

**ODISHA ELECTRICITY REGULATORY COMMISSION**  
**BIDYUT NIYAMAK BHAWAN**  
**UNIT-VIII, BHUBANESWAR - 751 012**  
\*\*\*\*\*

**Present : Shri S. P. Nanda, Chairperson**  
**Shri B. K. Misra, Member**  
**Shri S. P. Swain, Member**

**Case No. 117 of 2009**

**In the matter of:** An application under Section 86 of Electricity Act, 2003 read with Section 21 of Orissa Electricity Reform Act, 1995 and other enabling provisions seeking approval of Power Purchase Agreement (PPA) executed between M/s. Sterlite Energy Ltd. and GRIDCO.

GRIDCO Limited, Janpath, Bhubaneswar - 22 .... **Petitioner**

Vrs.

M/s Sterlite Energy Ltd & Others .... **Respondents**

**And**

**Case No. 31/2010**

**In the matter of:** An application for approval of provisional tariff for procurement of power by GRIDCO from 2400 MW thermal power plant of M/s. Sterlite Energy Ltd. (SEL) at Brundamal, Jharsuguda.

GRIDCO Limited, Janpath, Bhubaneswar - 22 .... **Petitioner**

Vrs.

M/s Sterlite Energy Ltd & Others .... **Respondents**

**And**

**Case No. 56/2012**

**In the matter of:** An application for review of the interim order dt.04.04.2012 of the OERC passed in Case No. 117/2009, under Section 94 (1)(f) of E.A,2003, read with Regulation 70 of the OERC (Conduct of Business) Regulations 2004.

M/s Sterlite Energy Ltd .... **Petitioner**

Vrs.

GRIDCO Limited & Others .... **Respondents**

**Parties Present:** Shri P K Pradhan, Director (Com), GRIDCO, Shri Ranjit Das, CGM (PP), GRIDCO in Case No. 117/2009 and 31/2010 and 56/2012 on behalf of GRIDCO.

Shri Jagdeep Dhankhar, Sr. Advocate, Shri Sanjay Sen, Advocate, Shri Hemant Singh, Advocate, Shri Pramod Suri, Director, M/s. SEL, Shri Lalit Tandon, VP (Finance), M/s. SEL, Shri Jigar Shah, Shri Ravi Rajgopal, Shri Nakul Kohli and Shri Manoj Rastogi all are on behalf of M/s. SEL. Shri P K Dash, GM, SLDC and Shri Niladri Khadanga, DM, CSO, WESCO, NESCO & SOUTHCO.

Nobody is present on behalf of ERLDC, CESU, OPTCL and DoE, GoO.

**Date of Hearing: 15.12.2012**

**Date of Order: 12.06.2013**

**ORDER**

1. M/s. GRIDCO Ltd. had filed the Power Purchase Agreement (PPA) executed between M/s. Sterlite Energy Ltd. (SEL) and GRIDCO on 28.09.2006 before the Commission based on MoU dtd. 26.09.2006 between Govt. of Orissa and SEL for installation of a Thermal Power Plant of 2400 MW capacity at an estimated expenditure of Rs.7481 crore within a period of 45 months under MoU route. This was registered as Case No. 44/2006 and the Commission vide its Order dtd. 20.08.2009 had disposed the case along with 12 other similar Independent Power Producers (IPPs) with several directions which inter alia includes incorporation of provisions of State Thermal Policy, R&R Policy applicable for the IPPs of the State in their respective PPAs.
2. In accordance with the aforesaid direction of the Commission, GRIDCO has filed an application on 01.10.2009 before the Commission for approval of Principal PPA dtd. 28.09.2006 and the amended PPA dtd. 20.08.2009 executed between M/s. Sterlite Energy Ltd. (SEL), Tuticorin, Tamilnadu and GRIDCO for purchase of power from the 2400 MW Thermal Power Project of M/s. SEL in the State of Orissa. The petition was registered as Case No. 117/2009.
3. In the mean time GRIDCO filed another petition before the Commission for determination of provisional tariff towards procurement of power from the subject Thermal Power Plant of M/s. SEL. This was registered in Case No. 31 of 2010. Several hearings were conducted on both the cases and interim orders were passed by the Commission. Further, M/s SEL filed a petition for review of the interim order dated 04.04.2012 passed by the Commission in the aforesaid cases, which was registered as Case No. 56 of 2012. Since, all the three cases are similar in nature; they were clubbed together and put before the Commission for analogous hearing. The cases were finally heard on 15.12.2012 and the Commission consider all the submissions made by the concerned parties at different times of hearings.

4. The Commission in its interim order dated 30.07.2010 passed in this case had made certain observations on the PPA submitted by GRIDCO and directed GRIDCO and M/s. SEL to sign a consolidated PPA incorporating the principal PPA dated 28.09.2006 and amended PPA dated 20.08.2009 in line with the observations made by the Commission and submit the same before the Commission for approval. Accordingly, a consolidated PPA was executed between GRIDCO & M/s. SEL on 19.12.2012 and submitted before the Commission on 29.12.2012 for approval. It is observed that almost all observations of the Commission have been incorporated in consolidated PPA.

5. However, GRIDCO in its submission on 29.12.2012 has raised the issue of Wheeling and Transmission of Power from the subject power plant of M/s. SEL to GRIDCO.

The Clause No. 4 of the Principal PPA dated 28.09.2006 as well the Consolidated PPA dated 19.12.2012 on “Transmission / Wheeling of Power” reads as follows:

**“Transmission / Wheeling of Power:** Power to GRIDCO shall be made available by SEL at the Bus bars of the Station connected to the transmission lines of OPTCL / PGCIL and it shall be the obligation and responsibility of GRIDCO to make the required arrangement for evacuation of power from such delivery points. SEL shall make independent arrangements for evacuation of the remaining power from the station at SEL costs and responsibility.”

6. But GRIDCO wanted this Clause to be modified in line with PPAs executed by it with other IPPs. But the same is yet to be modified in the Consolidated PPA submitted before the Commission.

7. As regards to entitlement of power from the thermal power plant of SEL, as per the Consolidated PPA dated 19.12.2012, SEL will make available the power to GRIDCO which is State Designated Entity (SDE) as given below.

(a) The Capacity allocated to GRIDCO as SDE shall be up to 25% of the installed capacity of the Thermal Power Station of M/s. SEL as requisitioned by GRIDCO once in each 5 year block period.

(b) GRIDCO as SDE shall at all times have the right to purchase 25% of the power sent out from the Thermal Power Stations. The auxiliary consumption determined by the appropriate Commission shall however be adjusted in the above calculation.

