CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 316/2010

Coram: Dr. Pramod Deo, Chairperson
Shri S. Jayaraman, Member
Shri V.S. Verma, Member
Shri M. Deena Dayalan, Member

Date of Hearing: 22.3.2012 **Date of Order: 13.8.2012**

In the matter of:

Approval 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 for determination of transmission tariff for Singrauli Transmission System in Northern Region for tariff block 2009-14 period.

And

In the matter of:

Power Grid Corporation of India Ltd., Gurgaon **Petitioner**

Vs

1. Uttar Pradesh Power Corporation Ltd., Lucknow
2. Rajasthan Rajya Vidyut Prasaran Nigam Ltd., Jaipur
3. Ajmer Vidyut Vitran Nigam Ltd, Jaipur
4. Jaipur Vidyut Vitran Nigam Ltd., Jaipur
5. Jodhpur Vidyut Vitran Nigam Ltd., Jaipur
6. Himachal Pradesh State Electricity Board, Shimla
7. Punjab State Electricity Board, Patiala
8. Haryana Power Purchase Centre, Haryana
9. Power Development Deptt., Jammu
10. Delhi Transco Ltd., New Delhi
11. BSES Yamuna Power Ltd., New Delhi
12. BSES Rajdhani Power Ltd., New Delhi
13. North Delhi Power Ltd., New Delhi
14. Chandigarh Administration, Chandigarh
15. Uttarakhand Power Corporation Ltd., Dehradun
16. North Central Railway, Allahabad
17. New Delhi Municipal Council, New Delhi **..Respondents**

The following were present:

1. Shri S.S. Raju, PGCIL
2. Shri M.M. Mondal, PGCIL
3. Shri Rajeev Gupta, PGCIL
4. Shri R. B. Sharma, Advocate, BRPL

ORDER

This petition has been filed by Power Grid Corporation of India Limited (PGCIL) for determination of transmission tariff for Singrauli Transmission System in Northern Region (hereinafter referred to as "transmission assets') for tariff block 2009-14 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009 (hereinafter referred to as "2009 Tariff Regulations").

2. The transmission charges for the transmission assets for the period 2004-09 was approved by the Commission vide order dated 27.9.2010 in Petition No. 149/2010. The instant petition has been filed for determination of tariff for 2009-14 period based on the admitted capital cost of `23474.88 lakh as on 31.3.2009. The petitioner has claimed the following additional capital expenditure and de-capitalisation for the tariff period 2009-14:-

(` in lakh)

Asset	Admitted capital Cost as on 1.4.2009	Add-cap 2011-12	De-cap 2011-12	Add-cap 2012-13	De-cap 2012-13	Add-cap 2013-14	Estimate completion cost
Singrauli transmission System	23474.88	372.39	22.68	974.14	36.87	455.11	25216.966

3. The details of assets covered in the petition and their date of commercial operation are given hereunder:-

Sr. No.	Transmission Line:(Asset-I)	DOCO	Length in Kms.
1	400 kV S/C twin conductor Singrauli- Anpara-II T/L	5.4.1982	25.057
2	400 kV S/C twin conductor Singrauli- Kanpur-I T/L	27.5.1983	447
3	400 kV S/C twin conductor Singrauli- Kanpur-II T/L	14.3.1987	424.15
4	400 kV S/C twin conductor Singrauli- Lucknow T/L	1.6.1986	408.6
5	400 kV S/C twin conductor Lucknow- Moradabad T/L	1.6.1986	331.177
6	400 kV S/C twin conductor Moradabad - Muradnagar T/L	1.6.1986	133
7	400 kV S/C twin conductor Moradabad – Dadri T/L	16.10.1984	33.098
8	400 kV S/C twin conductor Dadri- Panipat T/L	16.10.1984	112.322
9	400 kV S/C twin conductor Kanpur- Agra T/L	26.11.1986	238.805
10	400 kV S/C twin conductor Agra- Bassi T/L	30.11.1986	210.331
11	400 kV S/C twin conductor Kanpur-Panki-I, T/L	27.5.1983	5.622
12	400 kV S/C twin conductor Kanpur-Panki-II, T/L	27.5.1983	5.7
	Sub-Station:		**No. of bays**
	400 kV Agra Sub-Station:		
1	400 kV Kanpur bay	14.3.1987	**1**
2	400 kV Bassi bay	14.3.1987	**1**
	400 kV Lucknow Sub-Station:		
1	400 kV Singrauli bay	1.10.2010	1
2	400 kV Moradabad bay	1.10.2010	1
	400 kV Moradabad Sub-Station:		
1	400 kV Lucknow bay	1.6.1986	1
2	400 kV Muradnagar bay	1.6.1986	1
	400 kV Muradnagar Sub-Station:		
1	400 kV Moradabad bay	1.6.1986	1
2	400 kV Dadri bay	1.11.1984	1
3	400 kV DadBus Reactor bay	1.6.1986	1
	400 kV Kanpur Sub-Station:		
1	400 kV Singrauli-I bay	1.6.1983	1
2	400 kV Singrauli-II bay	14.3.1987	1
3	400 kV Panki-I bay	1.6.1983	1
4	400 kV Panki-II bay	14.3.1987	1
5	400 kV Agra bay	14.3.1987	1
	400 kV Anpara Sub-Station:		
1	400 kV Singrauli bay	1.2.1982	1
	400 kV Panki Sub-Station:		
1	400 kV Kanpur-I bay	1.6.1983	1
2	400 kV Kanpur-II bay	1.6.1983	1
	400 kV Bassi Sub-Station:		
1	400 kV Agra bay	28.7.1990	1
2	400 kV Bus Reactor bay	28.7.1990	1

