

**No.L-7/142/157/2008-CERC
CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

**Coram: Dr. Pramod Deo, Chairperson
Shri S. Jayaraman, Member
Shri V. S. Verma, Member
Shri M. Deena Dayalan, Member**

In the matter of

The Central Electricity Regulatory Commission (Terms and Conditions of Tariff)(third Amendment) Regulations, 2012.

STATEMENT OF REASONS

The Central Electricity Regulatory Commission (hereinafter “the Commission”) has been entrusted with a variety of functions under the Electricity Act, 2003 (hereinafter “the Act”). One of the functions of the Commission is to specify the terms and conditions of tariff under section 61 read with section 178 of the Act for determination of tariff of the generating companies and transmission licensees who are covered under the jurisdiction of the Commission. In exercise of the said powers, the Commission has specified the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter “2009 Tariff Regulations”) which came into effect from 1.4.2009 and would remain in force till 31.3.2014. To keep pace with the requirements of the power sector, the Commission issued two amendments to the 2009 Tariff Regulations in the year 2011. A need was felt to go for the third amendment to the 2009 Tariff Regulations. Accordingly, draft regulations were posted on the website of the Commission on 13.6.2012 inviting comments/suggestions/objections from the stake holders. The broad areas covered under the draft amendment were as under:

- (a) Additional return on equity @ 1% for the reservoir based hydro-electric projects {amendment to Clause (2) of Regulation 15}
- (b) Providing for more transparency in claiming energy charges by the generators by furnishing of complete details regarding GCV and Prices of fuels used for power generation including information relating to blending of imported coal and its price etc. {Insertion of provisos under Regulation 21 (6)}
- (c) Allowing expenditure for infrastructure development for supply of power within 5 Km. radius as capital cost or additional capital expenditure {Insertion of Proviso in Regulation 7 (2) and insertion of clause (ix) in Regulation 9 (2)}
- (d) Providing for norms of initial spares for the pumped storage scheme and GIS sub-station {Amendment of Regulation 8 (iii) and insertion of new clause 8 (iv)}
- (e) Allowing any indispensable expenditure for running of the coal/lignite based power stations { insertion of Clause 9 (x) in Regulation 9 (2)}
- (f) Tariff of the pumped storage scheme/Projects {Insertion of Regulations 3 (31), 22 (A), 27 }
- (g) Reimbursement of water charges payable by hydro generating stations of NHPC in the State of J&K as additional energy charges {Insertion of Regulation 22 (7a)}
- (h) Making applicable certain provisions to the CPSUs which were only applicable to the hydro stations developed by a company not being a State controlled or owned company { Amendment of Regulation 7 (2) and 32 Note 3}
- (i) Reimbursement of RLDC Charges, license fees etc by the beneficiaries to the generators and the transmission licensees {Insertion of Regulation 42(a)}
- (j) Providing for consideration of the capital expenditure projected to be incurred after cut-off date {Amendment of Regulation 9 (2)}
- (k) Deletion of Existing clause (8) of Regulation 21.

2. Comments/ suggestions/ objections were received from a number of stakeholders including generators, beneficiaries, IPPs, traders, etc. A public hearing was also held on 4.9.2012. The comments/suggestions/objections received from the stakeholders have been examined and analysed and our decisions on the various

provisions of the draft Amendment Regulations have been summarised in the succeeding paragraphs.

A. Additional Return on Equity of 1% for the reservoir based hydro-electric projects (Amendment of Clause (2) of Regulation 15)

3. In the draft amendment, it was proposed to substitute Clause (2) of Regulation 15 of the Principal Regulations (without the provisos) as under:

"(2) Return on Equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river hydro generating stations with or without pondage, and 16.5% for the reservoir based hydro generating stations including pumped storage schemes."

4. The responses of the stakeholders are as under:

(a) The NHPC has welcomed the higher Return on Equity (RoE) for reservoir based hydro generating stations but at the same time has sought higher RoE for Run-of- River (RoR) with pondage type hydro projects. NHPC has submitted that as 75% of the hydro projects are ROR schemes and only 25% are storage schemes, RoR hydro generating stations with pondage also provide peaking support to the grid as per the requirements of the Grid Code. NHPC has further pleaded that higher RoE should be available to all types of hydro generating stations as IRR for hydro projects in general is less as compared to thermal projects due to high gestation period.

(b) THDC has submitted that RoE of 16.5% should be provided to all type of HEPs.

(c) Torrent Power has submitted that in its understanding addition of "Return on equity for Reservoir based Generating Stations and pumped storage

schemes” is based on the fact that the grossing up concept shall be continued in terms of regulation 15(3) and amendment dated 21.06.2011. Torrent Power has suggested to add "to be grossed up as per clause (3) of this regulation" at the end of the proposed clause.

(d) NEEPCO has submitted that RoE of 16.5% should be provided to all HEPs including ROR projects and additional return of 0.5% for timely completion of project should also be applicable in addition to 16.5 % RoE.

(e) Athena Demwe Power Ltd. has submitted that ROE for all types of hydro projects, including run of the river with or without pondage, should be increased to 20% considering the fact that ROE is allowed only from COD and the gestation period of HEP (7-8 years) is more compared to thermal projects (3-4 years). Athena has further suggested that the definition of 'Reservoir based generating station' should be incorporated.

(f) PTC India Ltd. has submitted that allowing ROE of 16.5% for reservoir based hydrogenating station including pumped storage schemes will help in meeting peak requirement which is a major challenge for the grid operation and development of such plants.

(g) UPPCL has opposed the hike in RoE for hydro generating stations on the ground that generators are getting profit of more than double the ROE of 16%. Allowing ROE @ 16.50% (pre-tax) shall be extra recovery of tariff from consumers which will be discriminatory and inconsistent to section 61 (d) and (g) of the Act. UPPCL has suggested that the Commission should advise the Govt of India to incentivize such hydro developers by providing exemption

from Taxes, Duties and other charges. UPPCL has further submitted that any hike in the tariff in the middle of the tariff period shall create regulatory uncertainty and it is against the objectives of tariff policy and therefore, the draft amendment should be withdrawn wherever the hike has been proposed.

- (h) TATA POWER has submitted that in case the proposed higher rate of ROE i.e. 16.5% is allowed for reservoir based hydrogenating stations including pumped storage, then the fixed cost of these stations will increase significantly. Thus, there is no merit in increasing the ROE as such increase will be detrimental to the interests of the end consumer.
- (i) Punjab Power Corporation has submitted that RoE of 16.5% is not at all justified as 50% is the profit from the sale of power from hydro power stations. It is further submitted that 1% extra RoE may be allowed to future projects and not the existing projects where the hydrological risks during the construction period is over. In all HEPs, hydrological risks were passed on to the beneficiaries in the tariff.
- (j) ASEB has submitted that increase in RoE at the midway of MYT regulations shall put undue hardship to the beneficiaries and is against the National Tariff Policy. Sanctity of MYT regulation shall lose its relevance if amended frequently.
- (k) Sh. Arun Dutta on behalf of Mrs. Mallika Sharma Bezbaruah, consumer from North East has submitted that there is no justification in increase of 1 % in RoE of Hydro Power projects under the present scenario. The Commission

has raised RoE to 15.5% during MYT regulations, 2009 which is against the consumer interest. Further increase for HEP to 16.5% is not acceptable.

(l) CHETNA (Society for Protection of culture, heritage, environment, tradition and promotion of national awareness) has submitted that mid-term amendment on ROE of the MYT Regulation is against the provision of National Tariff Policy. The explanatory memorandum is silent on the discussion in the Forum of Regulators as mandated by the NTP. In the absence of material of discussion it is presumed that the issue was not discussed in the FOR and therefore the same is not acceptable.

