

CHAPTER 6

COMMISSION ANALYSIS

6.1 Tariff Determination

The generation tariff for TVNL has been calculated by estimating fixed and variable charges separately. The fixed charges comprise of the following five components – Return on Equity, Interest on Loan Capital, Depreciation, Operation and Maintenance Expenses and Interest on Working Capital. The variable charges consist of the fuel costs (coal and oil).

6.2 Total Generation and Sales

6.2.1 Generation

The petitioner has proposed a total generation of 1679 MU and PLF of 45.60% for FY 2007-08. The Petitioner has submitted that historically the generating units have operated at level much below their potential because of:

- i. Transmission constraints such as frequent tripping of transmission lines.
- ii. Backing down of units because of no demand from JSEB.
- iii. Frequent outages due to tube leakages, etc.

However, the petitioner has not given any action plan to overcome the constraints mentioned above. The Commission directs the petitioner to provide an action plan as well as investment plan so that all the above constraints are removed expeditiously.

The PLF has increased to an average of 73.80% in FY 2006-07 from an average of around 35% during the period FY 2000-05. The plant has done very well from September 2006 to March 2007 as is evident from the table below:

Table: 22 PLF of Unit I & Unit II

Month	PLF of Unit-I (%)	PLF of Unit-II (%)	PLF (%)
Oct, 2006	83.79	81.8	83.1
Nov, 2006	86.09	78.72	82.41
Dec, 2006	87.4	57.24	72.33
Jan, 2007	94.25	84.2	88.27
Feb, 2007	73.44	97.01	85.16
Mar, 2007	72.31	80.55	76.48

It is amply clear that barring December 2006 when PLF of Unit-II was low at 57.24 %, the plant had generated at high capacity and the entire generation had been evacuated. This adequately proves that the plant has the capacity to generate at consistently high PLF's of above 80%.

The petitioner has submitted that Unit I suffered a major breakdown, on 31 May 2007, due to sudden load throw-off resulting in severe damage of the moving and guide blades of the LP turbines and it is expected to back in operation only in FY 2008-09. The petitioner has not given the time frame required for bringing back the Unit I in operation. It has merely stated that Unit I will be back in operation in 2008-09. It has not even specified an exact date or even a month in 2008-09 when Unit I will be available. In Agenda Note No. 8/01, it has been mentioned that the procurement of new rotor would take 30 months at least. After, procurement of rotor, the same will have to be installed and commissioned. This will take additional time. So, as per TVNL's submission Unit I will be down for approximately 3 years.

A breakdown of the magnitude mentioned above raises very serious questions about the preparedness of TVNL's management to address serious maintenance problems. It appears that TVNL has not classified its spares according to its criticality, lead time and availability. Nor does it have any arrangement whereby high value critical spares with high lead times can be arranged in a short time. The Commission directs TVNL to codify and classify its spares according to its use, value, criticality, lead time and have arrangements either inhouse or with other generating stations or with equipment suppliers so that high value critical spares can be arranged in a very short time.

The Commission also directs TVNL to have a computerized Maintenance Management System and Spares Inventory Management so that maintenance activity can be tracked and smoothly carried out.

TVNL in its submission has enclosed Minute of meeting with BHEL titled "Record Notes of observation on LP turbine following blade failure at Unit I, Tenuughat TPS/TVNL." In the above noted Record Notes, BHEL has made the following observations:

- "i) From the color of fractured surface, it appears there were cracks at that location earlier, most of which had propagated to a considerable distance covering more than 50% of root cross section.*
- ii) Severe salt deposition (up to 3 mm thick) on moving and guide blades.*
- iii) Till date no MPI,NFT or blade root cleaning on LP last two stages(as recommended by technical circular)have been carried out*
- iv) Water chemistry needs to be improved. "*

- v) *Till such time adequate water chemistry is ensured, more frequent inspection and cleaning of LP free standing blade roots (every 25,000 EOH) to be carried out."*

