ODISHA ELECTRICITY REGULATORY COMMISSION
PLOT NO. 4, CHUNOKOLI, SHAILASHREE VIHAR,
CHANDRASEKHARPUR,
BHUBANESWAR-751021
****

Present: **Shri U N Behera, Chairperson**
Shri A K Das, Member

Case No. 38/2016

M/s. Vedanta Ltd. ……… Petitioner
Vrs.
GRIDCO & Others …....... Respondents

In the matter of: **An application under Sections 61, 62 & 86 of the Electricity Act, 2003 read with Section 21 of the OER Act, 1995 along with OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2014 seeking approval of Multi-Year Tariff for supply of power for FY 2010-11 to FY 2013-14 in terms of the consolidated PPA executed between the applicant and GRIDCO Ltd.**

For Petitioner: Shri Satyakam S., Advocate, M/s. Vedanta Ltd., Shri Vikash Jain, VP (Legal), Shri Vikash Kumar, AGM (Fin) all from M/s. Vedanta Ltd.

For Respondents: Shri S K Puri, Sr. GM (RT&C), OPTCL, Shri P S Sahu, Sr. GM (PS), SLDC and Ms. Niharika Pattanaik, ALO, DoE, GoO.

Date of Hearing: 04.07.2017 **Date of Order:26.02.2018**

ORDER

The petitioner M/s Vedanta Ltd. (previously known as Sasa Sterlite Ltd.) has filed the present application before this Commission under Sections 61, 62 and 86 of the Electricity Act, 2003 and other enabling provisions for re-determination of generation tariff of state's share of power from its 4x600 MW thermal generating stations at Jharsuguda for FY 2010-11 to FY 2013-14, pursuant to the order dated 10.05.2016 of Hon'ble APTEL passed in Appeal No. 25/2014.

2. Consequent to MOU dated 26.09.2006 between Govt. of Odisha and M/s. Sterlite Energy Limited for setting up of a 4x600 MW capacity thermal power plant at Brundamal, Jharsuguda, a Power Purchase Agreement (PPA) for procurement of State share of power as per MoU was executed between M/s. Sterlite Energy Ltd. and GRIDCO Ltd. on 28.09.2006 and the same was filed by GRIDCO Ltd. before the Commission for approval. Basing on the direction of the Commission on the matter of approval of PPA dated 30.07.2010, a consolidated PPA in place of multiple PPAs for transmission and power purchase was

signed and was submitted to the Commission for approval on 29.12.2012. The provisions for power supply to GRIDCO Ltd. as contained in the consolidated PPA reads as follows:-

a. The capacity allocated to GRIDCO shall be up to 25% of the installed capacity of the Thermal Power Station of Sterlite Energy.

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

c. GRIDCO will be entitled to receive the entire infirm power from the thermal power station at variable cost.

d. Sterlite Energy will make available the entire power generated from the first Unit of 600 MW capacity to GRIDCO and M/s. Sterlite Energy shall not go for trading of power from the first unit. Such supply of power by Sterlite Energy 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.

e. The tariff payable by GRIDCO to Sterlite Energy will be determined by the Odisha Electricity Regulatory Commission.

3. The Commission vide its order dated 12.06.2013 passed in Case Nos. 117/2009, 31/2010 and 56/2012 had determined the tariff for supply of power to GRIDCO for the period from November, 2010 to March, 2014. The Commission while determining the capital structure of the Petitioner had taken into consideration the zero percent inter-corporate loan availed by M/s. Sterlite Energy Ltd. from its parent company M/s. Sterlite Industries Ltd. basing on the Board Resolution furnished by M/s. Sterlite Energy Ltd.

