

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 98/TT/2012**

**Coram:**

**Shri Gireesh B. Pradhan, Chairperson  
Shri M. Deena Dayalan, Member  
Shri A. K. Singhal, Member**

**Date of Hearing : 22.04.2014  
Date of Order : 16.09.2014**

**In the matter of:**

Approval of transmission tariff from anticipated Notional DOCO to 31.3.2014 for Assets: (i) 132kV Silchar-Hailakandi (AEGCL) line along-with associated bays (Anticipated DOCO 01.04.2012) (ii) 200MVA, 400/132kV, ICT-II at Silchar along-with associated bays (Anticipated DOCO 01.04.2012) (iii) 400kV D/C Pallatana-Surajmaninagar line (Charged at 132kV) alongwith associated bays (Anticipated DOCO 01.07.2012) (iv) 400kV Silchar-Purbakancharbari line (Charged at 132kV) along-with associated bays (Anticipated DOCO 01.07.2012) (v) 80 MVAR, 420kV Bus Reactor at Bongaigaon along-with associated bay (Anticipated DOCO 01.07.2012) Under transmission system associated with Pallatana Gas Based Power Project and Bongaigaon Thermal Power Station in NER for tariff block 2009-14 under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009.

**And in the matter of:**

Power Grid Corporation of India Limited  
"Saudamani", Plot No.2,  
Sector-29, Gurgaon -122 001.

.....**Petitioner**

**Vs**

1. Assam State Electricity Board  
Bijulee Bhawan, Paltan Bazar  
Guwahati-781 001.
2. Meghalaya Energy Corporation Ltd.  
Short Round Road  
Shillong-793 001.
3. Government of Arunachal Pradesh  
Itanagar.



4. Power and Electricity Department  
Govt. of Mizoram  
Mizoram.
5. Electricity Department  
Govt. of Manipur, Keishampat  
Imphal.
6. Department of Power  
Govt. of Nagaland  
Kohima.
7. Tripura State Electricity Corporation Ltd.  
Bidyut Bhawan, North Banamalipur  
Agartala  
Tripura-700 001
8. OTPC (ONGC Tripura Corporation Ltd.  
6<sup>th</sup> Floor, A Wing, IFCI Towers  
New Delhi-110 019.
9. National Thermal Power Corporation Ltd.  
NTPC Bhawan  
Scope Complex, Institutional Area  
Lodhi Road  
New Delhi-110 003.

....Respondents

**For petitioner** : Shri S. K. Venkatesan, PGCIL  
Ms. Sangeeta Edwards, PGCIL  
Shri S.S Raju, PGCIL  
Ms. Seema Gupta, PGCIL

**For respondents** : None

### **ORDER**

The petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval of the transmission tariff from anticipated Notional DOCO to 31.3.2014 for Assets: (i) 132kV Silchar-Hailakandi (AEGCL) line along-with associated bays (Anticipated DOCO 1.4.2012) (ii) 200MVA, 400/132kV, ICT-



II at Silchar along-with associated bays (Anticipated DOCO 1.4.2012) (iii) 400kV D/C Pallatana-Surajmaninagar line (Charged at 132kV) alongwith associated bays (Anticipated DOCO 1.7.2012) (iv) 400kV Silchar-Purbakanchanbari line (Charged at 132kV) along-with associated bays (Anticipated DOCO 1.7.2012) (v) 80 MVAR, 420kV Bus Reactor at Bongaigaon along-with associated bay (Anticipated DOCO 1.7.2012) under transmission system associated with Pallatana Gas Based Power Project and Bongaigaon Thermal Power Station in NER for tariff block 2009-14 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations").

2. The Investment approval to the transmission project was accorded by Board of Directors of Powergrid vide letter dated 26.2.2010 bearing no. C/CP/Pallatana-Bongaigaon at an estimated cost of ₹214400 lakh, including IDC of ₹17835 lakh based on 3<sup>rd</sup> quarter, 2009 price level. The scope of work covered under the project is as follows:-

**Transmission Lines:-**

a.	Bongaigaon TPS-Bongaigoan 400kV D/C Line	3 km
b.	Silchar-Badarpur (POWERGRID) Switching station interconnecting 132 kV D/C line	21 km
c.	Pallatana-Surajmaninagar (TSECL) 400 kV D/C line (charged at 132 kV)	35 km
d.	Silchar-Purba Kanchan Bari (TSECL) 400 kV D/C line (Charged at 132 kV)	122 km
e.	Silchar-Melriat (New) 400 kV D/C line (Charged at 132 kV)	160 km
f.	Silchar-Imphal (New) 400 kV D/C line (Charged at 132 kV)	140 km
g.	Melriat (New)-Melriat (Mizoram) Interconnecting 132 kV	30 km

	D/C line	
h.	Silchar-Srikona (AEGCL) 132 kV D/C line	3 km
i.	Silchar-Hailakandi (AEGCL) 132 kV D/C line	25 km
j.	LILO of Loktak-Imphal (POWERGRID) 132 kV S/C line at Imphal (New)	6 km
k.	LILO of Kathalguri-Misa 400 kV S/C line at Mariani (New) (Charged at 220 kV)	2 km
l.	Mariani (new)-Mokokchung (POWERGRID) 220 kV D/C line	56 km
m.	Mokokchung (POWERGRID)-Mokokchung (Nagaland) 132 kV D/C line with Zebra conductor	1 km
n.	Pasighat-Roing 132 kV S/C line (on D/C tower)	70 km
o.	Roing-Tezu 132 kV S/C line (on D/C tower)	60 km
p.	Tezu-Namsai 132 kV S/C line (on D/C tower)	90 km

**Sub-stations:-**

- a. 2x200 MVA, 400/132 kV New Sub-station at Silchar
- b. 2x50 MVA, 132/33 kV New Sub-station at Melriat (upgradable to 400 kV)
- c. 2x50 MVA, 132/33 kV Imphal (New) Sub-station
- d. 220 kV New Switching Station at Mariani
- e. 2x50 MVA, 220/33 kV New Sub-station at Mokokchung
- f. 2x50 MVA, 132/33 kV New Sub-station at Roing
- g. 2x15 MVA, 132/33 kV New Sub-station at Tezu
- h. 2x15 MVA, 132/33 kV New Sub-station at Namsai

3. The petitioner has claimed transmission tariff for the following transmission assets:-

Description	Anticipated DOCO (as per the petition)	Actual DOCO (as per affidavit dated 19.12.2013)
132 kV Silchar-Hailakandi Transmission Line up to LILO point of 132 kV S/C Panchgram-Dullavcherra AEGCL Line along with associated bays(hereinafter referred to as " <b>Asset-1</b> ")	1.4.2012	1.7.2012
200 MVA, 400/132KV ICT-II at Silchar along with associated bays (hereinafter referred to as " <b>Asset-2</b> ")		1.7.2012
400KV D/C Pallatana-Surajmaninagar line (charged at 132 KV) along with associated bays (hereinafter referred to as " <b>Asset-3</b> ")		1.7.2012