- (c) GRIDCO as SDE shall at all times have the right to receive from the Thermal Power Stations 7% of the power sent out at variable cost, if coal block (s) is allocated within the state of Odisha. Otherwise SEL will provide 5% of the power sent out at variable cost.
  - (d) GRIDCO as SDE will be entitled to receive the entire infirm power from the Thermal Power Stations at variable cost.
  - (e) M/s. SEL will make available the entire power generated from the first unit of 600 MW capacity to GRIDCO and SEL shall not go for trading of power from the first Unit. Such supply of power by SEL to GRIDCO will never be less than 25% of the total generation from the first unit as well as from all the subsequent units as provided in the PPA besides the entitlement of GRIDCO of 7% or 5% and infirm power as indicated at Para (c) & (d) above.
  - (f) The tariff payable by GRIDCO to SEL will be determined by the Odisha Electricity Regulatory Commission.
8. After scrutinising the PPA the following issues need to be resolved with regard to its approval.
- (a) Who is the Appropriate Commission for determination of tariff?
  - (b) Evacuation of power from the subject power plant
  - (c) Whether Scheduling will be done by SLDC or ERLDC.
9. SEL has been supplying the entire generation from 1<sup>st</sup> commissioned unit (Unit – II) less auxiliary consumption to GRIDCO in terms of the Power Purchase Agreement (PPA). SEL does not as on date have any other PPA with any Distribution Licensee of any other State. Further, the sale of electricity to Distribution Licensees in more than one State, ought to be covered under Composite Scheme of generation and sale under 79 (1) of the Electricity Act, 2003. However, mere sale of electricity to more than one Distribution Companies of different States does not ipso facto become a composite scheme. A Composite Scheme should mean that there is a commonality on aspects such as tariff, terms and conditions for generation and sales as in case of Bulk Power Supply Agreements entered into by Central Sector Generating Stations such as NTPC, NHPC etc where under the same agreement the electricity is supplied to distribution licensees of more than one State. In addition to that M/s SEL has also cited the CERC Order in Case No. 103/2005 dtd. 29.03.2006 wherein CERC has clarified its jurisdiction under Section 79 (1) vis-à-vis a composite scheme of generation and sale

to more than one state. As per para 28 of the said order of CERC, a generating station could come under composite scheme when it is set up in one State but the beneficiaries would be pre-identified and be in more than one State. Accordingly, as SEL has not defined its other beneficiaries, it should not be treated under category of 79 (1) (b) of the Act. Therefore, OERC is the appropriate Commission to determine tariff of power to be procured by GRIDCO from the plant of the M/s. SEL as per the PPA. In case, the total generation of this power plant involves sale to more than one State Utilities without case-1 bidding, SEL is required to approach CERC for determination of tariff of the subject power plant. Then the tariff fixed by CERC should be applicable prospectively. Till such time OERC is the appropriate Commission for determination of tariff limited to the entitlement of the State for which GRIDCO has entered PPA with M/s. SEL.

10. Regarding Transmission / Wheeling of Power generated by this power plant it is indicated in the PPA that *“Power to GRIDCO shall be made available by SEL at the Bus bars of the Station connected to the transmission lines of OPTCL / PGCIL and it shall be the obligation and responsibility of GRIDCO to make the required arrangement for evacuation of power from such delivery points. SEL shall make independent arrangements for evacuation of the remaining power from the station at SEL costs and responsibility.”*

On this issue M/s SEL has submitted that under the PPA the obligation to prepare infrastructure for evacuation is with GRIDCO and it is also quite clear that the delivery point for supply of power to GRIDCO is the bus-bar of the generating station and it is the obligation of GRIDCO to make necessary arrangements for evacuation of power from the bus-bar in order to avail state share of power. SEL further submitted that they are reviving the abandoned 400 KV Ib-Meramundali line of OPTCL on deposit work basis and hopeful that upon completion of the same, which is expected by July, 2013, the unit connected to OPTCL Network will be able to run at full 600 MW capacity and normative parameters of operations as per regulations shall be achieved. On this issue the Commission is of the view that since the transmission planning programme of OPTCL for evacuation of power from the upcoming IPPs is under process, GRIDCO/OPTCL may approach the Commission for suitable amendment of the clause in the consolidated PPA, if necessary after finalisation of the same. Till then the present practice of evacuation of power from the power plant of

M/s SEL will continue, which is expected to improve after revival of the Ib-Meramundali line of OPTCL.

11. In the review petition file by M/s SEL (Case No. 56 of 2012), SEL has submitted that as per clause 6.4.2(c) (iii) of IEGC if the state has more than 50% share of power scheduling will be done SLDC. In the present case since the state has a share of 32% of power from the subject generating station the scheduling and other function shall be performed by ERLDC.

On the same issue GRIDCO has submitted that clause 6.4.2(c) (iii) of IEGC stipulate as follows.

- (iii) if a generating station connected both to ISTS and the state network scheduling other functions performed by the system operator of a control area will be done by SLDC, only if state has more than 50% share of power. The role of concerned RLDC, in such a case, shall be limited to consideration of the schedule for inter-state exchange of power on account of this ISGS while determining the net drawal schedules of the respective states. If the state has a share of 50% less, the scheduling and other functions shall be performed by ERLDC”.*

The Commission has noted that M/s. SEL has signed a PPA with M/s. GRIDCO for 32% (768 MW) of its 2400 MW (4 x 600 MW) power plant. M/s. SEL – IPP has also entered another PPA with M/s. VAL – II, an industrial consumer in the State of Odisha for supply of maximum 2050 MW power. Therefore, the total capacity of the project has been booked on the long term basis for consumption within the State. At present M/s. VAL-II is not yet made fully operational and as such M/s. SEL – IPP is selling its unutilised power to the outside State on merchant basis. The claim of IPP for such sale of surplus power to the outside State on merchant basis can't be entertained for the purpose of scheduling by ERLDC.

This issue has been adequately deliberated during the hearing of Case No. 28/2011 and the Commission vide its order dated 14.12.2012 passed in case no. 28/2011 has observed that “M/s SEL-the IPP has only the long term PPA with VAL-II & GRIDCO for its total capacity and for all the practical purpose, it is a state embedded generator and GRIDCO has every right to avail all the power generated at the bus bar for scheduling purpose. xxxxxxxxxxxx. SLDC shall schedule the total power of M/s SEL and ensure that it is reflected in the implemented day ahead schedule of ERLDC and weekly UI statement prepared by ERLDC”. Hence, the Commission feels that there is no need for further clarification on this issue and reiterates the same.