4. In the meantime, the company undertook integration and merger of its different entities. Under the scheme of amalgamation, the erstwhile M/s. Sterlite Energy Ltd. and its parent company M/s. Sterlite Industries Ltd. were merged with M/s. Sesa Goa Ltd. w.e.f. 01.01.2011 in terms of the merger scheme approved by the Hon'ble Bombay High Court on 03.04.2013 and Hon'ble Madras High Court on 25.07.2013. After such merger, the merged successor entity was named as M/s. Sesa Sterlite Ltd. on 18.09.2013. M/s. Sesa Sterlite Ltd. challenged the Commission's aforesaid order dated 12.06.2013 passed in Case No. 117/2009, 31/2010 and 56/2012 before the Hon'ble APTEL in Appeal No. 25/2014 due to non-acceptance of intra corporate loan towards normative debt equity structure by the Commission. Hon'ble APTEL at Para-7 (g) of their judgment dated 10.05.2016 passed in Appeal No. 25/2014 had directed as given below:-

"We are of the considered view that pursuant to the amalgamation, the consolidated audited accounts of new company as and when made available before the State Commission, communicating therein the revised debt equity structure of the new entity with all other relevant details, for determination of tariff, would be examined appropriately by the State Commission."

5. M/s. Sesa Sterlite Ltd. was later renamed as M/s. Vedanta Ltd. w.e.f. 01.01.2011. Consequent upon the above directions of the Hon'ble APTEL, M/s. Vedanta Ltd. has filed the present petition along with the audit report of Deloitte Haskins & Sells LLP, the statutory auditors of the merged entity- M/s. Sesa Sterlite Ltd. (later renamed as M/s. Vedanta Ltd. w.e.f 21.04.2015) up to the half financial year ending on September, 2013. The petitioner has also submitted a special audit report, conducted by M/s. A. K. Tekriwal & Associates, Chartered Accountants, who was engaged by the petitioner to certify the accounts of Aluminium & Power Division related to its 4x600 MW IPP for the post merger period i.e. from 01.01.2011 to the end of FY 2013-14 along with the calculation of fixed cost for the same period.

6. Moreover, the Commission vide its interim order dated 21.09.2016 passed in the present case had appointed an independent statutory audit firm M/s. Bal & Company, Chartered Accountants under Regulation, 2.6 of the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2014, to verify the capital structure of the said thermal power plant of the petitioner. M/s. Bal & Company has submitted the report to the Commission vide its letter dated 11.11.2016. In that report the following points have been dealt with

   (i) Ascertaining the actual date of merger of SEL and Sesa Goa Ltd. under the scheme of amalgamation and arrangement as per the orders of the Hon'ble High Court of Chennai & Mumbai;

   (ii) Determination of the capital cost of 4 x 600 MW power project of Sesa Sterlite Ltd. with unit-wise and asset-wise breakup;

   (iii) Determination of the equity component of the project along with its sources.

   (iv) Determination of the debt component of the project along with the details of the loans and interest rate.

   (v) Verification of IDC and IEDC claimed and revenue earning on account of interest on deposit or advances or any other receipt.

   Further, the Commission, vide its interim order dated 04.05.2017, had directed GRIDCO to file its reply on all the issues raised in the present case.

7. The petitioner, in its present petition, has submitted that upon merger of M/s. Sterlite Energy Ltd. with its parent company M/s. Sterlite Industries (India) Ltd. and other group companies, the entire inter-company loans were consolidated into the opening equity of the merged

entity i.e. M/s. Sesa Goa Ltd. (renamed as Sesa Sterlite Ltd.). Thus, w.e.f. 01.01.2011 (effective date of merger), there is no inter-company deposit /loan, but mere deployment of funds of the merged entity and such deployment of fund will be treated as equity. In terms of CERC Generation Tariff Regulations, 2009, if the equity actually deployed in a project is more than 30% of the capital cost, equity excess of 30% shall be treated as normative loan. The petitioner has further submitted that this is applicable in its case because as per the consolidated audited accounts, the petitioner has invested equity in excess of 30% of the capital cost of the project from its free reserves. Since fixed charge is dependent upon debt equity structure of IPP and is recoverable from beneficiary GRIDCO, the Petitioner has prayed the Commission for revision of fixed charges of its 4x600 MW IPP w.e.f. 01.01.2011 consequent upon the merger of its group of companies.