From the above notings, it is obvious that the damage to the LP Turbine was due to negligence in maintenance as it is clearly noted that *"it appears there were cracks at that location earlier, most of which had propagated to a considerable distance covering more than 50% of root cross section and till date no MPI, NFT or blade root cleaning on LP last two stages (as recommended by technical circular) have been carried out."*

Had the cracks been noted during earlier maintenance activity, the present problem would not have occurred. Water chemistry is a chronic problem with TVNL. In the past there have been frequent tube leakages due to poor water chemistry. It appears that the DM plant is not functioning properly.

The Commission directs TVNL to maintain the DM plant properly and report to the Commission information regarding water chemistry, especially pH value, conductivity, Oxygen content on a monthly basis. It may be noted that The Commission in its tariff Order 2004-05 had given the following directions to TVNL :

"6.5 Scheduled Maintenance Plan

The Commission has observed that TVNL does not have a proper Scheduled Maintenance Plan nor does it have a proper, coded spares inventory management system due to which TVNL is incurring heavy operational losses. The Commission directs TVNL to have a well documented spares inventory management system and maintenance plan which clearly spells out each maintenance activity, personnel involved, tools, tackles, time schedule, shutdown, spares and action are required to be performed. TVNL should have its own self contained Workshop."

Non-compliance of the above directions and negligence in maintenance has resulted in the failure of Unit-I and caused loss of energy generation when the country is facing acute power shortage. TVNL must take steps to expeditiously repair the damaged unit and bring it back into operation within a maximum period of 6 months from the date of its failure.

The Commission has observed that whenever TVNL approaches the Commission for revision of tariff, one of its units is down and this has become a regular feature. Such occurrence should not be encouraged as non-functioning of one of the units must not be a recurring phenomenon. Moreover Commission has also noted that TVNL did not approach commission for tariff revision during FY 2006-07, when both its units were functional and the PLF was approximately 74%. A tariff revision in FY 2006-07 could have in fact brought down the tariff. Thus Commission, takes a stricter stand on this issue and allows only 6 months shutdown for unit 1.

The Commission has computed total gross generation for FY 2007-08 as 2119 MU. This is based on the following:

- For Unit I: The Commission is allowing six months period (June 2007 to November 2007) for the repair of Unit 1. The Commission is considering the actual generation for April and May, allowing no generation from June 2007 to November 2007 and thereafter taking generation based on a plant availability of 75%. The total generation from Unit 1 for FY 2007-08 is approved at 686 MUs.
- For unit II: The Commission is considering the actual generation from April to July 2007 (as made available by the petitioner) and from August 2007 to March 2007, the Commission is taking generation an availability of 75%. The total generation for unit II as approved by the Commission is 1433 MUs.

Taking the above into account, the PLF has been worked out as 57.59%.

6.2.2 Auxiliary Consumption and Sales

The Commission takes cognizance of the fact that the petitioner has brought down the auxiliary consumption from 14.23% in 2005-06 to 12.04% in 2006-07. The Commission however finds the proposed auxiliary consumption of 12% as very high and unacceptable. In Tariff Order 2004-05 of TVNL, the Commission had directed TVNL to have energy audit of their plant carried out. This not been carried out and as a result TVNL has not been able to identify areas of inefficiency and reduce the auxiliary consumption. Inefficient working of different equipment like feed pumps, cooling water pumps, air fans, coal grinding mills, ash handling equipment, common auxiliaries etc. of the generating station lead to high auxiliary consumption. The Commission directs TVNL get an energy audit conducted by an Accredited Energy Auditor as per the provisions of the Energy Conservation Act, 2001 within a period of six months from date of this Tariff Order and submit the findings of the energy audit to the Commission.

It is the considered view of the Commission that there is still sufficient scope for bringing down the auxiliary consumption further and is therefore allowing the normative level of auxiliary consumption at 9%. Accordingly, the sales/net generation for 2007-08 works out to 1928 MU.

