	3600	
		Base Price	Base Price	Rs/MT		2815
		GCV	GCV- Bagasse	Kcal/kg		2,250
			Bagasse Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	28.90	
		O&M Expenses Escalation		%		5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Bagasse Based Power Project																										
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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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
Bagasse Cost	Rs. Lakh		209.28	216.49	223.95	231.67	239.65	247.91	256.45	265.29	274.43	283.88	293.67	303.78	314.25	325.08	336.28	347.87	359.86	372.25	385.08	398.35	412.08	426.27	440.96	456.16	471.87	
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		28.90	30.41	32.01	33.69	35.46	37.32	39.28	41.34	43.51	45.80	48.20	50.73	53.40	56.20	59.15	62.26	65.52	68.95	72.58	76.40	80.41	84.63	89.07	93.75	98.67	
Depreciation	Rs Lakh		28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21
Interest on term loan	Rs Lakh		40.47	37.68	34.89	32.10	29.31	26.52	23.73	20.94	18.14	15.35	12.56	9.77	6.98	4.19	1.40	0.00	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		14.28	14.70	15.14	15.60	16.07	16.57	17.08	17.62	18.18	18.76	19.36	19.99	20.64	21.32	22.03	22.56	23.36	24.20	25.06	25.96	27.01	27.98	28.99	30.03	31.11	
Return on Equity	Rs Lakh		28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>138.44</b>	<b>137.59</b>	<b>136.83</b>	<b>136.18</b>	<b>135.64</b>	<b>135.20</b>	<b>134.89</b>	<b>134.69</b>	<b>134.63</b>	<b>134.70</b>	<b>134.92</b>	<b>135.29</b>	<b>135.81</b>	<b>136.50</b>	<b>137.37</b>	<b>124.63</b>	<b>128.70</b>	<b>132.98</b>	<b>137.46</b>	<b>142.17</b>	<b>154.91</b>	<b>160.10</b>	<b>165.55</b>	<b>171.27</b>	<b>177.27</b>	

Levelised tariff corresponding to Useful life		Unit	Year-->	1	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 Cost of Generation	Rs/kWh		6.58	4.92	5.09	5.27	5.45	5.64	5.83	6.03	6.24	6.46	6.68	6.91	7.15	7.39	7.65	7.91	8.18	8.47	8.76	9.06	9.37	9.69	10.03	10.37	10.73	11.10
Per unit Variable Cost	Rs/kWh		1.08	0.68	0.72	0.75	0.79	0.83	0.88	0.92	0.97	1.02	1.08	1.13	1.19	1.26	1.32	1.39	1.46	1.54	1.62	1.71	1.80	1.89	1.99	2.10	2.21	2.32
O&M expn	Rs/kWh		0.55	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Int. on term loan	Rs/kWh		0.49	0.35	0.36	0.37	0.38	0.39	0.40	0.41	0.43	0.44	0.45	0.47	0.48	0.50	0.52	0.53	0.55	0.57	0.59	0.61	0.63	0.66	0.68	0.71	0.73	
Int. on working capital	Rs/kWh		0.59	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
<b>Total COG</b>	<b>Rs/kWh</b>		<b>9.82</b>	<b>8.18</b>	<b>8.33</b>	<b>8.49</b>	<b>8.65</b>	<b>8.83</b>	<b>9.01</b>	<b>9.20</b>	<b>9.41</b>	<b>9.62</b>	<b>9.85</b>	<b>10.08</b>	<b>10.33</b>	<b>10.59</b>	<b>10.86</b>	<b>11.14</b>	<b>11.11</b>	<b>11.49</b>	<b>11.88</b>	<b>12.29</b>	<b>12.71</b>	<b>13.34</b>	<b>13.79</b>	<b>14.27</b>	<b>14.76</b>	<b>15.27</b>

Variable Cost	4.92	Rs/kWh
Levelised Tariff (Fixed)	3.24	Rs/kWh
<b>Levelised Tariff</b>	<b>8.16</b>	<b>Rs/kWh</b>

Determination of AD for Bagasse based Power Project	
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 (Rs./Lakh)	562

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%	0.00%
Book Depreciation	Rs Lakh	14.83	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	16.18	-	-	-	-	-	-	-	-

Accelerated Depreciation	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	
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	9.40%	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%	0.00%
Closing	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	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%
Accumulated Depreciation	Rs Lakh	168.49	196.58	78.63	47.18	28.31	16.98	10.19	6.11	3.67	2.20	1.32	0.79	0.48	0.29	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	153.67	166.92	48.98	17.52	-1.35	-12.67	-19.46	-23.54	-25.99	-27.45	-28.33	-28.86	-29.18	-29.37	-29.48	-29.55	-29.59	-16.14	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.70	58.33	17.11	8.12	-0.47	-4.43	-6.80	-8.23	-9.08	-9.59	-9.90	-10.09	-10.20	-10.26	-10.30	-10.33	-10.34	-5.64	0.01	0.00	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	4.25
Per unit benefit	Rs/Unit	2.53	1.37	0.40	0.14	-0.01	-0.10	-0.16	-0.19	-0.21	-0.23	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	0.13

Tax Benefit Levelised	7.39	Rs Lakh
Electricity Generation (Levelised)	4.06	MU
<b>Levelised benefit</b>	<b>0.18</b>	<b>Rs/kWh</b>

Assumption for Bagasse based Cogeneration Project Parameters				State	Tamil Nadu	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	8.50%	
			PLF	%	60%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	562	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	562	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	393	
			Total Equity Amount	Rs Lacs	168	
		Debt Component	Loan Amount	Rs Lacs	393	
			Moratorium Period	Years	-	
			Repayment Period (incl. Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	168	
			Return on Equity (up to 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months	1.50	
		<b>For variable Charges</b>				
		Bagasse Stock		Months	4.00	
		Interest on Working Capital		%	11.90%	
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	3600	
			During Stabilization Period	Kcal/kWh	3600	
		Base Price	Base Price	Rs/MT	2423	
		GCV	GCV- Bagasse	Kcal/kg	2,250	
			Bagasse Price Escalation Factor	%	3.45%	
			Specific Fuel Consumption	kg/kWh	-	
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	28.90	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Bagasse Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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-->																									
Bagasse Cost		Rs. Lakh	203.87	210.89	218.16	225.68	233.45	241.50	249.82	258.43	267.33	276.54	286.07	295.93	306.12	316.67	327.58	338.87	350.55	362.63	375.12	388.05	401.42	415.25	429.56	444.36	459.67	
Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	28.90	30.41	32.01	33.69	35.46	37.32	39.28	41.34	43.51	45.80	48.20	50.73	53.40	56.20	59.15	62.26	65.52	68.95	72.58	76.40	80.41	84.63	89.07	93.75	98.67	
Depreciation		Rs Lakh	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	
Interest on term loan		Rs Lakh	40.47	37.68	34.89	32.10	29.31	26.52	23.73	20.94	18.14	15.35	12.56	9.77	6.98	4.19	1.40	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	13.98	14.39	14.82	15.27	15.73	16.21	16.72	17.24	17.79	18.35	18.94	19.55	20.19	20.86	21.55	22.06	22.85	23.66	24.51	25.39	26.42	27.37	28.36	29.38	30.44	
Return on Equity		Rs Lakh	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	
Total Fixed Cost		Rs Lakh	138.14	137.28	136.51	135.85	135.29	134.85	134.52	134.31	134.24	134.30	134.50	134.85	135.36	136.04	136.88	124.13	128.19	132.44	136.91	141.60	154.32	159.49	164.92	170.62	176.60	
Levelised tariff corresponding to Useful life		Unit	Year-->																									
Per Unit Cost of Generation		Rs/kWh	5.66	4.24	4.38	4.53	4.69	4.85	5.02	5.19	5.37	5.55	5.75	5.94	6.15	6.36	6.58	6.81	7.04	7.28	7.54	7.79	8.06	8.34	8.63	8.93	9.23	9.55
O&M expn		Rs/kWh	0.95	0.60	0.63	0.67	0.70	0.74	0.78	0.82	0.86	0.90	0.95	1.00	1.05	1.11	1.17	1.23	1.29	1.36	1.43	1.51	1.59	1.67	1.76	1.85	1.95	2.05
Depreciation		Rs/kWh	0.49	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	0.54	0.54	0.54	0.54	
Int. on term loan		Rs/kWh	0.43	0.84	0.78	0.72	0.67	0.61	0.55	0.49	0.43	0.38	0.32	0.26	0.20	0.14	0.09	0.03	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	0.29	0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.41	0.42	0.43	0.45	0.46	0.47	0.49	0.51	0.53	0.55	0.57	0.59	0.61	0.63
RoE		Rs/kWh	0.61	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	
Total COG		Rs/kWh	8.51	7.10	7.23	7.37	7.51	7.66	7.82	7.98	8.16	8.34	8.54	8.74	8.95	9.17	9.41	9.65	9.92	9.95	10.29	10.64	11.00	11.55	11.94	12.35	12.78	13.22
Variable Cost		4.24	Rs/kWh																									
Levelised Tariff (Fixed)		2.85	Rs/kWh																									
Levelised Tariff		7.09	Rs/kWh																									
Determination of AD for Bagasse based Power Project																												
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 (Rs./Lakh)		562																										
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%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Book Depreciation	Rs Lakh	14.83	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	16.18	-	-	-	-	-	-	-	
Accelerated Depreciation	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Opening	%	30.00%	35.00%	14.00%	9.40%	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%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Closing	%	70.00%	65.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	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%	
Accalated Depreciation	Rs Lakh	168.49	196.58	78.63	47.18	28.31	16.98	10.19	6.11	3.67	2.20	1.32	0.79	0.48	0.29	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	
Net Depreciation Benefit	Rs Lakh	153.67	166.92	48.98	17.52	-1.35	-12.67	-19.46	-23.54	-25.99	-27.45	-28.33	-28.86	-29.18	-29.37	-29.48	-29.55	-29.59	-16.14	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	
Tax Benefit	Rs Lakh	53.70	58.33	17.11	6.12	-0.47	-4.43	-6.80	-8.23	-9.08	-9.59	-9.90	-10.09	-10.20	-10.26	-10.30	-10.33	-10.34	-5.64	0.01	0.00	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	4.81	
Per unit benefit	Rs/Unit	2.23	1.21	0.36	0.13	-0.01	-0.09	-0.14	-0.17	-0.19	-0.20	-0.21	-0.21	-0.21	-0.21	-0.21	-0.21	-0.21	-0.21	-0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Discounting Factor	1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	0.12	0.11	
Applicable Discounting Factor	1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	0.12	0.11	
Tax Benefit Levelised	7.39	Rs Lakh																										
Electricity Generation (Levelised)	4.60	MU																										
Levelised benefit	0.16	Rs/kWh																										