4. Details of the transmission charges claimed by the petitioner for the above assets are given as under:-

(` in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	345.94	345.94	364.56	440.30	532.18
Interest on Loan	0.00	0.00	10.46	46.30	77.39
Return on equity	2056.06	2056.06	2065.23	2098.98	2135.49
Interest on Working Capital	142.39	147.62	154.04	162.99	172.53
O & M Expenses	1845.80	1950.30	2062.77	2181.05	2305.30
Total	**4390.19**	**4499.92**	**4657.06**	**4929.62**	**5222.89**

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

(` in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	276.87	292.54	309.42	327.16	345.80
O & M expenses	153.82	162.53	171.90	181.75	192.11
Receivables	731.70	749.99	776.18	821.60	870.48
Total	**1162.39**	**1205.06**	**1257.50**	**1330.51**	**1408.39**
Interest	142.39	147.62	154.04	162.99	172.53
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%

6. 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, 2003. Uttar Pradesh Power Corporation Limited (UPPCL), Respondent No.1, has raised the issue of additional capital cost, filing fee, service and license fee, vide its reply dated 22.2.2012. BSES Rajdhani Power Limited (BRPL), Respondent No.12, vide its reply dated 20.3.2012, has raised the issue of projected additional capital expenditure, licence fee, filing fee, service tax and O&M expenses. The issues raised by the respondents have been dealt with in relevant paragraphs of this order.

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

CAPITAL COST

8. As regards the capital cost, Regulation 7(2) of the 2009 Regulations provides as under:-

> *"(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:*
>
> *Provided also that the Commission may issue guidelines for vetting of capital cost of hydro-electric projects by independent agency or expert and in that event the capital cost as vetted by such agency or expert may be considered by the Commission while determining the tariff for the hydro generating station:*
>
> *Provided also that the Commission may issue guidelines for scrutiny and approval of commissioning schedule of the hydro-electric projects of a developer, not being a State controlled or owned company as envisaged in the tariff policy as amended vide Government of India Resolution No 23/2/2005-R&R (Vol.IV) dated 31st March 2008:*
>
> *Provided also that in case the site of a hydro generating station is awarded to a developer (not being a State controlled or owned company), by a State Government by following a two stage transparent process of bidding, any expenditure incurred or committed to be incurred by the project developer for getting the project site allotted shall not be included in the capital cost:*
>
> *Provided also that the capital cost in case of such hydro generating station shall include:*
>
> *(a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and*
> *(b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) project in the affected area:*
>
> *Provided also that where the power purchase agreement entered into between the generating company and the beneficiaries or the implementation agreement and the transmission service agreement entered into between the transmission licensee and the long-term transmission customer, as the case may be, provide for ceiling of actual expenditure, the capital expenditure admitted by the Commission shall take into consideration such ceiling for determination of tariff:*

Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff."

9. As per the last proviso to Regulation 7(2) of the 2009 Tariff Regulations, capital cost of `23474.88 lakh as on 31.3.2009 has been considered for the purpose of tariff calculation.

ADDITIONAL CAPITAL EXPENDITURE

10. Regulation 9(2) of the 2009 Tariff Regulations provides for additional capital expenditure incurred after the cut-off date as under:-

"The capital expenditure incurred on the following counts after the cut-off date may, in its discretion be admitted by the Commission, subject to prudence check.

(i) XXX
(i) XXX
(ii) XXX
(iii) XXX
(iv) In case of transmission system any additional expenditure on items such as relays, control and instrumentation, computer system, power line carries communication, DC batteries, replacement of switchyards equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system."

11. The petitioner has claimed the following additional capitalisation and de-capitalisation under Regulation 9 (2) (v) of the 2009 Tariff Regulations and submitted that these replacements are necessary for efficient and successful operation of the system:-

Year	Capitalisation (` in lakh)	De-capitalisation (` in lakh)	Reason
2011-12	372.39	22.68	Replacement of old equipments
2012-13	974.14	36.87	Replacement of old equipments and procurement of reactor
2013-14	455.11	0	Procurement of reactor
Total	1801.64	59.55	

12. The details of the item wise de-capitalisation proposed by the petitioner are as under:-

Proposed De-capitalisation of equipment			
	2011-12 (in `)	2012-13 (in `)	2013-14
LA	38262	114786	0
PLCC	689871	536566	0
CB	704445	2113335	0
CVT	80575	143244	0
Isolators	361659	152278	0
CT	387792	581688	0
C&R	5587	44697	0
Reactor	0	0	0
TOTAL	2268191	3686594	0
(` in lakh)	**22.6819**	**36.8659**	

13. The petitioner's claim for capitalisation of additional expenditure has been discussed item wise as under:-

(a) Replacement of 24 nos. of 400 kV Gapped type Lightening Arrestors (LAs): The petitioner has submitted that the LAs are the main protective equipment which saves all the equipment in the switchyard from High Voltage transient. The existing LAs are gapped type Silicon Carbide arrestors and with the technical advancement gapless Zink Oxide arrestors have been developed. The Silicon Carbide arrestors

were being phased out as they have inherent drawbacks like reduction of spark over voltage level and problem in sealing after surge passes due to carbonization/ melted particles in the gap. Zink Oxide type surge arrestors improve the efficiency and performance against surges due to inherent superiority on account of fast response, high energy handling capabilities, absence of series/spark gap and superior performance under polluted environment. The petitioner has proposed to replace old Gapped LAs with Gapless LAs for better security of the system. There are 24 nos. of Lightening Arrestors which have completed more than 21 years and will be completing 25 years during tariff block 2009-14. These lightening arrestors are gapped type Silicon Carbide. As per IEEE Transaction on Power Delivery, 1996, gapped type LAs need to be replaced after 13 years of service, as these cannot provide required protection margin for the switch yard equipment. In our order dated 7.8.2009 in Petition No. 76/2009, we had allowed additional capital expenditure for replacement of these type of Lightening Arrestors in the Southern Region. Taking into consideration the obsolescence of gapped type LAs and earlier decision of the Commission, the proposed replacement of the LAs is found to be justified and expenditure is accordingly allowed.