6.3 Fixed Charges

The fixed charge consists of the following components

- 6.3.1 Interest on Loan Capital
- 6.3.2 Return on Equity
- 6.3.3 Depreciation
- 6.3.4 Operation and Maintenance Expenses
- 6.3.5 Interest on Working Capital

6.3.1 Interest on Loan Capital

Loan repayment has two components – the principal repayment and the interest payment. For purposes of tariff calculation only the interest payment is taken into account.

TVNL has submitted that the loan amount outstanding on March 31, 2007 is Rs 665.9 Crore. This comprises of Rs 608.9 Crore loan from the government of Bihar and Rs 57 Crore from the Government of Jharkhand. Of the Rs 57 Crore loan received from Jharkhand Government, Rs 27 Crore was given specifically for the construction of the Merry Go Round System. (TVNL received Rs 5 Crore in 2004-05, Rs 14 Crore in 2005-06 and Rs 8 Crore in 2006-07 for the MGR).

Further the petitioner has submitted the interest on Bihar Government loan at the rate of 13% p.a as Rs 79.17 Crore and interest on the Jharkhand Government loan as the rate of 13.25% as Rs 7.55 Crore. The Commission scrutinized the letter of disbursement of the recent Jharkhand Government loans. As per the terms and conditions of the loan, the interest payable on the Jharkhand Government loan is 13% and not 13.25% as claimed by TVNL. The Commission is therefore considering the loan from the Jharkhand Government also at 13%.

The Commission is of the view that Interest on the loan for MGR (i.e. Rs. 27 Crores) will not be allowed as a revenue expense as this loan has been availed for construction of a capital asset. During construction this asset will qualify as a 'capital work in progress' and on completion will be capitalized into the project cost. The interest payment for construction of the MGR amounting to Rs.3.51 Crores is in the nature of "interest during construction" which will also be capitalized once the MGR is completed.

The Commission is allowing interest of Rs 79.16 Crore towards loan from the Bihar Government and Rs 3.9 Crore towards loan from the Jharkhand Government amounting to Rs. 30 Crores. The Commission is thus allowing an aggregate amount of Rs 83.06 Crore towards interest payment for FY 2007-08.

The Commission will also like to bring to notice that TVNL is not repaying the principal amount. Had the principal been paid timely, the interest on account of the loan would have come down. At present, the consumers are finally paying for this inefficiency through increased tariff. The Commission directs TVNL to pay its dues in a timely manner. This will improve its credit rating also and enable it to tap the market for its projects.

The Commission also notes that despite directions issued to the petitioner to make efforts to reduce interest rate, the petitioner has not taken any action.

6.3.2 Return on Equity

The petitioner has submitted that of the total project of Rs 1355.58 Crore, only Rs 100 Crore is the equity component. The petitioner has further submitted that it has proposed to the State Government to raise the equity amount from Rs 100 Crore to Rs 1100 Crore by converting the outstanding loan and part of the accumulated interest into equity. The state government has so far not taken any action and the petitioner has accordingly asked for Rs 14 Crore as equity at the rate of 14% on the present equity amount of Rs 100 Crores.

The Commission concurs with the petitioner's submission and is allowing Rs 14 crore at return on equity.

In its note ref 1273/08 dated 27.08.05 TVNL has proposed that out of accumulated interest of RS 949.52 crores upto 31.03.2005 an amount of Rs 391.11 be converted into share capital. Accumulated interest is the interest, which has not been paid by TVNL, and such interest cannot be allowed to be converted into equity, as it would mean allowing return on funds, which is not a capital expenditure. It would also set a precedent for other utilities to not pay interest on loans and get it converted into equity and take benefit of return on equity for the entire life of the project at the cost of the consumer. It would have the effect of pushing up the tariff of electricity over the entire life of the plant. It is the duty of TVNL to pay up its accumulated interest. It cannot get its accumulated interest converted into equity.

