IN THE COURT OF JHARKHAND STATE ELECTRICITY REGULATORY COMMISSION RANCHI

Case (T) No. 13 of 2016

IN THE MATTER OF :

Review of the Order dated September 01st, 2016 passed by the Hon'ble JSERC in Petition No.5 of 2015 in the matter for Approval of Final Capital Cost of 540 MW (2x270 MW) coal based thermal power plant in Jharkhand, True up of Aggregate Revenue Requirement for FY 2012-13 &FY 2013-14; Annual Performance Review for FY 2014-15; Aggregate Revenue Requirement and Tariff determination for FY 2015-16.

AND

IN THE MATTER OF:

Adhunik Power and Natural Resources Limited…………… …… Petitioner

Versus

Jharkhand Urja Vikas Nigam Limited & Ors…… …… ….. ……Respondents

P R E S E N T

Hon'ble Dr. Arbind Prasad, Chairperson

Hon'ble Mr. R.N.Singh, Member

Date: 9th January, 2018

For the Petitioner :Mr. Parinay Deep Shah, Advocate

For the Respondent :Mr. Navin Kumar, Mr. Amitabh and Mr. Amit Sinha, Advocates

O R D E R

The Commission issued a tariff order dated 01.09.2016 in Case (T) No. 05 of 2015 of Adhunik Power & Natural Resources Ltd. (APNRL).

The petitioner filed a review petition on 28.09.2016. Petitioner submitted that the review petition has been filed within 30 days of the order of the Commission and therefore, it is well within time prescribed for review petition. Petitioner in his review petition has raised the following points:-

A Consideration for some of the disallowances in the Approval of Final Capital Cost of the Project and to fix the project cost based on the Audited Accounts.

B Re-determination of Aggregate Revenue Requirement for FY 2012-13 for Unit-1 and for FY 2013-14 for Unit-2 considering 70 days of operation for Unit-1 in FY 2012-13 and 317 days of operation for Unit-2 in FY 2013-14 instead of 69 days and 316 days respectively.

C Re-determination of Allowable Interest of Working Capital considering correct Rate of Interest as per the Regulation.

D Allowing Incentive based on the plant availability factor based on the report of SLDC.

E Inclusion of Transit Losses, while approving the Energy Charge Rate from FY 2012-13 to 2015-16, as provided in the regulation.

F Re-determination of Base Energy Charge Rate (ECR) based on the correct application of the formulae of ECR as provided in the regulation.

G Allowing Water Charges as a separate pass through in tariff

As the respondent-JBVNL filed the reply on 11.08.2017.

The matter was finally heard on merit on 17.11.2017 and on 27.11.2017.

The counsel for the petitioner supported its petition and made the following arguments:-

A The counsel for the petitioner submitted that in its original petition, the petitioner has requested that to fix the capital cost of Rs. 3344.21 crores as per the break-up given below:-

Particulars	Unit –I Estimated Cost till CoD of the Project	Unit –II Estimated Cost till CoD of the Project	Total Cost till CoD of the Project
Land and Land Development	49.12	49.12	98.24
Pre operative Expenses	156.66	168.63	325.29
Plant & machinery	990.31	981.60	1971.91
Civil Works and Infrastructure	171.14	171.14	342.27
Total project Hard Cost	**1367.23**	**1370.49**	**2737.72**
Interest during Construction (IDC & Financing Charges)	295.44	311.04	606.49
Total Project Cost (Including IDC)	**1662.68**	**1681.53**	**3344.21**

Admittedly in the above submission there were three mistakes:-

(i) The above amount wrongly included the amount of work in progress.
(ii) Overstatement of pre operative expenses by Rs.42.54 Cr. As the preoperative expense was shown as 931.78 Cr. Where as the schedule 16 of audited account says it to be Rs.889.23 Cr. Thus an excess of Rs. 42.54 Cr was shown in the original tariff petition.
(iii) Matching mistake was under statement of plant and machinery, civil work expenses of 42.54 Cr.

Correcting for the above mistakes as per the audited accounts the overall Capital Cost is Rs. 3,314.24 crore as on 31st March, 2014 as shown in the table below:-

		Opening balance (Rs Crore)
Schedule 14 of Audited Accounts	Tangible Assets	3,310.82
Schedule 15 of Audited Accounts	In-tangible Assets	3.42
Total Capital Cost as on March 31, 2014		**3,314.24**

He further submitted that the Commission also based on the audited account arrived to this figure as detailed in Para 5.15 of impugned order:-

"*5.15 In light of the above issues the Commission is constrained to rely on the audited accounts of the Petitioner for prudence check and approval of the capital cost of the petitioner. Accordingly, the capitalization achieved as on March 31st 2014 has been considered for approval of the capital cost of project. As per the accounts of FY 2013-14, the capitalized amount was Rs. 3314.24 including intangible assets and excluding work in progress. The Commission has apportioned this capital cost further for Unit-I and Unit-II of the project the ratio in which the total amount is divided among the two units as per the CA certificate for capital cost incurred up to CoD of the Units.*"

The Commission having thus established the correct cost, made reliance on the break-up of Capital Cost Rs.3344.21 Crores and various heads mentioned in the petition. The Commission has rightly taken the preoperative expenses as per the audited accounts. However, the Commission did not correct the figure of Plant, Machinery and Civil works but relied on the incorrect submission made by the petitioner in the true up petition. As a result the Commission has inadvertently reduced the capital cost by Rs. 42.54 Cr. As shown below table:-

Head	**Rs. Crore**
Capital Cost as per Books of Accounts	3,314.24
Less: Overstated Pre-operative Expenses	42.54
Net Approved Capital Cost	**3,271.70**

Having correctly observed the Capital Cost as per the audited account as 3314.24 Cr there was no requirement to consider the details break up as provided in the original submission which clearly has inadvertent errors. The full reliance only on audited accounts rather partly taking from the original petitions and partly from the audited accounts resulted in the discrepancy of Rs 42.54 Cr.