Assumption for Bagasse based Cogeneration Project Parameters				State	Telangana	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	8.50%	
			PLF	%	53%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	562	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	562	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	393	
			Total Equity Amount	Rs Lacs	168	
		Debt Component	Loan Amount	Rs Lacs	393	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	168	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For variable Charges</b>				
		Bagasse Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	3600	
			During Stabilization Period	Kcal/kWh	3600	
		Base Price	Base Price	Rs/MT		2,248
		GCV	GCV- Bagasse	Kcal/kg		2,250
			Bagasse Price Escalation Factor	%		3.45%
			Specific Fuel Consumption	kg/kWh		-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	28.90	
		O&M Expenses Escalation		%	5.25%	
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	



Assumption for Bagasse based Cogeneration Project Parameters				State	Uttar Pradesh
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	8.50%
			PLF	%	45%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	562
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	562
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	393
			Total Equity Amount	Rs Lacs	168
		Debt Component	Loan Amount	Rs Lacs	393
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	168
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For variable Charges</b>			
		Bagasse Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	3600
			During Stabilization Period	Kcal/kWh	3600
		Base Price	Base Price	Rs/MT	2,509
		GCV	GCV- Bagasse	Kcal/kg	2,250
			Bagasse Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	28.90
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Bagasse Based Power Project																									
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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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-->																								
		Rs. Lakh	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Bagasse Cost			158.34	163.80	169.44	175.28	181.32	187.57	194.03	200.72	207.63	214.79	222.19	229.84	237.76	245.96	254.43	263.20	272.27	281.65	291.35	301.39	311.78	322.52	333.63	345.13	357.02

  

Fixed Cost		Unit	Year-->																								
		Rs Lakh	1	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			28.90	30.41	32.01	33.69	35.46	37.32	39.28	41.34	43.51	45.80	48.20	50.73	53.40	56.20	59.15	62.26	65.52	68.95	72.58	76.40	80.41	84.63	89.07	93.75	98.67
Depreciation			28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21	28.21
Interest on term loan			40.47	37.68	34.89	32.10	29.31	26.52	23.73	20.94	18.14	15.35	12.56	9.77	6.98	4.19	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital			11.46	11.78	12.12	12.47	12.84	13.23	13.63	14.05	14.48	14.93	15.41	15.90	16.41	16.94	17.50	17.87	18.51	19.18	19.87	20.59	21.46	22.24	23.04	23.88	24.75
Return on Equity			28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58
Total Fixed Cost			135.62	134.67	133.82	133.06	132.41	131.86	131.43	131.12	130.93	130.88	130.96	131.19	131.58	132.12	132.83	133.69	134.69	135.84	137.14	138.59	140.19	141.94	143.84	145.89	148.09

Levelised tariff corresponding to Useful life		Unit	Year-->																									
		Rs/kWh	1	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 Cost of Generation			5.86	4.39	4.54	4.69	4.86	5.02	5.38	5.56	5.75	5.95	6.16	6.37	6.59	6.81	7.05	7.29	7.54	7.80	8.07	8.35	8.64	8.94	9.24	9.56	9.89	
Per unit Variable Cost			1.27	0.80	0.84	0.89	0.93	0.98	1.03	1.09	1.15	1.21	1.27	1.34	1.41	1.48	1.56	1.64	1.72	1.82	1.91	2.01	2.12	2.23	2.34	2.47	2.60	2.73
O&M expn			0.65	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Depreciation			0.58	1.12	1.04	0.97	0.89	0.81	0.73	0.66	0.58	0.50	0.42	0.35	0.27	0.19	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on term loan			0.41	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40	0.41	0.43	0.44	0.45	0.47	0.48	0.49	0.51	0.53	0.55	0.57	0.59	0.62	0.64	0.66	0.68
Int. on working capital			0.31	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
RoE			9.57	9.14	8.27	8.40	8.54	8.69	8.85	9.02	9.19	9.38	9.58	9.78	10.00	10.23	10.47	10.73	10.61	10.97	11.35	11.74	12.14	12.78	13.21	13.66	14.14	14.63
Total COG			9.57	9.14	8.27	8.40	8.54	8.69	8.85	9.02	9.19	9.38	9.58	9.78	10.00	10.23	10.47	10.73	10.61	10.97	11.35	11.74	12.14	12.78	13.21	13.66	14.14	14.63

Variable Cost	4.39	Rs/kWh
Levelised Tariff (Fixed)	3.71	Rs/kWh
Levelised Tariff	8.10	Rs/kWh

Determination of AD for Bagasse based Power Project	
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 (Rs./Lakh)	562

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%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%
Book Depreciation	Rs. Lakh		14.83	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	16.18	-	-	-	-	-

  

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	%		100%	70%	35%	21%	13%	9%	6%	3%	2%	1%	0%	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%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%		70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs. Lakh		168.49	196.58	78.63	47.18	28.31	16.98	10.19	6.11	3.67	2.20	1.32	0.79	0.48	0.29	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		153.67	166.92	48.98	17.52	-1.35	-12.67	-19.46	-23.54	-25.99	-27.45	-28.33	-28.86	-29.18	-29.37	-29.48	-29.55	-29.59	-16.14	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh		53.70	58.33	17.11	6.12	-0.47	-4.43	-6.80	-8.23	-9.08	-9.59	-9.90	-10.09	-10.20	-10.26	-10.30	-10.33	-10.34	-5.64	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		2.98	1.62	0.47	0.17	-0.01	-0.12	-0.19	-0.23	-0.25	-0.27	-0.27	-0.28	-0.28	-0.28	-0.29	-0.29	-0.29	-0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor			1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levelised	7.39	Rs. Lakh
Electricity Generation (Levelised)	3.45	MU
Levelised benefit	0.21	Rs/kWh



Assumption for Bagasse based Cogeneration Project Parameters				State	Other States
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	8.50%
			PLF	%	53%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	562
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	562
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	393
			Total Equity Amount	Rs Lacs	168
		Debt Component	Loan Amount	Rs Lacs	393
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	168
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For variable Charges</b>			
		Bagasse Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	<b>Heat Rate</b>	After Stabilization Period	Kcal/kWh	3600
			During Stabilization Period	Kcal/kWh	3600
		Base Price	Base Price	Rs/MT	2,723
		GCV	GCV- Bagasse	Kcal/kg	2,250
			Bagasse Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	-
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	28.90
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Bagasse Based Power Project																										
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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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		
Variable Cost		Unit	Year-->																									
Bagasse Cost		Rs. Lakh	202.43	209.40	216.62	224.08	231.80	239.79	248.05	256.60	265.44	274.59	284.05	293.84	303.96	314.43	325.27	336.48	348.07	360.06	372.47	385.30	398.58	412.31	426.52	441.22	456.42	
Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	28.90	30.41	32.01	33.69	35.46	37.32	39.28	41.34	43.51	45.80	48.20	50.73	53.40	56.20	59.15	62.26	65.52	68.95	72.58	76.40	80.41	84.63	89.07	93.75	98.67	
Depreciation		Rs Lakh	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21	
Interest on term loan		Rs Lakh	40.47	37.68	34.89	32.10	29.31	26.52	23.73	20.94	18.14	15.35	12.56	9.77	6.98	4.19	1.40	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	13.90	14.31	14.73	15.18	15.64	16.12	16.62	17.14	17.68	18.24	18.83	19.44	20.07	20.73	21.42	22.14	22.92	23.75	24.62	25.54	26.50	27.51	28.56	29.65	30.78	
Return on Equity		Rs Lakh	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	
Total Fixed Cost		Rs Lakh	138.06	137.20	136.43	135.76	135.20	134.75	134.42	134.21	134.13	134.19	134.39	134.74	135.24	135.91	136.76	124.00	128.05	132.30	136.77	141.45	154.16	159.33	164.75	170.44	176.42	
Levelised tariff corresponding to Useful life		Unit	Year-->																									
Per Unit Variable Cost		Rs/kWh	6.36	4.76	4.93	5.10	5.27	5.45	5.64	5.84	6.04	6.24	6.46	6.68	6.91	7.15	7.40	7.65	7.92	8.19	8.47	8.76	9.06	9.38	9.70	10.03	10.38	10.74
O&M expn		Rs/kWh	1.08	0.68	0.72	0.75	0.79	0.83	0.88	0.92	0.97	1.02	1.08	1.13	1.19	1.26	1.32	1.39	1.46	1.54	1.62	1.71	1.80	1.89	1.99	2.10	2.21	2.32
Depreciation		Rs/kWh	0.55	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	
Int. on term loan		Rs/kWh	0.49	0.95	0.89	0.82	0.75	0.69	0.62	0.56	0.49	0.43	0.36	0.30	0.23	0.16	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital		Rs/kWh	0.42	0.33	0.34	0.35	0.38	0.37	0.38	0.39	0.40	0.42	0.43	0.44	0.46	0.47	0.49	0.50	0.52	0.53	0.55	0.57	0.59	0.62	0.64	0.68	0.71	
RoE		Rs/kWh	0.69	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	
Total COG		Rs/kWh	9.59	9.01	8.15	8.30	8.46	8.63	8.81	9.00	9.19	9.40	9.61	9.84	10.08	10.33	10.59	10.87	10.83	11.20	11.58	11.98	12.39	13.00	13.45	13.91	14.39	14.89
Variable Cost		4.76	Rs/kWh																									
Levelised Tariff (Fixed)		3.23	Rs/kWh																									
Levelised Tariff		7.99	Rs/kWh																									
Determination of AD for Bagasse based Power Project																												
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 (Rs./Lakh)		562																										
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		14.83	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	29.65	16.18	-	-	-	-	-	-	-	
Accelerated Depreciation	%		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Openness	%		100%	70%	35%	21%	13%	9%	6%	3%	2%	1%	0%	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	%		70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%		
Accelerated Depreciation	Rs Lakh		168.49	196.58	78.63	47.18	28.31	16.98	10.19	6.11	3.67	2.20	1.32	0.79	0.48	0.29	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		153.67	166.92	48.98	17.52	-1.35	-12.67	-19.46	-23.54	-25.99	-27.45	-28.33	-28.86	-29.18	-29.37	-29.48	-29.55	-29.59	-16.14	0.02	0.01	0.01	0.00	0.00	0.00	0.00	
Tax Benefit	Rs Lakh		53.70	58.33	17.11	6.12	-0.47	-4.43	-6.80	-8.23	-9.08	-9.59	-9.90	-10.09	-10.20	-10.26	-10.30	-10.33	-10.34	-5.64	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		2.53	1.37	0.40	0.14	-0.01	-0.10	-0.16	-0.19	-0.21	-0.23	-0.24	-0.24	-0.24	-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	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	
Tax Benefit Levelised	7.39	Rs Lakh																										
Electricity Generation (Levelised)	4.06	MU																										
Levelised benefit	0.18	Rs/kWh																										

