



**NEYVELI LIGNITE CORPORATION LTD.**

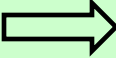
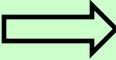
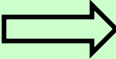
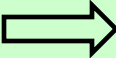
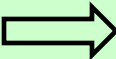
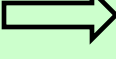
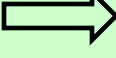
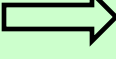



**DRAFT TARIFF REGULATION  
2014-19**

**PRESENTATION OF  
COMMENTS / SUGGESTIONS  
AT CERC**

**15.01.2014 & 16.01.2014**



# NLC REQUESTS

1. Tax on Return on Equity. 
2. Incentive. 
3. Sharing of Financial Gains. 
4. Operation & Maintenance Expenses. 
5. Special Allowance. 
6. Interest on Working Capital. 
7. Penal Interest for Capital Cost Variation. 
8. Projects to be Commissioned after 01.04.2014. 
9. Specific Requirements of TPS I 
10. Specific Requirements of Other Plants. 
11. Other Areas. 



# TAX ON RETURN ON EQUITY

**Regulation 25:** Income Tax – shift from Upfront Loading in Tariff to Reimbursement.

❑ NLC requests Grossing up in ROE as in 2009-14.

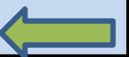




# INCENTIVE

**Regulation 30 (4):** Incentive @ 50p/kwhr above NAPLF

- To be linked with NAPAF and not to NAPLF
- As a percentage of AFC to be continued.
- The revised NAPLF for NLC TPS I, TPS II, BTPP are to be made at par with NAPAF.

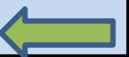




# SHARING OF FINANCIAL GAINS ON CONTROLLABLE PARAMETERS

**Regulation 8(3):** Sharing of Gains in Controllable Parameters

❖ Settlement to be done on Annual Basis.





## OPERATION & MAINTENANCE EXPENSES

### Regulation 29: Increase in O & M norms

- O&M Expenses allowed for BTPP & TPS I to be increased.
- PRP, Incentive, Ex-gratia and PLI etc to be considered for O&M.
- Provision for Non- Executives Pay Revision in the Base Rate.
- Salary and Wages component in O&M to be considered at least 60%.
- Base Rate to be escalated by 6.35% over 2013-14 Norms for 210 MW Units.

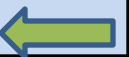




## INTEREST ON WORKING CAPITAL

**Regulation 28 (2):** Fuel cost for Interest on working capital

- Fuel price escalation to be allowed annually during the tariff period.





## PENAL INTEREST FOR CAPITAL COST VARIATION

**Regulation 7(7) & 7(8): Penal Interest at 1.20/0.80 times the bank rate for variation in Capital Cost by more than +/-5%.**

- ❑ To dispense with Penal Interest of 1.20/0.80 times bank rate for settlement of tariff difference for +/-5% variation of the projected capital expenditure vis-a-vis the actual capital cost.

### **Alternatively**

- ❖ To dispense with regularization of provisional billing based on Actual Capital Cost on year to year basis.







## PROJECTS TO BE COMMISSIONED AFTER 01.04.2014

Reg. 4(1) Date of  
Commercial Operation.  
Reg. 11(A)(1) IDC.

Reg. 36(C)  
Gross Station  
Heat Rate

Reg. 5(1) Trial Run &  
Trial Operation.  
Reg. 13 Initial Spares.

- To dispense with Certificate from CEA for COD Declaration/ Trial Operation.
- To allow Stabilization period of 6 months after COD for achieving the Normative Availability.
- 1% reduction in ROE for COD without RGMO/FGMO to be exempted or penalty to be considered only for the period of default.
- To dispense with Trial Operation condition of continuous running for 72 hours at MCR/IC.
- Factor of 6.5% is to be retained for Gross Station Heat Rate.
- To drop Regulation 11(A)(1) for IDC. **Alternatively, same may be considered for projects sanctioned after 01.04.2014.**
- Delay due to Contractor to be treated as Uncontrollable Factors.
- Norm for Initial Spares to be raised to 5% of Project Cost.
- Ceiling limit for spares to vary inversely with the no. of units.





## Specific Requirements for 600 MW TPS I

- NAPAF is to be reduced to 70%.
- Incentive to be made applicable from NAPAF instead of from NAPLF.
- Higher O&M Norm to cover Actual O&M Expenditure.
- Norm for Secondary Fuel oil consumption to be retained at 3.5 ml/kwhr.
- Norm for auxiliary energy consumption to be raised to 13%
- Provision to be made for reimbursement of the expenditure towards RLA study and works.
- Compensation Allowance to be allowed @ Rs. 1.5 Lakhs/MW.





# Specific Requirements for Other Plants

## BTTP

- ❑ Base Rate of O&M is to be enhanced.
- ❑ Existing gross station heat rate to be allowed and spelt separately as 2621 kcal/kwhr.
- ❑ NAPAF to be fixed at 75% for 2014-19.
- ❑ Secondary Fuel Oil Consumption to be retained at 1.25 ml/kwhr.

## TPS II

Incentive to be made applicable from NAPAF instead of from NAPLF.

## TPS I EXP.

Norm for auxiliary energy consumption is to be Retained at 9.5%.

## TPS II EXP

NAPAF to be fixed at 75% for 2014-19.

## NTPL

Norm for auxiliary energy consumption to be raised to 6.5% from 6.0%





# OTHER AREAS

## **Regulation 9 - Capital Cost:**

- **Capitalization of Common Assets** for Lignite/Coal based Thermal Power Stations

## **Regulation 14 - Additional Capitalization and Decapitalization:**

- Additional capitalization which have become necessary for efficient operation and essential for operation to be allowed to be capitalized.
- Capitalization of very high value replacements like Turbine rotor, Generator rotor etc. in addition to the Compensation allowance is to be allowed.

## **Regulation 27- Depreciation**

- **Unrecovered depreciation** to be allowed at the end of the useful life
- OR it may be allowed as an additional incentive where generation is more than norms.

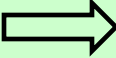
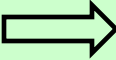
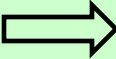
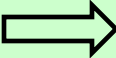
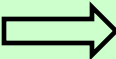
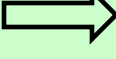
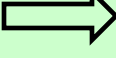
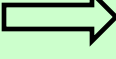



## **OTHER POINTS:**

- **Payment security clauses to be inserted** to ensure the timely payment from beneficiaries.
- 5% difference to be maintained for Lignite vs Coal fired plants in NAPAE.





# NLC REQUESTS

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THANK YOU





**NEYVELI LIGNITE CORPORATION LTD.**

**DRAFT TARIFF REGULATION  
2014-19**

**BACK UP SLIDES**

# TAX ON RETURN ON EQUITY

**Regulation 25:** Income Tax – shift from Upfront Loading in Tariff to Reimbursement

1. Tax holiday benefits and higher depreciation benefits are due only to the generating companies.
2. Power projects have a long gestation period and no return on equity during the long construction phase.



## TAX ON RETURN ON EQUITY (Contd.)

3. The mode of Reimbursement of actual tax which was prevalent during 2001-04 & 2004-09 Regulations resulted in serious problems faced by Generating Companies on account of following reasons:
- Delay in Assessment due to re-opening etc resulting in difficulty in realization of dues
  - The process is further complicated if the generating company has strong view against the decision made by assessing authority and appeals against it.
  - In case of adverse order after many years realization from beneficiaries become difficult.