12. With above observations the consolidated PPA executed between M/s. Sterlite Energy Ltd. and GRIDCO Ltd. on 19.12.2012 is hereby approved by the Commission. Now, the Commission would proceed to determine the tariff of the subject power plant of M/s. SEL in the subsequent paragraphs.
13. The Commission is yet to frame the Generation Tariff Regulations applicable for the State. So the Commission, for approval of generation tariff of M/s SEL would like to be guided by the principles laid down in CERC (Terms & Conditions of Tariff) Regulations, 2009 as per Section 61 (a) of the Act as well as Tariff Policy and other statutory provisions. The CERC Tariff Regulations, 2009 is applicable for the period 2009-2014. So, the Commission based on the said Regulations has determined the tariff for the financial year upto 2013-14 starting from the COD of the generating station. While determining the generation tariff, the Commission has considered the petition containing the tariff proposal for said period filed by SEL on 22.10.2011 and all its supplementary information / clarifications and presentation made by SEL during the hearing held on 15.12.2012. The Commission has also considered the objections raised by GRIDCO & Others and rejoinder of SEL. The unit wise installed capacity and date of Commercial operation of different units of SEL is given below.

Unit No.	Capacity in MW	Date of COD
Unit-2	600 MW	10.11.2010
Unit-1	600 MW	30.03.2011
Unit-3	600 MW	19.08.2011
Unit-4	600 MW	26.04.2012

14. Taking into the date of commercial operation of each of the four nos. of generating units of the Station and ending of the financial year, the tariff period for M/s SEL has been divided into seven block periods as given in the table below.

Tariff for Unit- II	Tariff for Unit- I & II	Tariff for Unit- I& II	Tariff for Unit- I, II & III	Tariff for Unit- I, II & III	Tariff for Unit- I, II, III & IV	Tariff for Unit- I, II, III & IV
2010-11		2011-12		2012-13		2013-14
10/11/2010 to 29/03/2011	30/03/2011 to 31/03/2011	01/04/2011 to 18/08/2011	19/08/2011 to 31/03/2012	01/04/2012 to 25/04/2012	26/04/2012 to 31/03/2013	01/04/2013 to 31/03/2014

#### **Operational Parameter**

#### **Determination of Plant Availability:**

15. M/s. SEL has considered the Normative Annual Plant Availability Factor (NAPAF) at 85% as per Regulation 26(i)(a) of CERC Tariff Regulations, 2009 and accordingly computed the gross generation for determination of tariff. GRIDCO has also accepted

the same. Therefore, the Commission approves the NAPAF of 85% for the subject Thermal Power Station of M/s. SEL.

**Determination of Auxiliary Consumption:**

16. M/s. SEL submitted that during construction of the power plant, Unit-II was synchronised to the State Grid first for supplying power to GRIDCO. But GRIDCO could not draw the full State share (600 MW) of the plant due to transmission line constraint which was there due to availability of only two circuits of 220 KV line between SEL and Budhipadar Grid sub-station through which SEL power is injected in to the State transmission system. Therefore, SEL has no alternative but to operate the Unit -II which has installed capacity of 600 MW in part load condition. The under generation of Unit- II has resulted in increase in percentage of auxiliary consumption with respect to the total generation. According to Regulation 26 (iv) (a) (ii) of CERC Tariff Regulations M/s. SEL is eligible for a normative auxiliary consumption of 6% of the total generation. We agree with the contention of the Petitioner that due to transmission constraint they have not been able to generate at full capacity and inject the State quota of power to the State transmission system. As per CERC norm M/s. SEL is to consume 36 MW as auxiliary consumption irrespective of the loading of the Generator in absolute term. The 220 KV double circuit transmission line running between M/s. SEL and Budhipadar Grid sub-station of OPTCL is capable of carrying power around 400 MW in sustainable mode for which M/s. SEL has limited the generation from Unit –II accordingly. The normative auxiliary consumption of 36 MW for a generation of 400 MW is calculated to be 9% which we accept for the period till the next unit i.e. Unit – I is declared commercially operated and synchronised to the Power Grid system through which its power is evacuated. Therefore, the Commission accept the auxiliary consumption of 9% upto 29.03.2011. It is to be mentioned here that except Unit – II of the power station all other units are connected to 400 KV system of M/s. PGCIL. As per the above principle, subsequent units such as Unit – I, III and IV which were commercially operated in different dates as stated above, their auxiliary consumption is also calculated to be 36 MW each same as that of Unit –II of the power station. Accordingly the Commission calculates the percentage of auxiliary consumption of the power station taking into consideration the units which are actually connected to the Grid either through Power Grid system or OPTCL system on a particular date. The percentage of auxiliary consumption at



different point of time till all the four units is commercially operated is given in the table below:

<b>Auxiliary consumption (in %)</b>					
	<b>10.08.2010 to 29.03.2011</b>	<b>30.03.2011 to 18.08.2011</b>	<b>19.08.2011 to 25.04.2012</b>	<b>26.04.2012 to 31.03.2013</b>	<b>FY 2013-14</b>
Submitted by M/s SEL	11.93%	8.00%	8.00%	8.00%	8.00%
Submitted by GRIDCO	6.00%	6.00%	6.00%	6.00%	6.00%
Approved by the Commission	9.00%	7.20%	6.75%	6.50%	6.00%

### **Determination of Station Heat Rate**

17. *As per Regulation 26 (ii) (B) of CERC Tariff Regulations, the Heat Rate norms for coal-based thermal generating stations is defined as follows.*

*B. New Thermal Generating Station achieving COD on or after 1.04.2009.*

*(a) Coal-based and lignite-fired Thermal Generating Stations*

$$= 1.065 \times \text{Design Heat Rate (Kcal/kWh)}$$

*Where the Design Heat of a unit means the unit heat rate guaranteed by the supplier at conditions of 100% MCR, zero percent make up, design coal and design cooling water temperature/back pressure.*

18. M/s. SEL has stated that as per Regulation 26 (ii)(B) of CERC Tariff Regulation, SEL qualifies for the design Heat Rate of 2294 Kcal/Kwh. However this design Heat rate is applicable for a machine operating on design capacity. But due to part load operation of Unit-2 and non-drawal of full 600 MW allocated power by GRIDCO resulting in lower PLF and higher operating Heat Rate, which is calculated to be 2874 Kcal/Kwh. Therefore, M/s. SEL prays the Commission to consider the heat rate of Unit-2 at 2874 Kcal./ Kwh from which GRIDCO is availing the power.
19. GRIDCO in its submission dt 24.12.2012.has submitted that Gross station Heat rate should be considered as 2294 Kcal/Kwh i.e design Heat Rate.
20. The Commission is of opinion that the Station Heat rate is one of the most important parameters which reflects on the efficiency of a thermal station. All out efforts, therefore, ought to be made to operate the thermal station at station heat rate as close to the design heat rate as possible. Considering the submission of SEL, GRIDCO and going by CERC norm, the Commission approves the Station Heat Rate as 2443.11 Kcal/Kwh i.e 1.065 X Design Heat Rate of 2294 Kcal/Kwh with effect from 19.08.2011 and prior to that 2500 Kcal/Kwh since the generating units were running at partial load due to transmission constraints.