(m) Sh. Atul Goyal, on behalf of Consumers has submitted that the interest of the consumers and their rights should be protected.

Analysis and Decision of the Commission

5. The provision of increased ROE of 16.5% for the reservoir based generating station including pumped storage schemes has been opposed by the beneficiaries like UPPCL, Tata Power Delhi Distribution Ltd, and Consumer Mallika Sharma Bezbaruah. It has been submitted by them that the burden of increase in cost of supply for operating generating station should not be forced on the beneficiaries in violation of the provisions of the Act. It has been further submitted by them that the Commission has already increased the ROE from 14% to 15.5% during the tariff period 2009-14. In case higher ROE is allowed to the existing reservoir based hydrogenating stations, then the fixed cost of these stations will increase significantly as the retrospective revision of tariff for the period 2009-14 will be carried out and the increased amount would be recovered from beneficiaries who are already

experiencing the brunt of high fixed cost on account of increased IDC, cost and time over-run of the projects. Hence, as per these beneficiaries and consumers, further increase in the ROE would be detrimental to the end consumers. On the other hand, Athena Power, PTC, NEEPCO etc. have supported the increase. NHPC has submitted to provide for a ROE of 17.5% while Athena power has sought to increase it to 20% for all types of hydro-electric projects considering higher gestation period compared to thermal power station. NHPC has submitted that as per XIIth five year plan, majority of schemes are ROR with pondage type and these stations will also supply peaking power contributing to grid stability which is mandatory as per Grid Code. They have pleaded that additional return should be available to RoR plants with Pondage also.

6. We have carefully considered the views of the stakeholders. The main concerns are as follows:

- (a) Whether mid-term review of the tariff regulation to provide for additional return on equity to the reservoir based stations is justified
- (b) whether it is justified to provide additional return on equity to the existing reservoir based hydro generating stations
- (c) whether additional return on equity should be provided at a higher rate considering gestation period as compared to the coal based stations
- (d) Whether the additional return on equity should also be provided to the RoR hydro generating stations with pondage.

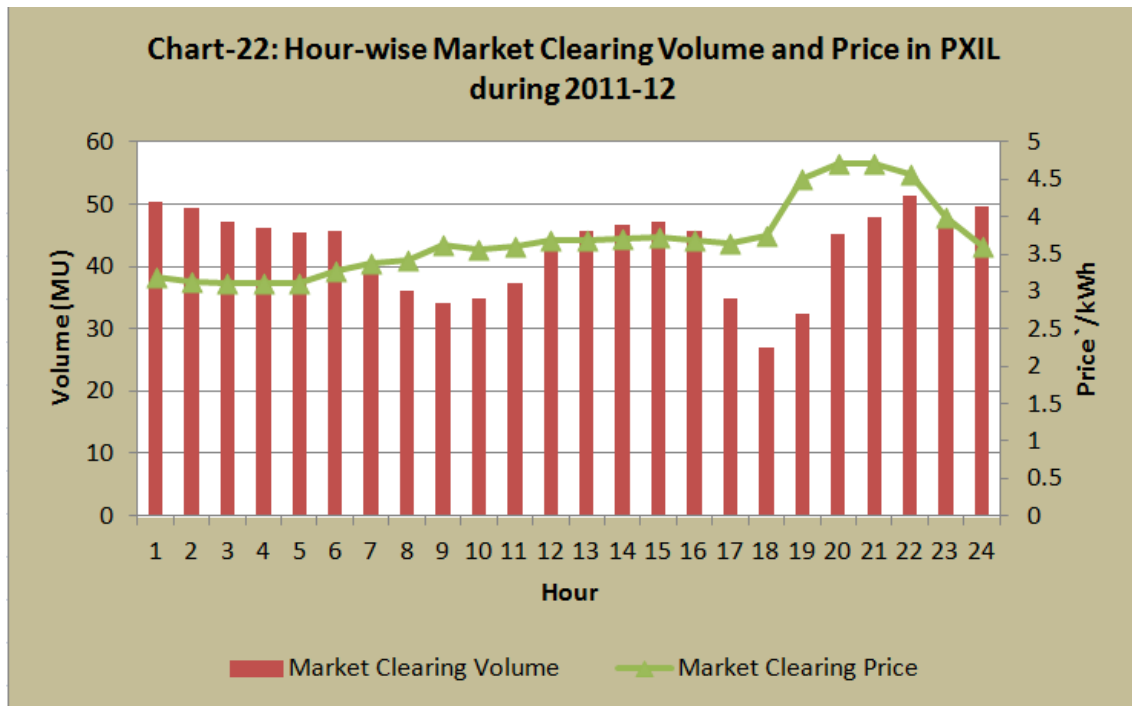
The Commission has deliberated the reasons for providing for additional return on equity in its explanatory memorandum at length. The Commission has given due consideration to the importance of reservoir based hydro generating stations of

providing peak support and necessity of development of such projects in the long run from the point of view of energy security and in the light of deteriorating share of hydro generating stations in the total mix in the country which has dropped to about 19% by the end of 11th Plan from 45.68% in 3rd Plan. The Commission has also brought out that the majority of such projects being developed are the RoR projects. The relevant portions of the Explanatory Memorandum are extracted below:

“47. In the light of above, development of reservoir based hydro power in India deserves due attention from the energy security point of view, peaking support capability and harnessing of renewable source of energy to its potential. With larger perspective of future energy scenario and environment concerns, any implication on tariff becomes a small issue considering the cost implications in future. Further there is a greater risk for the generator to bear the hydrology risk as well. It may therefore, be desirable to provide additional return on equity of 1% consciously in case of reservoir based hydro generating stations.”

7. In the above back drop, it becomes important to provide clear signal without losing any further time and therefore, the Commission is of the view that it is desirable to go for mid-term amendment of the 2009 Tariff Regulations. Further, the amended Regulation would be applicable from the date of its notification so far as this amended provision is concerned and would adequately take care of the concern of the beneficiaries as any additional liability would accrue only in future and not retrospectively. With regard to the issue of providing additional return on equity to the existing reservoir based hydro generating stations, it needs to be pointed out that existing regulations provide for sharing of hydrology risk between generator and beneficiaries in the first 10 years in the ratio of 50:50 and generator is required to bear the risk fully after 10 years. This calls for suitable adjustment in the return on equity commensurate with the increase in the risk on the generator. Earlier in the

tariff period 2004-09, entire hydrology risk was being borne by the beneficiaries. In due consideration of this, the Commission has extended the benefit of additional return on equity to the existing reservoir based hydro generating stations also. The proposed increase in RoE will result in increase in tariff of the order of 5 to 6 paise/kWh on an average and is a small price in exchange for the benefit of peak power and comfort to be derived by the beneficiaries from the transfer of hydrology risk to the generator. Further, considering the peak support from these stations, it is likely to offset high cost peak power procured from the power exchanges or through bilateral arrangements in the short term. In this connection, reference may be made to the average price in the power exchanges for the year 2011-12 as illustrated below:



It is seen that the average peak price of procurement in IEX is of the order of Rs. 4 per unit as compared to Rs. 3 per unit from the hydrogenating stations during peak. Therefore, the marginal increase in fixed cost of these stations would get

compensated adequately and is likely to have a favorable effect on the consumer tariff in the long run, provided such projects materialize.