6.3.3 Depreciation

Depreciation is calculated on the historical cost of the asset. It is calculated on straight-line method over the useful life of the asset. Depreciation is allowed upto a maximum of 90% of the historical capital cost of the asset and the residual life of the asset will be considered as 10%.

The petitioner has proposed a depreciation amount of Rs 43.88 Crore. The Commission verified the opening value of asset of TVNL plant for FY 2006-07 (as on April 1, 2006) as given in the balance sheet with the values proposed by TVNL in the petitioner. The Commission found some differences in the value of assets. The Commission has calculated the depreciation based on the rate of depreciation given in the JSERC (Terms and Conditions for Determination of Thermal Generation Tariff) Regulations, 2004. It has taken the value of assets from the balance sheet of TVNL as on March 31, 2006 (as balance sheet and P/L accounts for FY 2006-07 have not been prepared by TVNL). The aggregate depreciation for FY 2007-08 works out to Rs 43.85 Crores

TVNL, in its submission vide letter ref 1374/07 dated 20/09/07 have stated in Annexure-X that it had inadvertently not included its Head Office fixed asset depreciation amounting to Rs 10.06 lakhs and depreciation on newly purchased EPABX and air conditioner for CHP amounting to Rs 48,000 and Rs 18,000 respectively.

As the depreciation on Head Office Fixed Asset and newly acquired EPABX and air conditioner for CHP had been inadvertently left out, the depreciation amounting to Rs 10.72 lakhs is allowed. Hence the Commission approves the aggregate depreciation amounting to Rs 43.96 Crores.

6.3.4 Operation and Maintenance (O&M) Expenses

As per the JSERC norms, O&M expenses for plants set prior to 1.04.2004 will be limited to 2.5 % of Capital Cost escalated at 6% per annum from the year of commissioning.

In the initial petition for FY 2007-08, the petitioner has claimed O&M expenses based on actuals at Rs 142.4 Crore for FY 2007-08 but the breakup of the O&M expenses provided by TVNL in its initial tariff petition aggregates to only Rs 108.7 Crore. Further the petitioner has stated its actual O&M expenses for FY 2006-07 in the tariff petition as Rs 95.47 Crore (Ref Form 15 Page 40). Subsequently in its submission Vide letter ref 137/07 dated 20/09/07 at annexure VI, the petitioner has stated the O&M expenses for FY 2006-07 as Rs 90.44 Crores (Annex IV). During the public hearing the petitioner submitted that actual O&M during FY 2006-07 was actually Rs.74.23 Crores and the proposed O&M expenditure for 2007-08

should be Rs.113 Crores. These various estimates of O&M expenditure reflects data inconsistency.

Further, as per the tariff petition of TVNL, the employee cost has increased from Rs 16.82 crores in 2005-06 to 23.96 crores in 2006-07. This is an increase of around 42%. TVNL has proposed an employee cost of RS 27.90 crores for 2007-08. TVNL has submitted that the above increase is due to inflation, increment in salaries and wages, honorarium/incentives and increased demand for trained manpower. It may be noted that inflation has been less than 6 % during the last two years; there has been no intimation of increase in salaries and wages to the Commission. The plant has been operating from 1996/1997. Hence it is clear that TVNL has been operating with trained manpower. Honorarium/incentives are minor elements well taken care of in the inflation allowed. Hence, such a huge increase in employee cost cannot be allowed to be passed on the consumer.

Similarly Repair and Maintenance have jumped from 0.89 crores in 2004-05 to 2 crores in 2005-06 to 4.95 crores in 2006-07 and has been proposed as Rs 3.65 crores in 2007-08. There has been abnormal increase in other elements also such as stores consumed, ash disposal, other expenses (deferred revenue expenditure), etc.