(b) Retrofitment work of existing old obsolete 16 nos. of PLCC panels (speech & speech + protection): The petitioner has submitted that the PLCC panels proposed for replacement have completed more than 23 years and are now at end of their useful life. Frequent problems of mal-functioning are resulting avoidable tripping of lines. Moreover, ABB make PLCC model ETI-21/22 and protection coupler NSD 40/41/60/61 are proposed for replacement as the said PLCC panels are obsolete. The OEM (ABB) is unable to provide any service support due to obsolescence and

non-availability of components required for repair/replacements. The petitioner has also placed on the record the correspondence from ABB regarding their inability to provide support for repair of the equipment and the OEMs recommendation for retrofitment of these PLCC panels. Considering the obsolescence of earlier models and importance of PLCC for system protection perspective, retrofitment of PLCC panels is found to be justified and the expenditure on that account is allowed.

(c) Retrofitment of 4 nos. 400 kV make circuit breaker with new SF6 gas circuit breaker at Agra, Anpara and Moradabad: The petitioner has submitted, in its affidavit dated 19.4.2011, 4 Circuit Breakers (CBs) are Siemens AEG Germany and BHEL make are required to be replaced on account of obsolescence and non-availability of requisite repair/service support. It has also been submitted that these designs of circuit breakers are phased out of manufacturing and frequent problems are experienced in Hydraulic oil system, SF6 insulating gas system, grading capacitors, support column operating rods. The old gaskets, piping, moving parts, PIR, hydraulic pump, bearings, motor problem, pilot valve, Nitrogen Accumulators and electro mechanical components have resulted in frequent failures of BHEL make circuit breakers. The Static Contact Resistance has increased and CRM value recorded during Annual Maintenance Programme (AMP) at Agra Sub-station have gone well beyond acceptable limits of 75 Micro Ohm per break and 150 Micro Ohm across both breaks. It has also been submitted that heavy SF6 gas leakage problems are repeatedly occurring in spite of attempts to arrest the same with the help of OEM. It might lead to higher SF6 gas consumption and environmental hazard. Repeated CB mal-operations were experienced causing problems like failure to auto reclose, trippings on pole discrepancy, CB going under low SF6 or low oil pressure lockouts

due to SF6 or hydraulic oil leakages etc. The petitioner has proposed replacement of one breaker at Anapara sub-station in 2011-12, which has completed 29 years and replacement of 3 breakers (2 nos. in Agra sub-station and 1 no. in Moradabad sub-station, in 2012-13) after completion of 25 years of operation. The petitioner has submitted the test reports, conducted during March-December 2010, of the CBs proposed to be replaced. It is observed that the contact resistance of the breakers is in the range 83-126 Micro Ohm. In view of the reported frequent problems in breaker operation and non-availability of spare and service support, the replacement of proposed circuit breakers is found to be justified. Accordingly, expenditure on this account is allowed.

(d) Replacement of 25 Nos. 400 kV CVTs: The petitioner has submitted that the problem of drift in secondary voltage was frequently observed in these aging CVTs, due to which CVTs have to be taken out from the service. The CVTs which have completed about 25 years of service are proposed to be replaced. The petitioner has also submitted that most of the CVTs are WSI make. AREVA, which has taken over WSI has confirmed that design of CVTs has been changed and therefore, no repair of the existing CVTs can be undertaken. Further, vide affidavit dated 3.2.2012, the petitioner has submitted some test results of CVTs proposed to be replaced, wherein it has been mentioned that the secondary voltage drift of > 0.5 Volt is indicative of failure of the particular CVTs. The drift in secondary voltage after certain extent may cause protection and metering problems. However, there is no standard / benchmark value of drift in secondary voltage for replacement of CVTs. We notice that as per the internal norms of the petitioner, the CVTs can be replaced if secondary voltage drift >2.0 Volts. As the secondary voltage drift is well within the internal norms specified by

the petitioner there is no sufficient justification for replacement of all the CVTs. Therefore, additional capital expenditure on this account is not allowed at this stage. However, the petitioner is at liberty to approach the Commission for capitalisation of the expenditure after replacement of the equipments when it is felt necessary for efficient and safe operation of the power system.

(e) Retrofitment of 27 nos. 400 kV Pantograph & HCB type of S&S and Happam make Isolators: The petitioner has submitted that these isolators are old mechanical gang type, and about to complete 25 years of useful service and are giving frequent problems in operation and maintenance. The isolators are of Rade Konkar (RK) or S&S or Happam make. The RK, one of the manufacturers of these isolators has been closed and S&S and Happam have phased out these types of isolators. Due to non-availability of spares and technical support, the repair/rectification of these isolators is not possible. Hot spots are observed due to aging and pitting of contacts and arms. The isolators have become stiff and it is not possible to operate these isolators due to damage in assembly. The main contact damages over the period with unavailability of spare arms are also causing problem. These isolators are mechanically gang operated and are giving frequent trouble as realignment of these isolators is not further possible due to wear and tear of associated parts of these isolators. The petitioner has also submitted that no spares /service supports are being provided by the manufacturers for these isolators. Isolators have under gone change to electrically gang operated type from the earlier mechanically gang operated designs, due to reliability and operational issues associated with mechanically gang operated isolators. The petitioner has further submitted that retrofitment of RK make isolators were carried out successfully on experimental basis in, male/female arm, terminal