8. On the question of whether additional return on equity should be provided at a higher rate considering higher gestation period of hydro generating stations as compared to the thermal generating stations, it is suffice to say that the purpose of providing for additional return on equity of 1% is to provide comfort to the project developers to develop storage type hydro projects. At this stage we would not like to distinguish returns on equity to be based on gestation period or by the field of investment or based on technology. On the issue whether the additional return on equity should also be provided to the RoR hydro generating stations with pondage, it is felt that there is merit in the arguments of NHPC and others. Regulation 6.5.12 of Grid Code provides that “Run-of-river power station with pondage and storage type power stations are designed to operate during peak hours to meet system peak demand.” Further 2009 Tariff Regulations also provide for computation of PAF achieved based on daily declaration of peak capacity for at least three hours. The schedule given to the generator for these 3 hours is normally during the peak hours. Since RoR hydro generating stations with pondage are also capable of providing peak power support for at least 3 hours, we are of the view that the additional return on equity of 1% should also be provided to such RoR hydro generating station with pondage.

9. In view of the above decision, clause (2) of Regulation 15 has been amended as under:

“(2)Return on Equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including

pumped storage schemes and run of river generating station with pondage and to be grossed up as per clause (3) of this regulation:"

B. Providing for more transparency in claiming energy charges by the generators by furnishing of complete details regarding GCV and Prices of fuels used for power generation {Addition to Regulation 21 (6)}

10. It was proposed to add following two provisos at the end of Clause (6) of the Regulation 21:

"Provided that the generating company shall provide details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel etc., details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal with details of the variation in energy charges billed to the beneficiaries along with the bills of the respective month.

Provided further that a copy of the bills and details of parameters of GCV & price of fuel i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel etc., details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall also be displayed on the website of the generating company. The details should be available on its website for a period of a quarter on monthly basis."

11. The responses of the stakeholders to the above proposed amendment were as under:

(a) NTPC has submitted that the Commission may prescribe a format for furnishing the information regarding use of coal and suggested a [format](#) for the purpose.

(b) TORRENT POWER has submitted that the objective of bringing in greater transparency by providing all the details of fuel including the blending ratio/proportion of various types of fuels in the calculation of energy charges is a welcome step. It is also necessary that the details are sufficiently supported

by the provisions of invoice of fuel to the off-takers. It has further been submitted that the second proviso requiring the generator to display the details of parameters of the fuel quality as well as the price and the relevant information on the website of the generator may prove counterproductive. The information may not only be confidential under the respective fuel supply agreements and/or PPAs but also business sensitive and may be harmful to the interests of the generators. The availability of such information with the beneficiaries is already ensured. However, if such information is made available in public domain, it may disclose objective strategies of the generators particularly with relation to procurement of imported coal and imported RLNG and may in fact enable the suppliers to unduly influence pricing thereby harming the interest of the beneficiaries. In view of this, it has been contended that the second proviso in the proposed amendment be deleted.

- (c) Tata Power has welcomed the proposal as it is in line with the clause 4(c) of Tariff Policy and will bring much needed transparency in the fuel procurement methodology adopted by the generators. It has further been submitted that the generators may be directed to finalize their fuel procurement and usage plan station wise for the coming quarter/half yearly in consultation with beneficiaries so that beneficiaries can take a well informed decision on scheduling of power based on merit order principle. In addition to the above, TATA Power has suggested for incorporation of a suitable provision in the 2009 Tariff Regulations in order to restrict the generators to declare their availability beyond the normative availability by using costlier imported/e-auction coal just for earning incentives.

(d) UPPCL has supported the amendment in view of the transparency required for tariff determination as per Section 79(3) of the Act and the objective of Tariff Policy.

(e) GRIDCO has also supported the proposed amendment. In addition, the following submissions have been made:

- i. The information on price and GCV of coal on monthly basis to be furnished by the CGSs, should be compiled at the end of the financial year and duly certified by the Auditors for onward submission to the beneficiaries.
- ii. The generating stations should provide the detailed calculation involved in the derivation of landed price of coal from its base price, which is provided to them by the coal suppliers. It is required to know exactly on what account the landed price of coal gets revised from time to time and even for past periods. Such information is necessary for verification of arrear bills raised pertaining to past periods.
- iii. To fix a normative ratio of blending of coal as wide variations in blending ratio (10-40%) is being observed for different Central Generating Stations like KhTPS, FSTPS etc. to bring all coal based thermal stations to a level field in respect of blending.
- iv. Only domestic coal should be used if there is no coal shortage in a power station.
- v. Imported coal should not be used in pit-head stations.
- vi. The cost of imported coal should be benchmarked with domestic coal of CIL and difference should be provided as subsidy by GOI/ CIL.

- vii. A provision should be included that the generating station should obtain prior consent from the beneficiaries for blending of imported coal with local coal.

GRIDCO has suggested the following in place of clause (2) of Regulation 25 of the 2009 Tariff Regulations:

“(2) The Commission may on its own review and revise the operational norms specified in this chapter after two years of commencement of tariff period and at the end of each financial year thereafter, in respect of any generating stations for which relaxed norms have been provided.”

- (f) PTC has submitted that the proposed amendment is a welcome move. It will help to bring transparency and reduce information asymmetry. It will also help utilities in expediting the process of invoices/bills based on parameters related fuel/ e-auction etc.

- (g) NEEPCO has submitted that the monthly bills of the fuel (natural gas) supplier includes Monthly Weighted Average GCV and landed cost of fuel and therefore, it is not possible to provide details on parameters etc. as proposed in the draft regulations. NEEPCO has suggested the following provision to be adopted:

“The generating company shall provide monthly weighted average GCV and monthly landed cost of fuel (natural gas) along-with calculation of monthly Energy Charge Rate (ECR) billed to the beneficiary along with the bills of the respective month. Further the details of the above information should be available on the website of the generator for a period of quarter on monthly basis”

- (h) NLC has submitted that the required information will be published in the company's website as per the proposed Regulation.
- (i) BRPL has submitted that the beneficiaries may or may not opt for the energy generated from the imported coal. Charging from the beneficiaries on the

basis of pooled generation cost amounts to subsidizing one set of people against the other which is not allowed under the Electricity Act, 2003.

- (j) Punjab State Power Corporation Ltd (PSPCL) has welcomed the proposed amendment. PSPCL has suggested that the fuel data/information of 12 months should be made available on the web-site, GCV measurement and sampling should be made by third party to avoid any manipulation, and calculation of average cost of coal needs more transparency.

Analysis and Decision of the Commission

12. With regard to the above proposed amendment for furnishing details of GCV and price of fuel, Tata Power Delhi Distribution Ltd, GRIDCO, UPPCL, PTC, NLC, BRPL and Punjab Power Corp have welcomed the proposal as it will bring much needed transparency. The generators have also not objected to the proposal. NTPC has submitted that the Commission may prescribe a format for furnishing the information. Torrent Power has submitted that information may be provided to the beneficiaries but should not be asked to be put on the website as it may not be possible to disclose the information due to confidentiality clause in the FSA and it may also be business sensitive and may be harmful to the interest of the generator against the supplier. We are of the view that in the interest of transparency, all information relating to the fuel including imported fuel should also be made available to the beneficiaries as well as posted on the web sites of the generators.

13. It has been submitted by the beneficiaries like GRIDCO, Tata Power Delhi Distribution Ltd, BSES and UPPCL that the information on price and GCV of coal from different sources on monthly basis should be compiled at the end of the financial year duly certified by the auditors. They have suggested for issue of directions to the generators to share with the beneficiaries the station wise fuel

procurement plan for the coming quarter/half year so that the beneficiaries can take a well informed decision on scheduling of power based on merit order principle. They have also requested to restrict the generators to declare their availability beyond the NAPAF by using imported/e-auction coal and to decide the blending ratio of imported coal in consultation with beneficiaries.