### **Determination of Specific Secondary fuel oil Consumption**

21. M/s SEL submitted that the cost of secondary fuel oil has been computed in line with regulation 20 of CERC tariff regulation. Further, regulation 26 (iii) (a) of the CERC Tariff Regulations specifies that the Specific Secondary Fuel Oil consumption should be considered at 1 ml/kWh. Since both M/s SEL & GRIDCO accept the said CERC norm, the Commission approves the Specific Secondary Fuel Oil consumption as 1 ml/Kwh for the subject Thermal Power Stations of M/s. SEL.

### **Determination of Capital Cost of the Project**

22. M/s SEL in its letter dtd. 24.01.2013 has submitted the unit wise gross fixed assets as on April, 26, 2012 which is given in the table below:

**(Rs. Cr.)**

	<b>Unit-2</b>	<b>Unit-1</b>	<b>Unit-3</b>	<b>Unit-4</b>	
<b>COD</b>	<b>Nov. 10, 2010</b>	<b>Mar 30, 2011</b>	<b>Aug 19, 2011</b>	<b>Apr 26, 2012</b>	<b>Total</b>
<b>Gross Fixed Assets</b>	2767.27	1360.88	1913.15	2158.70	8200.00

23. After scrutinising the audited Balance Sheet submitted by M/s. SEL for FY 2010-11, 2011-12 and 2012-13, the Commission observed that the position of Fixed Asset and Capital works in progress is as under:

**(Rs. Cr.)**

	<b>31.03.2011</b>	<b>31.03.2012</b>	<b>31.03.2013</b>
Gross Fixed Asset in use (As per Note-11 of the Audited Account)	2767.26	6041.30	7628.58
Capital Work in progress (As per Balance Sheet)	3931.58	1407.85	357.61
Total Fixed Asset	6698.84	7449.15	7986.19

24. The Commission, therefore, accepts the amount of Rs.7986.19 Cr. as the total fixed assets of the project based on the audited data and considers the same as capital cost of the project for computation of tariff.
25. As indicated earlier, the Tariff is to be determined for seven block periods i.e. in two block periods in each financial year i.e. FY 2010-11, 2011-12 and 2012-13 and also for the whole FY 2013-14 depending on the Commercial Operation of the Generating units. Accordingly, the Capital Cost of the Project needs to be segregated for each block period. M/s. SEL in its submission has given the break up of the gross fixed asset on the COD of each generating unit as given below:

<b>Name of the Unit</b>	<b>Unit-II (1<sup>st</sup> Unit)</b>	<b>Unit -I (2<sup>nd</sup> Unit)</b>	<b>Unit-III (3<sup>rd</sup> Unit)</b>	<b>Unit-IV (4<sup>th</sup> Unit)</b>
COD	10.11.2010	30.03.2011	19.08.2011	26.04.2012
Total fund deployment (Rs. Cr.)	2767.27	1360.88	1913.15	2158.70 (estimated on project completion)

26. We have already determined the total fixed asset of the power station at Rs.7986.19 Cr. as on 31.03.2013 after completion of all the four units of the project. Considering the submission of M/s. SEL regarding the capital deployed for the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> unit and total project cost of Rs. 7986.19 Cr. the project cost of 4<sup>th</sup> unit is determined. The capital cost of all the seven block periods for the purpose of tariff calculation would be as indicated in the table below:

(Rs. Cr.)						
Unit- II in Operation	Unit- I & II in Operation	Unit- I & II in Operation	Unit- I, II & III in Operation	Unit- I, II & III in Operation	Unit- I, II, III & IV in Operation	Unit- I, II, III & IV in Operation
2010-11		2011-12		2012-13		2013-14
10/11/2010 to 29/03/2011	30/03/2011 to 31/03/2011	01/04/2011 to 18/08/2011	19/08/2011 to 31/03/2012	01/04/2012 to 25/04/2012	26/04/2012 to 31/03/2013	01/04/2013 to 31/03/2014
2767.27	4128.15	4128.15	6041.30	6041.30	7986.19	7986.19

#### **Determination of Debt and Equity component of the project**

27. As per Clause 12 of the CERC Regulation, 2009

*“For a project declared under commercial operation on or after 01.04.2009, 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.”*

M/s. SEL has submitted that the company has also deployed the surplus fund of Sterlite Industry (India) Ltd., the parent company of SEL by way of Rupee Loan with 0% interest which is payable on demand. The outstanding balance of the said loan as on 31<sup>st</sup> March 2012, is Rs.4224.61 Crore. The Petitioner has prayed for treating the said amount as quasi equity.

28. The Commission scrutinized the audited accounts submitted by M/s. SEL and observed that as regards to funding of the Capital/ Project cost, the equity portion as per Audited Account (Note-3 and Note -4of the Audited Account) is given as follow:

(Rs. Cr.)			
	31.03.2011	31.03.2012	31.03.2013
Equity Share	1187.31	1187.31	1187.31
Premium raised	14.19	14.19	14.19
Total paid up capital for computation of RoE	1201.50	1201.50	1201.50

Since the equity portion invested in full from the beginning of the project the Commission apportioned the equity amount of Rs.1201.50 Cr. equally for the four generating units of the power station, which comes to Rs.300.375 Cr. for each unit.

The Petitioner, however, has requested that 30% of the project cost should be taken as equity on normative basis. The Petitioner had stated in his letter dtd. 16.11.2012 and subsequently reiterated in his other submissions that loan from the parent company i.e. Sterlite Industries (India) Ltd. which will be payable on demand will be repaid after availing term loan of Rs.6150 Cr. availed through consortium led by SBI. Once this amount is paid back it will bring back equity structure of the Company to a ratio of 1.33:1. The applicant prays that pending actualization of such transaction the loan amount of holding company should be treated as quasi equity get the same treatment as return on equity as per CERC guideline.

29. The contention of applicant is not acceptable. Infusion of equity is a fact as evident from audited account and also as authorised in terms of Company Act. The audited account of these years 2010-11, 2011-12 and 2012-13 clearly indicate the following shareholding pattern:

Authorised Capital	Rs.4500 Cr.
Issued Share Capital with Share Premium	Rs.1201.50 Cr.
Subscribed share Capital	Rs.1201.50 Cr.