Assumption for Biomass Gasifier Based Project Parameters				State	Andhra Pradesh	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	85%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	677	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	677	
3	Sources of Funding	<u>Debt: Equity</u>	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	474	
			Total Equity Amount	Rs Lacs	203	
		<u>Debt Component</u>	Loan Amount	Rs Lacs	474	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		<u>Equity Component</u>	Equity Amount	Rs Lacs	203	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	<u>Fiscal Assumptions</u>	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		<u>Depreciation</u>	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b><u>For Fixed Charges</u></b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b><u>For variable Charges</u></b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	Base Price	Base Price	Rs/MT	3,983	
			Biomass Price Escalation Factor	%	3.45%	
			Specific Fuel Consumption	kg/kWh		1.25
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	72.25	
		O&M Expenses Escalation		%		5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass Gasifier Based Power Project																									
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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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-->																								
Biomass Cost	Rs. Lakh		370.97	383.75	396.97	410.65	424.80	439.44	454.58	470.24	486.44	503.20	520.54	538.48	557.03	576.23	596.08	616.62	637.87	659.85	682.58	706.10	730.43	755.60	781.64	808.57	836.43
Fixed Cost		Unit	Year-->																								
O&M Expenses	Rs Lakh		72.23	76.05	80.04	84.24	88.66	93.32	98.22	103.37	108.80	114.51	120.52	126.85	133.51	140.52	147.90	155.66	163.84	172.44	181.49	191.02	201.05	211.60	222.71	234.40	246.71
Depreciation	Rs Lakh		31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59
Interest on term loan	Rs Lakh		48.79	45.42	42.06	38.69	35.33	31.96	28.60	25.24	21.87	18.51	15.14	11.78	8.41	5.05	1.68	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		25.40	26.22	27.08	27.96	28.89	29.85	30.85	31.89	32.97	34.09	35.26	36.48	37.74	39.06	40.43	41.86	43.33	44.72	46.37	48.09	50.01	51.86	53.78	55.78	57.85
Return on Equity	Rs Lakh		34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>212.49</b>	<b>213.74</b>	<b>215.22</b>	<b>216.94</b>	<b>218.93</b>	<b>221.18</b>	<b>223.71</b>	<b>226.54</b>	<b>229.69</b>	<b>233.16</b>	<b>236.98</b>	<b>241.15</b>	<b>245.71</b>	<b>250.67</b>	<b>256.05</b>	<b>245.26</b>	<b>264.96</b>	<b>265.15</b>	<b>275.86</b>	<b>287.10</b>	<b>308.30</b>	<b>320.71</b>	<b>333.74</b>	<b>347.43</b>	<b>361.81</b>

Per Unit Cost of Generation		Unit	Year-->																									
Per unit Variable Cost	Rs/kWh		7.39	5.53	5.72	5.92	6.12	6.33	6.55	6.78	7.01	7.25	7.50	7.76	8.03	8.31	8.59	8.89	9.20	9.51	9.84	10.18	10.53	10.89	11.27	11.66	12.06	12.47
O&M expn	Rs/kWh		1.70	1.08	1.13	1.19	1.26	1.32	1.39	1.46	1.54	1.62	1.71	1.80	1.89	1.99	2.10	2.21	2.32	2.44	2.57	2.71	2.85	3.00	3.16	3.32	3.50	3.68
Depreciation	Rs/kWh		0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	
Int. on term loan	Rs/kWh		0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital	Rs/kWh		0.50	0.38	0.39	0.40	0.42	0.43	0.44	0.46	0.47	0.49	0.51	0.53	0.54	0.56	0.58	0.60	0.62	0.64	0.67	0.69	0.72	0.74	0.77	0.80	0.83	0.86
RoE	Rs/kWh		0.52	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	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	
<b>Total COG</b>	<b>Rs/kWh</b>		<b>10.92</b>	<b>8.70</b>	<b>8.91</b>	<b>9.13</b>	<b>9.36</b>	<b>9.60</b>	<b>9.85</b>	<b>10.11</b>	<b>10.39</b>	<b>10.68</b>	<b>10.98</b>	<b>11.30</b>	<b>11.62</b>	<b>11.97</b>	<b>12.33</b>	<b>12.71</b>	<b>12.85</b>	<b>13.31</b>	<b>13.79</b>	<b>14.29</b>	<b>14.81</b>	<b>15.49</b>	<b>16.05</b>	<b>16.63</b>	<b>17.24</b>	<b>17.87</b>

Variable Cost	5.53	Rs/kWh
Levelised Tariff (Fixed)	3.53	Rs/kWh
<b>Levelised Tariff</b>	<b>9.06</b>	<b>Rs/kWh</b>

Determination of AD for Biomass Gasifier based Power Project	
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 (Rs./Lakh)	677.00

Years----->	Unit	Year-->																										
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%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%
Book Depreciation	Rs Lakh	17.87	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	
<b>Accelerated Depreciation</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>		
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%	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%	0.00%	
Closing	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	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	Rs Lakh	203.10	236.95	94.78	56.87	34.12	20.47	12.28	7.37	4.42	2.85	1.59	0.96	0.57	0.34	0.21	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00	
Net Depreciation Benefit	Rs Lakh	185.23	201.20	59.03	21.12	-1.62	-15.27	-23.46	-28.38	-31.32	-33.09	-34.15	-34.79	-35.17	-35.40	-35.54	-35.62	-35.67	-19.45	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00	
Tax Benefit	Rs Lakh	64.73	70.31	20.63	7.38	-0.57	-5.34	-8.20	-9.92	-10.95	-11.56	-11.93	-12.16	-12.29	-12.37	-12.42	-12.46	-12.46	-6.80	0.01	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	6.71	
Per unit benefit	Rs/Unit	1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	0.13	
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	0.13	

Tax Benefit Levelised	8.91	Rs Lakh
Electricity Generation (Levelised)	6.40	MU
<b>Levelised benefit</b>	<b>0.14</b>	<b>Rs/kWh</b>

Assumption for Biomass Gasifier Based Project Parameters				State	Haryana	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	85%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	677	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	677	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	474	
			Total Equity Amount	Rs Lacs	203	
		Debt Component	Loan Amount	Rs Lacs	474	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	203	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	Base Price	Base Price	Rs/MT	4534	
			Biomass Price Escalation Factor	%	3.45%	
			Specific Fuel Consumption	kg/kWh		1.25
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	72.25	
		O&M Expenses Escalation		%		5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass Gasifier Based Power Project																										
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			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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			422.27	436.82	451.87	467.44	483.55	500.21	517.45	535.28	553.72	572.80	592.54	612.95	634.07	655.92	678.52	701.90	726.09	751.11	776.99	803.76	831.46	860.10	889.74	920.40	952.11

  

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			72.23	76.05	80.04	84.24	88.66	93.32	98.22	103.37	108.80	114.51	120.52	126.85	133.51	140.52	147.90	155.66	163.84	172.44	181.49	191.02	201.05	211.60	222.71	234.40	246.71
Depreciation	Rs Lakh			31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59
Interest on term loan	Rs Lakh			48.79	45.42	42.06	38.69	35.33	31.96	28.60	25.24	21.87	18.51	15.14	11.78	8.41	5.05	1.68	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			28.24	29.16	30.11	31.11	32.14	33.21	34.33	35.49	36.69	37.95	39.25	40.60	42.01	43.47	44.99	46.32	48.02	49.77	51.60	53.49	55.60	57.64	59.77	61.97	64.26
Return on Equity	Rs Lakh			34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>			<b>215.33</b>	<b>216.68</b>	<b>218.26</b>	<b>220.09</b>	<b>222.18</b>	<b>224.54</b>	<b>227.19</b>	<b>230.14</b>	<b>233.41</b>	<b>237.01</b>	<b>240.96</b>	<b>245.28</b>	<b>249.98</b>	<b>255.09</b>	<b>260.62</b>	<b>249.98</b>	<b>259.85</b>	<b>270.20</b>	<b>281.08</b>	<b>292.50</b>	<b>313.89</b>	<b>326.49</b>	<b>339.72</b>	<b>353.62</b>	<b>368.21</b>

Levillised tariff corresponding to Useful life																													
Per Unit Cost of 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	
Per unit Variable Cost	Rs/kWh			8.41	6.30	6.51	6.74	6.97	7.21	7.46	7.72	7.98	8.26	8.54	8.84	9.14	9.46	9.78	10.12	10.47	10.83	11.20	11.59	11.99	12.40	12.83	13.27	13.73	14.20
O&M expn	Rs/kWh			1.70	1.08	1.13	1.19	1.26	1.32	1.39	1.46	1.54	1.62	1.71	1.80	1.89	1.99	2.10	2.21	2.32	2.44	2.57	2.71	2.85	3.00	3.16	3.32	3.50	3.68
Depreciation	Rs/kWh			0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	
Int. on term loan	Rs/kWh			0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital	Rs/kWh			0.56	0.42	0.43	0.45	0.46	0.48	0.49	0.51	0.53	0.55	0.57	0.58	0.60	0.63	0.65	0.67	0.69	0.72	0.74	0.77	0.80	0.83	0.86	0.89	0.92	0.96
RoE	Rs/kWh			0.52	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	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	
<b>Total COG</b>	<b>Rs/kWh</b>			<b>12.00</b>	<b>9.51</b>	<b>9.74</b>	<b>9.99</b>	<b>10.25</b>	<b>10.52</b>	<b>10.81</b>	<b>11.10</b>	<b>11.41</b>	<b>11.74</b>	<b>12.07</b>	<b>12.43</b>	<b>12.80</b>	<b>13.18</b>	<b>13.58</b>	<b>14.00</b>	<b>14.19</b>	<b>14.70</b>	<b>15.23</b>	<b>15.78</b>	<b>16.35</b>	<b>17.08</b>	<b>17.69</b>	<b>18.33</b>	<b>19.00</b>	<b>19.69</b>