## TAX ON RETURN ON EQUITY (Contd.)

4. The proposed formula results in passing on the tax incentives / benefits accrued in other business streams (say lignite) of the generating company to EBs
5. Passing of tax incentives / benefits accrued in one generating station to EBs of other generating stations (sometimes EBs of other states)
6. The tax reimbursement will be treated as income and will be taxed repeatedly. Hence the tax reimbursement on ROE has to be grossed up and paid.

## TAX ON RETURN ON EQUITY (Contd.)

7. In the draft regulation the profit before tax has been linked to the tax on the return on equity which has to be corrected.
8. The tariff regulations of 2009-14 , has correctly made to have the reimbursement of income tax in the capacity charges itself by way of front loading, considering the difficulties faced by the generating company.
9. Keeping in view the above, it is requested that grossing up the income tax element in the ROE itself being a better option may be retained.

# INCENTIVE

- While shifting from PLF linked incentive (2004-09) to Availability linked incentive (2009-14), the following aspects were taken into due cognizance by the Commission still hold valid.
1. “The schedule reduction is for attaining overall economy for the beneficiaries, it would be grossly unfair to expect such financial loss to be absorbed by the generating company (which is in no way responsible for consumers' load profile).
  2. For the purpose of Load Generation balance, the Beneficiaries are surrendering their share in ISGS stations instead of backing down their high cost load centre generating stations
  3. A generating station backing down as per merit order during off-peak hours must not result in a commercial loss.



## INCENTIVE (Contd.)

4. It is most important that there are no commercial deterrent for any utility to do what it is supposed to do in the larger interest
  5. If the disincentive could be in the form of denial of normative fixed charge for availability lower than the normative then the incentive could be in the form of additional fixed charge for availability in higher than the normative”
- The provision of incentive equal to fixed charges for availability over the NAPAF may be retained as in existing Regulation.



## INCENTIVE (Contd.)

- If the new regulation is implemented, the uneconomic operation of the plants between NAPAF (72% for TPS I and 75% for TPS II) and NAPLF (75% for TPS I and 80% for TPS II) would offset the gains in the form of incentive that would accrue for operation above NAPLF.
- While generators are already forced to absorb the O & M expenses above the normative, a reduction in incentive will adversely impact the profitability of the station.
- With enormous capacity addition in the region, there is bound to be a very huge backing down for ISGS. The ISGS are forced to operate on low efficiency due to load reduction on account of lower schedules. In the year 2013-14 up to mid DEC'13, there has been a backing down of 2% of the capacity in NLC Stations in Neyveli.



## INCENTIVE (Contd.)

- This loss due to operation in low efficiency regime (due to low demand which is entirely beyond the factors attributable to the station) has been thrust entirely on the generators. On the other hand, the regulation provides for sharing of any saving on account of efficient operation with the beneficiaries.
- As the state owned power stations are not guaranteed of returns for backing down during high frequency / low demand conditions, the backing down is done mainly by ISGS to secure the grid.
- Un-requisition by beneficiaries is beyond the control of the Generators and hence incentives introduced for rewarding performance of generators should not be linked with factors beyond the control of generators.



## INCENTIVE (Contd.)

- A shift from Availability linked incentive to PLF linked incentive would tantamount to penalizing the ISGS for maintaining grid security, which is the ultimate objective of the ABT.
- For TPS I and TPS II, a different NAPLF higher than NAPAF has been fixed for recovery of incentive which is not fair. The revised NAPLF for NLC TPS I and TPS II to be made at par with NAPAF.
- Norm for recovery of fixed charges and norm for recovery of incentive should be on par with each other for the reasons stated above. The rate of incentive proposed (50 paise / kwhr) is also very less.
- The PRP, PLI etc have been disallowed stating that the same should be met through more efficient performance. Present proposal deprives the incentive earned through efficient performance also.





## INCENTIVE (Contd.)

- Hence it is requested that the provision of incentive equal to fixed charges for availability over the NAPAF shall be retained as in existing Regulation.
- (or) incentive rate shall be raised Rs 1.0 / kwhr or the rate of Capacity Charge / kwhr whichever is less and the norm for NAPLF be set equal to that of NAPAF.



## SHARING OF FINANCIAL GAINS

- The tariff (Energy Cost) for the control period is fixed by the commission based on Normative Station Heat Rate, Normative Secondary Fuel Oil Consumption & Normative Auxiliary Energy Consumption notified in the Tariff Regulations.
- While norms have been fixed for the controllable parameters after taking into account all the contributing factor and further after stating that any savings in controllable parameters should be shared with the beneficiaries, the relevance of the truing up of controllable parameters needs clarity.
- Commission has indicated that any financial gains by a generating company on account of controllable parameters shall be shared between generating company and the beneficiaries on **monthly basis**, in the ratio of 3:1 which is detrimental to the generators.

## SHARING OF FINANCIAL GAINS (Contd.)

- When any loss in revenue on account of not achieving the normative Station Heat Rate, Auxiliary consumption and Secondary Oil consumption has to borne by Generators, it would be logical that any gain due to efficient performance should be rewarded to the Generators.
- The norms are tightened in every regulation and the benefits due to efficient performance is already passed on. Hence, further provision for passing on the savings may be dropped.
- However, if the gains are to be necessary shared it may be on an annual basis in view of the following.
  1. The operating parameters will not be uniform throughout the year, but will vary based on seasonal changes in the atmospheric conditions and planned maintenance schedule of units.

## SHARING OF FINANCIAL GAINS (Contd.)

2. Normally, the operating parameters will be within the norm during first & last quarter of financial year when all the units are in service and demand in grid is more.
3. The planned maintenance works are being carried out during monsoon period (Second & Third quarter) considering the low demand in the grid during this period. During that occasion, operating parameters will be more than norms due to shutdown & startup of the units and part load operation of units.
4. The severity of monsoon may lead to high secondary oil consumption.
5. Passing of 25% gains only and not losses on account of Controllable performance parameters on monthly basis will lead to under recovery of Energy charges on annual basis.

## SHARING OF FINANCIAL GAINS (Contd.)

- As detailed above, any assessment of consumption should be made only at the end of the year as only the annual figure will be a realistic one.
- Monthly figures would vary widely depending upon the seasonal changes, maintenance schedule of the units and the load that is maintained depending on the prevailing conditions.
- During the best performing months, the consumption of oil and auxiliary power would be less and the saving would be shared with the beneficiaries, if this regulation prevails in the final order.

## SHARING OF FINANCIAL GAINS (Contd.)

- However, during monsoon periods, oil consumption and other controllable parameters would be higher than norms and hence, there would be no saving and consequently, no sharing.
- During reconciliation at the end of the year, the situation would only be that shared savings have be recovered from the beneficiaries. Therefore, the specified for sharing of the gains should be for yearly saving only.

## OPERATION & MAINTENANCE

- As compared to the annual escalation of 6.35% considered in the tariff period of 2014-19, the base rate of 2014-15 has been escalated only at 5.8% over the rates of 2013-14 for 210 MW units.
- Salary and wages is the biggest single cost component of the O&M costs. Salary and Wages are paid by CPSEs strictly in line with DPE guidelines and CPSEs virtually do not have much flexibility on deciding the Salary of the employees.
- The pay revision of executives of CPSEs will be due w.e.f. 01.01.2017 and in case of non executives, the wage revision under Ministry of Coal will become due w.e.f. 01.01.2012 itself. This will substantially impact the O&M costs from the due date. This aspect has not been covered in the proposed regulations.
- Provision may be kept for pay revision of non executives and suitable increase on this account may be considered in the base rates of all generating stations.