8. The respondent, GRIDCO has submitted that as per the Hon'ble APTEL's order dated 10.05.2016 passed in Appeal No. 25/2016, tariff is to be determined afresh taking into account the consolidated audited accounts reflecting the merger and amalgamation impact only. Hence, it is to be decided whether the fixed cost of unit #2, which continues to be an IPP Unit, shall be determined exclusively or the fixed cost in respect of Unit #2 shall be pro-rated (one fourth of total) after determining the fixed cost of the entire power station. Accordingly, the debt & equity component and the related parameters for determining the fixed charges shall undergo necessary changes/modifications, keeping intact all other components, operational parameters, stipulations as such as per the Tariff order of the Commission dated 12.06.2013 passed in Case No. 117/2009, 34/2010 and 54/2013.

9. GRIDCO submitted that the petitioner has not submitted the unit-wise breakup of the additional capital expenditure certified by the auditors, which may be verified by the Commission or else the total project cost approved by the Commission in its tariff order dated 12.06.2013 may be considered for the purpose of computation of tariff. However, the total additional capital expenditure shown by the petitioner is at Rs. 155.40 Crore, whereas per the auditors M/s. Bal & Company report it is Rs. 111.90 Crore. As per the CERC Regulations, 2009 prudent check of additional capitalization vis-à-vis original scope of work may be carried out prior to consideration of such expenditures.

Further, the petitioner has only provided the tariff period-wise break up of equity component without indicating the unit-wise break up of funds deployed. The equity figure of Rs. 4697.62 Crore for the period from 10.11.2010 to 31.12.2010 contradicts with the figure of Rs. 1201.50 Cr. mentioned by the independent auditor M/s. Bal & Co. in their report. These discrepancies may be cross verified by M/s. Bal & Co (Charted Accountants).

10. GRIDCO, further submitted that CoD of Unit #2 is a prior event that had happened before merger of companies of the petitioner. Hence, GRIDCO should not bear the financial impact of merger as far as equity infusion is considered in respect of Unit #2. However, it will bear the fixed charges in respect of Unit #2 from the beginning as it is the only unit continuing to operate as an IPP, provided the expenditures incurred towards commonalities are duly deducted from the gross value of the asset. The initial fixed cost burden of the other three units (converted to CGP w.e.f 01.04.2015) should not be loaded in determination of the tariff of Unit #2, the IPP unit. Hence, GRIDCO submitted that the equity component of Unit #2 should be Rs. 300.375 Cr. (Rs. 1201.50 Cr./4 nos. of units) based on the principles followed by the Commission in its earlier order dated 12.06.2013.

11. In respect of investment on loan, GRIDCO submitted that the weighted average rate of interest on the actual loan, portfolio with actual interest outgo may be considered. The rate of interest as calculated by the petitioner may be considered by the Commission after prudent verification. Regarding repayment of loan, the figures could not be verified as the petitioner has not submitted the supportive documents. Further, the refinancing charges have not been duly adjusted by the petitioner in line with Regulation 16 (7) of CERC Generation Tariff Regulations, 2009. The Commission may consider the same after obtaining details from the petitioner and duly vetted by the independent auditor M/s. Bal & Company.

12. GRIDCO has submitted that in view of the above facts, they are not in a position to verify the tariff calculation of the petitioner. However, GRIDCO requested the Commission to take cognizance of the CERC order dated 04.06.2012 on the benchmark capital cost for thermal power stations with coal as fuel.

13. The Commission took above submissions of the Petitioner and Respondent GRIDCO into record. It is observed that in our order dated 12.06.2013 passed in Case No. 117/2009, 31/2010 and 56/2012 the tariff in respect of 4 x 600 MW IPP of M/s. Vedanta Ltd. (erstwhile Sterlite Energy Ltd.) was determined for the period from November, 2010 to end of the FY 2013-14 wherein the financial support in the form of inter-corporate loan to M/s. Sterlite Energy Ltd. from its sister concerned M/s. Sterlite Industries Ltd. was considered as a loan having zero percent interest basing on the resolution of its Board Meeting held on 26.10.2010. However, as per the judgements of Hon’ble Bombay High Court on 03.04.2013 and Hon’ble Madras High Court on 25.07.2013, both the companies were merged with the their group of companies retrospectively w.e.f. 01.01.2011. Therefore, Hon’ble APTEL at Para 7 (g) of their judgement dated 10.05.2016 passed in Appeal No. 25/2014 have opined as follows:

"We are of the considered view that pursuant to the amalgamation, the consolidated audited accounts of new company as and when made available before the State Commission, communicating therein the revised debt equity structure of the new entity with all other relevant details, for determination of tariff, would be examined appropriately by the State Commission."