Variable Cost	6.30	Rs/kWh
Levillised Tariff (Fixed)	3.58	Rs/kWh
<b>Levillised Tariff</b>	<b>9.88</b>	<b>Rs/kWh</b>

Determination of AD for Biomass Gasifier based Power Project	
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 (Rs./Lakh)	677.00

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		17.87	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	19.50	-	-	-	-	-	-	-

  

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	203.10	236.95	94.78	56.87	34.12	20.47	12.28	7.37	4.42	2.85	1.59	0.96	0.57	0.34	0.21	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	185.23	201.20	59.03	21.12	-1.62	-15.27	-23.46	-28.38	-31.32	-33.09	-34.15	-34.79	-35.17	-35.40	-35.54	-35.62	-35.67	-19.45	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	64.73	70.31	20.63	7.38	-0.57	-5.34	-8.20	-9.92	-10.95	-11.56	-11.93	-12.16	-12.29	-12.37	-12.42	-12.45	-12.46	-6.80	0.01	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	6.71
Per unit benefit	Rs/Unit	1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	0.12
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	0.12

Tax Benefit Levillised	8.91	Rs Lakh
Electricity Generation (Levillised)	6.40	MU
<b>Levillised benefit</b>	<b>0.14</b>	<b>Rs/kWh</b>

Assumption for Biomass Gasifier Based Project Parameters				State	Maharashtra	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	85%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	677	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	677	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	474	
			Total Equity Amount	Rs Lacs	203	
		Debt Component	Loan Amount	Rs Lacs	474	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	203	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	Base Price	Base Price	Rs/MT	4637	
			Biomass Price Escalation Factor	%	3.45%	
			Specific Fuel Consumption	kg/kWh		1.25
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	72.25	
		O&M Expenses Escalation		%		5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass Gasifier Based Power Project																									
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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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		431.86	446.74	462.14	478.06	494.53	511.57	529.20	547.43	566.30	585.81	606.00	626.88	648.48	670.82	693.94	717.85	742.58	768.17	794.64	822.02	850.34	879.64	909.95	941.30	973.74
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		72.23	76.05	80.04	84.24	88.66	93.32	98.22	103.37	108.80	114.51	120.52	126.85	133.51	140.52	147.90	155.66	163.84	172.44	181.49	191.02	201.05	211.60	222.71	234.40	246.71
Depreciation	Rs Lakh		31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59
Interest on term loan	Rs Lakh		48.79	45.42	42.06	38.69	35.33	31.96	28.60	25.24	21.87	18.51	15.14	11.78	8.41	5.05	1.68	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		28.77	29.71	30.68	31.70	32.75	33.84	34.98	36.16	37.39	38.67	39.99	41.37	42.81	44.30	45.84	47.21	48.93	50.72	52.58	54.50	56.65	58.73	60.88	63.13	65.45
Return on Equity	Rs Lakh		34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>215.86</b>	<b>217.23</b>	<b>218.83</b>	<b>220.68</b>	<b>222.79</b>	<b>225.17</b>	<b>227.84</b>	<b>230.82</b>	<b>234.11</b>	<b>237.73</b>	<b>241.71</b>	<b>246.05</b>	<b>250.78</b>	<b>255.91</b>	<b>261.47</b>	<b>267.56</b>	<b>274.15</b>	<b>281.31</b>	<b>289.02</b>	<b>297.28</b>	<b>306.10</b>	<b>315.49</b>	<b>325.47</b>	<b>336.05</b>	<b>347.24</b>

Levilled tariff corresponding to Useful life																											
Per Unit Cost of 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
Per unit Variable Cost	Rs/kWh		8.61	6.44	6.66	6.89	7.13	7.37	7.63	7.89	8.16	8.44	8.74	9.04	9.35	9.67	10.00	10.35	10.70	11.07	11.45	11.85	12.26	12.68	13.12	13.57	14.04
O&M expn	Rs/kWh		1.70	1.08	1.13	1.19	1.26	1.32	1.39	1.46	1.54	1.62	1.71	1.80	1.89	1.99	2.10	2.21	2.32	2.44	2.57	2.71	2.85	3.00	3.16	3.32	3.50
Depreciation	Rs/kWh		0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Int. on term loan	Rs/kWh		0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh		0.57	0.43	0.44	0.46	0.47	0.49	0.50	0.52	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.68	0.70	0.73	0.76	0.78	0.81	0.84	0.87	0.91	0.94
RoE	Rs/kWh		0.52	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	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
<b>Total COG</b>	<b>Rs/kWh</b>		<b>12.20</b>	<b>9.66</b>	<b>9.90</b>	<b>10.15</b>	<b>10.42</b>	<b>10.70</b>	<b>10.98</b>	<b>11.29</b>	<b>11.60</b>	<b>11.93</b>	<b>12.28</b>	<b>12.64</b>	<b>13.02</b>	<b>13.41</b>	<b>13.82</b>	<b>14.25</b>	<b>14.44</b>	<b>14.96</b>	<b>15.50</b>	<b>16.05</b>	<b>16.63</b>	<b>17.38</b>	<b>18.00</b>	<b>18.65</b>	<b>19.33</b>

Variable Cost	6.44	Rs/kWh
Levilled Tariff (Fixed)	3.59	Rs/kWh
<b>Levilled Tariff</b>	<b>10.03</b>	<b>Rs/kWh</b>

Determination of AD for Biomass Gasifier based Power Project	
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 (Rs./Lakh)	677.00

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	17.87	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	19.50	-	-	-	-	-	-	-
Accelerated Depreciation	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
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	203.10	236.95	94.78	56.87	34.12	20.47	12.28	7.37	4.42	2.85	1.59	0.96	0.57	0.34	0.21	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	185.23	201.20	59.03	21.12	-1.62	-15.27	-23.46	-28.38	-31.32	-33.09	-34.15	-34.79	-35.17	-35.40	-35.54	-35.62	-35.67	-19.45	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	64.73	70.31	20.63	7.38	-0.57	-5.34	-8.20	-9.92	-10.95	-11.56	-11.93	-12.16	-12.29	-12.37	-12.42	-12.45	-12.46	-6.80	0.01	0.01	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	1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levilled	8.91	Rs Lakh
Electricity Generation (Levilled)	6.30	MU
<b>Levilled benefit</b>	<b>0.14</b>	<b>Rs/kWh</b>



Assumption for Biomass Gasifier Based Project Parameters				State	Punjab	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	85%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	677	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	677	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	474	
			Total Equity Amount	Rs Lacs	203	
		Debt Component	Loan Amount	Rs Lacs	474	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	203	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	Base Price	Base Price	Rs/MT	4742	
			Biomass Price Escalation Factor	%	3.45%	
			Specific Fuel Consumption	kg/kWh		1.25
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	72.25	
		O&M Expenses Escalation		%		5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	441.68	456.90	472.64	488.93	505.77	523.20	541.23	559.88	579.17	599.12	619.77	641.12	663.21	686.07	709.71	734.16	759.46	785.63	812.70	840.70	869.67	899.63	930.63	962.70	995.87
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	72.25	76.05	80.04	84.24	88.66	93.32	98.22	103.37	108.80	114.51	120.52	126.85	133.51	140.52	147.90	155.66	163.84	172.44	181.49	191.02	201.05	211.60	222.71	234.40	246.71
Depreciation		Rs Lakh	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59
Interest on term loan		Rs Lakh	48.79	45.42	42.06	38.69	35.33	31.96	28.60	25.24	21.87	18.51	15.14	11.78	8.41	5.05	1.68	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	29.32	30.27	31.26	32.30	33.37	34.49	35.65	36.85	38.10	39.40	40.76	42.16	43.62	45.14	46.72	48.11	49.86	51.69	53.58	55.54	57.72	59.83	62.03	64.31	66.68
Return on Equity		Rs Lakh	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45
<b>Total Fixed Cost</b>		<b>Rs Lakh</b>	<b>216.40</b>	<b>217.79</b>	<b>219.41</b>	<b>221.28</b>	<b>223.41</b>	<b>225.82</b>	<b>228.51</b>	<b>231.51</b>	<b>234.82</b>	<b>238.47</b>	<b>242.47</b>	<b>246.84</b>	<b>251.59</b>	<b>256.76</b>	<b>262.35</b>	<b>251.77</b>	<b>261.69</b>	<b>272.12</b>	<b>283.06</b>	<b>294.55</b>	<b>316.01</b>	<b>328.68</b>	<b>341.99</b>	<b>355.96</b>	<b>370.64</b>

Levallised tariff corresponding to Useful life		Unit	Year-->																									
			1	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	8.80	6.59	6.81	7.05	7.29	7.54	7.80	8.07	8.35	8.64	8.93	9.24	9.56	9.89	10.23	10.58	10.95	11.33	11.72	12.12	12.54	12.97	13.42	13.88	14.36	14.85
O&M expn		Rs/kWh	1.70	1.08	1.13	1.19	1.26	1.32	1.39	1.46	1.54	1.62	1.71	1.80	1.89	1.99	2.10	2.21	2.32	2.44	2.57	2.71	2.85	3.00	3.16	3.32	3.50	3.68
Depreciation		Rs/kWh	0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	
Int. on term loan		Rs/kWh	0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital		Rs/kWh	0.58	0.44	0.45	0.47	0.48	0.50	0.51	0.53	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.70	0.72	0.74	0.77	0.80	0.83	0.86	0.89	0.92	0.96	0.99
RoE		Rs/kWh	0.52	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	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	
<b>Total COG</b>		<b>Rs/kWh</b>	<b>12.41</b>	<b>9.81</b>	<b>10.06</b>	<b>10.32</b>	<b>10.59</b>	<b>10.87</b>	<b>11.17</b>	<b>11.48</b>	<b>11.80</b>	<b>12.14</b>	<b>12.49</b>	<b>12.86</b>	<b>13.24</b>	<b>13.64</b>	<b>14.06</b>	<b>14.49</b>	<b>14.70</b>	<b>15.23</b>	<b>15.77</b>	<b>16.34</b>	<b>16.93</b>	<b>17.68</b>	<b>18.32</b>	<b>18.98</b>	<b>19.66</b>	<b>20.38</b>