Overall, the O&M charges proposed by TVNL for FY 2007-08 are extremely high. The Commission has noted with concern the maintenance planning and execution and has given directions to TVNL on that account also. However, appropriate maintenance planning and execution has not been done leading to high O&M expenses and failures as noted in the previous Section on Generation in this Order. In view of the above, high costs of O&M cannot be allowed to be passed on to the consumer.

The Commission has computed O&M expenses as per the JSERC (Terms and conditions of generation tariff) Regulations. The norms allow calculation of O&M expenses based on 2.5% of the project cost at the time of commissioning of the plant and an escalation of 6% every year thereafter. Taking the initial project cost as Rs 1355.58 Crore, the annual O&M expenses for 2007-08 have been computed as Rs 64.33 Crore.

Further, taking cognizance of the fact that unit 1 is out of order the Commission wil allow for justified expenses for the repair of unit 1 at the earliest. The petitioner has proposed Rs. 25 Crores for repair of Unit 1, however documentary evidence from BHEL, shows that actual cost for repairing of unit 1 would be approximately Rs.18.46 Crores. The BHEL document also states that this repair may take approx 30 months from the date of order is placed for

repair with BHEL. As on date, TVNL has not placed this order and is not likely to do so in the remaining 3 months of current financial year in the absence of their chairman. However the Commission is still allowing 50% of the cost of repair i.e. Rs.9.23 Crores in FY 2007-08. The Commission directs TVNL to come back to the Commission for the remaining Rs.9.23 Crores for the repair work of unit 1 next year. The Commission therefore approves aggregate O&M expense of Rs.73.56 Crores for FY 2007-08 which includes Rs.64.33 Crore towards O&M expenses as per norms and Rs.9.23 crores for repair of unit 1.

6.3.5 Interest on working capital

The total working capital requirement consists of:

- (i) Cost of coal or lignite for 1.5 months for pit-head generating stations corresponding to the target availability
- (ii) Cost of secondary fuel oil for one-month stock of secondary oil corresponding to target availability.
- (iii) Operation and Maintenance expenses for one month
- (iv) Maintenance spares @ 1% of the historical cost escalated @ 6% per annum from the date of commercial operation
- (v) Receivables equivalent to two months of fixed and variable charges for sale of electricity calculated on the target availability

The rate of interest on working capital is equal to the short term Prime Lending Rate of the State Bank of India on 1st April of the year for which the tariff is being determined.

6.3.5.1 Cost of Coal

TVNL has requested that a heat rate of 2821 kCal/kWh be allowed as that was the actual Station Heat rate achieved by it in FY 2006-07. As mentioned earlier, the petitioner has not complied with the directions of the Commission to carry out energy audit which would have identified the areas of energy inefficiency and would have enabled TVNL to achieve Station Heat Rate as per norms. Hence, the Commission has considered station heat rate of 2500 kCal/ kWh (based on norms), calorific value of D grade coal as 4300 kCal/kg as per Regulations of JSERC.

The petitioner has provided bills for the weekly payment made for coal for the months of April and May 2007. TVNL procures its coal from four different collieries. The Commission has taken the average price of the collieries that comes to Rs 1139 per tonne.

The petitioner has asked for a 5% hike in the transport cost from Rs 161 per tonne in 2006-07 to Rs 169 per tonne. The commission scrutinized TVNL's transport contract for delivery of coal from CCL collieries dated 4 August 2004. This contract is valid for three years from the date of contract but allows for any hike in price of diesel. The weighted average price of transport as per this contract is Rs 140 per tonne. The Commission in the tariff order of FY 2005-06 had allowed transport cost of Rs 151.09 per tonne which is 8% more than this average transport cost of Rs 140 per tonne. . It is of the view that Rs 151.09 would allow for any escalation in price of diesel during the period of the contract. It has therefore decided to retain the transport cost of coal as the level approved in FY 2005-06. Hence the Commission allows transport cost of coal as Rs 151.09 for FY 2007-08.