## OPERATION & MAINTENANCE (Contd.)

- Further, most of the power generating companies which have emerged during the last two decades, have been able to manage with the outsourcing of its operations whereas NLC which is operating its generating stations for the last more than 50 years did not have much choice and deployed its own manpower for the same.
- While considering 40% as Salary and Wages component out of the total O&M cost for other companies may be appropriate whereas in case of NLC, the salary and wages component is more than 70%. This fact is evident when comparing the ratio of salary and wages to other costs (outsourcing) of NLC with other companies.
- So, it is requested that for NLC, for the purpose of allowing pay revision as per DPE guidelines, Salary and wages component may be considered at least 60% of the O&M cost instead of 40%



## OPERATION & MAINTENANCE (Contd.)

- While fixing the norms for O & M expenses, Prior Period Transactions, one time non recurring expenses were not considered by the Commission.
- The Performance Related Pay, Incentive, Exgratia and Productivity linked incentive etc. were also not considered by the Commission and the generating stations are expected to meet the same through incentives earned by way of better performance.
- In the proposed regulation, the incentive is restricted only for generation above normative PLF and also it is limited to 50 p/kwhr. Due to the changeover only one-third of the amount spent on the above could be recovered. Further efficiency gains on account of station heat rate, oil consumption and auxiliary energy consumption also have to be shared with the beneficiaries.
- In view of the above, expenditure incurred on PRP, Incentive, Exgratia and PLI etc shall be considered while fixing norm for O&M.

## OPERATION & MAINTENANCE (Contd.)

- O&M Base rate for Barsingsar TPP (BTPP)
- O &M Expenses allowed for BTPP for 2014-15 is Rs 29.12 lakhs per MW which is lesser than O&M allowed for 2013-14 (Rs 29.98 lakhs per MW). This is presumably on the basis of actuals of 2012-13 which is marginally less than the normative level (Rs 28.12 lakhs per MW actual as compared to Rs 28.36 lakhs per MW normative).
- It may please be noted that the actual expenditure during 2012-13 is less on account of lesser expenditure on repair and maintenance especially stores and spares since the plant was under warranty.

## OPERATION & MAINTENANCE (Contd.)

- The CFBC technology based project of 125 MW each unit, stabilization of the operation takes longer duration as witnessed in the initial period of operation of other similar lignite based plant of similar size in Gujarat and Rajasthan. In order to stabilize the operations of BTPP, it requires heavy repair works of the refractory liners in the Boiler. As the technology is new, the provision made in this regard is not sufficient.
- Therefore, it is requested that for BTPP, necessary provision may be allowed in O & M cost and suitable hike in the base rate of first year O&M cost of 2014-15 may be allowed.

# SPECIAL ALLOWANCE

- The regulation allows a Special Allowance of Rs. 7.5 lakh/MW/year for the year 2014-'15 and thereafter escalated @ 6.35% every year during the tariff period 2014-19, unit-wise from the next financial year from the respective date of the completion of useful life with reference to the date of commercial operation of the respective unit of generating station in lieu of R & M expenses whereas in respect of generating stations who has already availed of a 'Special Allowance' it is allowed by escalating the 'Special Allowance' allowed for 2013-'14.

YEAR ( RS. Lakhs/MW)	2014- 15	2015- 16	2016- 17	2017 -18	2018- 19
Allowance for Stations already availing the provision in 2013-14	6.65	7.07	7.52	8.00	8.50
Allowance for Stations availing the provision in Tariff period 2014-19	7.50	7.98	8.48	9.02	9.59

## SPECIAL ALLOWANCE (Contd.)

- The older generating Stations who are already availing the allowance are therefore at a loss cumulatively.
- In order to extend the provision to all generators availing the special allowance in lieu of R & M in an equitable manner, there shall not be any differentiation between Stations already availing the facility and the Stations that would avail the facility in the forthcoming Tariff period.
- With the current level of inflation and the Increasing cost of Spares and consumables for works and the rising cost of labour, the replacement works in the Units are bound to be expensive. In the explanatory memorandum, the Commission has stated that, considering the increase in R&M cost over a period of time, the Commission proposes to increase the Special Allowance to Rs. 7.5 Lakh/MW for the units, which will opt for Special Allowance during the tariff period 2014-19.

## SPECIAL ALLOWANCE (Contd.)

- Irrespective of whether the allowance is availed from 2014-15 or earlier, the special allowance should be commensurate with the prevailing rates of materials and labour which is the same for all stations.
- Hence, Commission may extend the proposed allowance for all Stations and allow the Units for which Special allowance is availed under 2009-'14, also at Rs. 7.5 Lakh/MW.
- CEA, MOP is using the terminology R&M works for any special works undertaken in the Generating Units for sustaining the performance during its life time after completion of ten years. Also CEA, MOP is using the terminology Life Extension works for the Retrofitting / Rejuvenation works carried out after completion of useful life of plant i.e. Twenty-five years.
- However, CERC is terming the works carried out after useful life of station as R&M works.

## SPECIAL ALLOWANCE (Contd.)

- While booking expenditure on above heads and submitting data to different agencies, this may create confusion and to have clarity, uniform terminology may be adopted by the Authority & Central Commission
- A communication dated 26.04.2013 (No. 2/3/RFD/TRM/CEA/2011/694) received from CEA on the R&M and Life Extension (Copy enclosed as Annexure I) says that Units completing 10 years qualify to take up R&M works as per CERC guidelines.
- It is requested that in line with CEA guidelines, allowance may be provided in Tariff for R & M expenses beyond 10 years of the life of the plant apart from the Compensation Allowance provided for the period 10-25 years and Special Allowance after useful life of 25 years of the plant.

## SPECIAL ALLOWANCE (Contd.)

### TPS-I:

- R&M works have been carried out in all the units and were capitalized prior to the year 1999, this special allowance in lieu of R&M could not be claimed during the Tariff period 2009-14.
- However on completion of 15 years of extended life after carrying out R&M, Residual Life Assessment (RLA) study has been carried out in all the units. The expenditure incurred on the above works could not be capitalized as there is no provision for allowing such expenditure in the present Tariff Regulation.
- The expenditure incurred towards RLA Study, connected works to enable RLA study and rectification works for all the units of TPS-I will be around 13.08 Crores.



## SPECIAL ALLOWANCE (Contd.)

- It is also programmed to conduct another round of RLA study in all units on completion of 5 years after first RLA study to ensure healthiness of the equipments / systems.
- Mean while the capital of the station will get depreciated fully by March 2014.
- Hence for old plants like TPS-I whose capital got depreciated fully, provision shall be made for reimbursement of the expenditure incurred towards RLA study and also connected works carried out as per the requirement of RLA Study considering the ageing and vintage nature of such plants.

# INTEREST ON WORKING CAPITAL

- Although by revising the price of fuel oil and lignite for the 2014-19 period, the increase in working capital requirement is addressed at the beginning of the tariff period, yet, the price escalation during the tariff period is not addressed. The justification for periodic increase during the tariff period is further felt as while giving rebate to the EBs, generating companies are taking the current level of fuel prices.
- The actual primary fuel and secondary fuel cost of the respective year may be considered in the computation of working capital involving lignite / coal and oil i.e. allowing fuel price escalation during the tariff period instead of considering the weighted average price of the fuel three months preceding the first month for which tariff is determined.