Variable Cost	6.59	Rs/kWh
Levallised Tariff (Fixed)	3.61	Rs/kWh
<b>Levallised Tariff</b>	<b>10.19</b>	<b>Rs/kWh</b>

Determination of AD for Biomass Gasifier based Power Project	
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 (Rs./Lakh)	677.00

Years----->	Unit	Year-->																									
		1	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%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.87	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	19.50	-	-	-	-	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	203.10	236.95	94.78	56.87	34.12	20.47	12.28	7.37	4.42	2.85	1.59	0.96	0.57	0.34	0.21	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	185.23	201.20	59.03	21.12	-1.62	-15.27	-23.46	-28.38	-31.32	-33.09	-34.15	-34.79	-35.17	-35.40	-35.54	-35.62	-35.67	-19.45	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	64.73	70.31	20.63	7.38	-0.57	-5.34	-8.20	-9.92	-10.95	-11.56	-11.93	-12.16	-12.29	-12.37	-12.42	-12.45	-12.46	-6.80	0.01	0.01	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	1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levallised	8.91	Rs Lakh
Electricity Generation (Levallised)	6.40	MU
<b>Levallised benefit</b>	<b>0.14</b>	<b>Rs/kWh</b>

Assumption for Biomass Gasifier Based Project Parameters				State	Rajasthan	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	85%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	677	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	677	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	474	
			Total Equity Amount	Rs Lacs	203	
		Debt Component	Loan Amount	Rs Lacs	474	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	203	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	Base Price	Base Price	Rs/MT	3,958	
			Biomass Price Escalation Factor	%	3.45%	
			Specific Fuel Consumption	kg/kWh		1.25
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	72.25	
		O&M Expenses Escalation		%		5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass Gasifier Based Power Project																									
Units Generation		Unit	Year-->																								
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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	
Variable Cost		Unit	Year-->																								
Biomass Cost		Rs. Lakh	368.62	381.32	394.46	408.06	422.12	436.66	451.71	467.27	483.37	500.03	517.26	535.08	553.52	572.59	592.32	612.73	633.84	655.68	678.27	701.64	725.82	750.83	776.70	803.46	831.15
Fixed Cost		Unit	Year-->																								
O&M Expenses		Rs Lakh	72.25	76.05	80.04	84.24	88.66	93.32	98.22	103.37	108.80	114.51	120.52	126.85	133.51	140.52	147.90	155.66	163.84	172.44	181.49	191.02	201.05	211.60	222.71	234.40	246.71
Depreciation		Rs Lakh	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59
Interest on term loan		Rs Lakh	48.79	45.42	42.06	38.69	35.33	31.96	28.60	25.24	21.87	18.51	15.14	11.78	8.41	5.05	1.68	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	25.27	26.09	26.94	27.82	28.74	29.70	30.69	31.72	32.80	33.92	35.08	36.29	37.55	38.86	40.22	41.39	42.91	44.49	46.13	47.84	49.75	51.59	53.51	55.49	57.56
Return on Equity		Rs Lakh	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45
Total Fixed Cost		Rs Lakh	212.36	213.60	215.08	216.80	218.78	221.02	223.55	226.38	229.52	232.98	236.79	240.97	245.52	250.47	255.85	245.04	264.74	264.92	275.62	286.85	308.05	320.44	333.46	347.14	361.52

Levillised tariff corresponding to Useful life		Unit	Year-->																									
Per Unit Cost of Generation		Rs/kWh	7.35	5.50	5.69	5.88	6.08	6.29	6.51	6.74	6.97	7.21	7.46	7.71	7.98	8.25	8.54	8.83	9.14	9.45	9.78	10.11	10.46	10.82	11.20	11.58	11.98	12.39
O&M expn		Rs/kWh	1.70	1.08	1.13	1.19	1.26	1.32	1.39	1.46	1.54	1.62	1.71	1.80	1.89	1.99	2.10	2.21	2.32	2.44	2.57	2.71	2.85	3.00	3.16	3.32	3.50	3.68
Depreciation		Rs/kWh	0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	
Int. on term loan		Rs/kWh	0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital		Rs/kWh	0.50	0.38	0.39	0.40	0.41	0.43	0.44	0.46	0.47	0.49	0.51	0.52	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.69	0.71	0.74	0.77	0.80	0.83	0.86
RoE		Rs/kWh	0.52	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	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	
Total COG		Rs/kWh	10.87	8.66	8.87	9.09	9.32	9.56	9.81	10.07	10.34	10.63	10.93	11.24	11.57	11.91	12.27	12.65	12.99	13.25	13.73	14.22	14.74	15.42	15.97	16.55	17.16	17.78

Variable Cost	5.50	Rs/kWh
Levillised Tariff (Fixed)	3.53	Rs/kWh
<b>Levillised Tariff</b>	<b>9.02</b>	<b>Rs/kWh</b>

Determination of AD for Biomass Gasifier based Power Project	
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 (Rs./Lakh)	677.00

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	17.87	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	19.50	-	-	-	-	-	-	-

Accelerated Depreciation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	3%	2%	1%	0%	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%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	203.10	236.95	94.78	56.87	34.12	20.47	12.28	7.37	4.42	2.85	1.59	0.96	0.57	0.34	0.21	0.12	0.07	0.04	0.03	0.02	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	185.23	201.20	59.03	21.12	-1.62	-15.27	-23.46	-28.38	-31.32	-33.09	-34.15	-34.79	-35.17	-35.40	-35.54	-35.62	-35.67	-19.45	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	64.73	70.31	20.63	7.38	-0.57	-5.34	-8.20	-9.92	-10.95	-11.56	-11.93	-12.16	-12.29	-12.37	-12.42	-12.45	-12.46	-6.80	0.01	0.01	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	1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levillised	8.91	Rs Lakh
Electricity Generation (Levillised)	6.40	MU
<b>Levillised benefit</b>	<b>0.14</b>	<b>Rs/kWh</b>

Assumption for Biomass Gasifier Based Project Parameters				State	Tamil Nadu
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	10.00%
			PLF	%	85%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	677
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	677
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	474
			Total Equity Amount	Rs Lacs	203
		Debt Component	Loan Amount	Rs Lacs	474
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	203
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	<b>For Fixed Charges</b>			
		O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		<b>For variable Charges</b>			
		Biomass Stock		Months	4.00
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	Base Price	Base Price	Rs/MT	3,918
			Biomass Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	1.25
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	72.25
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biomass Gasifier Based Power Project																									
Units Generation		Unit	Year-->																								
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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-->																								
Biomass Cost		Rs. Lakh	364.94	377.52	390.52	403.98	417.90	432.30	447.20	462.61	478.54	495.03	512.09	529.74	547.99	566.87	586.40	606.61	627.51	649.13	671.50	694.64	718.57	743.33	768.95	795.44	822.85
Fixed Cost		Unit	Year-->																								
O&M Expenses		Rs Lakh	72.25	76.05	80.04	84.24	88.66	93.32	98.22	103.37	108.80	114.51	120.52	126.85	133.51	140.52	147.90	155.66	163.84	172.44	181.49	191.02	201.05	211.60	222.71	234.40	246.71
Depreciation		Rs Lakh	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59
Interest on term loan		Rs Lakh	48.79	45.42	42.06	38.69	35.33	31.96	28.60	25.24	21.87	18.51	15.14	11.78	8.41	5.05	1.68	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	25.07	25.88	26.72	27.59	28.51	29.45	30.44	31.47	32.53	33.64	34.79	35.99	37.24	38.54	39.89	41.05	42.56	44.13	45.76	47.45	49.35	51.18	53.08	55.05	57.10
Return on Equity		Rs Lakh	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45
Total Fixed Cost		Rs Lakh	212.15	213.39	214.86	216.58	218.55	220.78	223.30	226.12	229.25	232.71	236.51	240.67	245.21	250.16	255.52	244.70	264.39	264.56	275.24	286.46	307.64	320.03	333.03	346.70	361.06

Levillised tariff corresponding to Useful life

Per Unit Cost of Generation		Unit	Year-->																									
Per unit Variable Cost		Rs/kWh	7.27	5.44	5.63	5.82	6.02	6.23	6.45	6.67	6.90	7.14	7.38	7.64	7.90	8.17	8.45	8.74	9.05	9.36	9.68	10.01	10.36	10.72	11.08	11.47	11.86	12.27
O&M expn		Rs/kWh	1.70	1.08	1.13	1.19	1.26	1.32	1.39	1.46	1.54	1.62	1.71	1.80	1.89	1.99	2.10	2.21	2.32	2.44	2.57	2.71	2.85	3.00	3.16	3.32	3.50	3.68
Depreciation		Rs/kWh	0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	
Int. on term loan		Rs/kWh	0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital		Rs/kWh	0.50	0.37	0.39	0.40	0.41	0.42	0.44	0.45	0.47	0.48	0.50	0.52	0.54	0.55	0.57	0.59	0.61	0.63	0.66	0.68	0.71	0.73	0.76	0.79	0.82	0.85
RoE		Rs/kWh	0.52	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	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	
Total COG		Rs/kWh	10.79	8.60	8.81	9.03	9.25	9.49	9.74	10.00	10.27	10.55	10.85	11.16	11.49	11.83	12.18	12.55	12.69	13.15	13.62	14.12	14.63	15.30	15.86	16.43	17.03	17.65

Variable Cost	5.44	Rs/kWh
Levillised Tariff (Fixed)	3.52	Rs/kWh
<b>Levillised Tariff</b>	<b>8.96</b>	<b>Rs/kWh</b>