Based completely on audited account as submitted with original petition, the break-up of the Capital Cost including both hard cost and the soft cost is detailed below in the table:-

Capital Cost (Capitalised) as on 31.03.2014			**Rs. Cr.**
Head	**Unit-I**	**Unit-II**	**Unit-III**
Land	49.12	49.12	98.24
Pre-operative	136.17	146.58	282.75
Plant and Machinery	1001.94	988.88	1990.82
Civil Work and Infrastructure	167.97	167.97	335.94
Project Cost	1355.2	1352.55	2707.75
Interest During Construction	295.44	311.04	606.48
Total Project Cost	**1650.64**	**1663.59**	**3314.23**

The certification from Chartered Accountant to this effect is enclosed as a part of this petition.

B. **No. of Days of Operation:**

1. The Hon'ble Commission in the impugned order while approving the operational parameters along-with the True-up of ARR for FY 2012-13 and 2013-14, has considered the 69 days of operation of Unit-1 in FY 2012-13 and 316 days of operation of Unit-2 in FY 2013-14. The Hon'ble Commission in the said order has approved the Gross Generation at 280.03 MU for FY 2012-13 for Unit-1 and 1,153.66 MU for FY 2013-14 for Unit-2 against the Petitioner's claim of 284.09 MU for FY 2012-13 for Unit-1 and 1,157.26 MU for FY 2013-14 for Unit-2. The difference in the gross generation approved and claimed by the petitioner is due to the incorrect no. of days of operation considered by the Commission for both Unit-1 and Unit-2 in their respective year of COD.

2. The Commission has considered 69 days of operation for Unit-1 in FY 2012-13, whereas the total no. of effective days from date of COD of Unit-1 i.e., January 21st, 2013 to March 31st, 2013 works out to be 70 days. Similarly in case of Unit-2 the Commission has considered 316 days of operation in FY 2013-14, whereas the total no. of effective days from date of COD i.e. May 19th, 2013 to March 31st, 2014 works out to 317 days.

3. Further in the impugned order the Hon'ble Commission has allowed the Energy and Capacity Charges on pro-rata basis based on the number of days of operation of the respective Unit in its year of COD, thereby considering 69 days of operation for Unit-1 in FY 2012-13 and 316 days of operation for Unit-2 in FY 2013-14. The said error in the impugned order has resulted in under stating the Aggregate Revenue Requirement of the petitioner for Fy 2012-13 (Unit-1) and 2013-14 (Unit-2).

4. It is respectfully submitted that the Hon'ble Commission should re-determine the Aggregate Revenue Requirement of the petitioner for FY 2012-13 (Unit-1) and 2013-14 (Unit-2) considering 70 days of operation for Unit-1 in FY 2012-13 and 317 days of operation for Unit-2 in FY 2013-14.

C **Rate of Interest considered for calculation of Allowable Interest off Working Capital:**

1) Regulation 7.38 of the JSERC Generation Tariff Regulations, 2010provides the methodology for computing the applicable rate of interest for working out the allowable Interest of Working Capital as a part of Capacity Charges. The provisions laid out in said regulations are reproduced below:

> *"Rate of interest on working capital shall be on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on April 1, 2011 or April 1 of the year in which the generating station or a unit thereof, is declared under commercial operation, whichever is later during Transition period.*
>
> *During Control Period rate of interest on working capital shall be on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on April 1, 2012 or April 1 of the year in which the generating station or a unit thereof, is declared under commercial operation."*

2) Further 'Control period' defined in Regulation 2.1 of the JSERC Generation Tariff Regulations, 2010 as "*a multi-year period fixed by the Commission, from 1stApril 2012 and up to 31st March 2016"*.

3) Therefore, from combined reading of both the clauses of the tariff regulations, it is evident that for a particular Control Period the rate of interest on working capital shall be the short-term Prime Lending Rate of State Bank of India as on April 1st, 2012 or April 1st of the year in which the generating station or a unit thereof, is declared under commercial operation, which means that in case of Unit-1, where the COD has occurred in FY 2012-13, the rate of Interest to be considered for the purpose of calculation of interest on working capital for the remaining control period i.e., upto March 31st, 2016, should be the short-term Prime Lending Rate of State Bank of India as on April 1st, 2012 and in case of Unit-2, where the COD has occurred in FY 2013-14, the rate of Interest to be considered for the purpose of

calculation of interest on working capital for the remaining control period i.e., upto March 31st, 2016, should be the short-term Prime Lending Rate of State Bank of India as on April 1st, 2013.

However, the Hon'ble Commission in the impugned order, instead of considering a single rate of interest for the remaining control period starting from the date of COD of individual units of the project till the end of control period, has considered different rate of interest for each year of the control period.

D) <u>Exclusion of Transit Losses, while approving the Variable Cost of Generation</u>

(1) The Commission in Para 6.27 of the Impugned order has approved the normative transit loss of 0.8% for coal procured from domestic sources (other than coal obtained from captive coal block) and a norm of 0.2% for transit loss on imported coal on the basis of CERC (Terms and Conditions of Tariff) Regulations, 2014.

(2) Further the Hon'ble Commission in Para 6.32 of the Impugned order has observed the following:

> *"The Commission notes that the Petitioner, while calculating ECR, considered the cost of coal without including the transit loss of coal, and later grossed up ECR by 0.80%. This calculation is not in accordance with the Generation Tariff Regulations, 2010. As per the formula specified in the said regulations, the landed cost of coal, inclusive of any transit loss, shall be used for calculation of ECR. Further, no grossing up of ECR by transit loss is required"*

(3) Thus, the Hon'ble Commission in Para 6.32 of the said order has acknowledged that the petitioner has not considered the transit losses while calculating the landed cost of domestic and imported coal and have instead grossed up the ECR by the % of transit losses. Accordingly, the Hon'ble Commission while approving the energy charges did not consider any grossing up of ECR by the % of transit losses and has approved the same landed cost of domestic and imported coal as submitted by the Petitioner in its petition dated April 30th, 2015, for the purpose of approving the Energy Rate for both the units for the period FY 2012-13 to FY 2015-16.