# PENAL INTEREST FOR CAPITAL COST VARIATION

- Regulation 7(7) states that if the date of commercial operation is delayed beyond 180 days from date of issue of tariff order awarded by the Commission based on anticipated COD, the tariff granted will be deemed to be withdrawn and it is required to file a fresh application for tariff determination after date of commercial operation.
- It may be ensured, that for such re-filing, filing fee is not required to be paid, since paying filing fees again for tariff determination of the same unit / plant is a big loss for generators. For re-filing, filing fees to be exempted.

# PENAL INTEREST FOR CAPITAL COST VARIATION (Contd.)

- The draft regulation provides to continue to bill the beneficiaries at the tariff applicable as on 31.03.2014 for the period starting from 1.4.2014 till approval of tariff for 2014-'19 based on projected capital expenditure. However, the Regulation is silent on recovery / refund mechanism for the excess / shortfall in tariff on issue of tariff order.
- Regularization of tariff based on actual capital cost specified in Regulation 7(7) and 7(8) is contradictory with the provision given in Regulation 8 (10).

# PENAL INTEREST FOR CAPITAL COST VARIATION (Contd.)

- Regulation 7(7) and 7(8) penalizes projection of capital expenditure in excess / shortfall of 5% by advocating penal interest for refund / recovery of tariff, whereas Regulation 8 (10) stipulates that after truing up of the capital expenditure including additional capital expenditure upto 31.03.2019, the entire excess / shortfall in tariff determined with projected capital cost, is to be refunded / recovered in 6 equal monthly installments along with Bank interest.
- Regulation 8(10) specifies only simple interest at the rate equal to Bank rate and not penal interest. The same analogy may be followed even if capital projection differs by +/- 5%.

# PENAL INTEREST FOR CAPITAL COST VARIATION (Contd.)

- Generators should not be penalized for projecting capital expenditure in excess / shortfall of + / - 5%. However if it is felt necessary, interest for refund of excess of actual capital cost and the interest for recovery of short-fall in actual capital cost compared to projected capital cost may be equalized and made symmetrical instead of stipulating 1.2 times bank interest for refund and 0.8 times bank interest for recovery. This equalization is essential in order to ensure parity among the stake holders.
- The tariff based on actual capital cost of the new projects / actual capital expenditure will be known only after truing up exercise is completed. Hence ,it will be possible to refund / recover the excess or shortfall in tariff as stated in Regulation 7 (7) only after truing up, i.e. not earlier than 31.10.2019 and not as soon as tariff order based for 2014-'19 based on projected capital cost / additional capital expenditure is awarded.

# PROJECTS TO BE COMMISSIONED AFTER 01.04.2014

## REGULATION 4(1): Date of Commercial Operation

- The **Tender Specification for a new Project is prepared** after taking into consideration the existing Regulations and Codes including **Technical standards of Central Electricity Authority** (Technical Standards for Construction of Electrical plants and electric lines) Regulations, 2010 and Grid Code.
- The **modalities to be followed for verification** of Technical standards and Codes are **yet to be declared**.
- **Period of 72 Hours of TRIAL OPERATION** may **not be sufficient** enough to verify all the parameters of Technical standards since the operation of unit itself needs to get stabilized and it also requires time to install special instruments to conduct all the tests.

# PROJECTS TO BE COMMISSIONED AFTER 01.04.2014 (Contd.)

## REGULATION 4(1): Date of Commercial Operation

- Apart from coordinating with the beneficiaries and SRLDC for trial operation, the Contractual obligations between the Generator and the equipment supplier / project major contractor have to be met.
- Only based on the contractor's preparedness, the testing can be carried out. Both for the generator and the equipment supplier, running the unit in stable condition would only be the first concern.
- Only after stabilization of the unit, the priority would shift to other activities such as testing, which have to be carried out in full detail without rushing up of the exercise.
- Already, Regional Inspection Office under the control of CEA is involved for issuing clearances for charging LT & HT electrical system.



# PROJECTS TO BE COMMISSIONED AFTER 01.04.2014 (Contd.)

## REGULATION 4(1): Date of Commercial Operation

- Similarly, all the concerned **statutory authorities** are inspecting and **issuing clearances at relevant stages** during execution of the project.
- Further, obtaining certificate from CEA / agency designated by CEA has **not been envisaged in the projects under construction/Commissioning.**
- Hence, incorporation of a condition of obtaining clearance from CEA in the ongoing projects would make the project completion very complicated as introduction of the condition after tender finalization would tantamount to a revision in specification and would distort the tendering process.
- Thus, for projects under construction, obtaining certificate from CEA for reckoning the date of commercial operation is impossible.

# PROJECTS TO BE COMMISSIONED AFTER 01.04.2014 (Contd.)

REGULATION 4(1): Date of Commercial Operation

## Demonstration of Normative Availability for 1 month after COD

- **Minimum Stabilization of Period of 6 Months**, in general, is required after Declaration of COD before demonstrating the plant availability of not less than the normative plant availability since the unit may get into initial teething problems.
- **A longer stabilization period** is essentially needed in the case of Units with New Technology / Higher Capacity which are erected in India for the first time.
- The earlier Regulations had such provision of 6 months stabilization period with relaxed norms.

# PROJECTS TO BE COMMISSIONED AFTER 01.04.2014 (Contd.)

## REGULATION 4(1): Date of Commercial Operation

### Demonstration of Normative Availability for 1 month after COD

- Hon'ble commission may consider on case to case basis based on representations, whenever technical problems are encountered in stable operation of new units and allow timeline for declaration of COD of the unit.
- If the COD gets shifted due to non-fulfillment of normative availability, tariff application and tariff thereof also will undergo changes and would require revisions.
- To demonstrate the normative availability as specified, a percentage tolerance in the operational norms is essentially required to be provided as 'relaxed norms' and a minimum tolerance period allowed as stabilization period.

# PROJECTS TO BE COMMISSIONED AFTER 01.04.2014 (Contd.)

## REGULATION 5(1): Trial Run and Trial Operation

- CEA defines a thermal unit '**as commissioned**' when the construction and commissioning of all plants and equipments required for operation of the unit at rated capacity are complete and the unit achieves full rated load on the designated fuel (no demonstration of Max. continuous rating for 72 hrs. required)
- Stipulating COD through trial run which is defined as 72 hours continuous running at rated installed capacity contravenes the above CEA definition of COD.

# PROJECTS TO BE COMMISSIONED AFTER 01.04.2014 (Contd.)

## REGULATION 36(C): Gross Station Heat Rate

- The Projects under construction / commissioning ( NNTPS, TPS II Expansion, NTPL) , shall be allowed to compute the Gross Station Heat rate as stipulated in 2009-14 regulations as all the performance parameters are tied up with EPC contractors while designing Boiler, Turbine, Generator & other major equipments.
- Hon. CERC has considered the value of the best performance plant for fixing this norm, instead the optimum performance level should be considered.
- While arriving at the norm, performance of coal based stations have alone been considered by the commission.
- The specific lacuna prevalent in lignite based stations compared to coal based stations needs to be given due cognizance.

# PROJECTS TO BE COMMISSIONED AFTER 01.04.2014 (Contd.)

## REGULATION 36(C): Gross Station Heat Rate

- Operation of water lance for eliminating the outage due to slagging restricts the electrical load that can be maintained on bars whenever the unit is put on water lance. The frequency of water lance operation is very high and hence the operation of the plant is generally at low efficiency levels only.
- Further, coupled to the high moisture content of lignite, the wetness collected in lignite during times of monsoon further brings down the operational efficiency.
- The unburnt percentage of fuel increases due to these factors.