Determination of AD for Biomass Gasifier based Power Project

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 (Rs./Lakh)	677.00

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	17.87	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	19.50	-	-	-	-	-	-	-
Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	203.10	236.95	94.78	56.87	34.12	20.47	12.28	7.37	4.42	2.85	1.59	0.96	0.57	0.34	0.21	0.12	0.07	0.04	0.03	0.02	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	185.23	201.20	59.03	21.12	-1.62	-15.27	-23.46	-28.38	-31.32	-33.09	-34.15	-34.79	-35.17	-35.40	-35.54	-35.62	-35.67	-19.45	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	64.73	70.31	20.63	7.38	-0.57	-5.34	-8.20	-9.92	-10.95	-11.56	-11.93	-12.16	-12.29	-12.37	-12.42	-12.45	-12.46	-6.80	0.01	0.01	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	1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levillised	8.91	Rs Lakh
Electricity Generation (Levillised)	6.40	MU
<b>Levillised benefit</b>	<b>0.14</b>	<b>Rs/kWh</b>

Assumption for Biomass Gasifier Based Project Parameters				State	Telangana	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	85%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	677	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	677	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	474	
			Total Equity Amount	Rs Lacs	203	
		Debt Component	Loan Amount	Rs Lacs	474	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	203	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	Base Price	Base Price	Rs/MT	3,983	
			Biomass Price Escalation Factor	%	3.45%	
			Specific Fuel Consumption	kg/kWh		1.25
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	72.25	
		O&M Expenses Escalation		%		5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass Gasifier Based Power Project																										
Units Generation		Unit	Year-->																									
Installed Capacity		MW	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
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			
Variable Cost		Unit	Year-->																									
Biomass Cost		Rs. Lakh	370.97	383.75	396.97	410.65	424.80	439.44	454.58	470.24	486.44	503.20	520.54	538.48	557.03	576.23	596.08	616.62	637.87	659.85	682.58	706.10	730.43	755.60	781.64	808.57	836.43	
Fixed Cost		Unit	Year-->																									
O&M Expenses		Rs Lakh	72.25	76.05	80.04	84.24	88.66	93.32	98.22	103.37	108.80	114.51	120.52	126.85	133.51	140.52	147.90	155.66	163.84	172.44	181.49	191.02	201.05	211.60	222.71	234.40	246.71	
Depreciation		Rs Lakh	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59		
Interest on term loan		Rs Lakh	48.79	45.42	42.06	38.69	35.33	31.96	28.60	25.24	21.87	18.51	15.14	11.78	8.41	5.05	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Interest on working Capital		Rs Lakh	25.40	26.22	27.08	27.96	28.89	29.85	30.85	31.89	32.97	34.09	35.26	36.48	37.74	39.06	40.43	41.60	43.13	44.72	46.37	48.09	50.01	51.86	53.78	55.78		
Return on Equity		Rs Lakh	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45		
Total Fixed Cost		Rs Lakh	212.49	213.74	215.22	216.94	218.93	221.18	223.71	226.54	229.69	233.16	236.98	241.15	245.71	250.67	256.05	245.26	264.96	265.15	275.86	287.10	308.30	320.71	333.74	347.43	361.81	
Levallised tariff corresponding to Useful life		Unit	Year-->																									
Per Unit Variable Cost		Rs/kWh	7.39	5.53	5.72	5.92	6.12	6.33	6.55	6.78	7.01	7.25	7.50	7.76	8.03	8.31	8.59	8.89	9.20	9.51	9.84	10.18	10.53	10.89	11.27	11.66	12.06	12.47
O&M expn		Rs/kWh	1.70	1.08	1.13	1.19	1.26	1.32	1.39	1.46	1.54	1.62	1.71	1.80	1.89	1.99	2.10	2.21	2.32	2.44	2.57	2.71	2.85	3.00	3.16	3.32	3.50	3.68
Depreciation		Rs/kWh	0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	
Int. on term loan		Rs/kWh	0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital		Rs/kWh	0.50	0.38	0.39	0.40	0.42	0.43	0.44	0.46	0.47	0.49	0.51	0.53	0.54	0.56	0.58	0.60	0.62	0.64	0.67	0.69	0.72	0.74	0.77	0.80	0.83	0.86
RoE		Rs/kWh	0.52	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	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	
Total COG		Rs/kWh	10.92	8.70	8.91	9.13	9.36	9.60	9.85	10.11	10.39	10.68	10.98	11.30	11.62	11.97	12.33	12.71	12.85	13.31	13.79	14.29	14.81	15.49	16.05	16.63	17.24	17.87
Variable Cost		Rs/kWh	5.53																									
Levellised Tariff (Fixed)		Rs/kWh	3.53																									
Levllised Tariff		Rs/kWh	9.06																									
Determination of AD for Biomass Gasifier based Power Project																												
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 (Rs./Lakh)		677.00																										
Years----->		Unit	Year-->																									
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	17.87	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	19.50	-	-	-	-	-	-	-	
Accelerated Depreciation																												
Opening		%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	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		%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Accelerated Depreciation		Rs Lakh	203.10	236.95	94.78	56.87	34.12	20.47	12.28	7.37	4.42	2.85	1.59	0.96	0.57	0.34	0.21	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	185.23	201.20	59.03	21.12	-1.62	-15.27	-23.46	-28.38	-31.32	-33.09	-34.15	-34.79	-35.17	-35.40	-35.54	-35.62	-35.67	-19.45	0.03	0.02	0.01	0.01	0.00	0.00	0.00	
Tax Benefit		Rs Lakh	64.73	70.31	20.63	7.38	-0.57	-5.34	-8.20	-9.92	-10.95	-11.56	-11.93	-12.16	-12.29	-12.37	-12.42	-12.45	-12.46	-6.80	0.01	0.01	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	1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.19	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Discounting Factor			1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13	
Applicable Discounting Factor			1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	
Tax Benefit Levellised		8.91																										
Electricity Generation (Levllised)		6.40																										
Levllised benefit		0.14																										



Assumption for Biomass Gasifier Based Project Parameters				State	Uttar Pradesh	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	85%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	677	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	677	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	474	
			Total Equity Amount	Rs Lacs	203	
		Debt Component	Loan Amount	Rs Lacs	474	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	203	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	Base Price	Base Price	Rs/MT	4053	
			Biomass Price Escalation Factor	%	3.45%	
			Specific Fuel Consumption	kg/kWh		1.25
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	72.25	
		O&M Expenses Escalation		%		5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass Gasifier Based Power Project																									
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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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		377.49	390.50	403.95	417.87	432.27	447.17	478.51	495.00	512.06	529.70	547.95	566.83	586.36	606.57	627.47	649.09	671.46	694.59	718.52	743.28	768.89	795.39	822.79	851.14	
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		72.23	76.05	80.04	84.24	88.66	93.32	98.22	103.37	108.80	114.51	120.52	126.85	133.51	140.52	147.90	155.66	163.84	172.44	181.49	191.02	201.05	211.60	222.71	234.40	246.71
Depreciation	Rs Lakh		31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59
Interest on term loan	Rs Lakh		48.79	45.42	42.06	38.69	35.33	31.96	28.60	25.24	21.87	18.51	15.14	11.78	8.41	5.05	1.68	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		25.76	26.59	27.46	28.36	29.30	30.28	31.29	32.35	33.44	34.58	35.77	37.00	38.29	39.62	41.01	42.20	43.75	45.36	47.04	48.77	50.72	52.59	54.54	56.56	58.67
Return on Equity	Rs Lakh		34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>212.85</b>	<b>214.11</b>	<b>215.61</b>	<b>217.34</b>	<b>219.34</b>	<b>221.61</b>	<b>224.15</b>	<b>227.00</b>	<b>230.16</b>	<b>233.65</b>	<b>237.48</b>	<b>241.68</b>	<b>246.26</b>	<b>251.24</b>	<b>256.64</b>	<b>262.46</b>	<b>268.70</b>	<b>275.29</b>	<b>282.24</b>	<b>289.57</b>	<b>297.29</b>	<b>305.41</b>	<b>313.94</b>	<b>322.89</b>	<b>332.26</b>

Levilled tariff corresponding to Useful life																												
Per Unit Cost of 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	
Per unit Variable Cost	Rs/kWh		7.52	5.63	5.82	6.02	6.23	6.45	6.67	6.90	7.14	7.38	7.64	7.90	8.17	8.45	8.74	9.05	9.36	9.68	10.01	10.36	10.71	11.08	11.47	11.86	12.27	12.69
O&M expn	Rs/kWh		1.70	1.08	1.13	1.19	1.26	1.32	1.39	1.46	1.54	1.62	1.71	1.80	1.89	1.99	2.10	2.21	2.32	2.44	2.57	2.71	2.85	3.00	3.16	3.32	3.50	3.68
Depreciation	Rs/kWh		0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Int. on term loan	Rs/kWh		0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	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		0.51	0.38	0.40	0.41	0.42	0.44	0.45	0.47	0.48	0.50	0.51	0.53	0.55	0.57	0.59	0.61	0.63	0.65	0.68	0.70	0.73	0.76	0.78	0.81	0.84	0.87
RoE	Rs/kWh		0.52	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	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	
<b>Total COG</b>	<b>Rs/kWh</b>		<b>11.06</b>	<b>8.80</b>	<b>9.01</b>	<b>9.24</b>	<b>9.47</b>	<b>9.72</b>	<b>9.97</b>	<b>10.24</b>	<b>10.52</b>	<b>10.81</b>	<b>11.12</b>	<b>11.44</b>	<b>11.77</b>	<b>12.12</b>	<b>12.49</b>	<b>12.87</b>	<b>13.02</b>	<b>13.49</b>	<b>13.98</b>	<b>14.48</b>	<b>15.01</b>	<b>15.69</b>	<b>16.26</b>	<b>16.85</b>	<b>17.46</b>	<b>18.10</b>

Variable Cost	5.63	Rs/kWh
Levilled Tariff (Fixed)	3.53	Rs/kWh
<b>Levilled Tariff</b>	<b>9.16</b>	<b>Rs/kWh</b>

Determination of AD for Biomass Gasifier based Power Project	
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 (Rs./Lakh)	677.00