400KV Silchar-Purbakanchanbari Line (charged at 132KV ) along with associated bays (hereinafter referred to as " <b>Asset-4</b> ")	1.7.2012	Yet to be commissioned
80 MVAR, 420 KV Bus Reactor at Bongaigaon along with associated bays (hereinafter referred to as " <b>Asset-5</b> ")		1.11.2012

4. The petitioner has claimed transmission tariff for some of the other assets covered under project "Transmission System associated with Pallatana Gas Power Project and Bongaigaon Thermal Power Station" in another petition. The details of those assets are as follows:-

S. No.	Asset	Reference
1	400kV D/C Bongaigaon TPS- Bongaigaon Line along with associated bays	Order dated 22.2.2014 in Petition No. 184/TT/2011
2	132 kV D/C Silchar- Badarpur line along with associated bays	
3	132 kV D/C Silchar- Sirkona line along with associated bays	
4	200 MVA,400/132kV ICT at Silchar S/S along with associated bays	
5	50 MVAR switchable line reactors for 400 kV D/C Silchar- Palatana at Silchar S/S along with associated bays and 63 MVAR Bus Reactor at Silchar S/S along with associated bays	

5. The transmission charges claimed by the petitioner based on the actual date of commercial operation are as under:-

Particulars	(` in lakh)			
	Asset 1		Asset 2	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Depreciation	69.57	105.82	81.00	113.40
Interest on Loan	83.52	118.60	97.87	128.12
Return on equity	69.00	104.97	80.45	112.63
Interest on Working Capital	7.81	11.38	9.82	13.58
O & M Expenses	48.83	68.82	69.66	98.19
<b>Total</b>	<b>278.73</b>	<b>409.59</b>	<b>338.80</b>	<b>465.92</b>

(` in lakh)

Particulars	Asset 3		Asset 5	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Depreciation	343.01	504.27	19.10	51.64
Interest on Loan	414.72	571.43	22.97	58.94
Return on equity	340.66	500.64	18.97	51.29
Interest on Working Capital	28.99	41.51	2.83	7.34
O & M Expenses	67.11	94.59	25.80	65.46
<b>Total</b>	<b>1194.49</b>	<b>1712.44</b>	<b>89.67</b>	<b>234.67</b>

6. The details submitted by the petitioner in support of its claim for interest on working capital are given hereunder:-

(` in lakh)

Particulars	Asset 1		Asset 2	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Maintenance Spares	9.77	10.32	13.93	14.73
O & M Expenses	5.43	5.74	7.74	8.18
Receivables	61.94	68.27	75.29	77.65
<b>Total</b>	<b>77.14</b>	<b>84.33</b>	<b>96.96</b>	<b>100.56</b>
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	7.81	11.38	9.82	13.58

(` in lakh)

Particulars	Asset 3		Asset 5	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Maintenance Spares	13.42	14.19	9.29	9.82
O & M Expenses	7.46	7.88	5.16	5.46
Receivables	265.44	285.41	35.87	39.11
<b>Total</b>	<b>286.32</b>	<b>307.48</b>	<b>50.32</b>	<b>54.39</b>
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	28.99	41.51	2.83	7.34

7. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act. Assam Power Distribution Company Limited (APDCL), Respondent No. 1 has filed its reply vide affidavit dated 17.1.2013. The petitioner

has not filed any rejoinder to the reply filed by APDCL. The objections raised by APDCL in its reply are addressed in the relevant paragraphs of this order.

8. Having heard the representatives of the parties and perused the material on records, we proceed to dispose of the petition.

9. The petitioner has submitted in the petition that the land for Hailakandi Sub-Station of AEGCL is under acquisition. Accordingly, it has been decided in the 10<sup>th</sup> RPC that in the absence of Hailakandi Sub-station, an interim arrangement to facilitate the evacuation of power from Pallatana via Silchar Sub-station, LILO of existing 132 kV S/C Panchgram-Dullavcherra line of AEGCL would be made by connecting it to 132 kV D/C Silchar-Hailakandi line so as to form Silchar-Panchgram & Silchar-Dullavcherra links. In view of this arrangement, the assets would be commissioned in two phases:-

**Phase-I:** 2 nos 132 kV Bays at Silchar end & 132 kV D/C line up to LILO point of 132 kV Dullavcherra-Panchgram (15 km) and

**Phase-II:** 2 nos 132 kV bays at Hailakandi end & 132 kV D/C line from LILO point of Hailakandi (10 km), not covered in the instant petition.

10. The petitioner, in response to a query, has reiterated, vide affidavit dated 6.6.2014 that this interim arrangement has been discussed and agreed in 10th TCC & RPC meeting of NER and submitted a copy of the minutes of the said meeting. The representative of the petitioner submitted during the hearing on 22.4.2014 that remaining part of Asset-1 and Asset-4 would be commissioned

during the 2014-19 period and requested to allow tariff for Asset-2, 3 and 5 and that part of Asset-1 which has been commissioned.

11. We have considered the submissions made by the petitioner vide affidavits dated 19.12.2013 and 6.6.2014 and during the hearing on 22.4.2014. It is observed that out of the five assets covered in the instant petition, part of Asset-1, Asset-2, Asset-3 and Asset-5 have been commissioned. Part of Asset-1 has not been commissioned due to land acquisition problem at Hailakandi Substation of AEGCL and accordingly an interim arrangement has been worked out and agreed upon by the constituents of NER. As regards Asset-4, the petitioner has submitted in its affidavit dated 28.5.2014 that due to reasons beyond its control, it is anticipated to be commissioned on 1.6.2014 and requested to grant tariff for it also in the instant petition. Asset-4 and part of Asset-1 have not been commissioned and will be commissioned during the 2014-19 tariff period and as such we are not inclined to grant tariff for these assets in the instant order. The petitioner is directed to file a fresh petition for Asset-4 and the remaining part of Asset-1 on their commissioning as per the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations"). Transmission tariff for Assets-2, 3, 5 and part of Asset-1 only is allowed in the instant petition.