# PROJECTS TO BE COMMISSIONED AFTER 01.04.2014 (Contd.)

## REGULATION 36(C): Gross Station Heat Rate

- The norms based on coal based stations cannot be applied directly to lignite based stations.
- The multiplication factor for calculating this norm value from the Design heat Rate has been reduced to 1.045 from 1.065 and the Minimum Boiler efficiency has been raised to 0.87 from 0.85 for Sub-Bituminous Indian Coal which is very stringent / commissioning.

# PROJECTS TO BE COMMISSIONED AFTER 01.04.2014 (Contd.)

## REGULATION 11(A)(1): IDC

- Generating companies have already made investment decisions with respect to various projects and financial closure of those projects are planned as per the existing practice of doing the same keeping in view the favorable market conditions.
- In case of NLC, no project is starving of funds and mode of execution of the power project is sometimes through Joint Venture route.
- In such cases, based on the comfort letters given by NLC, debt is arranged at very competitive rate.
- Moreover, based on the requirement, part debt is arranged which also results in wide participation and results in competitive rate of interest.



# PROJECTS TO BE COMMISSIONED AFTER 01.04.2014 (Contd.)

## REGULATION 11(A)(1): IDC

- The proposed change of allowing interest only after achieving financial closure will penalize NLC by disallowing the interest paid on part of the loan arranged in the initial execution of the project which is done primarily to keep the cost of debt funds to its lowest.
- Moreover, changing of a prime parameter which may significantly influence the financial viability of the project after the investment decision is taken by the generating company may adversely affect the generating companies and industry at large.

# PROJECTS TO BE COMMISSIONED AFTER 01.04.2014 (Contd.)

## REGULATION 12(1)(iii): IDC due to delay

- The delay in execution of the project on account of contractor, supplier or agency of the generating company is specified as a controllable parameter and
- NLC has furnished comments and justifications for shifting the delay due to the contractor, supplier or any agency of the generating company under the category 'Uncontrollable factors'.

# PROJECTS TO BE COMMISSIONED AFTER 01.04.2014 (Contd.)

## REGULATION 12(1)(iii): IDC due to delay

- If delay on the part of the contractor not attributable or controllable by the generator is considered as a “Controllable Factor”, penalty has to be suffered by the generator on three counts.
  - Capital cost for Tariff calculation will get abated on account of Liquidated Damages recovered from the contractor
  - Capital cost will further dip on account of disallowance of IDC as delay by contractor is considered a controllable factor
  - Adding further to the damage is the difference in ROE by 0.5% between projects completed in time and those not adhering to the timeline.

# PROJECTS TO BE COMMISSIONED AFTER 01.04.2014 (Contd.)

## REGULATION 13: Initial Spares

- The projects already under construction / commissioning have been formulated based on the current Tariff period (2009-'14) norm.
- However, for reasons beyond our control, the commissioning of the projects has spilled over to the next Tariff period.
- Applying the proposed Draft Regulation to these projects would pose serious concerns over the financial viability of the projects.
- Although the requirement of 'Initial Spares' even with the existing Regulation far exceeds the normative level, while firming up the packages, the procurement of Initial Spares is restricted to the normative level.

# PROJECTS TO BE COMMISSIONED AFTER 01.04.2014 (Contd.)

## REGULATION 13: Initial Spares

- This is done only at the risk of availability of spares at a later date when needed.
- In this process certain recommendations of the OEM with regard to the requirement of spares is discarded for the sake of adhering to the Regulatory conditions as the sole risk of the generators.
- While already Generators are unable to recover the cost of actual requirement of initial spares through tariff, further reduction in the norm for Initial spares will cause much loss to the generators.

# PROJECTS TO BE COMMISSIONED AFTER 01.04.2014 (Contd.)

## REGULATION 13: Initial Spares

The following reasons have been quoted by the Hon. CERC while fixing the draft norm

- Typically Initial Spares are to be supplied only from OEM and it may not be appropriate to consider the Initial spares as percentage of Capital Cost.
- For two Projects having same Plant & machinery Cost, the Project Cost differs and hence the cost of Initial Spares.

# PROJECTS TO BE COMMISSIONED AFTER 01.04.2014 (Contd.)

## REGULATION 13: Initial Spares

For the above reasoning's the following facts may be considered

- The absolute value of Initial spares is very meager compared to the total cost of the project.
- Any outage of the unit immediately after depletion of the stock of the initial spares, would deprive the grid of the much needed relief until procurement of the spare.
- The OEMs themselves may not be able to supply required Spares at short notice. It is due to this reason that the OEMs are recommending the availability of a certain quantity of spares initially.

# PROJECTS TO BE COMMISSIONED AFTER 01.04.2014 (Contd.)

## REGULATION 13: Initial Spares

- The Regulation of 2.5% of project cost is itself insufficient for the purchase of recommended minimum initial spares. Even for the Tariff period 2009-2014, the difficulty was expressed as our Comment to the Draft regulation and an increase in percentage of project cost for initial spares was sought. However the commission had not favorably considered our representation.
- Further, this change of base from project cost to plant & machinery cost and change of percentage from 2.5 to 3 was not contemplated in the Approach paper.
- This proposed change in the Regulation is unfavorable and adversely affects the generators who are already struggling to meet ends meet to be in line with the existing Regulation.



# SPECIFIC REQUIREMENTS FOR 600 MW TPS I

## REGULATION 36(A): NAPAF

TPS-I: The norm for TPS I has been fixed as 72%.

- In forth coming years, it may not be possible to achieve the normative Target Availability of 72 % due to the following reasons.
- Since the Boilers of TPS 1 were commissioned in 1960's and already nearing the end of their service, forced outages of the boilers will be more in future.
- Planned Outages and forced outages got increased resulting in lesser availability of units.
- Variations in quality of lignite, higher wetness in lignite whenever there is some rain resulting in choking in bunker chutes and Raw coal feeders, pulsation in furnace combustion, all lead to frequent fluctuations in the load of unit resulting in low operating plant load factor and lesser ABT availability.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## REGULATION 36(A): NAPAF

- As there is no reserve Mill for the Boilers, outage of a Mill, such as Hammer throw, results in lesser Ex Bus generation leading to reduced ABT availability. In addition frequent outages of Slag Conveyors also cause reduction in ABT availability.
- Problem in Lignite Transfer between Mine I & TPS I becomes acute whenever there is heavy rain as the storage yard available for storing the lignite is open type and the conveyors are also of open type.
- Any failure of lignite transfer systems in lignite stock yard of Mine I also affects the transfer of lignite.
- Due to ageing forced outage of Turbines is found to be increasing.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## REGULATION 36(A): NAPAF

- TG Vibration got developed due to Turbine blade failure and the unit 6 was under forced S/D for a period of 81 days from 14-10-2012 to 03-01-2013.
- Due to problem in Governing system unit 8 was under forced S/D from 22-05-2013 to 25-05-2013.
- Unit 3 was under forced S/D for a period of 27 days from 01-09-2013 to 27-09-2013 due to TG Vibration.
- Unit 7 was under forced S/D for a period of 70 days from 16-09-2013 to 24-11-2013 due to Damages in HP Turbine Rotor & Turbine blades.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## REGULATION 36(A): NAPAF

- For upcoming new plants that too during stabilization period in which the number of startups will be more. Hence, it is requested that the norms shall be retrained at the existing values of 1.065 and 0.85.
- Punctures in Circulating Water pipe lines, due to ageing also result in increased forced outage of Turbines.
- Punctures in the shield plates of Boiler Furnace, Mills & ESP, due to ageing also result in more air ingress affecting the OPLF.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## TPS I