The Contention of the applicant that the loan amount from parent company will be partially converted to equity to attain normative level of 30% at a future date is irrelevant. This is a completely contingent factor which can't be taken as a basis for determination of tariff. What is to be taken into account is the return on the equity amount actually infused as per audited account and not the amount projected to be infused after completion of the project at a future indeterminate date. It is reiterated again that our computation with regard to the equity is based purely on the audited statement furnished by the Petitioner.

30. So we are not in a position to accept the contention of M/s. SEL to treat 0% loan (as per Minutes of Board meeting of holding company dtd. 21.05.2010 approving unsecured inter-corporate loan as submitted by M/s. SEL) of its parent company as quasi equity in view of stipulation in CERC Regulation regarding equity component should be capped at 30%. We are also unable to treat the part of the said 0% loan as quasi equity. In view of the above observation, the Commission has accepted the equity of Rs.300.375 Cr. for each unit as indicated above for the determination of tariff.

The Commission, therefore, treat the balance amount (total fixed asset – equity) as loan, which is given as under:

(Rs. Cr.)	
	31.03.2013
Approved Loan Amount (Project cost – equity)	6784.89 (7986.19-1201.50)

The above amount is approved by the Commission as long term loan for the project.

**Determination of Return on Equity:**

31. M/s SEL has claimed that as per the Regulations 15 read with Appendix-II of CERC Tariff Regulation 2009 they are entitled for 0.5% additional return on equity for completion of project within stipulated period from the approval of their Board in spite of commissioning of the project beyond the stipulated period due to force majeure condition. They attributed the delay in commissioning to non-availability of commissioning engineers from China which is beyond their control. But GRIDCO has submitted that as per the PPA the above problem is not a force majeure condition. The main reason for which CERC allows 0.5% additional RoE is for completing the project in time.
32. The Commission also agrees with the views of GRIDCO and have considered base rate of 15.5% for computation of RoE. Considering the MAT Rate of 19.93% for the year 2010-11 and 20.008% for the year 2011-12, 2012-13 & 2013-14, pre-tax return of equity comes to 19.358% for FY 2010-11 and 19.377% for the next three years. The RoE amount considering Equity amount of Rs.1201.50 crore for the above period is indicated in the table below.

(Rs. Cr.)							
	Tariff for Unit- II	Tariff for Unit- I & II	Tariff for Unit- I & II	Tariff for Unit- I, II & III	Tariff for Unit- I, II & III	Tariff for Unit- I, II, III & IV	Tariff for Unit- I, II, III & IV
Tariff Period	10/11/2010 to 29/03/2011	30/03/2011 to 31/03/2011	01/04/2011 to 18/08/2011	19/08/2011 to 31/03/2012	01/04/2012 to 25/04/2012	26/04/2012 to 31/03/2013	01/04/2013 to 31/03/2014
Equity Amount Approved by the Commission	300.375	600.75	600.75	901.125	901.125	1201.50	1201.50
RoE Proposed by M/S SEL	166.44	248.09	248.09	393.64	393.64	522.05	582.06
RoE Approved by the Commission	58.15	116.29	116.41	174.61	174.61	232.81	232.81

Note: All figurers are on annualized basis.

**Determination of Depreciation**

33. As per the CERC norms, the value base for the purpose of depreciation shall be the asset admitted by the Commission. M/s. SEL has considered weighted average rate of depreciation as 5.17% in its tariff calculation based on CERC norms. GRIDCO has

agreed to the submission of M/s. SEL. Accordingly, the Commission has also accepted the same for computation of tariff.

**Determination of Interest on Loan Capital**

34. Sterlite Industries Ltd. Submitted the audited account for the year ending 31.03.2011, 31.03.2012 and 31.03.2013. On verification of this audited accounts the loan fund of the industry as revealed from Note - 5 and Note - 7 of the audited accounts are given as under.

Source	(Rs. Cr.)		
	31.03.2011 Loan Amount	31.03.2012 Loan Amount	31.03.2013 Loan Amount
Loan from Sterlite Industries (India) Ltd.	4099.61	4224.61	8019.61
Buyers credit from bank (Secured)	137.67	121.44	167.47
Buyers credit from bank (Unsecured)	537.07	234.72	3.63
Issue of Commercial Paper	-	2075.00	50.00
Term loan from Bank	20.00	250.00	-
Working Capital Demand Loan	40.00	-	-
Corporate Guarantee Loan	344.35	90.35	17.10
<b>Total</b>	<b>5178.70</b>	<b>6996.12</b>	<b>8257.81</b>

On verification of the statement of profit and loss account, the interest cost booked therein for the financial year ending 31.03.2011, 31.03.2012 and 31.03.2013 were Rs.27.77 cr., Rs.140.89 Cr. and Rs.226.62 cr. respectively.

35. In their submission on dtd. 16.11.2012 M/s. SEL stated that the Company has infused Rs.8197.62 Cr. till 31.03.2012. Out of the infused funds equity portion including the share premium accounts for Rs.1201.50 Cr. Though the Company has entered into a term loan of agreement Rs.6150 Cr. through a consortium led by State Bank of India at floating rate of interest @11.50% payable on monthly basis, the Company has taken the opportunity to avail lower interest fund by way of commercial paper and foreign buyers credit. The Company has also taken surplus fund of Sterlite Industries (India) Ltd., the holding Company of SEL by way of rupee loan with a condition to pay on demand. The outstanding balance of said loan as on 31.03.2013 is Rs.8019.61 Cr out of which Rs.4217.51 Cr. has been considered at 0% and the balance Rs.3802.10 Cr. at 11.5%. This is evident from the Minutes of Board Meeting regarding loan agreement of holding company which has been filed by the applicant dtd. 30.04.2013. The Company will convert the parent company loan as soon as the same is demanded back, through State Bank of India approved term loan of Rs.6150 Cr. as stated above.

The applicant has requested that even for the loan availed at 0% from the holding company interest at 11.5% should be calculated on a normative basis and the same should be charged to the fixed cost for determination of the tariff

36. The request of the applicant is not acceptable to the Commission for the following reason:

Interest payment liability is a cost which is charged to fixed cost and the tariff thereon and finally passed on to the consumer. If for a particular loan portfolio no interest is payable, then obviously there is no financial cost for the applicant which can be loaded to the fixed cost and to the tariff. Interest burden actually incurred by the applicant can be charged to fixed cost but no interest on notional basis can be so charged to tariff.