12. The petitioner has submitted the auditor's certificate dated 22.9.2011 for "132 kV D/C Silchar-Hailakandi Transmission Line and its associated bays at Silchar S/S and Hailakandi S/S". However, tariff forms have been submitted only



for Phase I. Accordingly, petitioner was directed to submit the capital cost expenditure and revised tariff forms for Phase-I, i.e. "2 nos 132 kV Bays at Silchar end & 132 kV D/C line up to LILO point of 132 kV Dullavcherra-Panchgram" along with the status of commissioning of the other assets covered in the instant petition. In response, the petitioner vide affidavit dated 19.12.2013 has submitted that inadvertently the capital expenditure certificate for "132 kV Silchar-Hailakandi line along with associated bays at Silchar and Hailakandi S/S" was submitted instead of "132 kV Silchar-Hailakandi Transmission Line up to LILO point of 132 kV S/C Panchgram-Dullavcherra AEGCL Line along with associated bays at Silchar S/S" and after correcting the capital expenditure, submitted the revised management certificate along with revised tariff forms.

13. Details of apportioned approved cost, capital cost as on the actual date of commercial operation and estimated additional capitalization projected to be incurred for the assets covered in this petition are as follows:-

(₹ in lakh)

Asset	Apportioned approved cost	Projected exp. as on DOCO*	Projected additional capitalization		Capital cost up to 31.3.2014	Projected additional capitalization 2014-15	Total estimated completion cost
			DOCO to 31.3.13	2013-14			
Asset-1	1758.12	1519.15	470.40	24.13	2013.68	0.00	2013.68
Asset-2	2429.64	1995.45	100.00	104.55	2200.00	0.00	2200.00
Asset-3	8128.60	8306.04	710.00	1060.56	10076.59	110.84	10187.44
Asset-4	Not covered in the instant petition						
Asset-5	740.90	828.38	80.00	139.23	1047.61	10.00	1057.61

\* inclusive of initial spares pertaining to & transmission line and sub-station.

### Capital Cost

14. Regulation 7 of the 2009 Tariff Regulations so far as relevant provides as follows:-

**“(1) Capital cost for a project shall include:-**

- (a) The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan – (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the fund deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check.
- (b) capitalised initial spares subject to the ceiling rates specified in regulation 8; and
- (c) additional capital expenditure determined under regulation 9:

Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.

(2) The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff:

Provided that in case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time:

Provided further that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff.”

15. The petitioner has claimed following capital cost as on the date of commercial operation vide affidavit dated 19.12.2013:-

**(₹ in lakh)**

Particulars	Management Certificate dated	Capital cost as on DOCO
Asset-1	30.10.2013	1519.15
Asset-2	7.3.2013	1995.45
Asset-3	7.3.2013	8306.04
Asset-5	7.3.2013	828.38

### **Time Over-run**

16. As per the investment approval dated 26.2.2010, the assets were scheduled to be commissioned within 34 months progressively from the date of investment approval i.e. by 1.1.2013. Asset-1 to Asset-3 were put under commercial operation on 1.7.2012 and Asset-5 was put under commercial operation on 1.11.2012. Accordingly, there is no time over-run in case of Assets 1 to 3 and Asset-5. The petitioner has submitted reasons for time over-run in case of Asset-4 vide affidavit dated 28.5.2014 and the same shall be considered at the time of determining transmission tariff for Asset-4.

### **Cost Over-run**

17. There is cost over-run in case of Asset-1, Asset-3 and Asset-5. The petitioner was asked to furnish the reasons for cost over-run. In response, the petitioner vide affidavit dated 19.12.2013 has submitted that cost over-run in case of Asset-1 was due to higher awarded cost and adoption of design for WZ-6 requirement. Further, 220 kV D/C WZ-2 towers have been used in the line as design for 132 kV D/C WZ-6 towers are not available. In case of Asset-3, the petitioner has submitted that there were rubber plantation and other valuable trees and houses and huts across the line corridor and accordingly increased forest and crop compensation was paid as per the assessment of the local revenue authorities and this led to increase in cost of preliminary works leading to cost over-run. As regards Asset-5, the petitioner has submitted that the Circuit Breakers (CBs) (@ ₹29.37 lakh) part of the 1 half breaker scheme with BTPS-Bongaigaon Transmission Line was not considered in the FR cost. However, the asset was commissioned ahead of BTPS-Bongaigaon Transmission Line and

accordingly, CBs have been considered in the DOCO cost of the reactor instead of BTPS line. Similarly, other items which are part of 1 half breaker scheme not considered in FR cost of the reactor have been included in the cost at the time of commercial operation.

18. We have considered the submissions made by the petitioner regarding the cost over-run. It is observed that cost over-run is due to change in tower design and addition of CBs as part of 1 half breaker scheme and other auxiliaries system as per the site requirement at the time of the execution of work which were not considered at the time of estimation of FR cost. We are satisfied with the reasons submitted by the petitioner for the cost over-run and find that the cost over-run is not within the control of the petitioner and accordingly the cost over-run in case of Asset-1, Asset-3 and Asset-5 is allowed.

19. The total estimated completion cost of Asset-2 up to 31.3.2014 fall within the apportioned approved cost. However, the completion cost in case of Asset-1, 3 and 5 exceeds the apportioned approved cost. The petitioner has not furnished any RCE for the instant transmission assets. Accordingly, the capital cost of the instant assets has been restricted to the apportioned approved cost for the purpose of tariff determination. Similar approach was adopted by us in order dated 18.2.2014 in Petition No. 216/TT/2012. This approach has been upheld by the Hon'ble Appellate Tribunal for Electricity in its judgment dated 28.11.2013 in Appeal No. 165 of 2012. The same methodology has been adopted in the instant petition in case of Asset-1, Asset-3 and Asset-5.

## **Initial Spares**

20. As per the norms specified in Regulation 8 (iv) (a) of 2009 Tariff Regulations, initial spares to be allowed for sub-station is 2.5% of total sub-station cost and for transmission line is 0.75% of the total transmission line cost. Details of the initial spares claimed by the petitioner for the transmission line and sub-station are as follows:-

(₹ in lakh)

Particulars	Initial Spares claimed	
	Transmission Line	Sub-station
Asset-1	13.74	4.53
Asset-2	0.00	50.00
Asset-3	74.25	7.19
Asset-5	0.00	23.17

21. Initial spares claimed by the petitioner for Asset-2 and Asset-5 falls within the ceiling limit specified under Regulation 8 of 2009 Tariff Regulations. However, the initial spares claimed by the petitioner for Asset-1 and Asset-3 exceed the norms specified in the said Regulation. Initial spares are allowed as per the norms specified and it has been restricted to 0.75% and 2.5% of the original project cost of transmission line and sub-station respectively. The detail of admissible and non-admissible initial spares is as follows:-

(₹ in lakh)

Particulars	Initial Spares			
	Transmission Line		Sub-station	
	Admissible	Non-Admissible	Admissible	Non-Admissible
Asset-1	12.08	1.66	3.69	0.84
Asset-2	0.00	0.00	50.00	0.00
Asset-3	60.16	14.09	2.67	4.52
Asset-5	0.00	0.00	18.52	4.65

22. The cut-off date for all the assets is 31.3.2015, which falls in the next

tariff block i.e. 2014-19. However, for determination of admissible initial spares capital cost only up to 31.3.2014 (subject to cost over-run) has been considered. The same methodology was adopted by us in Petition No. 65/TT/2012. Accordingly, initial spares so allowed/restricted shall be reviewed at the time of truing up on the submission of the actual expenditure and then in the next tariff period, considering additional capital expenditure for the year 2014-15.