### INCENTIVE

- If the new regulation is implemented, the uneconomic operation of the plants between NAPAF (72%) and NAPLF (75%) would offset the gains in the form of incentive that would accrue for operation above NAPLF.
- While generators are already forced to absorb the O & M expenses above the normative, a reduction in incentive will adversely impact the profitability of the station.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## TPS I

### INCENTIVE

- With enormous capacity addition in the region, there is bound to be a very huge backing down for ISGS. The ISGS are forced to operate on low efficiency due to load reduction on account of lower schedules. In the year 2013-14 up to mid DEC'13, there has been a backing down of 2% of the capacity in NLC Stations in Neyveli.
- This loss due to operation in low efficiency regime (due to low demand which is entirely beyond the factors attributable to the station) has been thrust entirely on the generators. On the other hand, the regulation provides for sharing of any saving on account of efficient operation with the beneficiaries.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## TPS I

### INCENTIVE

- As the state owned power stations are not guaranteed of returns for backing down during high frequency / low demand conditions, the backing down is done mainly by ISGS to secure the grid.
- Un-requisition by beneficiaries is beyond the control of the Generators and hence incentives introduced for rewarding performance of generators should not be linked with factors beyond the control of generators.
- A shift from Availability linked incentive to PLF linked incentive would tantamount to penalizing the ISGS for maintaining grid security, which is the ultimate objective of the ABT.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## TPS I

### INCENTIVE

- For TPS I, a different NAPLF higher than NAPAF has been fixed for recovery of incentive which is not fair. The revised NAPLF for TPS I to be made at par with NAPAF.
- Norm for recovery of fixed charges and norm for recovery of incentive should be on par with each other for the reasons stated above. The rate of incentive proposed (50 paise / kwhr) is also very less.
- Hence it is requested that the provision of incentive equal to fixed charges for availability over the NAPAF shall be retained as in existing Regulation.



# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## O&M Cost of TPS-I:

- For TPS-I the norm fixed is given as below (in Lakh / MW / Year):

Year	Lakh / MW
2014-15	38.14
2015-16	40.56
2016-17	43.14
2017-18	45.88
2018-19	48.79

- Comment: The norm value given is not sufficient to cover the actual O&M Expenditure.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

- For the existing Tariff period of 2009-14 the actual as per the data filed with CERC on 17-07-2013 Vs norm values of O&M in lakh / MW is shown below:

Year	Norms	Actuals	Under Recovery
2009-10	27.00	34.76	7.76
2010-11	28.54	37.95	9.41
2011-12	30.18	39.73	9.55
2012-13	31.90	41.79	9.89
2013-14	33.73	48.79 (Projected)	15.06 (Projected)

- It can be seen from the above table that the under recovery in O&M Expenditure is very high. This is mainly because of the reason that the station is equipped with smaller capacity units of vintage design necessitating more man power requirement for O&M.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

- Hence the norm value for TPS-I shall be fixed considering the actual O&M incurred during 2013-14 and adopting the annual escalation factor of 6.35%.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## REGULATION 36(D): SECONDARY FUEL OIL CONSUMPTION

- The Specific Fuel Oil Consumption norm has been drastically reduced from 3.5 ml / kwhr to 1.5 ml / kwhr for this old & vintage TPS.
- The actual value of Specific Fuel Oil Consumption for the past five years is given below:

Year	2008-09	2009-10	2010-11	2011-12	2012-13
Sp. Oil Consumption (ml/Kwhr)	2.278	1.216	2.092	1.329	1.219

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## REGULATION 36(D): SECONDARY FUEL OIL CONSUMPTION

- Reduction in Specific Fuel Oil Consumption during 2009-10, 2011-12 & 2012-13 is due to increase in Gross Generation and lesser rain fall during monsoon. Such condition cannot be expected in the forthcoming years.
- The Furnace Oil consumption in these units is high due to the following circumstances.
- Old plant with vintage design.
- Severe fluctuations in the furnace condition during monsoon because of variation of Lignite quantity and quality due to wetness of Lignite.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## REGULATION 36(D): SECONDARY FUEL OIL CONSUMPTION

- When the intensity of rain is very high, the mine is getting flooded thus causing lignite supply limitation and increased Oil consumption.
- When the quality of Lignite is poor, heavy Furnace Pulsation occur in Boilers. To contain this pulsation furnace oil need to be used.
- Since the Forced outages of units are more, Consumption of oil towards start up tends to become high because of increase in number of start ups.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## REGULATION 36(D): SECONDARY FUEL OIL CONSUMPTION

- During monsoon seasons, 2 or 3 spells of continuous rainfall for 3 to 4 days occur. During these spells lignite production comes to standstill at Mines and it takes another 2 or 3 days for regaining full production capacity.
- Also, even after stoppage of rainfall slushy lignite causes chokes in the transfer chutes and boiler bunkers for many days causing very frequent fuel supply interruption to the boiler furnace necessitating secondary fuel support for stabilizing the furnace. This trend is likely to continue in the coming years also.
- Due to the vintage design of the plant only partial storage facility of 8,000 tonnes is available even though the day requirement of lignite is 18,000 tonnes.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## REGULATION 36(D): SECONDARY FUEL OIL CONSUMPTION

- Hence to meet the requirement lignite is continuously being received from Mine-1 through lignite transfer conveyors. During monsoon period and if there is any problem in operating the conveyors, the required supply gets affected resulting in partial load operation and increased secondary fuel oil consumption.
- Increased outages of Mills (Reserve Mill not available) and Slag Conveyors will lead to increased oil consumption in order to ensure safe operation of Boilers.



# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## REGULATION 36(E): AUXILIARY ENERGY CONSUMPTION

- The Auxiliary Power consumption (APC) for TPS 1 for the past five years is given below:

Year	2008-09	2009-10	2010-11	2011-12	2012-13
Auxiliary Energy Consumption (%)	12.20	11.77	12.33	11.97	11.55

- Reduction in Auxiliary Power consumption during 2009-10, 2011-12 is due to increase in Gross Generation. During 2012-13 the value is very less because there was practically no rain during monsoon. Such condition cannot be expected in the forthcoming years.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## REGULATION 36(E): AUXILIARY ENERGY CONSUMPTION

Auxiliary Power consumption will go up for the following years due to the reasons given below.

- Partial load operation due to the following reasons leads to increased Auxiliary Power Consumption
- Bunker choke because of variation in moisture content of Lignite.
- Low OPLF due to variation in quality of lignite
- Outages of Mills (Reserve Mill not available) and Slag Conveyors
- Increase in marcasite content in lignite is also very much likely. This will cause severe damage to the mills of the boilers and increased slagging inside the furnace causing increased loss of generation due to frequent maintenance of mills and failures of Slag conveyors.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## REGULATION 36(E): AUXILIARY ENERGY CONSUMPTION

- Due to the vintage design of the plant only partial storage facility of 8,000 tones is available even though the day requirement of lignite is 18,000 tones. Hence to meet the requirement lignite is continuously being received from Mine-1 through lignite transfer conveyors. During monsoon period and if there is any problem in operating the conveyors, the required supply gets affected resulting in partial load operation.
- As 100 MW turbines are being fed from 2 boilers, outage of 1 boiler results partial load (50%) operation.
- Reduction in Gross Generation in the years to come due to the following causes also will lead to increased Auxiliary Power Consumption