14. The Commission has in the Explanatory Memorandum observed on the issue of sharing of information regarding fuel as under:

“20. Since many of the stations are getting coal from sources other than the linked mine, the fuel charges vary due to the variation in transportation cost depending upon quantity to be transported from the non-linked coal mines. Many of the generating stations have resorted to blending with imported coal to tide over the problem of fuel shortages and accordingly, the energy charges vary depending upon the proportion of blending of imported coal. The proportion of blending of imported coal in general can be of the order of 10-15% for the existing station using Run of Mine (ROM) coal. The implication of such blending on the energy charge of the station could be of the order of 15 to 40 Paise/kWh for the coastal and non-pit head stations as per the report of the Central Electricity Authority. Some of the stations use auctioned coal also.

21. The Commission is of the view that significant variation in energy charge rate needs to be explained in clear terms. Variation in energy charges rate of the order of 30% puzzles the beneficiaries and they look for justification. There appears to be need for greater transparency on the part of generators in claiming the energy charges. Moreover, such increase in energy charges has to be recovered by the beneficiaries from their customers as fuel surcharge. Large variation in the energy charge rate may give rise to tariff shock for the beneficiaries/consumers. In view of the above, it should be the duty of the generators to provide details of parameters of GCV and price of fuel (i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG or liquid fuel) and blending ratio of imported and domestic coal, proportion of e-auction coal etc. justifying the variation in energy charges billed to the beneficiaries along with each bill/ supplementary bill. The billing information should also be available on the website of the generating company on monthly basis for period of at least 3 months.”

It can be seen from the above that the purpose is to provide for total transparency with regard to the energy charges which would help the beneficiaries in taking informed decisions regarding scheduling of the power from the thermal generating stations. Further consultation with the generator on any operational issue is not barred and the beneficiaries and the generators are free to have mutual consultations. Regulation 21(4) of 2009 Tariff Regulations provide for mutual consultation between generators and beneficiaries under fuel shortage condition as follows:

“(4) In case of fuel shortage in a thermal generating station, the generating company may propose to deliver a higher MW during peak-load hours by saving fuel during off-peak hours. The concerned Load Despatch Centre may then specify a pragmatic day-ahead schedule for the generating station to optimally utilize its MW and energy capability, in consultation with the beneficiaries. DC_i in such an event shall be taken to be equal to the maximum peak-hour ex-power plant MW schedule specified by the concerned Load Despatch Centre for that day.”

As regards obtaining the prior consent of the beneficiaries to decide the blending ratio of imported coal with domestic coal, we are of the view that this suggestion is not practicable as there may not be unanimity among the beneficiaries regarding blending ratio and different beneficiaries may give consent for different blending ratios. We are of the view that blending ratio is decided on technical considerations and the generator is in the best position to take a call in this regard. However, the generator should share the information with the beneficiaries.

15. In the light of the above decision, the following provisos have been added under Clause (6) of Regulation 21 of the 2009 Tariff Regulations:

"Provided that generating company shall provide to the beneficiaries of the generating station the details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel etc., as per the form 15 of the Part-I of Appendix I to these regulations:

Provided further that the details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal and the weighted average GCV of the fuels as received shall also be provided separately, along with the bills of the respective month:

Provided further that copies of the bills and details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel etc., details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall also be displayed on the website of the generating company. The details should be available on its website on monthly basis for a period of three months."

C. Allowing expenditure for infrastructure development for supply of power within 5 Km. radius as capital cost or additional capital expenditure (Insertion of Proviso in Regulation 7 (2) and insertion of clause (ix) in Regulation 9 (2))

16. A new proviso was proposed to be added after sixth proviso to clause (2) of Regulation 7 as follows:

"Provided also that the capital cost of the generating station shall include the cost for creating infrastructure for supply of power to the rural households located within a radius of five kilometers of the power station."

A new sub-clause was proposed to be added after sub-clause (viii) of Regulation 9 as follows:

"(ix) Expenditure on account of creation of infrastructure for supply of reliable power to rural households within a radius of five kilometers of the power station;"

17. The responses to the proposed provisions are discussed as under:

(a) UPPCL has submitted that the cost of creation of infrastructure for rural household should not be included in the capital cost of the generating station, as the beneficiaries of other states shall be liable to pay higher generation tariff. The tariff for infrastructure cost is required to be decided by SERC of that state in whose area the rural households exist. The recovery shall be made by the distribution licensee of that State under section 42 of the Act. Accordingly, the burden of "Creation of

infrastructure for supply of power for Rural household" within 5 km radius of the station should not be transferred to the beneficiaries in violation of Section 7 and 42 of the Act. It has also been submitted that the proposed amendment does not specify the limit of cost and type of work as it may adversely affect the consumers due to higher tariff at the discretion of CERC. It is unjustified and arbitrary.

(b) BSES Rajdhani has disagreed with the proposed amendment as it seeks to effectively pass the burden on to the beneficiaries. It has been submitted that the statement of the Hon'ble Minister for Power in the Parliament without consulting the beneficiaries, clearly indicate that the responsibility would be borne either by the Central Government or by the Generating Company from their own funds meant for socio-economic activities. The amount both capital and revenue cannot be charged from the beneficiaries.

(c) Punjab State Power Corporation Limited has submitted that capital cost for infrastructure for supply of power to rural households within a radius of 5 Km. should be met from the dividend provided to the Central Govt. by every CPSU. The burden of the cost should not be put on the beneficiaries.

(d) Ms Mallika Sharma Bezbarua, consumer activist has submitted that the provision of infrastructure cost on capital investment is not in accordance with the Tariff Policy and the Act. There is no separate category to the Rural Electrification but electrification of rural households falls under the provisions of 42 of the Act. It is a distribution activity and to be a distribution licensee, a person must be a licensee under section 12 of the Act. Under the circumstances, before amending the 2009 Tariff Regulations, the provisions of the Act need to be amended first. Therefore, the capitalizing the Rural Electrification of surrounding villages will make the generating

company a distribution company without license which is not permissible under law. Therefore, the proposed amendment must be dropped.

(e) Rajasthan Vidhyut Vikas Sansthan has submitted that the explanations given in the Explanatory Memorandum for capitalization of expenditure for creating infrastructure for supply of reliable power to house in village within a radius of 5 Km does not fulfil the basic requirements under Section 61 (a) to 61 (i) of the Act, and hence the proposed amendment is fully violative of the Act. It has been submitted that CERC being creation of the statute is supposed to justify all its actions in terms of the statutory provisions. The legally sustainable way could have been to incorporate a provision in the Tariff Policy which would then have become a guiding factor for CERC in terms of Section 61(i) of the Act. Any other guidance through an instrument other than Tariff Policy is not legally valid. The Objector has submitted that the proposed amendment is also violative of section 61(b) which mandates that commercial principle shall be adopted for deciding the terms and conditions of tariff. The Objector has suggested that the proposed amendment should be dropped and should be taken up only when a suitable amendment is first made in the Tariff Policy as per Section 3 of the Act.