### **Projected Additional Capital Expenditure**

23. Clause (1) of Regulation 9 of the 2009 Tariff Regulations provides as follows:-

“Additional Capitalisation: (1) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

- (i) Undischarged liabilities;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital Spares within the original scope of work, subject to the provisions of Regulation 8;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in Law.”

24. Clause (11) of Regulation 3 of the 2009 Tariff Regulations defines “cut-off” date as under:-

“cut-off date” means 31<sup>st</sup> March of the year closing after 2 years of the year of commercial operation of the project, and in case the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31<sup>st</sup> March of the year closing after 3 years of the year of commercial operation”.

Therefore, cut-off date for the above mentioned assets is 31.3.2015.

25. The details of the projected additional capital expenditure claimed by the

petitioner and considered for tariff determination is as follows:-

**Asset-1:**

Particular	(₹ in lakh)			
	2012-13	2013-14	2012-13	2013-14
	Claimed		Considered	
Transmission Line	438.50	6.14	225.09	0.00
Sub-Station Equipments	31.85	16.92	16.35	0.00
PLCC	0.05	1.08	0.03	0.00
<b>Total</b>	<b>470.4</b>	<b>24.14</b>	<b>241.47</b>	<b>0.00</b>

The total estimated completion cost up to 31.3.2014 i.e. ₹2013.68 lakh exceeds the apportioned approved cost of ₹1758.12 lakh by ₹255.56 lakh. Accordingly, to restrict the completion cost up to apportioned approved cost, the projected additional cost for the year 2012-13 has been restricted to ₹241.47 lakh and projected additional capital expenditure has not been considered.

**Asset-2:**

The petitioner has claimed projected additional capital expenditure of ₹100.00 lakh and ₹104.55 lakh pertaining to sub-station for 2012-13 and 2013-14 respectively. The same has been considered for the purpose of tariff determination.

**Asset-3 and asset-5:**

The petitioner has claimed the following projected additional capital expenditure for Asset-3 and Asset-5:-

Particular	(₹ in lakh)			
	2012-13	2013-14	2012-13	2013-14
	Asset-3		Asset-5	
Building and Civil works	0.00	4.69	0.00	0.00
Transmission Line	680.00	923.23	0.00	0.00
Sub-Station Equipments	30.00	90.16	80.00	139.23
PLCC	0.00	42.48	0.00	0.00
<b>Total</b>	<b>710.00</b>	<b>1060.56</b>	<b>80.00</b>	<b>139.23</b>

The total estimated completion cost up to 31.3.2014 exceeds the apportioned approved cost in case of Asset-3 and Asset-5 as stated in Para 19 above. Accordingly, to restrict the completion cost to apportioned approved cost the projected additional capital expenditure for the year 2012-13 and 2013-14 has not been considered for the purpose of tariff determination

26. The additional capital expenditure claimed by the petitioner falls within the cut-off date and it is mainly on account of balance and retention payments. Hence, subject to cost over-run, the same has been considered for all the assets covered in the instant petition for the purpose of tariff determination under Regulations 9 (1) 2009 Tariff Regulations. The entire projected additional capital expenditure will be reviewed at the time of truing up on submission of the actual additional capital expenditure.

27. Details of the capital expenditure from the date of commercial operation to 31.3.2014 considered for the purpose of tariff determination is as follows:-

		(₹ in lakh)			
Particulars		Asset-1	Asset-2	Asset-3	Asset-5
Apportioned approved cost		1758.12	2429.64	8128.60	740.90
Capital cost claimed as on DOCO (i)		1519.15	1995.45	8306.04	828.38
<b>Less:</b> Excess Initial Spares claimed (ii)		2.50	0.00	18.61	4.65
<b>Less:</b> Cost over-run as on DOCO (iii)		0.00	0.00	158.83	82.83
<b>Capital cost considered as on DOCO (i)-(ii)-(iii)</b>		<b>1516.65</b>	<b>1995.45</b>	<b>8128.60</b>	<b>740.90</b>
Projected Add Cap	2012-13	241.47	100.00	0.00	0.00
	2013-14	0.00	104.55	0.00	0.00
<b>Capital cost as on 31.3.2014</b>		<b>1758.12</b>	<b>2200.00</b>	<b>8128.60</b>	<b>740.90</b>



## Debt- Equity Ratio

28. Regulation 12 of the 2009 Tariff Regulations provides as under:-

“12. Debt-Equity Ratio (1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

**Explanation-** The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

29. Debt-equity ratio as on the actual date of commercial operation considered for the purpose of tariff calculation is as follows:-

Particulars	AppORTIONED approved cost		Capital cost as on date of commercial operation	
	Amount	%	Amount	%
<b>Asset 1</b>				
Debt	1230.68	70.00	1061.66	70.00
Equity	527.44	30.00	455.00	30.00
<b>Total</b>	<b>1758.12</b>	<b>100.00</b>	<b>1516.65</b>	<b>100.00</b>
<b>Asset 2</b>				
Debt	1700.75	70.00	1396.82	70.00
Equity	728.89	30.00	598.64	30.00
<b>Total</b>	<b>2429.64</b>	<b>100.00</b>	<b>1995.45</b>	<b>100.00</b>
<b>Asset 3</b>				
	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>

Debt	5690.02	70.00	5690.02	70.00
Equity	2438.58	30.00	2438.58	30.00
<b>Total</b>	<b>8128.60</b>	<b>100.00</b>	<b>8128.60</b>	<b>100.00</b>
<b>Asset 5</b>	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>
Debt	518.63	70.00	518.63	70.00
Equity	222.27	30.00	222.27	30.00
<b>Total</b>	<b>740.90</b>	<b>100.00</b>	<b>740.90</b>	<b>100.00</b>

30. Debt-equity ratio for projected additional capital expenditure is given below:-

( in lakh)

Particulars	Asset-1		Asset-2	
	Normative		Normative	
	2012-13		2012-13	
	Amount	%	Amount	%
Debt	169.03	70.00	70.00	70.00
Equity	72.44	30.00	30.00	30.00
<b>Total</b>	<b>241.47</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>
	<b>2013-14</b>		<b>2013-14</b>	
Debt			73.19	70.00
Equity	Not considered due to cost over-run		31.37	30.00
<b>Total</b>			<b>104.55</b>	<b>100.00</b>