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## REGULATION 36(E): AUXILIARY ENERGY CONSUMPTION

- Since the Boilers of TPS 1 are commissioned in 60's and already nearing the end of their service, forced outages of the boilers will be more in future.
- Variations in quality of lignite, higher wetness in lignite whenever there is some rain resulting in choking in bunker chutes and Raw coal feeders, pulsation in furnace combustion, all lead to frequent fluctuations in the load of unit resulting in low operating plant load factor.
- As there is no reserve Mill for the Boilers, outage of a Mill, such as Hammer throw, results in lesser generation. In addition frequent outages of Slag Conveyors also cause reduction in generation.
- Problem in Lignite Transfer between Mine I & TPS I becomes acute whenever there is heavy rain as the storage yard available for storing the lignite is open type and the conveyors are also of open type.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## REGULATION 36(E): AUXILIARY ENERGY CONSUMPTION

- Any failure of lignite transfer systems in lignite stock yard of Mine I also affects the transfer of lignite.
- Due to ageing forced outage of Turbines is found to be increasing.
- Punctures in Circulating Water pipe lines, due to ageing also result in increased forced outage of Turbines.
- Punctures in the shield plates of Boiler Furnace, Mills & ESP, due to ageing also result in more air ingress affecting the OPLF.
- Even after carrying out periodical Major Overhaul and Annual Maintenance works, sustaining the efficiency of Main equipment is found to be difficult due to ageing. Hence in future it may be warranted to derate the station capacity and in such situation the Auxiliary Power consumption may go up.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## RLA STUDY & WORKS

- R&M works have been carried out in all the units and were capitalized prior to the year 1999, this special allowance in lieu of R&M could not be claimed during the Tariff period 2009-14.
- However on completion of 15 years of extended life after carrying out R&M, Residual Life Assessment (RLA) study has been carried out in all the units. The expenditure incurred on the above works could not be capitalized as there is no provision for allowing such expenditure in the present Tariff Regulation.
- The expenditure incurred towards RLA Study, connected works to enable RLA study and rectification works for all the units of TPS-I will be around 13.08 Crores.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

- It is also programmed to conduct another round of RLA study in all units on completion of 5 years after first RLA study to ensure healthiness of the equipments / systems.
- Mean while the capital of the station will get depreciated fully by March 2014.
- Hence for old plants like TPS-I whose capital got depreciated fully, provision shall be made for reimbursement of the expenditure incurred towards RLA study and also connected works carried out as per the requirement of RLA Study considering the ageing and vintage nature of such plants.

# SPECIFIC REQUIREMENTS FOR 600 MW TPS I (Contd.)

## COMPENSATION ALLOWANCE

- Hon'ble CERC under the powers to relax extended this Compensation Allowance during the Tariff period 2009-14 @ the allowance applicable for plants crossed 20 years of operation during 2009-14 (0.65 Lakhs / MW / Year) for TPS-I also.
- As TPS-I is to be operated until the new replacement plant is commissioned, it is requested to extend this allowance @ Rs 1.5 Lakh / MW / Year considering
  - ✓ the nature of vintage design of equipment
  - ✓ the fact that many of the units have served for more than 50 years
  - ✓ other units also nearing 50 years of service
  - ✓ all the units have crossed 15 Years after LEP, and
  - ✓ the expenditure to be incurred for safe operation of plant for another 5 years.



# SPECIFIC REQUIREMENTS OF OTHER PLANTS

## Barsingsar TPP (BTPP)

### Enhancement of Base Rate of O&M

- O &M Expenses allowed for BTPP for 2014-15 is Rs 29.12 lakhs per MW which is lesser than O&M allowed for 2013-14 (Rs 29.98 lakhs per MW). This is presumably on the basis of actuals of 2012-13 which is marginally less than the normative level (Rs 28.12 lakhs per MW actual as compared to Rs 28.36 lakhs per MW normative).
- It may please be noted that the actual expenditure during 2012-13 is less on account of lesser expenditure on repair and maintenance especially stores and spares since the plant was under warranty.

# SPECIFIC REQUIREMENTS OF OTHER PLANTS (Contd.)

## Barsingsar TPP (BTPP)

### Enhancement of Base Rate of O&M

- For CFBC technology based project of 125 MW each unit, stabilization of the operation takes longer duration as witnessed in the initial period of operation of other similar lignite based plant of similar size in Gujarat and Rajasthan. In order to stabilize the operations of BTPP, it requires heavy repair works of the refractory liners in the Boiler. As the technology is new, the provision made in this regard is not sufficient.
- Therefore for BTPP, necessary provision may be allowed in O & M cost and suitable hike in the base rate of first year O&M cost of 2014-15 may be allowed.

# SPECIFIC REQUIREMENTS OF OTHER PLANTS (Contd.)

## Barsingsar TPP (BTPP)

### Gross Station Heat Rate

- The norm for the existing plant BTPS has to be spelt out. The existing norm of 2621 kCal/kwhr may be maintained.

### NAPAF

- The units with CFBC boilers are of new technology or are the first of their kind either in respect of technology employed or the size of the plant with that technology.
- Hence, innumerable teething problems are envisaged as seen in the case of Barsingsar TPS

# SPECIFIC REQUIREMENTS OF OTHER PLANTS (Contd.)

## Barsingsar TPP (BTPP)

### NAPAF

- The units would be subjected to severe financial hardship if a higher norm is fixed. Hence, it is requested that for BTPP, the norm during the next Tariff period may be fixed at 75% only and based on operational performance during the next Tariff period, the issue may be reviewed later.

# SPECIFIC REQUIREMENTS OF OTHER PLANTS (Contd.)

## Barsingsar TPP (BTPP)

### Secondary Fuel Oil Consumption

- The Specific Fuel Oil Consumption norm for Lignite fired CFBC stations has been reduced from 1.5 ml / kwhr to 1.0 ml / kwhr. As CFBC technology is new in India for Lignite fired Boilers, Barsingsar TPS has already faced much problems and commissioning of TPS-II expansion is getting delayed. Hence this norm shall be retained at the existing value of 1.25 ml / Kwhr at least for this tariff period.

# SPECIFIC REQUIREMENTS OF OTHER PLANTS (Contd.)

## TPS II

### INCENTIVE

- If the new regulation is implemented, the uneconomic operation of the plants between NAPAF (75%) and NAPLF (80%) would offset the gains in the form of incentive that would accrue for operation above NAPLF.
- While generators are already forced to absorb the O & M expenses above the normative, a reduction in incentive will adversely impact the profitability of the station.

# SPECIFIC REQUIREMENTS OF OTHER PLANTS (Contd.)

## TPS II

### INCENTIVE

- With enormous capacity addition in the region, there is bound to be a very huge backing down for ISGS. The ISGS are forced to operate on low efficiency due to load reduction on account of lower schedules. In the year 2013-14 up to mid DEC'13, there has been a backing down of 2% of the capacity in NLC Stations in Neyveli.
- This loss due to operation in low efficiency regime (due to low demand which is entirely beyond the factors attributable to the station) has been thrust entirely on the generators. On the other hand, the regulation provides for sharing of any saving on account of efficient operation with the beneficiaries.

# SPECIFIC REQUIREMENTS OF OTHER PLANTS (Contd.)

## TPS II

### INCENTIVE

- As the state owned power stations are not guaranteed of returns for backing down during high frequency / low demand conditions, the backing down is done mainly by ISGS to secure the grid.
- Un-requisition by beneficiaries is beyond the control of the Generators and hence incentives introduced for rewarding performance of generators should not be linked with factors beyond the control of generators.
- A shift from Availability linked incentive to PLF linked incentive would tantamount to penalizing the ISGS for maintaining grid security, which is the ultimate objective of the ABT.