37. The Commission is guided by CERC Regulation in determining the interest on loan capital. Clause 16 (5) and (6) of Chapter-3 of CERC Regulation states the following:

*“(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.”*

In view of the above CERC Regulation, only the weighted average rate of interest on the actual loan portfolio with actual interest outgo shall be considered rather than notional rate of interest submitted by the Petitioner. Therefore, the Commission is not inclined to load normative interest while determining the tariff which will result in artificial and unwarranted jacking up of fixed cost.

38. Hence, the Commission calculated the weighted average rate of interest based on the above principle which is reproduced below:

(Rs. Cr.)

Source	Loan Availed as on 31.03.2013		
	Loan Amount	Rate of Interest (%)	Amount of Interest
Loan from Sterlite Industries (India) Ltd.	4217.51	0	0
Loan from Sterlite Industries (India) Ltd.	3802.10	11.50	437.24
Total Loan from Sterlite Industries (India) Ltd.	8019.61		
Buyers credit from bank (Secured)	167.47	8.66	14.50
Buyers credit from bank (Unsecured)	3.63	8.66	0.31
Issue of Commercial Paper	50.00	8.74	4.37
Corporate Guarantee Loan	17.10	8.66	1.48
<b>Total</b>	<b>8257.81</b>	<b>5.55</b>	<b>457.90</b>

39. Accordingly, the interest on loan has been calculated for tariff purpose upto 2013-14 taking the above weighted average rate of interest. Though gross loan of Rs.8257.81 Cr. availed by the M/s. SEL is shown in the audited account but for the purpose of tariff computation, the Commission has considered the total loan of Rs.6784.69 Cr. as loan for the project. The unit-wise capital cost, equity and loan have been approved by the Commission as follows.

(Rs. Cr.)

	Tariff for Unit- II	Tariff for Unit- I & II	Tariff for Unit- I & II	Tariff for Unit- I, II & III	Tariff for Unit- I, II & III	Tariff for Unit- I, II, III & IV	Tariff for Unit- I, II, III & IV
Tariff Period	10/11/2010 to 29/03/2011	30/03/2011 to 31/03/2011	01/04/2011 to 18/08/2011	19/08/2011 to 31/03/2012	01/04/2012 to 25/04/2012	26/04/2012 to 31/03/2013	01/04/2013 to 31/03/2014
Project cost approved	2767.27	4128.15	4128.15	6041.30	6041.30	7986.19	7986.19
Equity approved by the Commission	300.375	600.75	600.75	901.125	901.125	1201.50	1201.50
Gross Loan	2466.90	3527.40	3527.40	5140.18	5140.18	6784.69	6784.69
Average net loan	2439.46	3471.94	3430.54	4906.06	4798.93	6240.45	5841.70

### **O & M Expenses**

40. Clause (a) of Regulation 19 of the CERC Tariff Regulations 2009 provides the following O & M expenses norms for 600MW coal based and lignite fired generating stations as under.

Year	2010-11	2011-12	2012-13	2013-14
O & M cost Rs. in Lakh/MW for 600MW and above sets	12.37	13.08	13.82	14.62

*Provided that the above norm shall be multiplied by 0.9 for additional 3<sup>rd</sup> & 4<sup>th</sup> units in respective unit sizes for the Unit whose COD occurs on or after 01.04.2009 in the same station.*

41. M/s. SEL submitted that as per above CERC Tariff Regulation, SEL has calculated the O & M expenses for its station from FY 10 to FY 14. Further, SEL has claimed an extra amount of Rs.1.35 Crore/Annum on account of revision of water charges by



Govt. of Odisha in addition to O & M expenses allowed by CERC norm. The Commission has allowed only the normative O&M expenses as per CERC norms and has also allowed M/s. SEL to reimburse water charges/cess as pass through in the year-end charges. The details of O & M expenses as approved by the Commission is given in the table below.

**(Rs. Cr.)**

	<b>Tariff for Unit- II</b>	<b>Tariff for Unit- I &amp; II</b>	<b>Tariff for Unit- I&amp; II</b>	<b>Tariff for Unit- I, II &amp; III</b>	<b>Tariff for Unit- I, II &amp; III</b>	<b>Tariff for Unit- I, II, III &amp; IV</b>	<b>Tariff for Unit- I, II, III &amp; IV</b>
	10/11/2010 to 29/03/2011	30/03/2011 to 31/03/2011	01/04/2011 to 18/08/2011	19/08/2011 to 31/03/2012	01/04/2012 to 25/04/2012	26/04/2012 to 31/03/2013	01/04/2013 to 31/03/2014
Proposed by M/S SEL	82.32	164.64	173.16	251.08	263.96	345.88	364.12
Proposed by M/S GRIDCO	74.22	148.44	156.96	227.59	240.47	315.10	333.34
Approved by the Commission	74.22	148.44	156.96	227.59	240.47	315.10	333.34

Note: All figures are on annualized basis.

### **Interest of Working Capital**

42. Regulation 18(1) of the CERC Tariff Regulations 2009 provides that the working capital for coal based generating stations shall cover.
- (i) *Cost of coal for 1.5 months for pit-head generating stations and two months for non-pithead generating stations for generation correspondence to the normative annual plant availability factor.*
  - (ii) *Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than liquid fuel oil, cost of fuel of stock for the main secondary fuel oil;*
  - (iii) *Maintenance spares @ 20% of operation and maintenance expenses specified in regulation 19.*
  - (iv) *Receivable equivalent to two months of capacity charge and energy charge for sale of electricity calculated on the normative plant availability factor and;*
  - (v) *O & M expenses for one month.*
43. M/s SEL submitted that as per Regulation 18 of CERC Tariff regulation the Coal Cost, LDO Cost & receivables have been computed at Normative availability of 85% for whole year and apportioned to 2 months for the purpose of working capital as specified in the Tariff regulations. Further, normative O & M Expenses and the cost Maintenance spares have been computed for whole year and apportioned to 1 month as specified in the Tariff regulation. As specified in Clause 3 of the above regulations, rate of interest on working capital has been taken at 11.75% for FY 2010-11 which

was the prevailing SBI Prime Lending Rate as on 1<sup>st</sup> April 2010 and 12.50% for the subsequent years. GRIDCO has also accepted the same principle in its submission.

44. After considering the submission of M/s SEL & GRIDCO, the Commission works out the interest on working capital which is reproduce in the table below.