Analysis and Decision of the Commission

18. We have considered the comments of the stakeholders. We are unable to agree with the views that any expenditure on the welfare of the local people on the direction of the Govt should only be allowed if it is through tariff policy or a statutory Notification. Ministry of Power through letter dated 27.7.2009 has notified the scheme under which the Central Public Sector Undertakings (CPSUs) are required to create infrastructure for supply of reliable power to the rural households in the villages within a radius of 5 km of their existing and upcoming power stations. The

scheme further provides that the appropriate Commission shall consider the expenditure incurred by the CPSUs for implementation of the scheme for the purpose of determining the tariff of their respective generating stations. The expenditure on creation of such infrastructure is to be made by the generator but would be operated and maintained by the State Discoms and therefore, we do not see that there would be any legal hurdle or any double charging. We are also of the view that such development of infrastructure by the generator for supply of power to the local people is a welcome step as it is often seen that the villages in the vicinity of the generating station remain without power on account of the lack of infrastructure for supply of power. In any case, the expenditure on implementation of such scheme may not be much as compared to the total cost of the station and could as well be met by the generator on its own as a part of its corporate social responsibility which is an obligation on the part of the generator. We are of the view that the generator shall have the option of meeting this expenditure on its own to fulfil its obligation under corporate social responsibility. Accordingly, the following provision has been approved for incorporation in the amendment to the 2009 Tariff Regulations:

Proviso under Regulation 7(2)

“Provided also that the capital cost of the generating station shall include the cost for creating infrastructure for supply of power to the rural households located within a radius of five kilometers of the power station if the generating company does not intend to meet such expenditure as part of its Corporate Social Responsibility.”

Proviso under Regulation 9(ix)

“(ix) Expenditure on account of creation of infrastructure for supply of reliable power to rural households within a radius of five kilometers of the power station if, the generating company does not intend to meet such expenditure as part of its Corporate Social Responsibility.”

D. Providing for norm of initial spares for the pumped storage scheme and GIS sub-station {Amendment of Regulation 8 (iii) and insertion of new clause 8 (iv)}

19. It was proposed to repeal sub-clause (iii) of Regulation 8 of 2009 Tariff Regulations to provide for initial spares for the pumped storage hydro-electric generating station @ 1.5% as in case of the other hydro generating stations. Further, it was proposed to add a new category under transmission to provide for the initial spares for Gas Insulated Sub-station (GIS) @3.5%.

20. Responses to the proposed amendment are as under:

(a) With regard to the provision of 1.5% of the original capital cost for the pumped storage scheme, THDC has submitted that Initial spares for the pumped storage scheme should be 3% for more running of the machines.

(b) With regard to the initial spares for GIS substations, Torrent Power has submitted that it should be 6% of the project cost, excluding the cost of land and civil works. PGCIL has submitted that initial spares for GIS substations should be 5%. In addition it has been submitted by PGCIL that while considering initial spares for sub-station @2.5% of the capital cost, the capital cost should include sub-station, PLCC, land, building and civil works. Norms of initial spares for sub-station extension should also be specified as 5% and initial spares for multi Ckt (M/C) Tower should be higher by 0.75 % as the concentration of equipment/ material is very high compared to S/C or D/C tower.

(c) UPPCL has submitted that there is a need to limit the %age of initial spares on the basis of "Normative or Actual whichever is lower" principle as required under section 61 (d) and (g) of the Act.

(d) Ms Mallika Sharma Bezbaruah, consumer activist has submitted that the initial spares of 3.5 % for GIS sub-station is very high. GIS sub-station is highly efficient and requires very less maintenance. Data of maintenance of GIS sub-station of other state owned utilities, private utilities is required to be looked into to take a pragmatic view.

Analysis and Decision of the Commission

21. We have considered the views of the stake holders. We are not convinced with the argument of THDC with regard to higher norms for the initial spares since the higher cost of pumped storage plant vis-à-vis a normal Hydro plant would in any case have a higher value of spares. As such, a norm of 1.5% of the cost for the Pumped storage scheme has been retained. With regard to norms for the GIS Sub-station, the Commission has recognized that the data is available with regard to sub-stations of PGCIL only and elaborate rationale for the norm of 3.5% of the capital cost has been given in the explanatory memorandum. Since no further data have been provided by any stakeholder, we have retained the norms of 3.5% of the capital cost as proposed in the draft amendment.

E. Allowing any indispensable expenditure for the running of the coal/lignite based power stations (insertion of Clause 9 (x) in Regulation 9 (2))

22. It was proposed to insert a new sub-clause (x) in Regulation 9 as under:

“(x) Any expenditure which is considered indispensable by the Commission for running the thermal generating station:

Provided that in case of coal-based and lignite-fired generating station, compensation allowance under clause (e) of Regulation 19 shall not be admissible.”

23. The responses to the proposed amendment are as under:

(a) NTPC has submitted that it is difficult to establish that proposed work is indispensable. As such, the word ‘indispensable’ may be replaced with words

“necessary and expedient” which are in line with statement of reasons. NTPC has also submitted that a sub-clause may be added for servicing of any additional expenditure incurred to meet the requirement of PAT scheme notified by Ministry of Power.

(b) NEEPCO and Torrent Power have submitted that the word ‘indispensable’ may be replaced with words “necessary for efficient & successful operation of the generating station”.

(c) NTPC, NLC, and DVC have submitted that Compensatory allowance may also be allowed so that minor capital assets (IT equipments/furniture etc) may be purchased.

(d) The Tata Power Delhi Distribution Ltd has submitted that the expenditure ‘essential’ for running the thermal generating station is already covered under clauses 9(1), (2) and 19(e) of the tariff Regulation and thus insertion of sub-clause (x) may be reconsidered by the Commission.

(e) UPPCL has submitted that the proposed amendment does not specify the limit of cost and type of work as it may adversely affect the consumer due to higher tariff at the discretion of CERC.

(f) BSES Rajdhani has submitted that the criteria explained for the above amendment in the explanatory memorandum is not satisfactory. Provision of Regulation 19 (e) is self sufficient in itself and there appears to be no need for further modification in the same. It has been further submitted that the generating companies and the inter-state transmission licensees are getting huge profit and any further benefit to them would adversely affect the power sector.

Analysis and Decision of the Commission

24. We have considered the views of the stakeholders. We are of the view that the compensation allowance under Regulation 19 (e) was provided in case of coal/lignite based stations to meet all the capital expenditure other than the expenditure covered under change of law and on ash handling system. Such expenditures are already covered in the Regulations 9(1) and 9(2). Further, the compensation allowance was provided based on the analysis of the data of the CPSUs. In view of above, it may not be advisable to go ahead with the proposed amendment. Accordingly, the proposed amendment is being dropped.

F. Tariff of the pumped storage scheme/Projects {Insertion of Regulations 3 (31A), 22 (A), and (27)}

25. The proposed amendments provide for insertion of the definition of the '*pumped storage hydro generating station*' by inserting a new clause after clause 31 of Regulation 3 of the 2009 Tariff Regulations as under:

"(31A) 'pumped storage hydro generating station' means the hydro station which generates power through energy stored in the form of water energy, pumped from a lower elevation reservoir to a higher elevation reservoir."

The amendments also provide for insertion of the word "including pumped storage hydro generating Station" after the word "hydro generating stations" in sub-clause (b) of clause (12), clause (41) and sub-clause (d) of clause (42) of Regulation 3 of 2009 Tariff Regulations.

26. No comments have been received on the above proposed amendments. As such, amendments as proposed have been adopted.

27. The proposed amendments also provided for insertion of a new Regulation 22A as follows:

"22A. Pumped Storage Hydro Generating Stations

(1) The fixed cost of a pumped storage hydro generating station shall be computed on annual basis, based on norms specified under these regulations and recovered on monthly basis as net capacity charge after deducting 75 % of the revenue earned by the station from the generation and sale of power in excess of the design energy plus 75% of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir in a month from the monthly fixed charges. The net capacity charge (inclusive of incentive) shall be payable by the beneficiaries in proportion to their respective allocation in the saleable capacity of the generating station, that is to say, in the capacity excluding the free power to the home State:

Provided that during the period between the date of commercial operation of the first unit of the generating station and the date of commercial operation of the generating station, the annual fixed cost shall provisionally be worked out based on the latest estimate of the completion cost for the generating station, for the purpose of determining the capacity charge payment during such period.