(4) In this respect, it is hereby submitted that the transit losses were not accounted in the landed cost of domestic and imported coal which is considered by the Hon'ble Commission for approving the Energy Rate and therefore even though the Commission has allowed normative transit of 0.8% for coal procured from domestic

sources (other than coal obtained from captive coal block) and 0.2% for coal procured from non-domestic (imported) sources, the same have not been reckoned while working out the allowable energy charges for both the units for the period FY 2012-13 to FY 2015-16.

(5) Hence, in light of the above submissions, it is hereby requested that the Hon'ble Commission should re-consider the calculation of Energy Charge after incorporating the normative transit losses in the landed cost of domestic and imported coal.

E) <u>Disallowance of Incentive related to plant availability factor</u>

(1) The Hon'ble Commission in the impugned order has stated that the petitioner failed to submit the requisite documents such as availability certificate from the load dispatch centre / ERPC and has therefore disallowed the incentive billed by the Petitioner to JUVNL/JBVNL at the time of approving the Truing-up for FY 2012-13 and 2013-14. Further the Commission has directed the petitioner to produce the availability certificates for Unit 1and Unit 2 against the contracted capacity to JBVNL for FY 2012-13, FY 2013-14.

(2) In this regard the Petitioner hereby submits that subsequent to the date of issuance of the impugned Order, the petitioner has been able to obtain the availability certificate from Jharkhand SLDC for the project against the contracted capacity to JBVNL for the period FY 2012-13 to 2015-16 and therefore requests the Hon'ble Commission to kindly re-consider the Incentive billed by the Petitioner to JUVNL/JBVNL and accordingly allow the same. The availability certificate for the project against the contracted capacity to JBVNL has been annexed.

F) <u>Re-determination of Base Energy Charge Rate (ECR)</u>

(1) The Hon'ble Commission in the impugned Order has approved the Base Energy Charge Rate (ECR) for FY 2012-13 and 2013-14, considering the normative performance parameters and actual fuel prices and calorific value of primary and secondary fuel as submitted by the petitioner in its petition dated April 30th, 2015. The Hon'ble Commission has calculated the Base Energy Charge Rate in line with the methodology provided in Regulation 8.18 of the JSERC Generation

Regulations, 2010. The said methodology as prescribed in the generation regulations is reproduced herein below:

"8.18 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 stations

ECR = (GHR – SFC x CVSF) 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.

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"

(2) Accordingly the Hon'ble Commission approved the following Energy Charge for FY 2012-13 and 2013-14 for Unit-1 and for FY 2013-14 for Unit-2:

Table-4: Calculation of Energy Charge as per JSERC Order

Parameters		FY 2012-13	FY 2013-14	FY 2013-14
		Unit-1		Unit-2
Gross Generation	MU	280.03	1368.20	1153.66
Heat Rate	kCal/kWh	2387.00	2387.00	2387.00
Specific Oil Consumption	ml/kWh	1.00	1.00	1.00
Calorific Value of Oil	KCal/l	9346.83	9346.83	9346.83
Weighted average cost of coal	Rs/MT	2914.00	3085.00	3047.04
Weighted average GCV of coal	kCal/L	3566.00	3571.00	3618.47
Energy Charge Rate	Rs/kWh	2.114	2.234	2.178

(3) However, the Petitioner has discovered some calculation error in the Energy Charge Rate approved by the Hon'ble Commission in the impugned order for the period under Truing-up. Therefore the Petitioner in the instant petition has reworked out the Base Energy Charge Rate in accordance with the methodology provided in Regulation 8.18 of the JSERC Generation Regulation, 2010. The revised Base Energy Charge Rate as calculated by the Petitioner is depicted in the table below:

Table-5: Revised Calculation of Energy Charge

Parameters		FY 2012-13	FY 2013-14	FY 2013-14
		Unit-1		Unit-2

Parameters		FY 2012-13	FY 2013-14	FY 2013-14
		Unit-1		Unit-2
Gross Generation	MU	280.03	1368.20	1153.66
Heat Rate	kCal/kWh	2387.00	2387.00	2387.00
Specific Oil Consumption	ml/kWh	1.00	1.00	1.00
Calorific Value of Oil	KCal/l	9346.83	9346.83	9346.83
Weighted average cost of coal	Rs/MT	2914.00	3085.00	3047.04
Weighted average GCV of coal	kCal/L	3566.00	3571.00	3618.47
Energy Charge Rate	Rs/kWh	2.135	2.257	2.200

Further, as stated by the Petitioner in para 29 to 33 of the instant petition, that the transit losses approved by the Hon'ble Commission in the Impugned Order has not been considered by the Commission while working out the allowable ECR for Unit 1 for FY 2012-13 and 2013-14 and Unit -2 for FY 2013-14. Accordingly, the Petitioner in the below table has depicted the revised weighted average cost of coal along-with the revised ECR after considering the normative transit losses approved by the Hon'ble Commission in the impugned Order.

Table-6: Revised Calculation of Energy Charges

Parameters		FY 2012-13	FY 2013-14	FY 2013-14
		Unit-1		Unit-2
Gross Generation	MU	284.09	1368.20	1157.26
Heat Rate	kCal/kWh	2387.00	2387.00	2387.00
Specific Oil Consumption	ml/kWh	1.00	1.00	1.00
Calorific Value of Oil	KCal/l	9346.83	9346.83	9346.83
Weighted average cost of coal	Rs/MT	2937.18	3108.41	3070.51
Weighted average GCV of coal	kCal/L	3566.00	3571.00	3618.47
Energy Charge Rate	Rs/kWh	2.152	2.274	2.217

(4) Therefore the Petitioner hereby requests the Hon'ble Commission to kindly consider the aforementioned submissions made in regard with the Energy Charge Rate calculations and re-determine the same in accordance with the JSERC Generation Regulation, 2010.