# SPECIFIC REQUIREMENTS OF OTHER PLANTS (Contd.)

## TPS II

### INCENTIVE

- For TPS II, a different NAPLF higher than NAPAF has been fixed for recovery of incentive which is not fair. The revised NAPLF for TPS II to be made at par with NAPAF.
- Norm for recovery of fixed charges and norm for recovery of incentive should be on par with each other for the reasons stated above. The rate of incentive proposed (50 paise / kwhr) is also very less.
- Hence it is requested that the provision of incentive equal to fixed charges for availability over the NAPAF shall be retained as in existing Regulation.

# SPECIFIC REQUIREMENTS OF OTHER PLANTS (Contd.)

## TPS I EXP.

### Auxiliary Energy Consumption

- The Auxiliary Power consumption (APC) for TPS 1 Expansion for the past five years is given below.

Year	2009-10	2010-11	2011-12	2012-13	2013-14
Auxiliary Energy Consumption (%)	8.70	8.46	7.65	8.56	8.54 (Projected)

- Auxiliary energy consumption of TPS-I Expansion is lower than norms as the plant is operating with maximum OPLF and PLF due to most favorable conditions like high demand in the grid leading to no surrender by Beneficiaries especially by TNEB having more share in the station, failure of monsoon and better quality of fuel.

# SPECIFIC REQUIREMENTS OF OTHER PLANTS (Contd.)

## TPS I EXP.

### Auxiliary Energy Consumption

- The Auxiliary energy consumption of TPS-I Expansion in the year 2011-12 is a freak value which can not be taken as a normal value.
- The Auxiliary energy consumption of TPS-I Expansion in the year 2011-12 is a freak value which can not be taken as a normal value.
- It may be seen from the above table that the Aux Energy Consumption is more than 8.5% for major portion of the period 2009-14.



# SPECIFIC REQUIREMENTS OF OTHER PLANTS (Contd.)

## TPS I EXP.

### Auxiliary Energy Consumption

- In the recent days due to generation addition in this zone and tightening of frequency band, the frequency is hovering above 50Hz most part of the day and as lot of generation addition is expected within short duration, the demand in the grid may come down resulting more backing down of generation.
- During part load operation of units, there will be considerable increase in station auxiliary energy consumption and hence reduction in norm will not be economical for operating stations in future scenario.
- It is not appropriate to consider the value of the best performance plant for fixing this norm, instead the optimum performance level should be considered.



# SPECIFIC REQUIREMENTS OF OTHER PLANTS (Contd.)

## TPS II EXPANSION

### NAPAF

- The units with CFBC boilers are of new technology or are the first of their kind either in respect of technology employed or the size of the plant with that technology.
- The units would be subjected to severe financial hardship if a higher norm is fixed. Hence, it is requested that for TPS II EXPANSION, the norm during the next Tariff period may be fixed at 75% only and based on operational performance during the next Tariff period, the issue may be reviewed later.



# SPECIFIC REQUIREMENTS OF OTHER PLANTS (Contd.)

## NTPL

### Auxiliary Energy Consumption

- It is requested to increase the Auxiliary consumption for NTPL from the norm of 6% to 6.5% considering power consumption requirement of 3 MW for Shore Unloader and Desalination plant since it is the coal based coastal plant with no allocation of sweet water/ river water.



# OTHER AREAS

## Regulation 9 – Capital Cost

- Regulation 9(2)(e) provides for inclusion of additional capital expenditure in the Capital Cost subject to Regulation 14. It is requested that Additional capitalization which has become necessary for efficient operation of the Lignite/Coal based power plants and also essential for operation should be allowed to capitalized.
- It is also required to allow capitalization of Common Assets which are supporting Lignite/Coal based Thermal Power Stations.



# OTHER AREAS

## Regulation 9 – Capital Cost

- In Regulation 9 (5) it is stated that the capital cost with respect to thermal generating station, incurred or projected to be incurred on account of the Perform, Achieve and Trade (PAT) scheme of Government of India will be considered on case to case basis.
- As regards NLC - TPS-I, apart from the expenditure incurred towards enhancing energy efficiency such as installation of Energy Efficient motors for Feed Pumps, Rehabilitation works in Cooling Towers such as replacement of Fills & cleaning of Fills which are covered under this clause, periodical replacements of capital assets is necessitated by the vintage nature of the plant to sustain the operations smoothly, if not very efficiently.
- The present Tariff Regulation does not allow reimbursement of the cost of such assets through tariff.





# OTHER AREAS

## Regulation 9 – Capital Cost

- Further, capital additions are not allowed as per tariff, in spite of our repeated submissions with reasoning and details of the expenditure incurred.
- For a power station like TPS I which is more than 50 years old, there is an absolute need for replacement of certain machinery which have served beyond their life. The replacements are further necessitated on grounds of optimum energy utilization and environmental concerns.
- Bearing in mind, the age of the plant and the necessity to continue the operation of the plant, till commissioning of the replacement plant, it is requested that expenditure incurred on the works for sustaining the operation of the plant shall be considered for reimbursement in the tariff.



# OTHER AREAS

## Regulation 14 - Additional Capitalization and De-Capitalization

- Additional capitalization which have become necessary for efficient operation of the Lignite/Coal based power plants should be allowed to capitalized.
- Capitalization of Common Assets which are supporting Lignite/Coal based Thermal Power Stations may be allowed.
- During truing up exercise at the beginning of the next tariff period actual Gross Fixed Assets including common assets (as certified by Auditor) may be reckoned and depreciation already recovered through tariff in the previous years may be reckoned to arrive at NFA as opening balance, to enable to cover common assets thro' tariff.



# OTHER AREAS

## Regulation 14 - Additional Capitalization and De-Capitalization

- Since Net Fixed Assets (NFA) is being followed for NLC's existing power plants (except BTPP), additional capital expenditure on all counts should be allowed without restriction.
- Disallowing the capital additions for genuine reasons like obsolescence, lack of spares support from the suppliers etc., is not appropriate and such expenditure is necessarily to be incurred to sustain the operation of the Plant.
- All additional capital expenditure incurred for successful and efficient operation to be allowed even for coal/lignite based power stations as in the earlier regulations prior to 2009-'14 since 'Compensation Allowance' will not be adequate to cater to **very high value replacements** like Turbine rotor, Generator rotor etc.



# OTHER AREAS

## Regulation 14 - Additional Capitalization and De-Capitalization

- There is restriction on the cost of spares that can be ordered at the time of installation of the Plant and hence procurement of all the essential items of very high value spares - single item of spare costing heavily, is not possible. Thus any exigency that arises during O&M period of the Plant may warrant forced / planned replacement of such high value spares and the regulations should provide for capitalization of such very high value replacements like Turbine rotor, Generator rotor etc.
- Compensation allowance will not compensate for equity and depreciation. If CERC had allowed the additional capital investments under 'Additional Capitalization', the return on equity and depreciation would be available for that.



# OTHER AREAS

## Regulation 14 - Additional Capitalization and De-Capitalization

- Hence the Additional capital expenditure incurred for successful and efficient operation to be allowed as in the earlier regulations prior to 2009-'14 for major assets in addition to the Compensation allowance which is to be considered to be in lieu for only minor capital assets.

## Regulation 27 - Depreciation

- Depreciation is allowed upto maximum of 90% of the capital cost. So if unrecovered depreciation due to lesser availability is not allowed, depreciation recovered would fall short of the 90% limit .
- Hence unrecovered depreciation may be allowed at the end of the useful life or it may be allowed as an additional incentive where generation is more than norms.





THANK YOU