14. From the above observations of Hon'ble APTEL it is clear that the revised debt-equity structure of the said IPP of M/s. Vedanta Ltd. after merger of the group of companies is to be considered by the Commission for determination of tariff. Hence, the Commission is not inclined to revise the tariff of the said IPP prior to the merger of the group of companies i.e. 01.01.2011. The tariff for the power of the state dedicated IPP prior to the above merger date is final and is governed under our earlier order dated 12.06.2013. Therefore, only the post merger effect shall be considered and other parameters such as auxiliary consumption, normative plant availability factor, station heat rate and specific secondary fuel oil consumption etc. which have already been approved by the Commission shall continue to be adopted even thereafter. In other words the principle and parameters for determination of variable charge (energy charge rate) shall remain unchanged for the period i.e. 01.01.2011 to the end of FY 2013-14.

15. Accordingly, the Commission vide their interim order dated 21.09.2016 passed in the present case had appointed an independent statutory audit firm M/s. Bal & Company, Chartered Accountants under Regulation, 2.6 of the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2014, to verify the capital expenditure and equity structure of the said thermal power plant of the petitioner after the date of merger. M/s. Bal & Company submitted the report to the Commission vide its letter dated 11.11.2016 which was circulated among the parties to this proceeding. It is observed that the capital cost now submitted by M/s. Bal & Company vide his letter 11.11.2016 has a little variance with the Capital cost approved by the Commission earlier vide order 12.06.2013. M/s. Bal & Company has submitted the capital cost considering additional capitalization for FY 2013-14 by the IPP. Based on the report, the Commission has re-determined the Capital Cost, debt equity structure of the said IPP of M/s. Vedanta Ltd. below and is to allow consequential effect in the tariff for the period from 01.01.2011 to the end of FY 2013-14.

16. The unit wise installed capacity and date of Commercial operation (CoD) 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

17. Taking into the consideration the CoD of each of the four nos. of generating units of the Station and respective financial year, the tariff periods for M/s Vedanta Ltd. have been divided into seven blocks 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

The following parameters as approved by the Commission in their order dated 12.06.2013 are reproduced below:

18. (i) The NAPAF - 85%.

(ii) Auxiliary consumption (in %)

01.01.2011 to 29.03.2011	**30.03.2011 to 18.08.2011**	**19.08.2011 to 25.04.2012**	**26.04.2012 to 31.03.2013**	**FY 2013-14**
9.00%	7.20%	6.75%	6.50%	6.00%

(iii) Station Heat Rate:

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.

(iv) Specific Secondary fuel oil Consumption

The Specific Secondary Fuel Oil consumption - 1 ml/Kwh.

<u>Determination of Capital Cost of the Project</u>

19. Independent auditor, M/s Bal & Co in its report on 11.11.2016 has submitted the details of capital cost Unit wise after the merger of group companies which shall be utilized for determination of tariff for the seven block periods as given 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	01/01/2011 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
Opening capital cost	2,767.27	4,128.16	4,128.16	6,041.31	6,041.31	7,988.79	7,988.79
Add: Projected additional capital expenditure	-		-				111.90
Closing capital cost	2,767.27	4,128.16	4,128.16	6,041.31	6,041.31	7,988.79	8,100.69
Average capital cost	**2,767.27**	**4,128.16**	**4,128.16**	**6,041.31**	**6,041.31**	**7,988.79**	**8,044.74**

Determination of Debt and Equity component of the project

20. 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."

The Commission scrutinized the reports submitted by M/s Bal & Co on 11.11.2016 and observed that the equity portion is much more than the 30% of the Project cost. Since the equity portion invested is more than the normative value as stated above the Commission consider 30% of the project cost as equity.