G) <u>Disallowance of Water Charges</u>

(1) The Petitioner in its Petition dated April 30th, 2015 has claimed an amount of Rs. 4.18 crore and Rs. 9.75 crore for Unit 1 in FY 2012-13 and FY 2013-14 and Rs. 9.75 crore for Unit 2 in FY 2013-14 on account of additional water charges being over and above the normative O&M expenses allowed in the JSERC, Generation Regulations, 2010.

(2) However, the Hon'ble Commission in the impugned order has disallowed the claim of the Petitioner stating that *"the normative O&M cost per MW as approved in the JSERC (Generation Tariff) regulations, 2010 has been arrived after duly considering all such cost parameters and any further variation on the O&M cost towards any component is not considered by Commission."*.

(3) In this regard, it would be imperative to note that Regulation 7.46 of the JSERC Generation Regulations, 2015 provides the provision for recovery of such additional water charges, over and above the O&M expenses norms. The relevant extract of the JSERC Generation Regulations, 2015 is reproduced hereunder:

> *"7.46 The Water Charges and capital spares for thermal generating stations shall be allowed separately:*
>
> *Provided that water charges shall be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check. The details regarding the same shall be furnished along with the petition"*

(4) Further it would be necessary to analyse the definition of O&M expenses provided in the JSERC (Generation Tariff) regulations, 2010viz-a-viz the JSERC (Generation Tariff) regulations2015. The difference between the definition of O&M expenses in both the Regulations is depicted in the table below:

Table-7: JSERC Regulation regarding O&M Expenses

JSERC (Generation Tariff) regulations, 2010	JSERC (Generation Tariff) regulations, 2015

JSERC (Generation Tariff) regulations, 2010	JSERC (Generation Tariff) regulations, 2015
7.40 Operation and Maintenance (O&M) expenses shall comprise of the following: (a) Salaries, wages, pension contribution and other employee costs; (b) Administrative and General costs; (c) Repairs and maintenance expenses; and (d) Other miscellaneous expenses statutory levies and taxes (except corporate income tax).	7.40 Operation and Maintenance (O&M) expenses shall comprise of the following: (a) Salaries, wages, pension contribution and other employee costs; (b) Administrative and General costs; (c) Repairs and maintenance expenses; and (d) Other miscellaneous expenses statutory levies and taxes (except corporate income tax).

(5) From the above table it is discernible, that the nature of expenses included in the O&M expenses, as defined in both the Regulations is exactly the same. Thus, it is evident that Water Charges are not included in the definition of O&M expenses since JSERC (Generation Tariff) regulations, 2015 provides for separate recovery of water charges over and above the O&M norms, whereas the same has not been explicitly provided in the JSERC (Generation Tariff) regulations, 2010.

(6) Therefore, the reason quoted by the Hon'ble Commission in the impugned order for disallowing the additional water charges that "*the normative O&M cost per MW as approved in the JSERC (Generation Tariff) regulations, 2010 has been arrived after duly considering all such cost parameters and any further variation on the O&M cost towards any component is not considered by Commission"* does not hold true and merits reconsideration.

(7) Further, Regulation 7.41(e) of the JSERC (Generation Tariff) regulations, 2010 provides that where the Commission is of the opinion that an increase in O&M charges is justified, the same may be considered by the Commission for a specified period. This provision of the regulation empowers the Commission to allow such increase in O&M expenses on account of water charges.

(8) In this backdrop it is hereby requested to the Hon'ble Commission that the water charges should be allowed to the petitioner for the period FY 2012-13 to FY 2015-16 as the same was not the part of the O&M norms approved by the Commission approved in the JSERC (Generation Tariff) regulations, 2010. Also, it is hereby

submitted that the Petitioner is already facing financial crises in running and maintaining its power plant and further disallowance of the water charges which has actually been incurred by the petitioner, would further affect it adversely.

Submission of Respondent JBVNL:

The learned lawyer for the JBVNL submitted that in this petition the Commission has to review its own order and therefore, the respondent is not required to make any submission.

Since, JBVNL is the beneficiary of power being sold by APNRL, is making the submission/observation for the kind consideration of the Hon'ble Commission. He submitted that any review has to be done within 30 days and has to be restricted to the correction of only clerical or arithmetical mistakes. Further on each issue, he submitted as follows:

Capital work in progress:
The capital cost based on actual, as shown in the audited annual accounts only should be considered. The capital work in progress should not be allowed as part of final capital cost.

Pre-operative expense:
The petitioner accepts that they have inadevertently included the Rs. 42.54 Crs. Cost in the pre-operative expenses. It is requested to the Hon'ble Commission that any such expense which is not capitalized should not be allowed in the final capital cost.

No. of Days of Operation:

It is requested that the Hon'ble Commission should only after detailed scrutiny consider the number of days of operation for FY 13 and FY 14. The certified supporting evidence for the days of plant operation should be taken from the generator and any changes in earlier approved days should be done in line with the JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2010.

Rate of Interest considered for calculation of Allowable Interest of Working Capital:

It submitted that the interest on the working capital should be approved in line with the JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2010 wherein under clause 7.38 it is mentioned as follows:

" 7.38 Rate of interest on working capital shall be on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on April 1, 2011 or April 1 of the year in which the generating station or a unit thereof, is declared under commercial operation, whichever is later during Transition period.

During Control period rate of interest on working capital shall be on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on April1, 2012 or April 1 of the year in which the generating station or a unit thereof, is declared under commercial operation."

Moreover, the Hon'ble Commission should allow the interest only after the detailed scrutiny of the COD of each unit.