connectors and Corona Shields and they were replaced. However, foundation, structure and drive mechanism along with support insulators of original isolators have been utilized during retrofitment. Retrofitment work of S&S and Happam make isolators was undertaken for some isolators. But some isolators are to be replaced completely as the drive assemblies are also not functional. The cost of retrofitment of isolators is about `6-7 lakh per isolator. Almost all the components of isolators were replaced so that the isolators have become completely new. The cost of new isolator would be about `8-9 lakh including supply and erection of the isolator. The retrofitment work makes the isolators functional without compromising on any moving parts like operating mechanism and current carrying path, as only static elements like support insulators and structures are used from existing isolators. Replacement of the existing isolators with new isolators would require modification in foundation and cause long outage and higher cost of replacements. The petitioner, vide affidavit dated 3.2.2012, has submitted the details for 19 nos. of isolators out of total 27 nos. isolators which are proposed to be replaced. It has been submitted that these isolators generally have problems in operating mechanism and many equipments can be operated from handle only. The smooth operation of the isolators has a vital role in safe & reliable operation of the transmission system. Keeping in view the operational requirement the retrofitment/replacement of 19 isolators, for which details have been submitted, is found to be justified. In case of 8 other isolators, the petitioner is at liberty to approach Commission after retrofitment/replacement of those isolators.

(f) Replacement of 20 old 400 kV CTs: The petitioner has submitted that all these CTs have been in service for more than 20 years and are about to complete 25 years

of useful service life. Most of these CTs are WSI make, now taken over by AREVA. Many CTs of this make have already been replaced. The condition monitoring of the CTs is being done for capacitance, Tan Delta and DGA of CT oil (IEC 60599) to ascertain deterioration of dielectric of active parts. The refurbishment of active parts is not possible in view of design absolution and closing down of manufacturing works of these CTs. Therefore, these CTs are required to be replaced. It has been further submitted that failure of CTs in service causes major consequential damage to the adjacent equipments like circuit breakers, isolators etc. affecting delivery of power as well as reliability of grid. As such it is imperative to replace the CTs on priority as the cost of replacement is much less than the damage it causes to adjacent equipments. The residual life assessment is done based on the condition monitoring test, failure incidence, and non-availability of replacement parts/refurbishment due to obsolescence of the product design. It has been submitted that the proposed CTs are hermitically sealed unit designs and the routine testing of IR values was ineffective in providing any useful information on deterioration of insulation as the said CTs do not have tan delta measurement points. The IEC 60599 incorporates DGA measurement which is now implemented for the condition assessment of the instrument transformers. Oil sampling from the CTs supplied around 20-25 years back have been taken from different makes i.e. WSI, BHEL, TELK, ABB etc. and found that many units are having high level of fault gases much above the prescribed limits of DGA as per IEC 60599. This is indication of internal fault inception and possible failure in service, which may result in massive consequential damage to adjacent breakers, isolators, bus-bar support structure and most importantly the operating personnel. Results of DGA test of some CTs was submitted by the petitioner, vide affidavit dated 3.2.2012. Out of 20 CTs proposed to be replaced, details of 12 CTs

have been submitted. In case of 3 CTs installed at Agra in 400 kV Agra-Kanpur line bays, it has been mentioned that the DGA result shown H2> 300 ppm and Co2 > 900 ppm, indicating the violation of limits as per IEC-60599. In case of the remaining 9 CTs, it has submitted that yearly increase in Tan Delta value was > 0.001, which indicates deterioration in insulation. As regards the admissible values of gases in DGA test it was mentioned that these reference values are on the basis of IEC 60599. As regards the criteria for considering the yearly limit of increase in Tan Delta value it has been mentioned that this was on the basis of past experience. In view of above, the additional capitalisation for replacement of 3 CTs at Agra sub-station, for which the DGA test results show abnormal values, is justified. As regards the replacement of 9 CTs, showing yearly increase in Tan Delta value>0.001, the replacement of CTs on the basis of yearly increase in Tan Delta value>0.001 is not based on any standard benchmark but is based on past experience of the petitioner. We appreciate the concern of the petitioner regarding possible damage due to blast of CTs. We are of the view that the petitioner may replace these CTs as and when the requirement is felt, keeping in view the system requirement and safety of equipment and personnel. The petitioner is at liberty to approach the Commission with proper justification after having replaced the CTs, for safe, efficient and reliable operation of the power system. As regards the other CTs, for which no details have been submitted, the petitioner may replace these CTs when required for safe, efficient and reliable operation of the power system and may approach Commission in accordance with law.

(g) Replacement of C&R panels: The petitioner has submitted that most of the protection relays in C&R panels were installed in various transmission lines and

reactors which have completed more than their useful life of 15 years. These relays are static type, obsolete and frequent mall operations are observed. The issue of replacement of these relays was deliberated in various NRPC forums and in 8th meeting of Protection sub-committee of NRPC and it was decided that all the obsolete and old electro-magnetic type protection relays should be replaced with numerical relay to increase system reliability. Keeping in view, the obsolesce of relays and recommendation of Protection sub- committee NRPC, the proposed additional capitalisation for replacement of C&R panels is found to be justified.