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	17.87	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	19.50	-	-	-	-	-	-	-
Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	203.10	236.95	94.78	56.87	34.12	20.47	12.28	7.37	4.42	2.85	1.59	0.96	0.57	0.34	0.21	0.12	0.07	0.04	0.03	0.02	0.01	0.00	0.00	0.00	0.00
Net Depreciation Benefit	Rs Lakh	185.23	201.20	59.03	21.12	-1.62	-15.27	-23.46	-28.38	-31.32	-33.09	-34.15	-34.79	-35.17	-35.40	-35.54	-35.62	-35.67	-19.45	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	64.73	70.31	20.63	7.38	-0.57	-5.34	-8.20	-9.92	-10.95	-11.56	-11.93	-12.16	-12.29	-12.37	-12.42	-12.45	-12.46	-6.80	0.01	0.01	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	1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levilled	8.91	Rs Lakh
Electricity Generation (Levilled)	6.40	MU
<b>Levilled benefit</b>	<b>0.14</b>	<b>Rs/kWh</b>

Assumption for Biomass Gasifier Based Project Parameters				State	Other States	
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00	
			Auxiliary Consumption during stabilisation	%	10.00%	
			PLF	%	85%	
			Useful Life	Years	25.00	
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	677	
			Capital subsidy (if any)	Rs Lacs	-	
			Net capital cost	Rs Lacs	677	
3	Sources of Funding	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lacs	474	
			Total Equity Amount	Rs Lacs	203	
		Debt Component	Loan Amount	Rs Lacs	474	
			Moratorium Period	Years	-	
			Repayment Period (incl Moratorium)	Years	15.00	
			Interest Rate	%	10.65%	
		Equity Component	Equity Amount	Rs Lacs	203	
			Return on Equity (upto 20 Years)	%	16.96%	
			Return on Equity (after 20 Years)	%	21.52%	
			Discount Rate (equ. To WACC)	%	9.05%	
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%	
			MAT Rate	%	17.47%	
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%	
			Depreciation Rate 16th year onwards	%	2.00%	
5	Working Capital	<b>For Fixed Charges</b>				
		O&M Charges		Months	1.00	
		Maintenance Spares	(% of O&M Expenses)			15%
		Receivables for Debtors		Months		1.50
		<b>For variable Charges</b>				
		Biomass Stock		Months		4.00
		Interest on Working Capital		%		11.90%
6	Fuel Related Assumptions	Base Price	Base Price	Rs/MT	4260	
			Biomass Price Escalation Factor	%	3.45%	
			Specific Fuel Consumption	kg/kWh		1.25
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	72.25	
		O&M Expenses Escalation		%		5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00	

Determination of Tariff Components		Biomass Gasifier Based Power Project																									
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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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		396.73	410.40	424.54	439.17	454.30	469.95	486.15	502.90	520.23	538.15	556.70	575.88	595.72	616.25	637.48	659.45	682.17	705.67	729.99	755.14	781.16	808.08	835.92	864.73	894.52
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		72.25	76.05	80.04	84.24	88.66	93.32	98.22	103.37	108.80	114.51	120.52	126.85	133.51	140.52	147.90	155.66	163.84	172.44	181.49	191.02	201.05	211.60	222.71	234.40	246.71
Depreciation	Rs Lakh		31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59
Interest on term loan	Rs Lakh		48.79	45.42	42.06	38.69	35.33	31.96	28.60	25.24	21.87	18.51	15.14	11.78	8.41	5.05	1.68	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		26.83	27.70	28.60	29.54	30.52	31.54	32.60	33.70	34.84	36.03	37.26	38.55	39.89	41.27	42.72	43.97	45.58	47.26	49.00	50.80	52.82	54.76	56.79	58.89	61.07
Return on Equity	Rs Lakh		34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>213.91</b>	<b>215.21</b>	<b>216.75</b>	<b>218.52</b>	<b>220.56</b>	<b>222.87</b>	<b>225.46</b>	<b>228.35</b>	<b>231.56</b>	<b>235.09</b>	<b>238.98</b>	<b>243.22</b>	<b>247.86</b>	<b>252.89</b>	<b>258.35</b>	<b>264.27</b>	<b>270.61</b>	<b>277.34</b>	<b>284.46</b>	<b>291.97</b>	<b>299.88</b>	<b>308.19</b>	<b>316.81</b>	<b>325.74</b>	<b>334.99</b>

Levillised 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	7.91	5.92	6.12	6.33	6.55	6.77	7.01	7.25	7.50	7.76	8.02	8.30	8.59	8.88	9.19	9.51	9.83	10.17	10.52	10.89	11.26	11.65	12.05	12.47	12.89	13.34
O&M expn	Rs/kWh	1.70	1.08	1.13	1.19	1.26	1.32	1.39	1.46	1.54	1.62	1.71	1.80	1.89	1.99	2.10	2.21	2.32	2.44	2.57	2.71	2.85	3.00	3.16	3.32	3.50	3.68
Depreciation	Rs/kWh	0.42	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Int. on term loan	Rs/kWh	0.37	0.73	0.68	0.63	0.58	0.53	0.48	0.43	0.38	0.33	0.28	0.23	0.18	0.13	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	0.53	0.40	0.41	0.43	0.44	0.46	0.47	0.49	0.50	0.52	0.54	0.56	0.57	0.59	0.62	0.64	0.66	0.68	0.70	0.73	0.76	0.79	0.82	0.85	0.88	0.91
RoE	Rs/kWh	0.52	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	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
<b>Total COG</b>	<b>Rs/kWh</b>	<b>11.46</b>	<b>9.11</b>	<b>9.33</b>	<b>9.56</b>	<b>9.81</b>	<b>10.06</b>	<b>10.33</b>	<b>10.61</b>	<b>10.90</b>	<b>11.21</b>	<b>11.53</b>	<b>11.87</b>	<b>12.21</b>	<b>12.58</b>	<b>12.96</b>	<b>13.36</b>	<b>13.83</b>	<b>14.31</b>	<b>14.81</b>	<b>15.34</b>	<b>15.88</b>	<b>16.45</b>	<b>17.04</b>	<b>17.66</b>	<b>18.31</b>	<b>18.98</b>

Variable Cost	5.92	Rs/kWh
Levillised Tariff (Fixed)	3.56	Rs/kWh
<b>Levillised Tariff</b>	<b>9.47</b>	<b>Rs/kWh</b>

Determination of AD for Biomass Gasifier based Power Project	
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 (Rs./Lakh)	677.00

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%	
Book Depreciation	Rs Lakh	17.87	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	19.50	-	-	-	-	-	-	
Accelerated Depreciation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	
Accelerated Depreciation	Rs Lakh	203.10	236.95	94.78	56.87	34.12	20.47	12.28	7.37	4.42	2.85	1.59	0.96	0.57	0.34	0.21	0.12	0.07	0.04	0.03	0.02	0.01	0.00	0.00	0.00	
Net Depreciation Benefit	Rs Lakh	185.23	201.20	59.03	21.12	-1.62	-15.27	-23.46	-28.38	-31.32	-33.09	-34.15	-34.79	-35.17	-35.40	-35.54	-35.62	-35.67	-19.45	0.03	0.02	0.01	0.01	0.00	0.00	
Tax Benefit	Rs Lakh	64.73	70.31	20.63	7.38	-0.57	-5.34	-8.20	-9.92	-10.95	-11.56	-11.93	-12.16	-12.29	-12.37	-12.42	-12.45	-12.46	-6.80	0.01	0.01	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	
Per unit benefit	Rs/Unit	1.93	1.05	0.31	0.11	-0.01	-0.08	-0.12	-0.15	-0.16	-0.17	-0.18	-0.18	-0.18	-0.18	-0.19	-0.19	-0.19	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levillised	8.91	Rs Lakh
Electricity Generation (Levillised)	6.40	MU
<b>Levillised benefit</b>	<b>0.14</b>	<b>Rs/kWh</b>

Assumption for Biogas Based Project Parameters					
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	12.00%
			PLF	%	90%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	1354
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	1354
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	948
			Total Equity Amount	Rs Lacs	406
		Debt Component	Loan Amount	Rs Lacs	948
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	406
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
			Discount Rate (equ. To WACC)	%	9.05%
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	2.00%
5	Working Capital	O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		Interest on Working Capital		%	11.90%
6	Fuel Related Assumptions	Base Price	Base Price	Rs/MT	1702
			Price Escalation Factor	%	3.45%
			Specific Fuel Consumption	kg/kWh	3.00
7	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	72.25
		O&M Expenses Escalation		%	5.25%
8	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		Biogas Based Power Project																									
Units Generation		Unit	Year-->																								
Installed Capacity		MW	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
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-->																								
Biogas Cost		Rs. Lakh	402.83	416.71	431.07	445.93	461.29	477.18	493.63	510.64	528.23	546.43	565.26	584.74	604.89	625.73	647.29	669.59	692.66	716.53	741.22	766.76	793.18	820.51	848.78	878.03	908.28
Fixed Cost		Unit	Year-->																								
O&M Expenses		Rs Lakh	72.25	76.05	80.04	84.24	88.66	93.32	98.22	103.37	108.80	114.51	120.52	126.85	133.51	140.52	147.90	155.58	163.64	172.14	181.09	190.42	199.15	208.29	217.84	227.81	238.19
Depreciation		Rs Lakh	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19
Interest on term loan		Rs Lakh	97.58	90.85	84.12	77.39	70.66	63.93	57.20	50.47	43.74	37.01	30.28	23.55	16.82	10.09	3.36	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	28.90	29.73	30.60	31.50	32.44	33.42	34.44	35.50	36.61	37.76	38.96	40.22	41.52	42.87	44.28	45.76	46.89	48.58	50.34	52.17	54.35	56.32	58.36	60.49	62.70
Return on Equity		Rs Lakh	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91
Total Fixed Cost		Rs Lakh	330.82	328.72	326.85	325.22	323.85	322.76	321.95	321.44	321.25	321.38	321.87	322.71	323.95	325.58	327.64	296.91	306.71	317.01	327.82	339.17	369.89	382.41	395.57	409.38	423.90