<u>Exclusion of Transit Losses, while approving the Variable Cost of Generation:</u>

It is submitted that the calculation of the energy charge should be in line with JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2010 wherein the calculation of energy charge is mentioned as follow:

"8.18 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 stations
ECR =(GHR-SFC x CVSF) LPPF x 100/{CVPF x (100-AUX)}"
Subsequently, it is also mentioned that the landed cost of coal shall be arrived after considering the normative transit and handling loss as per the provisions of the JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2010 reproduced below:
"8.19 The landed cost of coal shall include:
(a) Base Cost of Coal;
(b) Royalty;
(c) Taxes and duties;
(d) Transport cost by rail/ocean/road/pipeline or any other means; and
(e) Clean energy cess as per Ministry of Coal, Govt. of India Notification.
For the purpose of computing energy charges, landed cost of coal shall be arrived at after considering normative transit and 0.2% on the quantity of coal dispatched by the coal supplier in case of pit-head generating stations."

It is prayed that in light of the above provisions the Hon'ble Commission should allow only reasonable energy charges and discourage for any deviation above norms as the coal handling and transit losses are controllable operating parameter.

<u>Disallowance of Incentive related to Plant availability Factor:</u>

As per the provisions of the JSERC (Terms and Conditions for Determination of Generation Tariff) Regulation, 2010 the recovery of the capacity charge (inclusive of incentive) shall be as follows:

"8.10 The fixed cost of a thermal generating station shall be computed on annual basis, based on norms specified under these Regulations, and recovered on monthly basis under capacity charge. The total capacity charge payable for a generating

station shall be shared by its Beneficiaries as per their respective percentage share/allocation in the capacity of the generating station.

8.11 Full Capacity Charges shall be recoverable at Normative Annual Plant Availability Factor (NAPAF)……

8.12 the capacity charge (inclusive of incentive) payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae:

(a) Generating stations in commercial operation for less than ten (10) years on 1st

April of the financial year:

=(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)

(b) For generating stations in commercial operation for ten (10) years or more on 1st April of the year:

=(AFC x NDM/NDY) x (PAFM/NAPAF) (in Rupees)"

As the above provisions clearly mention that the recovery of the fixed cost or capacity charges (inclusive of incentive) should be based on the overall plant availability factor , any incentive claimed has to be as per the regulation based on the certificate of its plant availability from the competent authority. Beyond this any claim for incentives has to be disallowed.

Re-determination of Base Energy Charge Rate (ECR)

It is submitted that the Hon'ble Commission should follow the methodology as per the formulae of calculation of the energy charge mentioned in the JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2010 as follow:

"8.18 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 stations

ECR=(GHR-SFC x CVSF)xLPPFx100/{CVPF x (100-AUX)}"

Subsequently, it is also mentioned that the landed cost of coal shall be arrived after considering the normative transit and handling loss as per the provisions of the JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2010 reproduced below:

" 8.19 The landed cost of coal shall include:

(a) Base Cost of Coal;
(b) Royalty;
(c) Taxes and duties;
(d) Transport cost by rail/ocean/road/pipeline or any other means; and
(e) Clean energy cess as per Ministry of Coal, Govt. of India Notification.

For the purpose of computing energy charges, landed cost of coal shall be arrived at after considering normative transit and handling loss of 0.8% on the quantity of coal dispatched by the coal supplier in case of non-pit-head generating stations and 0.2% on the quantity of coal dispatched by the coal supplier in case of pit-head generating stations."

In light of the above mentioned provisions it is prayed to the Hon'ble Commission to approve energy charge as per the normative plant parameters been filed by the aggrieved party. The Commission in the past has taken this view limit of 30 days is for filing the petition and not for passing the order.

Disallowance of Water Charges:

It is submitted that any separate recovery of the water charges is not mentioned in JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2010 as done in the JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 as follows and therefore, no water charge should be allowed.

The learned counsel for JBVNL further submitted that all these matters should appropriately be taken as appeal before APTEL, rather than in review petition before the Commission.

In response, the learned counsel of the petitioner submitted that, in addition to appeal before the Appellate Tribunal, review before the Commission is an integral part of the process of tariff fixation. The review can not be rejected merely on the ground that there is a separate provision for appeal.

Section 41 of JSERC (Conduct of Business) Regulation, 2016 provides for the review by the Commission. The petitioner filed the review petition will within the 30 days of the order dated 01.09.2016 which is to be reviewed. Restriction of review to the correction of clerical or arithmetical mistakes is when the Commission reviews the order own its own motion, and not when a petition has been filed for the review well within the time for filing such review.

Order/ Observation:

The review petition has been filed by the petitioner within 30 days of the order. Provision of JSERC (Conduct of Business) Regulation, 2016 in section A41.1 to limit the review to the correction of clerical or arithmetical mistakes arising from any accidental slip or omission is when the Commission reviews the order on its own motion. In the present case, review is being considered on the basis of a petition filed well within the prescribed time limit and therefore all the points are being considered on the merit of each case.

Issue No. 1 :Disallowances in the Approval of Final Capital Cost of the Project

The error in the capital cost primarily arose because of divergent figures provided by the Petitioner in the original application vis-à-vis the audited accounts. During the course of finalization of Order, the Petitioner was accorded several occasions to reconcile the variations/ differences which the Petitioner failed to. As a result, the Commission had no option but to take the figures which it considered appropriate without the supporting clarifications from the Petitioner. Consequently, the inadvertent difference of Rs 42.54 Cr from the audited accounts creeped in. The clarification providing the break up based on the audited accounts duly signed by a Chartered Accountant which has now been submitted along with this Petition should have been submitted during the process of finalization of the True-up Order.

The Petitioner submitted that the issue was neither raised nor discussed during the course of technical validation or hearing. Therefore, this discrepancy remained unnoticed. It is pertinent to note that in the regulatory process of tariff determination, the Commission raises queries and seeks clarification through written communication. There is no system of discussing the Tariff Order prior to the finalization of the Order.