<b>(Rs. in Crore)</b>							
	<b>Tariff for Unit- II</b>	<b>Tariff for Unit- I &amp; II</b>	<b>Tariff for Unit- I&amp; II</b>	<b>Tariff for Unit- I, II &amp; III</b>	<b>Tariff for Unit- I, II &amp; III</b>	<b>Tariff for Unit- I, II, III &amp; IV</b>	<b>Tariff for Unit- I, II, III &amp; IV</b>
	<b>10/11/2010 to 29/03/2011</b>	<b>30/03/2011 to 31/03/2011</b>	<b>01/04/2011 to 18/08/2011</b>	<b>19/08/2011 to 31/03/2012</b>	<b>01/04/2012 to 25/04/2012</b>	<b>26/04/2012 to 31/03/2013</b>	<b>01/04/2013 to 31/03/2014</b>
OIL COST 2 MONTHS	3.94	7.89	7.89	11.83	11.83	15.77	15.77
Coal cost for 2 months for non Pit head Stations	65.89	131.78	141.31	207.12	219.40	292.53	292.53
O&M COST 1 MONTH	6.19	12.37	13.08	18.97	20.04	26.26	27.78
RECEIVABLES 2 Month	142.86	260.10	271.73	397.57	411.63	545.76	545.21
SPARES @ 20% of O & M expenses	14.84	29.69	31.39	45.52	48.09	63.02	66.67
<b>TOTAL</b>	<b>233.72</b>	<b>441.82</b>	<b>465.40</b>	<b>681.01</b>	<b>710.98</b>	<b>943.34</b>	<b>947.96</b>
INTEREST ONW.C.	27.46	51.91	58.17	85.13	88.87	117.92	118.49

#### **Cost of Secondary Fuel Oil**

45. CERC in its Tariff Regulation 20(1) has prescribed a formula for calculation of the expenses on secondary fuel oil consumption for coal based generating station which shall be computed corresponding to the normative specific fuel oil consumption considering the weighted average landed price of secondary fuel adopted and NAPAF of the generating station. The Commission accepts the same principle while calculating the cost of secondary fuel oil for the subject generating station of M/s SEL. The Commission approves the Specific Secondary Fuel Oil consumption as 1 ml/Kwh for the subject Thermal Power Stations of M/s. SEL. M/s. SEL uses Light Diesel Oil (LDO) as secondary fuel for its units and they indicated that the actual landed cost of LDO is Rs.52948 per KL at a GCV of 9850 Kcal/Lt considering the average preceding three months. GRIDCO in its submission has also taken the same for calculation of cost of secondary Fuel Oil. It is found that the cost of secondary Fuel Oil as claimed by the petitioner are in order and hence has been allowed. Based on the above cost the Commission has calculated the Cost of secondary fuel oil for the generating station.

## Computation of Annual Capacity Charges

46. The Annual Fixed Charges as approved in respect of the generating station for the period 2010-11 to 2013-14 is as under.

(Rs. Crore)							
	Tariff for Unit- II	Tariff for Unit- I & II	Tariff for Unit- I& II	Tariff for Unit- I, II & III	Tariff for Unit- I, II & III	Tariff for Unit- I, II, III & IV	Tariff for Unit- I, II, III & IV
	10/11/2010 to 29/03/2011	30/03/2011 to 31/03/2011	01/04/2011 to 18/08/2011	19/08/2011 to 31/03/2012	01/04/2012 to 25/04/2012	26/04/2012 to 31/03/2013	01/04/2013 to 31/03/2014
Return on Equity	58.15	116.29	116.41	174.61	174.61	232.81	232.81
Interest on term loan	135.27	192.52	190.23	272.05	266.11	346.04	323.93
Depreciation (SLM)	143.07	213.43	213.43	312.34	312.34	412.89	412.89
O&M Expenses	74.22	148.44	156.96	227.59	240.47	315.10	333.34
Interest on Working capital	27.46	51.91	58.17	85.13	88.87	117.92	118.49
Cost of secondary Oil	23.66	47.31	47.31	70.97	70.97	94.62	94.62
<b>Total Cost</b>	<b>461.82</b>	<b>769.91</b>	<b>782.51</b>	<b>1,142.68</b>	<b>1,153.36</b>	<b>1,519.38</b>	<b>1,516.08</b>

**Note: All figures are on annualized basis.**

47. The Capacity Charge (inclusive of incentive) payable to M/s SEL for a calendar month shall be calculated in accordance with the formula laid down in the CERC Regulation 21(2)(a) which is given below:-

Generating stations in commercial operation for less than ten (10) years on 1<sup>st</sup> April of the financial year:

$MFC = AFC \times (NDM/NDY) \times (0.5 + 0.5 \times PAFM/NAPAF)$  (in Rupees);

Provided that in case the plant availability factor achieved during a financial year (PAFY) is less than 70%, the total capacity charge for the year shall be restricted to

$AFC \times (0.5 + 35/NAPAF) \times (PAFY/70)$  (in Rupees)

Where,

MFC = Monthly Fixed Charges

AFC = Annual fixed cost specified for the year, in Rupees

NAPAF= Normative annual plant availability factor in percentage

NDM = Number of days in the month

DFY = Number of days in the year

PAFM = Plant availability factor achieved during the month, in percentage.

PAFY = Plant availability factor achieved during the year, in percentage

**Note:** 1. For the past period PAFM shall be calculated basing on the actual energy generated when there is no declared availability made by the Generator to SLDC.

2. For the succeeding period the day ahead plant availability as a whole shall be declared by the Generator to SLDC and SLDC shall schedule the GRIDCO's drawal from the Generator bus bar for the project as a whole (not unit-wise). SLDC should certify the PAFM for the month.

### **Energy Charge Rate (ECR)**

48. Sub-clause (b) of clause (6) of Regulation 21 of the 2009 Tariff Regulations provides as under:

“Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae:

$$ECR = GHR \times LPPF \times 100 / \{CVPF \times (100 - AUX)\}$$

Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF = Gross calorific value of primary fuel as fired, in kCal per kg, per litre or per standard cubic metre, as applicable.

ECR = Energy charge rate, in Rupees per kWh sent out. GHR = Gross station heat rate, in kCal per kWh.

LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month.