(h) Replacement of two Rectors: The petitioner has submitted that three 50 MVAR line reactors at Agra, Bassi and Muradnagar have completed more than 23 years of their life. Due to degradation of the insulation over the period of time, failure of these reactors cannot be ruled out. It has been further submitted that the 80MVAR reactors were proposed to be procured for replacement of any of the existing 50MVAR reactors at Agra, Bassi, Muradnagar in case of failure of these reactors. It was also submitted that 80 MVAR reactors in lieu of 50 MVAR were proposed as the fault level and voltage profile has increased considerably at Agra, Bassi and Muradnagar substations in comparison to fault level at the time of installation of reactors almost 25 year back. Looking into the evolving fault level at Agra, Bassi and Muradnagar, it is necessary to install minimum 80 MVAR reactors as 50 MVAR reactors may not provide sufficient support to the system. In case of failure of reactors, there would be no reactor for long duration as lead time for procurement/commissioning would take more than one and a half years. As such it is proposed to have spare reactors, so that it can be used in case of failure, for better grid management. In its reply, dated 10.8.2011, the petitioner has submitted that the 3 phase fault current level at Agra,

Bassi and Muradnagar was 41.7 kA, 35.0 kA and 20.8 kA, respectively. The learned counsel for BRPL, during the hearing on 22.3.2012, has submitted that out of the total expenditure of about `17 crore, `9 crore is due to procurement of reactors. The learned counsel further submitted that the petitioner has proposed to replace the reactors due to increase in fault level at Agra and Bassi sub-station, but the current fault level, mentioned by the petitioner is within the limit specified in CEA Standards on "Construction of Electric Plants and Electric lines". The petitioner in response has submitted that two 80MVAR spare reactors are proposed to be procured in lieu of three 50 MVAR reactors installed at present at Agra, Bassi and Muradnagar. There is no sufficient technical justification for replacement of existing reactors with 80 MVAR reactors. The requirement for spare reactor may be discussed by the petitioner with beneficiaries at NRPC level and technical requirement of appropriate capacity of reactor may be finalized after detailed study. The petitioner is at liberty to approach the Commission in accordance with law for additional capital expenditure after procurement, if any, after getting approval for replacement from beneficiaries in NRPC.

14. In view of discussions in Para No.13 above, proposed expenditure for replacement of Lightening Arresters, PLCC panels, C&R panels, Circuit Breakers and some Isolators are found to be justified. The replacement of CVTs and procurement of spare reactors are not found to be justified. As far as CTs is concerned, replacement of only 3 CTs at Agra sub-station is found to be justified.

15. BRPL, in its reply, has submitted that the petitioner can make a claim for additional capital expenditure under Regulation 9(2) of the 2009 Tariff Regulations

only after the capital expenditure has been incurred. The term "expenditure incurred" is defined under Regulation 3(2) of the 2009 Tariff Regulations, which stipulates that the amount actually deployed and paid in cash or cash equivalent for creation or acquisition of useful asset. As the petitioner has not incurred the entire amount, the claim under regulation 9(2) of the 2009 Tariff Regulations cannot be entertained at this stage.

16. The Commission has considered the issue of allowing the additional capital expenditure projected to be incurred after the cut-off during the tariff period 2009-14 under Regulation 9(2) of the 2009 Tariff Regulations in many petitions, including Petition No.323/2009, wherein in its order dated 13.7.2012 held as under:-

> *"17. Similar submissions of the petitioner, in its petitions for determination of tariff for 2009-14 have been considered and disposed of by the Commission by its orders dated 20.4.2012, 7.5.2012, 23.5.2012, 25.5.2012 in Petition No. 239/2009, 256/2009, 332/2009 and 279/2009 respectively, pertaining to the determination of tariff of generating stations of the petitioner for 2009-14 as under:*
>
> *"We have considered the submissions of the petitioner. The following two issues arise for our consideration:*
>
> *(a) Whether additional capitalization projected to be incurred after the cut-off date during period 2009-14 is admissible under Regulation 9(2) of the 2009 Tariff Regulations.*
>
> *(b) Whether additional capital expenditure for successful and efficient operation of the thermal generating station including the gas power stations could be admissible under Regulation 9(2) of the 2009 Tariff Regulations.*
>
> *17. As regards the first issue, it is noticed that the last proviso to Regulation 7(2) of the 2009 Tariff Regulations provides that in case of existing projects, capital cost admitted by the Commission prior to 1.4.2009 duly trued up by excluding the un-discharged liability, if any, as on 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year and the tariff period 2009-14, as may be admitted by the Commission, shall form the basis of determination of tariff. Thus, as per the last proviso projected additional capital expenditure to be incurred for the respective years of the tariff period 2009-14 shall be considered by the Commission while determining the tariff in respect of the existing project. The said proviso does not make any distinction between the additional capital expenditure projected to be incurred before the cut-off date and additional capital expenditure projected to be incurred after the cut-off date. It therefore follows that in case of existing projects, additional capital expenditure projected to be incurred after the cut-off date can be considered by the Commission for determination of tariff. Regulation 9 of the 2009 Tariff Regulations provides for the additional capital expenditure to be admissible during the year 2009-14. While Clause (1) of Regulation 9 deals with the expenditure incurred before the cutoff date, Clause (2) of the said regulation deals with the expenditure incurred after the cut-off date. However, Clause (2) of Regulation 9 provides that only expenditure incurred after the cut-off date shall be admissible. It thus*

emerges that while the additional capital expenditure can be claimed under last proviso to Regulation 7(2) on projection basis, the same is not admissible under Regulation 9(2), since the expenditure has not been incurred. It is a settled principle of law that the provisions of the Act or Regulations should be read harmoniously keeping in view the objective of the legislation. During the period 2004-09, the additional expenditure was being admitted after the same was incurred. However, the Commission decided to allow additional capital expenditure on projection basis during the period 2009-14. In this connection, reference is drawn to paragraphs 10.1.3 and 10.1.4 of the Statement of Reasons to the 2009 Tariff Regulations, wherein the concept of claiming additional capitalization on projection basis has been explained in the following terms:

"10.1.3 The Commission has carefully examined the issue again and is of the view that the generating companies/transmission licensees as well as the beneficiaries should appreciate the regulation in its proper perspective. Apart from meeting the intended objective of certainty of tariff and minimal retrospective adjustments, the procedure would have following additional advantages:

(a) From beneficiaries' perspective, they would be aware of the intended additional capitalization in advance and be able to voice their concern before the Commission about the reasonableness and necessity of additional capitalization before the actual expenditure is made by the generating companies/transmission licensees. As regards their concern about the expected expenditure being considered in capital base without putting assets to use, the Commission would like to clarify that anticipated expenditure would be considered only after it is found justified and reasonable with the expectation that asset would be put to use. In the absence of expenditure actually made, the same would be taken out from the capital cost at the time of truing up exercise with appropriate refund/adjustment with interest. Further, if the expenditure indeed materializes, the actual retrospective adjustment is expected to be bare minimum as a result of truing up exercise.