Discrepancies remained primarily due to the reason that there were incongruences in the original Petition and the audited accounts. Even though the Commission, in its Order dated 01.09.2016, had recognized capital expenditure of Rs. 3,314.24 Cr as reflected in the audited accounts, in the absence of clarification from the Petitioner regarding treatment of pre-operative expenses, the Commission was constrained to reduce Rs. 42.54 Cr from the audited figures of capex. Now that the Petitioner has clarified and submitted the CA certificate based on audited accounts, the error of Rs. 42.54 Cr is allowed to be corrected to bring the capital cost as per the audited accounts to Rs 3314.23 Cr as detailed in the following table:

Revised Table 10 of the Order: Capital cost approved now by Commission

Parameters	Unit-I Cost till COD		Unit-II Cost till COD		Total Cost of the project till COD	
	Approved in Order dated 01.09.16	Approved Now	Approved in Order dated 01.09.16	Approved Now	Approved in Order dated 01.09.16	Approved Now
Land and Land	48.49	49.12	48.49	49.12	96.98	98.24

Parameters	Unit-I Cost till COD		Unit-II Cost till COD		Total Cost of the project till COD	
	Approved in Order dated 01.09.16	Approved Now	Approved in Order dated 01.09.16	Approved Now	Approved in Order dated 01.09.16	Approved Now
Development						
Land owned under full title	37.43	37.92	37.43	37.92	74.86	75.84
Land held under lease	11.03	11.20	11.06	11.20	22.12	22.41
Plant & Machinery	1359.99	1381.20	1381.11	1395.55	2741.10	2776.74
Civil works and infrastructure	209.94	212.67	208.57	211.28	418.51	423.95
Other Assets	7.55	7.65	7.55	7.65	15.11	15.31
Total Project Cost	**1625.98**	**1650.64**	**1645.72**	**1663.60**	**3271.69**	**3314.24**

Issue No. 2: Number of Days of Operation

There was an inadvertent error in the order dated 1st September 2016 regarding the calculation of number of days of operation of Unit 1 in FY 2012-13 and Unit 2 in FY 2013-14. Accordingly, Commission accepts the submission made by the Petitioner and now approves the number of days of operation of Unit 1 in FY 2012-13 as 70 days and Unit 2 in FY 2013-14 as 317 days.

As such, the revised fixed charges and energy charges for the years are as corrected in subsequent portions of this Order.

Issue No. 3: Rate of Interest Considered for Calculation of Allowable Interest of Working Capital

Regulation 7.38 of the JSERC Generation Tariff Regulations 2010 specifies that

> *"During Control Period rate of interest on working capital shall be on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on April 1, 2012 or April 1 of the year in which the generating station or a unit thereof, is declared under commercial operation"*

The C.O.D of Unit-I and Unit-II of the Petitioner's power station were 21st January 2013 and 19th May 2013 respectively. Therefore as per Regulation 7.38 of the JSERC Generation Tariff Regulations 2010, the applicable interest rate for calculation of interest on working capital for Unit-I and Unit-II of the Petitioner's power station during the control period shall be 14.75% (SBI PLR as on 1st April 2012) and 14.45 % (SBI PLR as on 1st April 2013) respectively. The Commission has now considered the same and re-calculated the interest on working capital.

The revised interest rates applicable for the control period and the interest on working capital are as follows:-

Revised Table 41 of the Order: Interest on Working Capital Approved Now for Unit I

Particulars	FY 13	FY 14	FY 13	FY 14
	Unit I		Unit I	

	Approved in Order dated 1st September 2016		Approved Now	
Rate of Interest (%)	14.50%	14.45%	14.75%	14.75%
Interest on Working Capital (Rs Cr)	4.58	25.62	4.73	26.53

Revised Table 42 of the Order: Interest on Working Capital Approved Now for Unit II

Particulars	FY 14	
	Approved in Order Dated 1st September 2016	Approved Now
Rate of Interest (%)	14.45%	14.45%
Interest on Working Capital (Rs Cr)	21.50	21.77

Issue No. 4: Exclusion of Transit Losses while approving Variable Cost of Generation& re-determination of Energy Charge Rate (ECR)

Issue of transit loss of coal and error in application of ECR formula are jointly dealt with as impact of transit loss in coal has been taken in the original Order while calculating the ECR.

For example the calculation given in Table 23 on Page 44 of the Order dated 01.09.16 for computation of energy charge rate per unit is reproduced below :

Table 23 of the Order dated 01.09.16: Approved Energy Charge Rate for Unit 1

Parameters	UoM	Approved in MYT Order	Submitted by APNRL	Approved True Up By JSERC	Approved in MYT Order	Submitted by APNRL	Approved True Up By JSERC
		FY 2012-13			FY 2013-14		
Gross Generation	MU	380.05	284.09	280.03	2010.42	1368.20	1368.20
Heat Rate	KCal/kWh	2,387	2,387	2,387	2,387	2,387	2,387
Specific Oil Consumption	ml/kWh	1.00	1.00	1.00	1.00	1.00	1.00
Calorific Value of Oil	KCal/l	9,553	9,346.83	9,346.83	9,553	9,346.83	9,346.83
Weighted average cost of coal	Rs/MT	2,913	2,914	2,914	2,913	2,914	2,914
Weighted average GCV of coal	kCal/L	3,566	3,566	3,566	3,674	3,571	3,571
Energy Charge Rate	**Rs/kWh**	**2.134**	**2.23**	**2.114**	**2.071**	**2.31**	**2.234**

The computation of Rs 2.114/ kWh for FY 2012-13 has apparently been based on the application of the formula specified in Regulation 8.17 and 8.18 of the Generation Tariff Regulation, 2010. The figure has resulted from substituting the relevant figures from the above table as per the details given below:

Heat Rate (GHR): 2387 kCal/ kWh
Specific Oil Consumption (SFC): 1 ml/kWh
Calorific Value of Oil (CVSF): 9346.83 kCal/ l
Auxiliary Consumption (AUX): 9%
Weighted average GCV of coal (CVPF): 3,566 kCal/l
Weighted average cost of coal (excluding transit loss): Rs 2,914/MT