49. As per LOA dtd. 25.06.2008 the Annual Contracted Quantity (ACQ) of Coal for Unit-II is 25.70 Lakh ton per annum for E/F grade coal. Based on the said LOA M/s. SEL had signed FSA dtd. 10.09.2011 with M/s. MCL which provides assurance for supply of 50% of ACQ. Subsequently, basing on the directives of PMO M/s. SEL signed an amended FSA for Unit-II on 09.06.2012 with M/s. MCL for supply of 80% of ACQ which is revised to 24.50 lakh ton per annum. Further, for the remaining three units of 1800 MW (600 MW each) there are separate LOA issued on 14.07.2010 allocating 69.449 lakh ton per annum of E/F grade coal. Based on the said LOA M/s. SEL signed a FSA on 10.09.2011 for Unit – I alone which was replaced by another FSA on 20.01.2012 for Unit – I & III for 46.3 Lakh ton per annum. It is to be mentioned here that though there is a LOA for Unit-IV M/s. SEL has not signed any FSA till date for that unit. These FSA also provides assurance of 50% of ACQ as they have no long term PPA with any DISCOM other than GRIDCO.
50. The Commission has noted that as VAL – II has not yet fully operationalised, it is yet to draw its requirement of power as per the PPA. M/s. SEL has, therefore, sold its surplus power on merchant basis to other beneficiary outside the State, either through short term contract or through power exchange at non-disclosed prices. The

Commission observes that the coal procured through administered price mechanism on the basis of long term PPA should not be diverted for merchant sale of power. Since the pass through of Fuel Charge affords full protection to the Generator against potential losses on account of a rise in fuel prices, it follows that the benefit of reduced or concessional fuel prices cannot be retained by the Generator. As a result, Fuel Charge cannot be a profit centre for the Generator and the principles for determination of Fuel Charge must ensure that costs are recovered on the basis of actuals, assuming that the Generator would function with the efficiency expected of a prudent and diligent operator. Fuel which is procured by the Generator through any form of concessional, preferential or captive allocation or sale by a Governmental Instrumentality shall be deemed as Concessional Fuel and earmarked for the benefit of the Utility. Any fuel procured through e-auction and /or through import could be utilised for merchant sale of power through short term contract or through power exchange.

51. On scrutiny of actual GRIDCO drawal of energy we found that the coal requirement for the said drawal is less than linkage coal available to M/s. SEL. The details of coal requirement for generation of GRIDCO share of power and ACQ of linkage coal available as per FSA is given below:

<b>Year</b>	<b>Power Exported to GRIDCO (MU)</b>	<b>Coal Required (In MT)</b>	<b>Quantity of Linkage Coal Available as per FSA (ACQ) (In MT)</b>
2010-11	695	647979	1285000
2011-12	1969	1739492	2442484
2012-13	3048	2493608	4274967

From the above table it is evident that without resorting to blending of linkage coal with e-auction or imported coal the requirement of coal for export of power to GRIDCO will be well within linkage coal available with M/s. SEL. Since M/s. SEL has a lone PPA with one utility i.e. GRIDCO it can use other sources of coal such as e-auction / imported coal for selling power to buyers other than GRIDCO. In addition to that for the FY 2013-14 also, as we estimate, the GRIDCO share of power can also be met from the linkage coal available to M/s. SEL.

52. After completion of Ib-Meramundali transmission line no line constraint will be there and M/s. SEL – IPP can fully maximize its generation. At that point of time M/s. SEL – IPP should take up with MCL to increase the availability of linkage coal. GRIDCO should also give necessary support to M/s. SEL for enhanced linkage of coal.

53. So the Commission is not inclined to accept the use of other sources of high cost coal for supply of power to GRIDCO which would otherwise be a burden to the State consumers. M/s. SEL has submitted the month-wise cost of linkage coal as well as GCV of the said coal which is given in the table below:

	2010-11		2011-12		2012-13	
	Cost of Linkage Coal (Rs. / MT)	GCV (Kcal/Kg)	Cost of Linkage Coal (Rs. / MT)	GCV (Kcal/Kg)	Cost of Linkage Coal (Rs. / MT)	GCV (Kcal/Kg)
April			1109	2831	1146	3160
May			1086	2820	1147	3230
June			1120	2937	1153	3099
July			1123	2872	1125	3167
August			1125	2733	1175	3100
September			1081	2814	1125	3032
October	1021	3271	1151	2923	1375	3243
November	1083	3434	1120	3004	1401	3286
December	1170	2672	1121	2972	1453	3231
January	1151	2741	1135	2972	1362	3144
February	938	2821	1090	3015	1375	3216
March	1060	2920	1200	3191	1450	3236
<b>Average</b>	<b>1043</b>	<b>2935</b>	<b>1131</b>	<b>2968</b>	<b>1284</b>	<b>3181</b>

54. Accordingly, from the year-wise average coal cost and GCV available with us from M/s. SEL sources and utilizing CERC Formula for the calculation of Energy Charge Rate for the year 2010-11 to 2013-14 we arrive at the ECR in the table given below:

		2010-11	2011-12	2012-13	2013-14
Gross Station Heat Rate	Kcal/kWh	2500	2443.11	2443.11	2443.11
Aux. Energy Consumption	%	9.00	6.75	6.50	6.00
Weighted average GCV of oil	Kcal/l	9850	9850	9850	9850
Weighted average GCV of coal	Kcal/kg	2935	2968	3181	3181
Weighted average price of oil	Rs/Kl	52948	52948	52948	52948
Weighted average price of coal	Rs/MT	1043	1131	1284	1284
Rate of energy charge ex-bus	Paise/kWh	97.24	99.43	105.05	104.49

55. However, M/s. SEL is required to compute the monthly energy charges in accordance with Clause 21 (6)(a) of CERC Regulations, 2009 which has already been stated in the beginning of this section basing on actual linkage coal price and GCV.
56. Billing of ECR shall be made to GRIDCO by M/s. SEL on monthly basis with the details of coal/oil used for generation as indicated above for scrutiny and payment. In addition to the above M/s SEL is entitled to recover other taxes / duty etc. levied by the Govt. or any statutory authority for the GRIDCO share of drawal of power.

57. In conclusion, the Commission direct as follows:

- (a) M/s. SEL will submit the revise bill of fixed charges month-wise based on the approved Annual Fixed Charges and the month-wise Energy Charge as per formula given in this Order.
- (b) M/s. SEL and GRIDCO will regularize the payment of infirm power received by GRIDCO prior to CoD of the generating unit at the variable charge rate of that particular month.
- (c) SLDC should schedule the total power of the project considering the full requirement of GRIDCO as per its own entitlement, full requirement of VAL - II and other Short Term Open Access (STOA) customer of M/s. SEL.
- (d) The day-ahead generation availability for the project as a whole shall be declared by the Generator to SLDC and SLDC shall schedule GRIDCO's drawal from Generator's bus bar for the project as a whole. SLDC shall also certify Plant Availability Factor Achieved during the Month (PAFM) in percentage for the relevant month.
- (e) The tariff of M/s. SEL – IPP, so determined in this Order is valid upto 31.03.2014. M/s. SEL – IPP shall file its tariff application for the FY 2014-15 onwards at least three months prior to validity period i.e. on or before 01.01.2014.

58. These cases are disposed of accordingly.

Sd/-

**(S. P. Swain)**  
**MEMBER**

Sd/-

**(B. K. Misra)**  
**MEMBER**

Sd/-

**(S. P. Nanda)**  
**CHAIRPERSON**