Particulars	Asset-3		Asset-5	
	Normative		Normative	
	2012-13		2011-12	
	Amount	%	Amount	%
Debt				
Equity	Not considered due to cost over-run		Not considered due to cost over-run	
<b>Total</b>				
	<b>2013-14</b>		<b>2012-13</b>	
Debt				
Equity	Not considered due to cost over-run		Not considered due to cost over-run	
<b>Total</b>				

31. Detail of debt-equity ratio of assets as on 31.3.2014 is as follows:-

( in lakh)

Particulars	Apportioned approved cost		Capital Cost as on 31.3.2014	
	Amount	%	Amount	%
<b>Asset 1</b>				
Debt	1230.68	70.00	1230.68	70.00
Equity	527.44	30.00	527.44	30.00
<b>Total</b>	<b>1758.12</b>	<b>100.00</b>	<b>1758.12</b>	<b>100.00</b>
<b>Asset 2</b>	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>
Debt	1700.75	70.00	1540.00	70.00

Equity	728.89	30.00	660.00	30.00
<b>Total</b>	<b>2429.64</b>	<b>100.00</b>	<b>2200.00</b>	<b>100.00</b>
<b>Asset 3</b>	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>
Debt	5690.02	70.00	5690.02	70.00
Equity	2438.58	30.00	2438.58	30.00
<b>Total</b>	<b>8128.60</b>	<b>100.00</b>	<b>8128.60</b>	<b>100.00</b>
<b>Asset 5</b>	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>
Debt	518.63	70.00	518.63	70.00
Equity	222.27	30.00	222.27	30.00
<b>Total</b>	<b>740.90</b>	<b>100.00</b>	<b>740.90</b>	<b>100.00</b>

### Return on Equity

32. Regulation 15 of the 2009 Tariff Regulations provides as under:-

“15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation:

Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be:

(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where t is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee as the case may be, shall recover the shortfall or refund the excess Annual Fixed charge on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission;

Provided further that Annual Fixed charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the

respective financial year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations".

33. The petitioner's prayer to recover the shortfall or refund the excess Annual Fixed Charges, on account on return on equity due to change in applicable Minimum Alternate Tax/Corporate Income Tax rate as per the Income Tax Act, 1961 of the respective financial year directly without making any application before the Commission shall be dealt under Regulation 15(3) as state above. Return on Equity has been computed @ 17.481% p.a on average equity.

34. Based on the above, the return on equity has been considered as given hereunder:-

(' in lakh)

Particular	Asset-1		Asset-2	
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Opening Equity	455.00	527.44	598.64	628.64
Addition due to Additional Capitalisation	72.44	0.00	30.00	31.37
Closing Equity	527.44	527.44	628.64	660.00
Average Equity	491.22	527.44	613.64	644.32
Return on Equity (Base Rate )	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax )	17.481%	17.481%	17.481%	17.481%
<b>Return on Equity (Pre Tax)</b>	<b>64.40</b>	<b>92.20</b>	<b>80.45</b>	<b>112.63</b>

(' in lakh)

Particular	Asset-3		Asset-5	
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Opening Equity	2438.58	2438.58	222.27	222.27
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00
Closing Equity	2438.58	2438.58	222.27	222.27
Average Equity	2438.58	2438.58	222.27	222.27
Return on Equity (Base Rate )	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax )	17.481%	17.481%	17.481%	17.481%
<b>Return on Equity (Pre Tax)</b>	<b>319.72</b>	<b>426.29</b>	<b>16.19</b>	<b>38.86</b>

### **Additional Return on Equity**

35. The petitioner has claimed in the petition additional return on equity of 0.5% as the instant transmission assets were anticipated to be commissioned within the timeline specified in the 2009 Tariff Regulations. APDCL has submitted that the Commission should seek petitioner's justification for claiming the additional return on equity of 0.5%. As stated earlier, Asset-4 has not been commissioned yet. As all the assets covered in the instant transmission project are not commissioned within the timeline specified in the 2009 Tariff Regulations, the petitioner's claim of additional return on equity of 0.5% is not admissible and accordingly it is disallowed.

### **Interest on Loan**

36. Regulation 16 of the 2009 Tariff Regulations provides as under:-

"16. **Interest on loan capital** (1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate

of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.”

37. APDCL has submitted that methodology for recovery of interest on loan is specified in Regulation 16 of the 2009 Tariff Regulations and it is worked out on the basis of the normative loan and normative repayment considering the weighted average rate of interest on loan. APDCL has submitted that the petitioner’s prayer has already been taken in the 2009 Tariff Regulations. We would like to clarify that interest on loan is allowed as per the provisions of Regulation 16 of the 2009 Tariff Regulations. The petitioner’s entitlement to interest on loan has been calculated on the following basis:-

(a) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition;

- (b) The repayment for the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that period;
- (c) Weighted average rate of interest on actual average loan worked out as per (a) above is applied on the notional average loan during the year to arrive at the interest on loan; and
- (d) Notwithstanding moratorium period availed by the transmission licensee, 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.

38. Accordingly, the interest on loan has been calculated on the basis of prevailing rate as on the date of commercial operation. Any change in rate of interest subsequent to the date of commercial operation will be considered at the time of truing up. Further, the petitioner has considered the proposed bond 12-13 (9.30%) in the Form-13 for calculation of weighted average rate of interest on actual loan. However, as per Regulation 16 (5) of the 2009 Tariff Regulations, the rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio. Accordingly, the same has not been considered for the purpose of computation of weighted average rate of interest.

39. Detailed calculations in support of the weighted average rates of interest have been given in Annexure 1 to 4 to this order.