(2) The capacity charge (inclusive of incentive) payable to a pumped storage hydro generating station for a calendar month shall be:

$((AFC \times NDM / NDY) - 0.75 \times ECCm)$ (in Rupees), if actual Generation during the month is $\geq 75\%$ of the Pumping Energy consumed by the station during the month and

$((AFC \times NDM / NDY) \times (\text{Actual Generation during the month during peak hours} / 75\% \text{ of the Pumping Energy consumed by the station during the month}))$ (in Rupees)), if actual Generation during the month is $< 75\%$ of the Pumping Energy consumed by the station during the month.

Where,

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

NDM = Number of days in the month

NDY = Number of days in the year

ECCm = Energy charge Credits for the sale of power in excess of the Design energy plus 75% of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir, of the month in Rupees as per sub-clause 4 and 5.

(3) The energy charge shall be payable by every beneficiary for the total energy scheduled to be supplied to the beneficiary in excess of the design energy plus 75% of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir, at a flat rate equal to the average energy charge rate of 80 paise per kWh, excluding free energy, if any, during the calendar month, on ex power plant basis. The revenue earned as energy charges during the month by the generating station from the beneficiaries shall be termed as Energy charge Credits (ECCm) for the sale of power in excess of the design energy plus 75% of the energy utilized in

pumping the water from the lower elevation reservoir to the higher elevation reservoir of the month.

(4) Energy charge payable to the generating company for a month shall be:
= $0.80 \times \{ \text{Scheduled energy (ex-bus) for the month in kWh} - (\text{Design Energy for the month} + 75\% \text{ of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir of the month}) \} \times (100 - \text{FEHS}) / 100.$

Where,

DEm = Design energy for the month specified for the hydro generating station, In MWh, subject to the provision in clause (6) below.

FEHS = Free energy for home State, in per cent, as defined in regulation 32, if any.

Provided further that in case the Scheduled energy in a month is less than the Design Energy for the month plus 75% of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir of the month, then the energy charges payable by the beneficiaries and ECCm shall be zero.

(5) The Generator shall be maintaining the record of daily inflows of natural water into the upper elevation reservoir and the reservoir levels of upper elevation reservoir and lower elevation reservoir on hourly basis. The generator shall be required to maximize the peak hour supplies with the available water including the natural flow of water. In case it is established that generator is deliberately or otherwise without any valid reason, is not pumping water from lower elevation reservoir to the higher elevation during off-peak period or not generating power to its potential or wasting natural flow of water, the capacity charges of the day shall not be payable by the beneficiary on an order of the Commission in this regard on an application made to it by any of the beneficiary."

28. The responses of the stakeholders are as under:

(a) NEEPCO is agreeable to the proposed inclusion of Regulation 22 A.

(b) THDC has submitted that in case of better performance, the generator should be incentivised and in case of fault, generator should be penalised. Certain changes have been proposed by THDC in the methodology of recovery of Annual Fixed Cost to ensure that the AFC is recovered by the generating station even in the circumstances which are beyond the control of the generating station. For example, in case of Tehri PSP, there would be few months during monsoon period when no

pumping would take place because of the hydrological limitations. THDC has submitted that for days pumping and generation may not take place due to hydrological reasons beyond the control of the generating station or design of the generating station or the beneficiary does not provide the pumping energy for any reason beyond the control of the generating station. The THDC has proposed that Regulation 22A may be modified as under:

"22A. Pumped Storage Hydro Generating Stations

(1) The fixed cost of a pumped storage hydro generating station shall be computed on annual basis, based on norms specified under these regulations, and recovered on monthly basis as Capacity Charge. The Capacity Charge (inclusive of incentive) shall be payable by the beneficiaries in proportion to their respective allocation in the capacity of the generating station as per PPA(s) or as notified by Ministry of Power, Govt. of India.

(2) The capacity charge payable to a pumped storage hydro generating station for a calendar month shall be computed on daily basis beneficiary-wise as under :

(a) For the days when pumping & generation take place :

Capacity Charge (Rs) (inclusive of incentive) = (AFC X percentage allocation of the beneficiary in the capacity of the station X Actual Generation during the day during peak hours) / (NDY X 100 X 75% of the Pumping Energy consumed by the station during the day)

(b) Capacity Charge (Rs.) = (AFC X percentage allocation of the beneficiary in the capacity of the station) / (NDY X 100)

The total capacity charge for the month shall be the sum of daily capacity charges calculated as per (a) & (b) above.

The total Capacity Charge for the year shall be the sum total of the monthly Capacity Charges calculated as above for the individual months.

where,

AFC = Annual Fixed Cost specified for the year, in Rupees.

NDY = Number of days in the year

The utilisation of the plant in terms of quantum of pumping energy and corresponding peak generation shall be subject to limitation as per DPR of the project / approval of the Authority.

(3) In case the actual saleable energy generated due to natural flow of water (i.e without using recycled water) in a month exceeds $\{NEm \times (100-Aux.) \times (100- FEHS)/10000\}$ kWh, the Energy Charge Credit (ECCm) for the energy in excess of the above shall be payable by every beneficiary and billed at One Hundred Fifty paise per kWh.

Where,

NEm = Energy (kWh) for the month specified for pumped storage hydro generating station to be produced using natural flow of water only (i.e without using recycled water) duly approved by Authority.

FEHS = Free energy for home state, in percent, as defined in Regulation 32, if any, out of the energy generated due to natural flow of water only (i.e without using recycled water).

(4) Energy Charge Credit payable in Rupees to the generating company for a month beneficiary-wise shall be:

= $1.50 \times [\text{actual saleable energy generated due to natural flow of water (i.e without using recycled water) in a month} - \{NEm \times (100-Aux.) \times (100- FEHS \times \text{percentage allocation of the beneficiary in the capacity of the station})/1000000\}]$.

The allocation of energy to various beneficiaries shall be made for the energy generated due to natural flow of water. This allocation will be made out of the quantity of such energy available after supplying free energy to home state. The allocation of energy (available after free energy to home state) shall be in proportion to beneficiaries' respective allocation in the capacity of the generating station.

Provided further that in case the scheduled energy (due to natural flow of water) in a month is less than the NEm, then the energy charge credit payable by the beneficiaries shall be zero."

THDC has further submitted that as per the DPR of Tehri PSP (1000 MW), 1268 MU energy will be generated against the input energy of 1712 MU (used in pumping water from lower reservoir to upper reservoir) on annual basis.

Punjab Power Corporation has suggested that details from other pumped storage schemes are also required instead of relying on the data of only one PSP scheme. The concept of design energy can be taken by giving a margin of 2-3% from station to station as has been given deviation in the Gross Station

Heat rate of Thermal power stations from the design heat rate in the 2009 Regulation. In case of Tehri HEP, the design energy is 80% and so for PSP it should be increased to 80%.

Analysis and Decision of the Commission

29. The Commission in the Explanatory Memorandum to the Draft amendments has observed as follows:

"48. The Pumped storage schemes utilize stored energy in the form of water, pumped from a lower elevation reservoir to a higher elevation for load balancing and peaking support. Approximately 70% to 85% of the electrical energy used to pump the water into the elevated reservoir can only be regained due to evaporation losses from the exposed water surface and due to conversion losses. The Commission had relied upon actual data for 2007-08 and 2008-09 of the Purullia Pump Storage Project (4x225 MW) and had proposed for generation of power during peak hours of 75% and above of the pumping energy.