(b) From the prospective of the generating companies/transmission licensees, they would be assured of the expenditure to be admitted once accepted by the Commission in the capital cost before making the expenditure. Moreover, they would be more careful about the expenditure to be made as it would require to be justified before the Commission.

10.1.4 The Commission is of the view that the approach adopted with regard to consideration of the expenditure including additional capital expenditure projected to be incurred for the purpose of determination of capital cost is a win-win situation for all. The Commission has decided to retain the said provisions with regard to capital cost including projected additional capital expenditure in Regulations 7 and 9 of these regulations."

18. It thus emerges from the scheme of the 2009 Tariff Regulations that the additional capital expenditure projected to be incurred shall be considered while determining the tariff of the existing generating stations subject to truing-up at the end of the period. In the light of the above discussions, the prayer of the petitioner for consideration of projected capital expenditure under Regulation 9(2) is allowed subject to prudence check."

17. In line with the decision of the Commission in the above said orders, we allow the additional capital expenditure claimed by the petitioner for 2009-14 in this petition, under the provisions of Regulation 9(2) of the 2009 Tariff Regulations as per details given overleaf:-

Sl. No.	Equipment to be replaced	Proposed Additional Capitalisation		Additional Capitalisation Allowed	
		Quantity	Amount (in `)	Quantity	Amount(in `)
1	Lightening Arrester	24	3609678	24	3609678
2	PLCC	16	7287205	16	7287205
3	Circuit Breaker	4	15193735	4	15193735
4	CVT	25	17618830	0	0
5	Isolators	27	21084961	19	14837565
6	CT	20	15617101	3	2342565
7	C&R Panels	9	8730227	9	8730227
8	Reactor	2	91021840	0	0
Total			180163577		52000975
Total additional capitalisation allowed (` in lakh)					**520.0098**

18. The details of the corresponding de-capitalisation for the equipments are as under:-

De-capitalisation allowed			
	2011-12 (in `)	2012-13 (in `)	2013-14
LA	38262	114786	0
PLCC	689871	536566	0
CB	704445	2113335	0
CVT	0	0	0
Isolators	254501	107159	0
CT	58169	87253	0
C&R	5587	44697	0
Reactor	0	0	0
TOTAL	1750835	3003796	0
(` in lakh)	**17.5083**	**30.0380**	

19. The petitioner has prayed that the activities related to replacement may require shutdown of the related system and hence requested that the outages due to shut down for replacement of equipment under additional capital expenditure be treated as

deemed availability for the purpose of calculation of availability. The respondent, UPPCL, in its reply submitted that the petitioner is duty bound to maintain the lines which may or may not require substantial outage. The respondent has submitted that the petitioner may not take up all the replacement work at once and the works may be taken up in a segregated manner so that the general over all availability of the system is not affected. In our view, the deemed availability of the transmission line shall be calculated in accordance with Appendix IV of the 2009 Tariff Regulations and no special dispensation can be given for the petitioner.

DEBT- EQUITY RATIO:

20. Regulation 12(2) of the 2009 Tariff Regulations provides that-

> *"(2) In case of generating station and transmission system declared under commercial operation prior to 01.04.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.03.2009 shall be considered."*

21. Details of the debt-equity in respect of transmission assets considered for the purpose of tariff calculation as on 31.3.2009 are given hereunder:-

	Admitted Capital Cost as on 31.3.2009	
Asset		
Particulars	**Amount (` in lakh)**	**%**
Debt	11713.18	49.90
Equity	11761.70	50.10
Total	**23474.88**	**100.00**

22. The details of the debt-equity ratio corresponding to additional capitalisation after adjusting de-capitalisation are given hereunder:-

2011-12	**Normative**	
Particulars	**Amount (` in lakh)**	**%**

Debt	136.07	70.30
Equity	58.32	30.00
Total	**194.39**	**100.00**
2012-13		**Normative**

Particulars	**Amount (` in lakh)**	**%**
Debt	194.65	70.00
Equity	83.42	30.00
Total	**278.07**	**100.00**

23. The debt- equity ratio of the transmission assets as on 31.3.2014 is given hereunder:-

	Cost as on 31.3.2014	
Particulars	**Amount (` in Lakh)**	**%**
Debt	12043.91	50.29
Equity	11903.44	49.71
Total	**23947.35**	**100.00**

RETURN ON EQUITY

24. Regulation 15 of the 2009 tariff regulations provides that:-

"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% to 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"

25. The petitioner has prayed to allow grossing up of base rate of return with the applicable base rate as per the Finance Act for the relevant year and direct settlement of tax liability between generating company/transmission licensee and the beneficiaries/long term transmission customers on year to year basis.

26. The petitioner's prayer to allow grossing up the base rate of return on equity based on tax rates viz., MAT, surcharge, any other cess, charges, levies etc., as per relevant Finance Act, shall be settled in accordance with the provisions of Regulation 15 of 2009 regulations.

27. The following amount of return on equity has been allowed:-

(` in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	11761.70	11761.70	11761.70	11820.01	11903.44
Addition due to additional capital expenditure	0.00	0.00	58.32	83.42	0.00
Closing Equity	11761.70	11761.70	11820.01	11903.44	11903.44
Average Equity	11761.70	11761.70	11790.85	11861.72	11903.44
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	2056.06	2056.06	2061.16	2073.55	2080.84

INTEREST ON LOAN

28. Regulation 16 of the 2009 tariff regulations provides that-

"16. (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."