40. Based on the above, interest on loan has been calculated as follows:-

(` in lakh)

Particulars	Asset 1		Asset 2	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Gross Normative Loan	1061.66	1230.68	1396.82	1466.82
Cumulative Repayment upto previous year	0.00	64.94	0.00	81.00
Net Loan-Opening	1061.66	1165.74	1396.82	1385.82
Addition due to additional capital expenditure	169.03	0.00	70.00	73.19
Repayment during the year	64.94	92.96	81.00	113.40
Net Loan-Closing	1165.74	1072.78	1385.82	1345.60
Average Loan	1113.70	1119.26	1391.32	1365.71
Weighted Average Rate of Interest on Loan	9.3320%	9.2756%	9.3819%	9.3842%
<b>Interest</b>	<b>77.95</b>	<b>103.82</b>	<b>97.90</b>	<b>128.16</b>

(` in lakh)

Particulars	Asset 3		Asset5	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Gross Normative Loan	5690.02	5690.02	518.63	518.63
Cumulative Repayment upto previous year	0.00	321.93	0.00	16.30
Net Loan-Opening	5690.02	5368.09	518.63	502.33
Addition due to additional capital expenditure	0.00	0.00	0.00	0.00
Repayment during the year	321.93	429.24	16.30	39.12
Net Loan-Closing	5368.09	4938.85	502.33	463.21
Average Loan	5529.06	5153.47	510.48	482.77
Weighted Average Rate of Interest on Loan	9.4023%	9.4036%	9.2095%	9.2107%
<b>Interest</b>	<b>389.89</b>	<b>484.61</b>	<b>19.59</b>	<b>44.47</b>

## Depreciation

41. Regulation 17 of the 2009 Tariff Regulations provides as follows:-

“17. **Depreciation** (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

Provided that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site;

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond



to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III to these regulations for the assets of the generating station and transmission system:

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

(6) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.”

42. Asset-1, Asset-2 and Asset-3 have been put under commercial operation as on 1.7.2012 and Asset-5 has been put under commercial operation as on 1.11.2012. The assets will complete 12 years beyond 2013-14. Accordingly, depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III to the 2009 Tariff Regulations as per the details given hereunder:-

(` in lakh)

Particulars	Asset 1		Asset 2	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Opening Gross Block	1516.65	1758.12	1995.45	2095.45
Addition due to Projected Additional Capitalisation	241.47	0.00	100.00	104.55
Closing Gross Block	1758.12	1758.12	2095.45	2200.00
Average Gross Block	1637.39	1758.12	2045.45	2147.73
Rate of Depreciation	5.2881%	5.2876%	5.2800%	5.2800%
Depreciable Value	1473.65	1582.31	1840.91	1932.95
Remaining Depreciable Value	1473.65	1517.37	1840.91	1851.95
Depreciation	<b>64.94</b>	<b>92.96</b>	<b>81.00</b>	<b>113.40</b>
Cumulative Depreciation	64.94	157.90	81.00	194.40

(` in lakh)

Particulars	Asset 3		Asset 5	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Opening Gross Block	8128.60	8128.60	740.90	740.90
Addition due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00
Closing Gross Block	8128.60	8128.60	740.90	740.90
Average Gross Block	8128.60	8128.60	740.90	740.90
Rate of Depreciation	5.2806%	5.2806%	5.2800%	5.2800%
Depreciable Value	7315.74	7315.74	666.81	666.81
Remaining Depreciable Value	7315.74	6993.81	666.81	650.51
Depreciation	<b>321.93</b>	<b>429.24</b>	<b>16.30</b>	<b>39.12</b>
Cumulative Depreciation	321.93	751.17	16.30	55.42

### **Operation & Maintenance Expenses (O&M Expenses)**

43. Regulation 19(g) of the 2009 Tariff Regulations prescribes the norms for O&M Expenses for the transmission system based on the type of sub-station and the transmission line. The norms for the transmission assets covered in the instant petition are as follows:-

Element	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV bay (` lakh/ bay)	52.40	55.40	58.57	61.92	65.46
132 kV & below bay (` lakh/ bay)	26.20	27.70	29.28	30.96	32.73
D/C single conductor TL (` lakh/ km)	0.269	0.284	0.301	0.318	0.336
S/C single conductor TL (` lakh/ km)	0.179	0.189	0.200	0.212	0.224
D/C twin conductor TL (` lakh/ km)	0.627	0.663	0.701	0.741	0.783

44. The allowable O&M Expenses for the assets covered in this petition as per the 2009 Tariff Regulations, are given overleaf:-

## Asset-1

Elements	2012-13 (pro-rata)	2013-14
15 km 132 kV S/C, single conductor T/L	2.39	3.36
2 no., 132 kV bays	46.44	65.46
<b>Total O&amp;M</b>	<b>48.83</b>	<b>68.82</b>

## Asset-2

Elements	2012-13 (pro-rata)	2013-14
1 no, 400 kV bay	46.44	65.46
1 no, 132 kV bay	23.22	32.73
<b>Total O&amp;M</b>	<b>69.66</b>	<b>98.18</b>

## Asset-3

Elements	2012-13 (pro-rata)	2013-14
37.2 km 400kV D/C, twin conductor T/L	20.67	29.13
2 no., 132 kV	46.44	65.46
<b>Total O&amp;M</b>	<b>67.11</b>	<b>94.59</b>

## Asset-5

Elements	2012-13 (pro-rata)	2013-14
1 no, 400 kV bay	25.80	65.46
<b>Total O&amp;M</b>	<b>25.80</b>	<b>65.46</b>

45. The petitioner has submitted that O&M Expenses for 2009-14 tariff block had been arrived on the basis of normalized actual O&M Expenses of the petitioner during the year 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking was also considered while calculating the O&M Expenses for tariff period 2009-14. The petitioner has submitted that it would approach the Commission for suitable revision in the norms for O&M Expenses due to wage revision, if any. The

petitioner further submitted that in O&M norms for tariff block 2009-14 the cost associated with license fees had not been captured and the license fee may be allowed to be recovered separately from the beneficiaries.

46. The Commission has given effect to impact of pay revision in the 2009 Tariff Regulations by factoring 50% on account of pay revision of the employees of PSUs after extensive stakeholders' consultation. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employee cost. However, in case the petitioner approaches with any such application, the same shall be dealt with in accordance with law.

#### **Interest on Working Capital**

47. The petitioner is entitled to claim interest on working capital as per the 2009 Tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are discussed hereunder:-

##### **(i) Receivables**

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables as a component of working capital will be equivalent to two months of fixed cost. The petitioner has claimed the receivables on the basis of 2 months of annual transmission charges. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

##### **(ii) Maintenance Spares**

Regulation 18 (1) (c) (ii) of the 2009 Tariff Regulations provides for maintenance spares @ 15% per annum of the O & M Expenses as part of

the working capital from 1.4.2009. The value of maintenance spares has accordingly been worked out.

**(iii) O & M Expenses**

Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for O&M Expenses for one month to be included in the working capital. The petitioner has claimed O&M Expenses for one month of the respective year. This has been considered in the working capital.

**(iv) Rate of Interest on Working Capital**

In accordance with clause (3) of Regulation 18 of the 2009 Tariff Regulations, the rate of interest on working capital shall be on normative basis and shall be equal to State Bank of India Base Rate of 10% plus 350 bps as on 1.4.2012 (13.50%). The interest on working capital for the assets covered in the petition has been worked out accordingly.