49. It was proposed in a draft proposal to amend the tariff Regulation 2009 that the quantum of electricity required for pumping water from down-stream reservoir to up-stream reservoir shall be arranged by the beneficiaries duly taking into account the transmission and distribution losses etc. up to the bus bar of the generating station. In return beneficiaries will be entitled to equivalent of 75% of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir from the generating station during peak hours and the generating station shall be under obligation to supply such quantum of electricity during peak hours. The O&M expenses were proposed to be on the same lines as that for the conventional Hydro generation. The proposed amendments also provided for passing of benefits from sale of power over and above the design energy +75% of the pumping energy consumed.

50. PTC had welcomed the proposal and had sought a tariff structure on the lines of conventional hydro generating stations. PTC had further submitted that the generator should not retain any benefit from sale of power over and above design energy. Tehri Hydroelectric Development Corporation (THDC) had submitted that the design energy of pumped storage station should be deemed to be zero. It had been further submitted that the initial spares should be capped at 2% of the original capital cost.

51. Since the pumped storage schemes are generally meant to take advantage of specific site for getting peaking support despite scanty water availability situations over the year, it is felt that the such stations should be paid full capacity charge as long as the station is able to provide such peaking support proportionate to the pumped energy provided by the beneficiary after accounting for pumping and evaporation losses. In this backdrop, the concept of NAPAF may not be of much relevance for such stations and hence, tariff structure could be further simplified. Recovery of capacity charge may be linked to the extent such support is provided by the generator. Further any revenue from the generation in excess of proportionate pumping energy of about 75% + the design energy may be provided to be shared with beneficiaries in the ratio of 75:25 (75% beneficiaries and 25% generator) as the hydrology risk is to be borne by the beneficiaries. The retaining of 25% revenue by the generator would incentivize them to provide additional support in excess of 75% of the pumping energy and over and above the design energy.

52. Since the beneficiaries are under payment obligation for full fixed charges and hydrology risk is to be borne by them it is necessary that they get full benefits of power generation which the station is capable of generating with the available water without any wastage and therefore, a provision could have been made to ensure that the generator takes all due care to maximize the use of water to its full potential and in case, he fails to do that without any valid reason, then the generator loses the capacity charges for the day."

30. It may be noticed that the concerns of the THDC that the generator should be able to recover its full fixed charge is adequately taken care of and in return the only requirement expected is that the plant should be providing the intended peaking support up to the expected level which is 75% of the pumping power consumed in a day. The complete hydrology risk is being born by the beneficiaries of the station and therefore, it is desirable that the any benefit of generation from the natural flow of water should be available to the beneficiaries. However, in order to incentivize the generator, it has been provided for sharing of Energy Charge credits with the beneficiaries in the ratio of 75% for the beneficiaries and 25% for the generator. The generator would however, be required to declare its availability of the plant

considering the natural flow of the water on a day ahead basis in line with scheduling procedure in Grid Code. However, it is felt that this provision may be further simplified with provision of energy generation in excess of 75% of pumping energy plus from natural flow of water above the design energy to be paid at a rate of 20 paise/kWh and doing away with Energy charge credit.

31. The Punjab State Power Corporation Ltd. has questioned the conversion efficiency norm of 75% for the pumped storage projects stating that details from other pumped storage schemes are also required instead of relying on the data of only one PSP scheme. PSPCL has sought a norm of 80% instead of 75%. We have examined the issue further. We find that the cycle efficiency in case of some of the projects of Maharashtra namely, Paithan PSP and Ujjani PSP are well below 70% as quoted in the MERC order 9.2.2009. It is also found that Alstom is offering Pumped storage projects of the order of 80%. However, we would like to keep a conservative conversion efficiency norm of 75% at this stage. It has also been provided to ensure that the generator takes all due care to maximize the use of water to its full potential and in case, he fails to do that without any valid reason, then the generator loses the capacity charges for the day. However, this provision is not very specific and it is felt that except for the outages including planned and force outages, the generator should run the units and the station on demand.

32. In view of the above discussion, the Regulation 22 A as revised has been included in the amendment to the 2009 Tariff Regulations:

"22A. Pumped Storage Hydro Generating Stations

(1) The fixed cost of a pumped storage hydro generating station shall be computed on annual basis, based on norms specified under these regulations, and recovered on monthly basis as capacity charge. The capacity charge shall be payable by the beneficiaries in proportion to their respective

allocation in the saleable capacity of the generating station, that is to say, in the capacity excluding the free power to the home State:

Provided that during the period between the date of commercial operation of the first unit of the generating station and the date of commercial operation of the generating station, the annual fixed cost shall provisionally be worked out based on the latest estimate of the completion cost for the generating station, for the purpose of determining the capacity charge payment during such period.

(2) The capacity charge payable to a pumped storage hydro generating station for a calendar month shall be:

$(AFC \times NDM / NDY)$ (in Rupees), if actual Generation during the month is $\geq 75\%$ of the Pumping Energy consumed by the station during the month and

$((AFC \times NDM / NDY) \times (\text{Actual Generation during the month during peak hours} / 75\% \text{ of the Pumping Energy consumed by the station during the month}))$ (in Rupees)), if actual Generation during the month is $< 75\%$ of the Pumping Energy consumed by the station during the month.

Where,

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

NDM = Number of days in the month

NDY = Number of days in the year

(3) The energy charge shall be payable by every beneficiary for the total energy scheduled to be supplied to the beneficiary in excess of the design energy plus 75% of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir, at a flat rate equal to the average energy charge rate of 20 paise per kWh, excluding free energy, if any, during the calendar month, on ex power plant basis.

(4) Energy charge payable to the generating company for a month shall be:
 $= 0.20 \times \{\text{Scheduled energy (ex-bus) for the month in kWh} - (\text{Design Energy for the month} + 75\% \text{ of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir of the month})\} \times (100 - \text{FEHS}) / 100.$

Where,

DEm = Design energy for the month specified for the hydro generating station, In MWh, subject to the provision in clause (6) below.

FEHS = Free energy for home State, in per cent, as defined in regulation 32, if any.

Provided further that in case the Scheduled energy in a month is less than the Design Energy for the month plus 75% of the energy utilized in pumping the

water from the lower elevation reservoir to the higher elevation reservoir of the month, then the energy changes payable by the beneficiaries shall be zero.

(5) The Generator shall maintain the record of daily inflows of natural water into the upper elevation reservoir and the reservoir levels of upper elevation reservoir and lower elevation reservoir on hourly basis. The generator shall be required to maximize the supplies with the available water including the natural flow of water. In case it is established that generator is deliberately or otherwise without any valid reason, is not pumping water from lower elevation reservoir to the higher elevation during off-peak period or not generating power to its potential or wasting natural flow of water, the capacity charges of the day shall not be payable by the beneficiary. For this purpose, outages of the unit(s)/station including planned outages and the forced outages up to the 15% in a year shall be construed as the valid reason for not pumping water from lower elevation reservoir to the higher elevation during off-peak period or not generating power using energy of pumped water or natural flow of water.

Provided further that the total capacity charges recovered during the year shall be adjusted on prorata basis in the following manner in the event of total machine outages in a year exceeds 15%:

$$(ACC)_{adj} = (ACC)_R \times (100 - ATO) / 85$$

Where,

(ACC)_{adj} – Adjusted Annual capacity Charges

(ACC)_R – Annual capacity Charges recovered

ATO - Total Outages in percentage for the year including forced and Planned outages

Provided further that the generating station shall be required to declare its machine availability daily on day ahead basis for all the time blocks of the day in line with the scheduling procedure of Grid Code."