ECR: (GHR – SFC x CVSF) x (LPPF/(1-transit loss)) x 100/ {CVPF x (100 – AUX)}

The Commission submitted the figures in the above formula as given below:

(2387-1 x 9346.83/1000) x (2914/0.92/1000) x 100/(3566 x (100-0.09))= 2.114/kWh

The application of the above formula and determination of ECR as Rs 2.114/kWh has apparently following two errors:

1. The division of LPPF by 0.92 is to account for the transit loss of coal. Erroneously this allows for 8% transit loss for entire coal.
   As per Para 6.27 of the Tariff Order dated 01.09.16,
   "6.27 The Commission approves normative transit loss of 0.8% for coal procured from domestic sources (other than coal obtained from captive coal block) in accordance with Generation Tariff Regulations, 2010. The Commission also notes that the Central Commission, in the CERC (Terms and Conditions of Tariff) Regulations, 2014, has set a norm of 0.2% for transit loss on imported coal. The Commission approves the same for any imported coal that may be used by the plant

   As per above para and as per the Petitioner and the rejoinders of the Petitioner, 0.8% and 0.2% ought to be considered as transit loss for domestic coal and imported coal respectively and therefore, the appropriate LPPF accounting for coal transit loss as per the Regulation should be taken. Further, discounting factor of 0.992 (i.e. 1-0.8%) ought to be considered instead of 0.92 for domestic coal and a factor of 0.998 (i.e.1-0.2%) ought to be considered for imported coal. Division by 0.92 has in effect allowed a 8% transit loss for the entire coal , instead of 0.8% and 0.2% respectively for domestic and imported coal respectively. This erroneous allowance of 8% transit loss is to be corrected to 0.8% for domestic coal and 0.2% for imported coal.
2. 0.09 in the above calculation is to account for the auxiliary consumption. Effectively 0.09% of auxiliary consumption has been allowed whereas permissible figure as per the Regulations is 9%.
   The above calculation for ECR has to be corrected accordingly for all the relevant years.

   Revised energy charges computation for FY 2012-13 and FY 2013-14 are as detailed in the following tables:

Revised Table 23 of the Order: Operational Parameters and ECR approved now by Commission for Unit-I

Parameters	Unit	Approved in Order dated 01.09.16	Approved Now	Approved in Order dated 01.09.16	Approved Now
		FY 2012-13		FY 2013-14	
Gross Generation	MU	280.03	284.09	1.368.20	1.368.20
Heat Rate	kCal/ kWh	2,387	2,387	2,387	2,387
Specific Oil Consumption	ml/kWh	1.00	1.00	1.00	1.00
Calorific Value of Oil	KCal/l	9,346.83	9,346.83	9,346.83	9,346.83
Weighted average	Rs/MT	2,914	2,914	3,085	3,085

Parameters	Unit	Approved in Order dated 01.09.16	Approved Now	Approved in Order dated 01.09.16	Approved Now
		FY 2012-13		FY 2013-14	
cost of coal (excluding transit loss)					
Weighted average cost of coal (including transit loss)*	Rs/MT	3,167	2,937	3,353	3,108
Weighted average GCV of coal	kCal/L	3,566	3,566	3,571	3,571
Energy Charge Rate	**Rs/kWh**	**2.114**	**2.152**	**2.234**	**2.274**

**Considering transit loss of 0.8% on domestic coal and 0.2% on imported coal*

Revised Table 24 of the Order: Operational Parameters and ECR approved now by Commission for Unit-II

Parameters	Unit	Approved in Order dated 01.09.16	Approved Now
		FY 2013-14	
Gross Generation	MU	1,153.66	1,157.26
Heat Rate	kCal/ kWh	2,387	2,387
Specific Oil Consumption	ml/kWh	1.00	1.00
Calorific Value of Oil	KCal/l	9,346.83	9,346.83
Weighted average cost of coal (excluding transit loss)	Rs/MT	3,047	3,047
Weighted average cost of coal (including transit loss)*	Rs/MT	3,312	3,071
Weighted average GCV of coal	kCal/L	3,618	3,618
Energy Charge Rate	**Rs/kWh**	**2.178**	**2.217**

**Considering transit loss of 0.8% on domestic coal and 0.2% on imported coal*

Issue 5: Disallowance of Incentive related to plant availability factor

During the scrutiny of Petition, the Commission had given multiple opportunities to the Petitioner vide letter dated 2nd February 2016 and again vide letter dated 24th February 2016 to make available the requisite certificates from SLDC, regarding the availability of the generation units for both units of the Petitioner's generation station.

Moreover the Commission in Paragraph 6.3 and Paragraph 6.4 of the Tariff order dated 1st September 2016 stated:

> *"6.3 The petitioner was unable to submit requisite certificates from SLDC/ERPC for certifying the availability.*
>
> *6.4 Accordingly, the Commission approves availability for Unit 1 and Unit 2 at Normative Annual Plant Availability Factor i.e. at 85%. The Commission also directs the petitioner to submit requisite certificates certifying availability against contracted capacity for FY 2012- 13 and FY 2013-14 along with its next tariff petition. Commission may make appropriate adjustments as it deems appropriate"*

Even after providing multiple opportunities to the Petitioner to submit the requisite availability certificate and the Petitioner failing to provide the requisite certificates, the Commission provided a final opportunity to the Petitioner to submit the availability certificates along with its next tariff Petition and specified that the appropriate adjustments shall be considered by Commission after scrutiny and prudence check during the processing of the next tariff petition of the Petitioner.

The Commission, at the time of issuance of the Order, was constrained to not consider the impact of incentives linked to availability as the documentary evidence certifying the availability of the units could not be produced by the Petitioner during the tariff finalization process even after repeated directions by the Commission, even though such incentives are admissible as per the regulations.