48. Necessary computations in support of Interest on Working Capital are given hereunder:-

(` in lakh)

Particulars	Asset 1		Asset 2	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Maintenance Spares	9.77	10.32	13.93	14.73
O & M Expenses	5.43	5.74	7.74	8.18
Receivables	58.58	61.38	75.30	77.66
Total	73.77	77.43	96.97	100.57
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	<b>7.47</b>	<b>10.45</b>	<b>9.82</b>	<b>13.58</b>

(` in lakh)

Particulars	Asset 3		Asset 5	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Maintenance Spares	13.42	14.19	9.29	9.82
O & M Expenses	7.46	7.88	5.16	5.46
Receivables	250.24	245.13	32.20	32.39
Total	271.12	267.20	46.65	47.66
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	<b>27.45</b>	<b>36.07</b>	<b>2.62</b>	<b>6.43</b>

### Transmission Charges

49. The transmission charges allowed for the assets are summarized below:-

(` in lakh)

Particulars	Asset 1		Asset 2	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Depreciation	64.94	92.96	81.00	113.40
Interest on Loan	77.95	103.82	97.90	128.16
Return on Equity	64.40	92.20	80.45	112.63
Interest on Working Capital	7.47	10.45	9.82	13.58
O & M Expenses	48.83	68.82	69.66	98.18
<b>Total</b>	<b>263.59</b>	<b>368.25</b>	<b>338.83</b>	<b>465.95</b>

(` in lakh)

Particulars	Asset 3		Asset 5	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Depreciation	321.93	429.24	16.30	39.12
Interest on Loan	389.89	484.61	19.59	44.47
Return on Equity	319.72	426.29	16.19	38.86
Interest on Working Capital	27.45	36.07	2.62	6.43
O & M Expenses	67.11	94.59	25.80	65.46
<b>Total</b>	<b>1126.10</b>	<b>1470.80</b>	<b>80.50</b>	<b>194.34</b>

### Filing Fee and Publication Expenses

50. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. APDCL has submitted that filing fee and publication expenses should be allowed as per the provisions of 2009 Tariff

Regulations. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on *pro-rata* basis in accordance with Regulation 42A (1) (a) of the 2009 Tariff Regulations.

### **Licence fee**

51. The petitioner has submitted that in O&M norms for tariff block 2009-14 the cost associated with license fees had not been captured and the license fee may be allowed to be recovered separately from the respondents. APDCL has submitted that licence fee should be allowed as per the 2009 Tariff Regulations. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42 A (1) (b) of the 2009 Tariff Regulations

### **Service tax**

52. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if it is subjected to such service tax in future. APDCL has submitted that the petitioner's prayer is premature and it should not be entertained. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

### **Sharing of Transmission Charges**

53. Tariff for assets given above shall be shared by the respondents in accordance with the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010.

54. This order disposes of Petition No. 98/TT/2012.

sd/-  
**(A. K. Singhal)**  
Member

sd/-  
**(M. Deena Dayalan)**  
Member

sd/-  
**(Gireesh B. Pradhan)**  
Chairperson





## Annexure 1

### Calculation of Weighted Average Rate of Interest on Actual Loans for Asset-1

( ` in lakh)

	Details of Loan	2012-13	2013-14
<b>1</b>	<b>Bond XXXIII</b>		
	Gross loan opening	<b>25.00</b>	<b>25.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	25.00	25.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	25.00	25.00
	Average Loan	25.00	25.00
	Rate of Interest	8.64%	8.64%
	Interest	<b>2.16</b>	<b>2.16</b>
	Rep Schedule	12 annual installments from 8.7.2014	
<b>2</b>	<b>Bond XXXIV</b>		
	Gross loan opening	<b>21.00</b>	<b>21.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	21.00	21.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	21.00	21.00
	Average Loan	21.00	21.00
	Rate of Interest	8.840%	8.840%
	Interest	<b>1.86</b>	<b>1.86</b>
	Rep Schedule	12 Equal Annual Installments from 21.10.2014	
<b>3</b>	<b>Bond XXXI</b>		
	Gross loan opening	<b>45.00</b>	<b>45.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	45.00	45.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	3.75
	Net Loan-Closing	45.00	41.25
	Average Loan	45.00	43.13
	Rate of Interest	8.90%	8.90%
	Interest	<b>4.01</b>	<b>3.84</b>
	Rep Schedule	12 Equal Annual Installments from 25.2.2014	
<b>4</b>	<b>Bond XL</b>		
	Gross loan opening	<b>140.40</b>	<b>140.40</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	140.40	140.40
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	140.40	140.40

	Average Loan	140.40	140.40
	Rate of Interest	9.300%	9.30%
	Interest	<b>13.06</b>	<b>13.06</b>
	Rep Schedule	12 Equal Annual Installments from 28.6.2016	
<b>5</b>	<b>Bond XXXVI</b>		
	Gross loan opening	<b>432.00</b>	<b>432.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	432.00	432.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	432.00	432.00
	Average Loan	432.00	432.00
	Rate of Interest	9.350%	9.35%
	Interest	<b>40.39</b>	<b>40.39</b>
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
<b>6</b>	<b>Bond XXXV</b>		
	Gross loan opening	<b>400.00</b>	<b>400.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	400.00	400.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	400.00	400.00
	Average Loan	400.00	400.00
	Rate of Interest	9.640%	9.640%
	Interest	<b>38.56</b>	<b>38.56</b>
	Rep Schedule	12 Equal Annual Installments from 31.5.2015	
<b>7</b>	<b>Bond XLI (AddCap for 2012-13 Drawl on 31.3.2013)</b>		
	Gross loan opening	<b>0.00</b>	<b>329.28</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	329.28
	Additions during the year	329.28	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	329.28	329.28
	Average Loan	164.64	329.28
	Rate of Interest	8.85%	8.85%
	Interest	<b>14.57</b>	<b>29.14</b>
	Rep Schedule	12 annual installments from 19.10.2016	
	<b>Total Loan</b>		
	Gross loan opening	<b>1063.40</b>	<b>1392.68</b>
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1063.40	1392.68
	Additions during the year	329.28	0.00
	Repayment during the year	0.00	3.75
	Net Loan-Closing	1392.68	1388.93
	Average Loan	1228.04	1390.81

	Rate of Interest	<b>9.3320%</b>	<b>9.2756%</b>
	<b>Interest</b>	114.60	129.01

## Annexure 2

### Calculation of Weighted Average Rate of Interest on Actual Loans for Asset-2

(` in lakh)