21. M/s. Bal & Co in its report on 11.11.2016 has submitted the actual equity infusion by the petitioner after merger of the company for the period from FY 2011 to 2014. Accordingly, the commission has calculated the return on equity.

22. The Commission have considered base rate of 15.5% for computation of RoE. Considering the Minimum Alternative Tax (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 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	01/01/2011 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	830.18	1,238.45	1,238.45	1,812.39	1,812.39	2,396.64	2,413.42
RoE Proposed by M/S Vedanta	160.71	239.74	239.97	351.19	464.39	464.39	464.39
Equity Amount proposed by the M/S Vedanta	830.18	1,238.45	1,238.45	1,812.39	1,812.39	2,396.64	2,396.64
%age of RoE (pre tax)	19.358	19.358	19.377	19.377	19.377	19.377	19.377
RoE Approved by the Commission	160.71	239.74	239.97	351.19	351.19	464.39	467.65

Note: All figurers are on annualized basis.

Determination of Depreciation

23. M/s Vedanta Ltd. in its submission has only considered the amount of depreciation approved by the Commission in their earlier order dated 12.06.2013. However, as per the CERC

norms, the value base for the purpose of depreciation shall be the asset admitted by the Commission with weighted average rate of depreciation as 5.17%. Hence, the Commission have calculated depreciation considering CERC norms based on approved capital cost as mentioned in previous paragraph.

Determination of Interest on Loan Capital

24. The Commission is guided by Clause 16 (5) and (6) of Chapter-3 of CERC Regulation in determining the interest on loan capital. M/s Bal & Co in its report on 11.11.2016 has submitted the actual weighted avg. interest rate for the period from FY 2011 to 2014.

25. Accordingly, the interest on loan has been calculated for tariff purpose up to 2013-14 taking the weighted average rate of interest as given in its report by M/s. Bal & Co. Accordingly, the interest on loan from different block periods has been calculated and given 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	01/01/2011 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
Average net loan	1899.46	2834.25	2792.85	3994.80	3887.67	5047.85	4686.69
Weighted average Interest rate (%)	7.23%	7.23%	8.14%	8.14%	9.89%	9.32%	10.31%
Interest on Loan	137.33	204.92	227.34	325.18	384.49	470.46	483.20

O & M Expenses

26. 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 3rd & 4th units in respective unit sizes for the Unit whose COD occurs on or after 01.04.2009 in the same station.

27. As per above CERC Tariff Regulation, M/s Vedanta Ltd. has calculated the O & M expenses for its station from FY 2010-11 to FY 2013-14 and the Commission has accepted the same. The details of O & M expenses as approved by the Commission are given 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**
	01/01/2011 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 VEDANTA LTD.	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 figurers are on annualized basis.

Interest of Working Capital

28. 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 expanses 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.

29. Accordingly, 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 Expanses and the cost of 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 and accepted by the Commission in the earlier order dated 12.06.2013, rate of interest on working capital has been considered as 11.75% for FY 2010-11 and 12.50% for the subsequent years.

30. After considering the submission of M/s Vedanta Ltd. & GRIDCO, the Commission works out the interest on working capital which is reproduced in the table below.

(Rs. in 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
	01/01/2011 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**
Oil Cost 2 Months	3.94	7.89	7.89	11.83	11.83	15.77	15.77
Coal cost for two months for non Pit head Stations	65.89	131.78	141.31	207.12	219.40	292.53	292.53
O&M Cost one Month	6.19	12.37	13.08	18.97	20.04	26.26	27.78
Receivables two Month	160.65	283.19	299.08	436.67	461.83	606.38	612.81
Spares @ 20% of O & M expenses	14.84	29.69	31.39	45.52	48.09	63.02	66.67
TOTAL	251.51	464.92	492.75	720.11	761.19	1,003.96	1,015.56
Interest on W.C.	**29.55**	**54.63**	**61.59**	**90.01**	**95.15**	**125.49**	**126.94**

Cost of Secondary Fuel Oil

31. The Commission in its order 12.06.2013 have determined the Cost of Secondary fuel oil for the tariff period from 2010 to 2014 as per CERC Tariff Regulation 20(1). Therefore, we do not depart from the same and continue to determine the tariff basing on the cost of secondary fuel oil as mentioned in our earlier order. The petitioner has also proposed the same cost of secondary fuel oil for the tariff period under consideration.