29. In the calculations, the interest on loan has been worked out as detailed below:-

(i) 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.

(ii) Tariff is worked out considering normative loan and normative repayments. Depreciation allowed has been taken as normative repayment for the tariff period 2009-14.

(iii) Weighted average rate of interest on actual loan worked out as above has been applied on the notional average loan during the year to arrive at the interest on loan.

(iv) Petitioner has considered separate loan portfolio for de-capitalised and additional capitalisation in order to work out the weighted average rate of interest. As per prevailing practice we have considered a combined loan portfolio for calculating the weighted average rate of interest.

(v) The proportionate value of additional loan in proportion to the additional capitalisation allowed has been considered for calculating weighted average rate of interest.

30. Detailed calculations of the weighted average rate of interest are given in Annexure to this order.

31. Details of the interest on loan worked on the above basis are given hereunder-

(` in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	11713.18	11713.18	11713.18	11849.26	12043.91
Cumulative Repayment upto Previous Year	11713.18	11713.18	11713.18	11849.26	12043.91
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capital expenditure	0.00	0.00	136.07	194.65	0.00
Repayment during the year	0.00	0.00	136.07	194.65	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.0000%	0.0000%	8.6400%	8.6400%	8.6400%
Interest	0.00	0.00	0.00	0.00	0.00

DEPRECIATION

32. Regulation 17 (4) of the 2009 tariff regulations provides as under:-

> *"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 31th 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 asset".*

33. The de-capitalised assets are parts of sub-station which in turn is a part of the combined assets of transmission lines and sub-stations. The petitioner has claimed capital cost of the de-capitalised equipment of `22.6819 lakh and `36.8659 lakh for the years 2011-12 and 2012-13 respectively. However, as mentioned in Para No. 18 above, de-capitalisation of `17.5083 lakh and `30.0380 lakh for 2011-12 and 2012-13 has been considered for tariff calculations. The petitioner has submitted, in the petition , that whole depreciable values (90% of original gross block) against these part assets is being recovered in 2011-12 and 2012-13 and accordingly, cumulative depreciation amount corresponding to the de-capitalised assets works out to `20.412 lakh for 2011-12 and `33.183 lakh for 2012-13. However, in the present case, although part-assets of the substation are being taken out of service, the sub-station itself is in service. It is observed that while the petitioner has shown that the full depreciable value corresponding to the part asset has been recovered; the sub-

station, of which these part-assets are a part, has not depreciated fully. Thus, there appears to be a mismatch in the depreciation recovery. Accordingly, proportionate cumulative depreciation corresponding to de-capitalised assets has been worked out by multiplying the capital cost of de-capitalised assets by the ratio of cumulative depreciation up to 31.3.2009 and Gross block for the combined asset up to 31.3.2009. The proportionate accumulated depreciation works out to `12.8576 lakh and `22.0589 lakh for equipment de-capitalised during 2011-12 and 2012-13 respectively. As the part assets have been taken out of service, these amounts of depreciation have been reduced from the accumulated depreciation during the years 2010-11 and 2011-12 respectively. The de-capitalisation and additional-capitalisation taking place during the tariff period shall change the value of gross block, therefore, in order to have a common reference point for depreciation, the ratio has been calculated considering the gross block as on 31.3.2009.

34. As per the order dated 27.9.2010 in Petition No.149/2010, balance useful life of the asset was twelve years as on 1.4.2008 and depreciation was spread over the balance useful life. The same concept has been continued in the instant petition. The depreciation computed for the tariff period 2009-14 is `345.95 lakh, `345.95 lakh, `357.09 lakh, `386.43 lakh and `404.30 lakh for the years 2009-10, 2010-11, 2011-12, 2012-13, 2013-14 respectively. Cumulative depreciation upto 31.3.2009 amounting to `17239.19 lakh, vide order dated 27.9.2010 in Petition No. 149/2010 has been considered for tariff purpose.

35. Details of the depreciation have been worked out as under:-

(` in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
As on 31.3.2009	23474.88	23474.88	23474.88	23669.27	23947.34
Addition during 2009-14	0.00	0.00	194.39	278.07	0.00
Gross Block	23474.88	23474.88	23669.27	23947.34	23947.34
Average Gross Block	23474.88	23474.88	23572.07	23808.31	23947.34
Rate of Depreciation	5.2227%	5.2227%	5.2229%	5.2235%	5.2238%
Depreciable Value	21044.59	21044.59	21132.07	21344.68	21469.81
Weighted Balance Useful life of the asset	11	10	9	8	7
Remaining Depreciable Value	3805.40	3459.46	3213.84	3091.42	2830.12
Depreciation	345.95	345.95	357.09	386.43	404.30

OPERATION & MAINTENANCE EXPENSES

36. Clause (g) of Regulation 19 of the 2009 Tariff Regulations prescribes the norms for O&M expenses based on the type of sub-station and line. The norms for the assets covered in this petition are given hereunder:-

(` in lakh)

Element	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV S/C twin conductor T/Line (` lakh/ kms)	0.358	0.378	0.400	0.423	0.447
400 kV Bays (` lakh/ bay.)	52.40	55.40	58.57	61.92	65.46

37. As per the existing norms under 2009 Tariff Regulations, allowable O&M expenses for the assets covered in this petition are given as under:-

(` in lakh)

Element	2009-10	2010-11	2011-12	2012-13	2013-14
2374.862 Kms. (25.057+447+424.15+408.6 +331.177+133+33.098+112.322 +238.805+210.331+5.622+5.7) 400 kV S/C twin conductor T/line	850.20	897.70	949.94	1004.57	1061.56
19 Nos. 400 kV bays	995.60	1052.60	1112.83	1176.48	1243.74
Total O&M for asset	**1845.80**	**1950.30**	**2062.77**	**2181.05**	**2305.30**

38. The petitioner has submitted that the 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 also submitted that it would approach Commission for suitable revision in the norms for O&M expenses in case the impact of wage hike w.e.f 1.1.2007 is more than 50%.