The Commission however would like to comment that TVNL has delayed the MGR. The MGR should have been in operation from June 2006 and the transport cost would have come down substantially as a result. The Commission directs the petitioner to expedite the completion of work on the MGR at the earliest.

6.3.5.2 Cost of Oil

The petitioner had proposed specific oil consumption of 2.31 ml/kwh. The Commission finds commendable the efforts of TVNL in bringing down the specific oil consumption from 6-14 ml/kwh level experienced during FY 2000-01-FY 2003-04 to 2.3 ml/kwh in 2006-07. The Commission, however feels there is substantial potential to bring it down further and allows the normative specific oil consumption i.e. 2 ml/kwh as the specific consumption of oil for FY 2007-08.

The Petitioner has proposed price of oil as Rs 30619.5 per Kl, a 10% escalation of the actual price of oil in 2006-07 (as claimed by the petitioner). The Commission is however of the opinion that prices of oil have in fact come down in the last one year and it can at most allow the rate prevailing in 2006-07. TVNL has submitted bills to back up the price of oil. In its bills enclosed as annexure-vi of letter ref 1374/07 dated 20.09.07, invoice value for oil is mentioned as Rs 328521.21 for 12 kilolitres of oil. From this the price of oil comes to Rs 27,377/kL. Hence, the Commission therefore approves Rs 27,377/kL, which is the actual price in August 2007.

6.3.5.3 O&M expenses

The Commission has allowed Rs. 73.56 Crores as annual O&M expenses for TVNL during FY 2007-08. The expenses for one month comes to Rs 6.13 Crore.

6.3.5.4 Maintenance Spares expenses

The petitioner has proposed the maintenance spares expenses as Rs 11.92 crores. As per TVNL's balance sheet for FY 2005-06 (as on March 31, 2006), the aggregate value of the plant and machinery is Rs 1171.52 Crore and accordingly 1% of the same works out to be Rs 11.71 crores.

6.3.5.5 Receivables

The Commission considered the tariff for FY 2005-06 and the sales as approved for FY 2007-08. At a tariff of Rs 1.90 per unit and taking sales of 2 months, the total amount for two months receivables amounts to Rs 61.06 Crores.

6.3.5.6 Interest on working capital

The petitioner has estimated the interest on working capital at 12.5%. However, the Commission has taken into consideration the sub PLR as per RBI of 13 %. The interest on working capital aggregates to Rs.13 crores and details has been summarized in the table below.

Table 23: Interest on Working Capital

Item of Working Capital (in Rs. Lakhs)	Proposed (2007-08)	Analysis (2007-08)
Cost of coal for 1.5 months	1,819.64	1986.93
Secondary fuel oil for 1 month	98.96	96.68
O&M expenses for 1 month	1187.7	613.04
Maintenance Spares @1% of plant and equipment	1,192.21	1,171.53
Receivables equivalent to 2 months fixed and variable charges	7,852.66	6106.11
Total Working Capital	12,150.17	9974.29
Interest on working capital	1,518.77	1296.66

6.3.5.7 Other Income

The petitioner has submitted non-tariff income of Rs 1.17 Crore for FY 2007-08. The Commission has accepted the same.

The total fixed charge components and the sales approved by the Commission for FY 2007-08 has been summarized in the table below -

Table 24: Fixed Charge Components

Components	Proposed (in Rs Crore)	Approved (in Rs Crore)
Return on Equity	14	14
Interest payment on loan	86.71	83.06
O&M	142.4	73.56
Depreciation	43.99	43.96
Interest on working Capital	15.19	13.00
Total expenses	302.18	227.58
Other income	1.17	1.17
Net total expenses	301	226.41
PLF	45.6%	57.59%
Sales (MU)	1476	1928.24
Auxiliary Consumption	12%	9%
Fixed Charge (Rs. Per kWh)	2.04	1.17

6.4 Variable Charges

For computing energy charges (variable charges), the fuel cost viz. coal and oil consumption and cost details are taken into consideration.