The Petitioner, has now submitted the requisite availability certificates. The Petitioner has submitted availabilities of 95.42% and 92.43% for FY 2012-13and FY 2013-14 respectively along with the review petition within the time limit prescribed for filing such petitions. Accordingly, the Commission finds it prudent to allow the incentive to the Petitioner in accordance with the Generation Tariff Regulations, 2010.

Issue 6: Disallowance of Water Charges

The Commission has approved the O&M charges as per the provisions of the applicable JSERC Generation Tariff Regulations, 2010. Allowance of additional water charges is not in line with the provisions of the JSERC Generation Tariff Regulations, 2010.

The Petitioner has submitted Petition for True-Up of FY 2012-13 and FY 2013-14, Annual Performance Review of FY 2014-15 and tariff determination exercise of FY 2015-16 which falls within the control period specified in JSERC Generation Tariff Regulations, 2010. The norms determined in these regulations are inclusive of water charges.

As such the correct approach in this matter would be for the Petitioner to seek appropriate amendment of applicable Regulations backed by sufficient justification in case it is facing difficulty with respect to the Regulations.

The Commission has disallowed the water charges claimed by Petitioner in the Tariff Order dated 1st September 2016 considering the provisions of regulations and hence no change is required in this matter.

Revised revenue gap/ surplus for FY 2012-13 and FY 2013-14

Based on the above findings, the revised tables for the original order are enclosed. The original Order dated 01.09.16 should be read along with these corrected tables:

Revised Table 47 of the Order: Revised Fixed Charges (Rs Cr) approved now for Unit 1 for 70MW

Particulars	Approved in Order dated 01.09.16	Approved Now	Approved in Order dated 01.09.16	Approved Now
	FY 2012-13		FY 2013-14	
O&M Expenses	10.98	11.14	61.40	61.40
Depreciation	15.05	15.50	79.59	80.81

Particulars	Approved in Order dated 01.09.16	Approved Now	Approved in Order dated 01.09.16	Approved Now
	FY 2012-13		FY 2013-14	
Interest on Loan	30.42	31.32	156.07	158.40
Return on Equity (pre -tax)	11.46	11.81	63.40	64.36
Cost of Secondary Fuel	1.80	1.82	8.62	8.62
Interest on Working Capital	4.58	4.73	25.62	26.53
Annual Fixed Charges	**74.28**	**76.32**	**394.70**	**400.13**

Revised Table 48 of the Order: Revised Fixed Charges (Rs Cr) approved now for Unit II for 270 MW

Particulars	Approved in Order dated 01.09.16	Approved Now
	FY 2013-14	
O&M Expenses	53.16	53.32
Depreciation	69.83	70.80
Interest on Loan	136.03	137.93
Return on Equity (pre -tax)	57.98	58.80
Cost of Secondary Fuel	7.25	7.27
Interest on Working Capital	21.50	21.77
Annual Fixed Charges	**345.74**	**349.90**

As per the revised approval granted by the Commission mentioned above, the adjustment in approved revenue gap for FY 2012-13 and FY 2013-14 approved in Tariff Order dated 1st September 2016 has been summarized in following table:

Revised Table 54 of the Order: Impact of True-up as approved now by the Commission

Particulars		Approved in Order dated 01.09.16			Approved Now		
		Unit 1		Unit 2	Unit 1		Unit 2
		FY 13	FY 14	FY 14	FY 13	FY 14	FY 14
Net Energy Supplied to JUVNL/ JBVNL	MU	95.84	473.33	422.81	95.84	473.33	422.81
Rate of Energy Charge	Rs/kWh	2.114	2.234	2.178	2.152	2.274	2.217
AFC Entitlement on True Up	Rs Cr	10.97	58.31	51.08	11.27	59.11	51.69
Incentive [0.5+0.5*(PAF/NAPAF)]	Rs Cr	0.00	0.00	0.00	0.69	2.58	2.26
Energy Charge Entitlement upon True-up	Rs Cr	20.26	105.74	92.09	20.63	107.64	93.74
Total Entitlement	Rs Cr	31.23	164.05	143.17	32.59	169.33	147.69
Revenue Billed							
AFC	Rs Cr	11.91	63.28	53.91	11.91	63.28	53.91
EC	Rs Cr	20.70	108.36	95.60	20.70	108.36	95.60
Incentive	Rs Cr	0.65	4.08	4.08	0.65	4.08	4.08
Total Revenue Billed to JUVNL/JBVNL	Rs Cr	33.26	175.73	153.59	33.26	175.73	153.59
Gap/(Surplus)		(2.02)	(11.68)	(10.42)	(0.67)	(6.40)	(5.90)
Rate of Interest	%	14.45%	14.59%	14.59%	14.45%	14.59%	14.59%
From COD to 31st March of the respective FY	Days	69	365	316	70	365	317
Allowable Interest for the year	Rs Cr	(0.06)	(1.70)	(0.66)	(0.02)	(0.93)	(0.37)

Particulars		Approved in Order dated 01.09.16			Approved Now		
		Unit 1		Unit 2	Unit 1		Unit 2
		FY 13	FY 14	FY 14	FY 13	FY 14	FY 14
Interest for the remaining period till September 30, 2015*	Rs Cr	(0.57)	(3.31)	(2.95)	(0.19)	(1.81)	(1.67)
Total Interest (Simple Interest)	Rs Cr	(0.63)	(5.01)	(3.61)	(0.21)	(2.75)	(2.05)
Total Amount to be additionally recovered / (paid back to JUVNL)	Rs Cr	(2.65)	(16.69)	(14.03)	(0.87)	(9.14)	(7.95)

*Till March 31st, 2016 for Commission approved numbers.

All other decisions and directions contained in the order dated 1st September, 2016 remain unaltered.

With the above observations the petition stands disposed off.

Sd/-
(R.N.Singh)
Member (Engg.)

Sd/-
(Dr. Arbind Prasad)
Chairperson