Per Unit Cost of Generation		Unit	Year-->																									
Per unit Variable Cost		Rs/kWh	7.75	5.80	6.00	6.21	6.42	6.64	6.87	7.11	7.36	7.61	7.87	8.14	8.42	8.71	9.01	9.32	9.64	9.98	10.32	10.68	11.04	11.42	11.82	12.23	12.65	13.08
O&M expn		Rs/kWh	1.65	1.04	1.10	1.15	1.21	1.28	1.34	1.41	1.49	1.57	1.65	1.74	1.83	1.92	2.02	2.13	2.24	2.36	2.48	2.61	2.75	2.90	3.05	3.21	3.38	3.55
Depreciation		Rs/kWh	0.82	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Int. on term loan		Rs/kWh	0.72	1.41	1.31	1.21	1.11	1.02	0.92	0.82	0.73	0.63	0.53	0.44	0.34	0.24	0.15	0.05	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	0.54	0.42	0.43	0.44	0.45	0.47	0.48	0.50	0.51	0.53	0.54	0.56	0.58	0.60	0.62	0.64	0.65	0.68	0.70	0.73	0.75	0.78	0.81	0.84	0.87	0.90
RoE		Rs/kWh	1.01	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Total COG		Rs/kWh	12.49	10.57	10.74	10.92	11.11	11.31	11.52	11.75	11.98	12.24	12.50	12.78	13.07	13.38	13.70	14.04	13.92	14.39	14.89	15.40	15.93	16.75	17.33	17.92	18.54	19.19

Variable Cost	5.80	Rs/kWh
Levelised Tariff (Fixed)	4.74	Rs/kWh
<b>Levelised Tariff</b>	<b>10.54</b>	<b>Rs/kWh</b>

Determination of AD for Biogas based Power Project	
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 (Rs./Lakh)	1,354.00

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	35.75	71.49	71.49	71.49	71.49	71.49	71.49	71.49	71.49	71.49	71.49	71.49	71.49	71.49	71.49	71.49	39.00	-	-	-	-	-	-	-	-

Accelerated Depreciation	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
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	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	406.20	473.90	189.56	113.74	68.24	40.94	24.57	14.74	8.84	5.31	3.18	1.91	1.15	0.69	0.41	0.25	0.15	0.09	0.05	0.03	0.02	0.01	0.01	0.00	0.00

Net Depreciation Benefit	Rs Lakh	370.45	402.41	118.07	42.24	-3.25	-30.55	-46.92	-56.75	-62.65	-66.18	-68.31	-69.58	-70.35	-70.80	-71.08	-71.24	-71.34	-38.91	0.05	0.03	0.02	0.01	0.01	0.00	0.00
Tax Benefit	Rs Lakh	129.45	140.62	41.26	14.76	-1.14	-10.67	-16.40	-19.83	-21.89	-23.13	-23.87	-24.31	-24.58	-24.74	-24.84	-24.90	-24.93	-13.60	0.02	0.01	0.01	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	3.73	2.03	0.59	0.21	-0.02	-0.15	-0.24	-0.29	-0.32	-0.33	-0.34	-0.35	-0.35	-0.36	-0.36	-0.36	-0.36	-0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.60	0.55	0.50	0.46	0.42	0.39	0.35	0.33	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levelised	17.83	Rs Lakh
Electricity Generation (Levelised)	6.63	MU
<b>Levelised benefit</b>	<b>0.27</b>	<b>Rs/kWh</b>

Assumption for RDF based MSW Project Parameters					Annexure – 6
S. No	Assumption Head	Sub-Head	Sub-Head - 2	Unit	Parameters
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1.00
			Auxiliary Consumption during stabilisation	%	15.00%
			PLF(Stabilization for 1st Year)	%	65%
			PLF(Stabilization from 2nd Year)	%	80%
			Useful Life	Years	20.00
2	Project Cost	Capital Cost/MW	Power Plant Cost	Rs Lacs	2200
			Capital subsidy (if any)	Rs Lacs	-
			Net capital cost	Rs Lacs	2200
3	Sources of Funding	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lacs	1540
			Total Equity Amount	Rs Lacs	660
		Debt Component	Loan Amount	Rs Lacs	1540
			Moratorium Period	Years	-
			Repayment Period (incl Moratorium)	Years	15.00
			Interest Rate	%	10.65%
		Equity Component	Equity Amount	Rs Lacs	660
			Return on Equity (upto 20 Years)	%	16.96%
			Return on Equity (after 20 Years)	%	21.52%
Discount Rate (equ. To WACC)	%		9.05%		
4	Financial Assumptions	Fiscal Assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate (Power Plant)	%	4.67%
			Depreciation Rate 16th year onwards	%	4.00%
5	Working Capital	O&M Charges		Months	1.00
		Maintenance Spares	(% of O&M Expenses)		15%
		Receivables for Debtors		Months	1.50
		Interest on Working Capital		%	11.90%
6	Operation & Maintenance Expenses	O&M Expenses		Rs. Lacs	187
		O&M Expenses Escalation		%	5.25%
7	Generation & Sale of Energy	Total No. of Hours		Hrs	8,766.00

Determination of Tariff Components		RDF Based Power Project																				
Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Installed Capacity	MW		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Generation	MU		4.84	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96

Fixed Cost	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
O&M Expenses	Rs Lakh		187.00	196.82	207.15	218.03	229.47	241.52	254.20	267.54	281.59	296.37	311.93	328.31	345.55	363.69	382.78	402.88	424.03	446.29	469.72	494.38
Depreciation	Rs Lakh		102.67	102.67	102.67	102.67	102.67	102.67	102.67	102.67	102.67	102.67	102.67	102.67	102.67	102.67	102.67	88.00	88.00	88.00	88.00	88.00
Interest on term loan	Rs Lakh		158.54	147.61	136.68	125.74	114.81	103.87	92.94	82.01	71.07	60.14	49.20	38.27	27.34	16.40	5.47	-0.00	-0.00	-0.00	-0.00	-0.00
Interest on working Capital	Rs Lakh		13.73	13.99	14.27	14.58	14.91	15.26	15.65	16.06	16.50	16.98	17.49	18.03	18.61	19.23	19.89	20.46	21.37	22.34	23.35	24.42
Return on Equity	Rs Lakh		111.96	111.96	111.96	111.96	111.96	111.96	111.96	111.96	111.96	111.96	111.96	111.96	111.96	111.96	111.96	111.96	111.96	111.96	111.96	111.96
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>573.90</b>	<b>573.04</b>	<b>572.73</b>	<b>572.97</b>	<b>573.82</b>	<b>575.28</b>	<b>577.41</b>	<b>580.24</b>	<b>583.79</b>	<b>588.12</b>	<b>593.25</b>	<b>599.24</b>	<b>606.12</b>	<b>613.95</b>	<b>622.77</b>	<b>623.30</b>	<b>645.36</b>	<b>668.59</b>	<b>693.03</b>	<b>718.76</b>

Levelised tariff corresponding to Useful life																							
Per Unit Cost of Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
O&M expn	Rs/kWh		4.68	3.86	3.30	3.48	3.66	3.85	4.05	4.26	4.49	4.72	4.97	5.23	5.51	5.80	6.10	6.42	6.76	7.11	7.49	7.88	8.29
Depreciation	Rs/kWh		1.73	2.12	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.48	1.48	1.48	1.48	1.48	
Int. on term loan	Rs/kWh		1.53	3.27	2.48	2.29	2.11	1.93	1.74	1.56	1.38	1.19	1.01	0.83	0.64	0.46	0.28	0.09	0.00	0.00	0.00	0.00	
Int. on working capital	Rs/kWh		0.28	0.28	0.23	0.24	0.24	0.25	0.26	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.33	0.34	0.36	0.37	0.39	0.41	
RoE	Rs/kWh		1.92	2.31	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	
<b>Total COG</b>	<b>Rs/kWh</b>		<b>10.15</b>	<b>11.85</b>	<b>9.61</b>	<b>9.61</b>	<b>9.61</b>	<b>9.63</b>	<b>9.65</b>	<b>9.69</b>	<b>9.73</b>	<b>9.79</b>	<b>9.87</b>	<b>9.95</b>	<b>10.05</b>	<b>10.17</b>	<b>10.30</b>	<b>10.45</b>	<b>10.46</b>	<b>10.83</b>	<b>11.22</b>	<b>11.63</b>	<b>12.06</b>

**Levelised Tariff 10.15 Rs/kWh**

Determination of AD for RDF based Power Project	
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 (Rs./Lakh)	2,200.00

Years----->	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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%
Book Depreciation	Rs Lakh	58.08	116.16	116.16	116.16	116.16	116.16	116.16	116.16	116.16	116.16	116.16	116.16	116.16	116.16	116.16	116.16	116.16	63.36	-	-

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30.00%	35.00%	14.00%	8.00%	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%
Closing	%	70.00%	35.00%	21.00%	12.50%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%
Accelerated Depreciation	Rs Lakh	660.00	770.00	308.00	184.80	110.88	66.53	39.92	23.95	14.37	8.62	5.17	3.10	1.86	1.12	0.67	0.40	0.24	0.14	0.09	0.05

Net Depreciation Benefit	Rs Lakh	601.92	653.84	191.84	68.64	-5.28	-49.63	-76.24	-92.21	-101.79	-107.54	-110.99	-113.06	-114.30	-115.04	-115.49	-115.76	-115.92	-63.22	0.09	0.05
Tax Benefit	Rs Lakh	210.33	228.48	67.04	23.99	-1.85	-17.34	-26.64	-32.22	-35.57	-37.58	-38.78	-39.51	-39.94	-40.20	-40.36	-40.45	-40.51	-22.09	0.03	0.02
Energy generation	MU	2.42	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96
Per unit benefit	Rs/Unit	8.69	3.83	1.12	0.40	-0.03	-0.29	-0.45	-0.54	-0.60	-0.63	-0.65	-0.66	-0.67	-0.67	-0.68	-0.68	-0.68	-0.37	0.00	0.00
Discounting Factor		1.00	0.92	0.84	0.77	0.71	0.65	0.59	0.55	0.50	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23	0.21	0.19
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.24	0.22	0.20

Tax Benefit Levelised	28.96	Rs Lakh
Electricity Generation (Levelised)	5.22	MU
<b>Levelised benefit</b>	<b>0.55</b>	<b>Rs/kWh</b>