6.4.1 Cost of Coal

TVNL had proposed station heat rate of 2821 kcal/kwh. The Commission has decided to consider station heat rate of 2500 based on norms. TVNL uses Grade D coal and Gross Calorific value of Grade D coal can vary between 4200-4940 kCal/kg. Therefore the Commission has decided to accept the calorific value of coal as proposed by TVNL at 4300 kCal/kg.

The petitioner for FY 2007-08 has proposed a specific coal consumption of 0.656 kg/kwh. The Commission, however, allows a specific coal consumption of 0.581 kg/kwh based on normative parameter.

The petitioner has provided bills for the weekly payment made for coal for the months of April and May 2007. TVNL procures its coal from four different collieries. The Commission has taken the average price of the collieries that comes to Rs 1139 per tonne.

The petitioner has asked for a 5% hike in the transport cost from Rs 161 per tonne in 2006-07 to Rs 169 Crore. The Commission scrutinized the contract for supply of coal from CCL

collieries to TVNL dated 4th August 2004. as per the contract, the weighted average transport cost comes out to be approx Rs. 140/ tonne. The contract is valid for 3 years from August 2004 to August 2007 but it allows for any escalation in the price of diesel in the interim. The commission in the previous tariff order for FY 2005-06 had allowed the transport cost of Rs. 151.09 /MT which is 8% higher than the actual transport cost of Rs 140 per tonne. The Commission is of the view that this amount would sufficiently cover any hike in diesel prices. Thus Commission has decided to retain the transport cost at the level it approved in FY 2005-06 i.e. Rs.151.09/ Mt.

The Commission however would like to comment that TVNL has delayed the MGR. The MGR should have been in operation from June 2006 and the transport cost would have come down substantially as a result. The Commission directs the petitioner to expedite the completion of work on the MGR at the earliest.

The petitioner had proposed a high figure for transit loss at 1%. The Commission has decided to accept a transit loss of 0.8% based on norms for non-pithead TPPS while calculating the actual consumption of coal.

6.4.2 Cost of Oil

The Petitioner has proposed price of oil as Rs 30619.5 per Kl, a 10% escalation of the actual price of oil in 2006-07 (as claimed by the petitioner). The Commission is however of the opinion that prices of oil have in fact come down in the last one year and it can at most allow the rate prevailing in 2006-07. As mentioned in the Section "Interest on Working Capital", the Commission approves Rs Rs 27,377/kL which is the actual price paid in August 2007.

The petitioner has proposed specific oil consumption of 2.31 ml/kwh based on the actuals of 2006-07. The Commission, however, is allowing 2.00 ml/kwh based on norms.

The details of the Variable Charge components approved by the Commission for FY 2007-08, has been summarized in the table below –

Table: 25 Energy Charge Components (2007-08)

Fuel Cost components	Proposed (Rs Crore)	Approved (Rs Crore)
Coal Cost components		
Station Heat Rate (Kcal/Kwh)	2821	2500
Calorific Value of coal (Kcal/kg)	4300	4300
Transit Loss (%)	1%	0.8%
Cost of Coal including transport cost (Rs/tonne)	1321.67	1290.27
Cost of coal per unit of generation (Rs/Kwh)	0.99	0.82
Oil Cost components		
Specific oil consumption (ml/kwh)	2.31	2.00
Cost of oil (Rs/kl)	Rs 30,619	Rs 27,377
Cost of oil per unit of generation (Rs/Kwh)	0.08	0.06
Total fuel cost per unit of generation (Rs/unit)	1.067	0.88

6.5 Approved Tariff for TVNL

The Commission after a detailed analysis has approved a tariff of Rs 2.06 per unit for FY 2007-08. This comprises a fixed charge of Rs 1.17 per unit and a variable charge of Rs 0.88 per unit.