39. The BRPL has submitted that the increase in the employee cost due to wage revision must be taken care by the petitioner by improving their productivity level and the beneficiaries should not be unduly burdened over and above the provisions made in the 2009 regulations.

40. It is clarified that, if any, application for revision of norms of O&M expenditure is filed by the petitioner in future, it will be dealt with in accordance with law. It is further clarified that O&M expenses are allowed as per existing norms.

INTEREST ON WORKING CAPITAL

41. As per the 2009 tariff regulations the components of the working capital and the interest thereon are discussed are given as under:-

(i) Receivables: As per Regulation 18(1) (c) (i) of the 2009 tariff regulations, receivables will be equivalent to two months of fixed cost. The petitioner has claimed the receivables on the basis of 2 months transmission charges claimed in the petition. 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 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 operation and maintenance expenses for one month of the recommended O & M expenses.

(iv) Rate of interest on working capital: In the calculations, the SBI PLR as on 1.4.2009 (i.e. 12.25%) is considered as the rate of interest on working capital.

42. Necessary computations in support of interest on working capital are appended hereunder:-

(` in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	276.87	292.55	309.42	327.16	345.80
O & M expenses	153.82	162.53	171.90	181.75	192.11
Receivables	731.70	749.99	773.43	800.23	826.26
Total	**1,162.39**	**1,205.06**	**1,253.75**	**1,309.14**	**1,364.16**
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	**142.39**	**147.62**	**153.58**	**160.37**	**167.11**

TRANSMISSION CHARGES

43. The transmission charges being allowed for the transmission lines are summarized below:-

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14

Depreciation	345.95	345.95	357.09	386.43	404.30
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	2056.06	2056.06	2061.16	2073.55	2080.84
Interest on Working Capital	142.39	147.62	153.58	160.37	167.11
O & M Expenses	1845.80	1950.30	2062.77	2181.05	2305.30
Total	**4390.20**	**4499.93**	**4634.61**	**4801.40**	**4957.55**

(` in lakh)

FILING FEE AND THE PUBLICATION EXPENSES

44. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. BRPL has requested to reject the petitioner's request for reimbursement of application filing fee and the expenses incurred on publication of notices in line with the Commission's order dated 11.9.2008 in Petition No. 129/2005. The respondent, UPPCL has, submitted that the filing fee shall be governed as per the Commission's orders. It is clarified that the order dated 11.9.2008 in Petition No. 129/2005 was applicable to tariff 2009-14 period and not tariff during 2009-14 period. In accordance with the Commission's order dated 11.1.2010 in Petition No. 109/2009, the petitioner shall be entitled to recover the filing fee directly from the beneficiaries on pro-rata basis. The petitioner shall also be entitled for reimbursement of the publication expenses in connection with the present petition, directly from the beneficiary on pro-rata basis.

LICENCE FEE

45. The petitioner has submitted that in O&M expenses 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.

46. BRPL has submitted that the petitioner's request for recovery of licence fee from the beneficiaries should be rejected. UPPCL has submitted that the petitioner's request for reimbursement for licence fee should be rejected as license fee is the eligibility fee of a licence holder and it is the onus of the petitioner. The petitioner's prayer for licence fee shall be dealt with in accordance with our order dated 25.10.2011 in Petition No. 21/2011 and 22/2011.

SERVICE TAX

47. 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. Both BRPL and UPPCL have objected to levying of service tax on the beneficiaries. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

SHARING OF TRANSMISSION CHARGES

48. The transmission charges allowed shall be recovered on monthly basis in accordance with Regulation 23 and shared by the beneficiaries in accordance with Regulation 33 of the 2009 Tariff Regulations up to 30.6.2011. With effect from 1.7.2011, the billing, collection & disbursement of the transmission charges shall be governed by the provision of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 as amended from to time.

49. This order disposes of Petition No. 316/TT/2010.

Sd/-	Sd/-	Sd/-	Sd/-
(M. Deena Dayalan)	(V.S. Verma)	(S. Jayaraman)	(Dr. Pramod Deo)
Member	Member	Member	Chairperson

ANNEXURE

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN						
						(` in lakh)
	Details of Loan	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**
1	**Bond XXXIII (For Add cap)**					
	Gross loan opening	0.00	**0.00**	**0.00**	**148.33**	**364.01**
	Cumulative Repayment upto DOCO/previous year	0.00	**0.00**	**0.00**	**0.00**	**0.00**
	Net Loan-Opening	0.00	0.00	0.00	148.33	364.01
	Additions during the year	0.00	0.00	148.33	215.68	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	148.33	364.01	364.01
	Average Loan	0.00	0.00	74.16	256.17	364.01
	Rate of Interest	8.64%	8.64%	8.64%	8.64%	8.64%
	Interest	0.00	0.00	6.41	22.13	31.45
	Rep Schedule	12 Annual Instalments from8.7.2014				
	Total Loan					
	Gross loan opening	0.00	0.00	0.00	148.33	364.01
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	0.00	148.33	364.01
	Additions during the year	0.00	0.00	148.33	215.68	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	148.33	364.01	364.01
	Average Loan	0.00	0.00	74.16	256.17	364.01
	Weighted Average Rate of Interest	**0.0000%**	**0.0000%**	**8.6400%**	**8.6400%**	**8.6400%**
	Interest	0.00	0.00	6.41	22.13	31.45