	Details of Loan	2012-13	2013-14
<b>1</b>	<b>Bond XXXIII</b>		
	Gross loan opening	50.00	50.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	50.00	50.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	50.00	50.00
	Average Loan	50.00	50.00
	Rate of Interest	8.64%	8.64%
	Interest	4.32	4.32
	Rep Schedule	12 annual installments from 8.7.2014	
<b>2</b>	<b>Bond XXXIV</b>		
	Gross loan opening	55.00	55.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	55.00	55.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	55.00	55.00
	Average Loan	55.00	55.00
	Rate of Interest	8.840%	8.840%
	Interest	4.86	4.86
	Rep Schedule	12 Equal Annual Installments from 21.10.2014	
<b>3</b>	<b>Bond XXXI</b>		
	Gross loan opening	150.00	150.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	150.00	150.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	12.50
	Net Loan-Closing	150.00	137.50
	Average Loan	150.00	143.75
	Rate of Interest	8.90%	8.90%
	Interest	13.35	12.79
	Rep Schedule	12 Equal Annual Installments from 25.2.2014	
<b>4</b>	<b>Bond XXXVI</b>		
	Gross loan opening	490.00	490.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	490.00	490.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00



	Net Loan-Closing	490.00	490.00
	Average Loan	490.00	490.00
	Rate of Interest	9.350%	9.35%
	Interest	<b>45.82</b>	<b>45.82</b>
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
<b>5</b>	<b>Bond XXXV</b>		
	Gross loan opening	<b>600.00</b>	<b>600.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	600.00	600.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	600.00	600.00
	Average Loan	600.00	600.00
	Rate of Interest	9.640%	9.640%
	Interest	<b>57.84</b>	<b>57.84</b>
	Rep Schedule	12 Equal Annual Installments from 31.5.2015	
	<b>Total Loan</b>		
	Gross loan opening	<b>1345.00</b>	<b>1345.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1345.00	1345.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	12.50
	Net Loan-Closing	1345.00	1332.50
	Average Loan	1345.00	1338.75
	Rate of Interest	<b>9.3819%</b>	<b>9.3842%</b>
	<b>Interest</b>	126.19	125.63

### Annexure 3

#### Calculation of Weighted Average Rate of Interest on Actual Loans for Asset-3

(₹ in lakh)

	Details of Loan	2012-13	2013-14
<b>1</b>	<b>Bond XXXIII</b>		
	Gross loan opening	150.00	150.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	150.00	150.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	150.00	150.00
	Average Loan	150.00	150.00
	Rate of Interest	8.64%	8.64%
	Interest	12.96	12.96
	Rep Schedule	12 annual installments from 8.7.2014	
<b>2</b>	<b>Bond XXXIV</b>		
	Gross loan opening	125.00	125.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	125.00	125.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	125.00	125.00
	Average Loan	125.00	125.00
	Rate of Interest	8.840%	8.840%
	Interest	11.05	11.05
	Rep Schedule	12 Equal Annual Installments from 21.10.2014	
<b>3</b>	<b>Bond XXXI</b>		
	Gross loan opening	300.00	300.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	300.00	300.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	25.00
	Net Loan-Closing	300.00	275.00
	Average Loan	300.00	287.50
	Rate of Interest	8.90%	8.90%
	Interest	26.70	25.59
	Rep Schedule	12 Equal Annual Installments from 25.2.2014	
<b>4</b>	<b>Bond XXXVI</b>		
	Gross loan opening	2140.00	2140.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	2140.00	2140.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00



	Net Loan-Closing	2140.00	2140.00
	Average Loan	2140.00	2140.00
	Rate of Interest	9.350%	9.35%
	Interest	<b>200.09</b>	<b>200.09</b>
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
<b>5</b>	<b>Bond XXXV</b>		
	Gross loan opening	<b>2000.00</b>	<b>2000.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	2000.00	2000.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	2000.00	2000.00
	Average Loan	2000.00	2000.00
	Rate of Interest	9.640%	9.640%
	Interest	<b>192.80</b>	<b>192.80</b>
	Rep Schedule	12 Equal Annual Installments from 31.5.2015	
<b>6</b>	<b>Bond XXXVII</b>		
	Gross loan opening	<b>185.00</b>	<b>185.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	185.00	185.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	185.00	185.00
	Average Loan	185.00	185.00
	Rate of Interest	9.25%	9.25%
	Interest	<b>17.11</b>	<b>17.11</b>
	Rep Schedule	12 annual installments from 26.12.2015	
	<b>Total Loan</b>		
	Gross loan opening	<b>4900.00</b>	<b>4900.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	4900.00	4900.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	25.00
	Net Loan-Closing	4900.00	4875.00
	Average Loan	4900.00	4887.50
	Rate of Interest	<b>9.4023%</b>	<b>9.4036%</b>
	<b>Interest</b>	460.71	459.60

## Annexure 4

### Calculation of Weighted Average Rate of Interest on Actual Loans for Asset-5

(₹ in lakh)

	Details of Loan	2012-13	2013-14
<b>1</b>	<b>Bond XXXIII</b>		
	Gross loan opening	25.00	25.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	25.00	25.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	25.00	25.00
	Average Loan	25.00	25.00
	Rate of Interest	8.64%	8.64%
	Interest	2.16	2.16
	Rep Schedule	12 annual installments from 8.7.2014	
<b>2</b>	<b>Bond XXXVIII</b>		
	Gross loan opening	165.00	165.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	165.00	165.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	165.00	165.00
	Average Loan	165.00	165.00
	Rate of Interest	9.250%	9.250%
	Interest	15.26	15.26
	Rep Schedule	Bullet payment as on 9.3.2027	
<b>3</b>	<b>Bond XXXI</b>		
	Gross loan opening	50.00	50.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	50.00	50.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	4.17
	Net Loan-Closing	50.00	45.83
	Average Loan	50.00	47.92
	Rate of Interest	8.90%	8.90%
	Interest	4.45	4.26
	Rep Schedule	12 Equal Annual Installments from 25.2.2014	
<b>4</b>	<b>Bond XXXVI</b>		
	Gross loan opening	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	100.00	100.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00





	Net Loan-Closing	100.00	100.00
	Average Loan	100.00	100.00
	Rate of Interest	9.350%	9.35%
	Interest	<b>9.35</b>	<b>9.35</b>
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
<b>5</b>	<b>Bond XXXVII</b>		
	Gross loan opening	<b>222.00</b>	<b>222.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	222.00	222.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	222.00	222.00
	Average Loan	222.00	222.00
	Rate of Interest	9.25%	9.25%
	Interest	<b>20.54</b>	<b>20.54</b>
	Rep Schedule	12 annual installments from 26.12.2015	
	<b>Total Loan</b>		
	Gross loan opening	<b>562.00</b>	<b>562.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	562.00	562.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	4.17
	Net Loan-Closing	562.00	557.83
	Average Loan	562.00	559.92
	Rate of Interest	<b>9.2095%</b>	<b>9.2107%</b>
	<b>Interest</b>	51.76	51.57