32. Now, considering principles as enumerated above we proceed to determine annual capacity charge of the IPP. Accordingly, the Annual Fixed Charges as approved in respect of the generating station for the period from 01.01.2011 to the end of FY 2013-14 is given hereunder.

(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
	01/01/2011 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	160.71	239.74	239.97	351.19	351.19	464.39	467.65
Interest on term loan	137.33	204.92	227.34	325.18	384.49	470.46	483.20
Depreciation (SLM)	143.07	213.43	213.43	312.34	312.34	413.02	415.91
O&M Expenses	74.22	148.44	156.96	227.59	240.47	315.10	333.34
Interest on Working capital	29.55	54.63	61.59	90.01	95.15	125.49	126.94
Cost of secondary Oil	23.66	47.31	47.31	70.97	70.97	94.62	94.62
Total Cost	**568.53**	**908.46**	**946.60**	**1,377.27**	**1,454.59**	**1,883.09**	**1,921.66**

Note: All figures are on annualized basis.

33. The above annualized Capacity Charge payable to M/s. Vedanta Ltd. for a calendar month in the form of monthly fixed charge shall be calculated in accordance with the formula laid down in the CERC Regulation 21(2)(a) of 2009 which is given below:-

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

MFC = AFC X (NDM/NDY) X (0.5+0.5 X 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 X (0.5 + 35/NAPAF) X (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

Energy Charge Rate (ECR)

34. As stated earlier the merger of group companies have no impact on the energy charge rate as determined by us for the tariff period under consideration. Hon'ble APTEL has also observed in their order in Appeal No. 25/2014 in Para 7 (g) that *"We are of the considered view that pursuant to the amalgamation, the consolidated audited accounts of new company as and when made available before the State Commission, communicating therein the revised debt equity structure of the new entity with all other relevant details, for determination of tariff, would be examined appropriately by the State Commission."*

Accordingly, Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis of the subject IPP shall be determined as per Clause 6 of Regulation 21 of CERC Tariff Regulations, 2009 which is depicted below:

"(6) 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 :

(a) For coal based and lignite fired stations

$$ECR = \{(GHR – SFC \times CVSF) \times LPPF / CVPF + LC \times LPL\} \times 100 /(100 – AUX)$$

(b) For gas and liquid fuel based stations

ECR = GHR x LPPF x 100 / {CVPF x (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.

CVSF = Calorific value of secondary fuel, in kCal per ml.

ECR = Energy charge rate, in Rupees per kWh sent out.

GHR = Gross station heat rate, in kCal per kWh.

LC = Normative limestone consumption in kg per kWh.

LPL = Weighted average landed price of limestone in Rupees per kg.

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

SFC = Specific fuel oil consumption, in ml per kWh."

35. M/s. Vedanta Ltd. is required to compute the monthly energy charges in accordance with the above Regulations of CERC basing on actual linkage coal price and GCV.

36. Billing of ECR shall be made to GRIDCO by M/s. Vedanta Ltd. 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. Vedanta Ltd. is entitled to recover other taxes / duty etc. levied by the Govt. or any statutory authority for the GRIDCO share of drawal of power.

37. In conclusion, the Commission direct as follows:

(a) M/s. Vedanta Ltd. will submit the revised 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. Vedanta Ltd. 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) The tariff of M/s. Vedanta Ltd. – IPP, so determined in this Order is valid from 01.01.2011 to 31.03.2014.

(d) The differential amount on account of this revised charges for the past period shall be recovered from GRIDCO in six half-yearly installments without any interest. The first installment shall be due on 30th day of presenting the bill in final shape in accordance with Regulation 6.6 of OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2014. Any delay in payment of the bill shall attract surcharge as per the said Regulation.

38. Accordingly, the case is disposed of.

Sd/-	Sd/-
(A. K. Das)	**(U. N. Behera)**
Member	**Chairperson**