33. It was proposed to issue an amendment to Regulation 27 of 2009 Tariff Regulations by inserting a new sub-clause as under:

"(iii) In case of Pumped storage hydro generating stations, the quantum of electricity required for pumping water from down-stream reservoir to up-stream reservoir shall be arranged by the beneficiaries duly taking into account the transmission and distribution losses etc. up to the bus bar of the generating station. In return beneficiaries will be entitled to equivalent energy of 75% of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir from the generating station during peak hours and the generating station shall be under obligation to supply such quantum of electricity during peak hours.

Provided that in the event of the beneficiaries failing to supply the desired level of energy during off-peak hours, there will be pro-rata reduction in their energy entitlement from the station during peak hours.

Provided further that the beneficiaries may sell their share of capacity in the generating station, in part or full, whereupon the owner of the capacity share will be responsible for arranging the equivalent energy to the generating station in off-peak hours, and be entitled to corresponding energy during peak hours in the same way as the original beneficiary was entitled.”

34. The responses to the proposed amendment were as under:

(a) UPPCL has not favoured the proposal of arranging electricity by the beneficiaries required for pumping water on the following grounds:

- i. Allocation for above electricity ought to be made by the Govt. of India through 15% unallocated quota or other policies.
- ii. The beneficiaries are not able to ensure power for their state/area due to various reasons.
- iii. The hydro generating station ought to take responsibility for arranging the input of generation of power by themselves.

(b) THDC has suggested that the O&M Expenses should be kept as minimum 3 % in place of 2 % due to more than double operation of the plant.

35. We have considered the objections and suggestions of the stakeholders. In our view, it would be better and a cleaner arrangement if the power for pumping water is arranged by the beneficiaries. This will obviate the possibility of any dispute with regard to the price at which pumping power is arranged by the generator for pumping water from the downstream reservoir to upstream reservoir. As regards the submission of THDC, we are of the view that O&M @ 2% of the capital cost is reasonable as increased cost of pumped storage scheme would take care of any additional O&M requirement. Accordingly, the amendment to Regulation 27 as proposed is being retained with minor modification in the last proviso.

G. Payment of water charges payable by hydro generating stations in the State of J&K as additional energy charges { Insertion of Regulation 22 (7a)}

36. The State of Jammu & Kashmir enacted State Water Resources Development Authority, Jammu under Jammu & Kashmir Water Resources (Regulations and Management) Act, 2010 under which the hydro generating stations are required to obtain licence and pay licence fees for use of water and also pay the water charges. NHPC has challenged the said Act before the High Court of Jammu & Kashmir in OWP No.604/2011. The Hon'ble High Court in its order dated 4.5.2011 has directed NHPC to apply for licence and deposit the water usage charge raised by the State Water Resources Regulatory Authority. The High Court has directed the State Water Resources Regulatory Authority to keep the amount collected from the petitioner on account of water usage charges in a separate account subject to the outcome of the writ petition. Since this is an additional cost to the hydro generating company, the Commission after hearing the beneficiaries in its order dated 21.10.2011 had decided to reimburse the water usage charges and licence fees subject to the decision of the Hon'ble High Court in the Writ Petition. The Commission in its order dated 21.10.2011 had directed as under:

“20. In view of our decision to reimburse the water usage charges and licence fees, we direct the staff of the Commission to move appropriate amendment to the 2009 regulations. The petitioner is pursuing the matter in the Hon'ble High Court of Jammu & Kashmir. The petitioner is directed to keep the Commission and the beneficiaries apprised about the development of the court case.

21. Subject to amendment of the 2009 regulations, the petitioner shall be entitled for reimbursement of expenditure on water usage charges and licence fee from the beneficiaries. In the event the petitioner succeeds in the writ petition, the water usage charges and the licence fees shall be refunded to the beneficiaries.”

37. Keeping in view the above decision, a new clause was proposed to be added after clause (7) of Regulation 22 as under:

“7a. In case of the hydro generating stations of NHPC Limited located in the State of Jammu and Kashmir, any expenditure incurred for payment of water usage charges to the State Water Resources Development Authority, Jammu under Jammu & Kashmir Water Resources (Regulations and Management) Act, 2010 shall be payable by the beneficiaries as additional energy charge in proportion of the supply of power from the generating stations on month to month basis:

Provided that the provisions of this clause shall be subject to the decision of the Hon’ble High Court of Jammu & Kashmir in OWP No.604/2011 and shall stand modified to the extent of inconsistency with the decision of the High Court.”

38. The responses of the stakeholders to the proposed amendment are as under:

(a) UPPCL and PTC have submitted that any decision in this matter may be deferred till the decision of Hon’ble High Court of Jammu & Kashmir.

(b) NHPC has sought reimbursement of the water usage charges and the licence fee from the date of payment to J&K authorities. NHPC has also submitted that since it has paid the water charges as and when demanded by J&K authorities and ensured supply of electricity to the beneficiaries, the reimbursement may be allowed with interest.

(c) NTPC has submitted that the thermal generating stations also have similar situation. State Governments have increased water charges abnormally resulting in increase in O&M cost and this increase is beyond the reasonable control of the generating company. As such, the billing and recovery of additional water charges may be allowed in case of thermal generating stations.

(d) Athena Power has submitted that the scope need not be confined only to such expenditure incurred by NHPC and should cover all HEPs in Jammu and Kashmir or in any other state.

Analysis and Decision of the Commission

39. We have considered the views of the stakeholders. We are unable to agree that reimbursement of water usage charges should be allowed after the judgment of the High Court of J&K. NHPC after notification of the Jammu & Kashmir Water Resources (Regulations and Management) Act, 2010 has challenged the said Act before the High Court of J&K and during the pendency of the writ petition has deposited the water usage charges and licence fees in terms of the interim directions of the High Court. Thus NHPC has incurred the expenditure on water usage charges in order to ensure that power is generated by its generating stations and supplied to the beneficiaries. On their part, the beneficiaries have enjoyed the benefits of power as otherwise without paying the licence fee and water usage charges, NHPC could not have utilised the water for generation and supply of electricity. Therefore, NHPC is entitled to reimbursement of the water usage charges from the date it was paid to the J&K Government. These water charges are being allowed as additional energy charges for hydro stations of NHPC. The payment of such water usage charges has been made subject to the outcome of the decision of the High Court of J&K. If NHPC succeeds, it will refund the water charges to the beneficiaries. NTPC has sought similar treatment for reimbursement of water charges in respect of the thermal generating stations. We are of the view that the case of NTPC does not stand on a similar footing as that of the water usage charges in J&K. In any case, each case needs to be decided on its own merit. NHPC has submitted that it should be allowed interest on water usage charges from the date of payment to J&K till the date of reimbursement by the beneficiaries. We find merit in the submission of NHPC. The water usage charges became payable from November 2010 onwards and NHPC has paid the same from its own resources. NHPC approached this Commission in June

2011 and the petition was decided on 21.10.2011 subject to the amendment of the 2009 Tariff Regulations. The beneficiaries are aware of the increase in water charges and also participated in the proceedings before the Commission. In other words the beneficiaries are aware of their liability from the very beginning. Since NHPC has paid the water usage charges which has gone to the benefit of the beneficiaries in the form of supply of power, we are of the view that NHPC should be entitled to reimbursement of water usage charges by the beneficiaries alongwith interest from the date of payment to J&K till the date of notification of the regulations which shall be payable in six equal monthly instalments. In so far as current water usage charges are concerned, NHPC will be entitled for reimbursement on month to month basis from the beneficiaries in proportion to the supply of power from the generating stations. The reimbursement has been made subject to the decision of the High Court of J&K and if NHPC succeeds, it will refund the reimbursement of water usage charges alongwith interest. Accordingly, the proposed amendment has been accepted with suitable modification as under:

“7a. In case of the hydro generating stations of NHPC Limited located in the State of Jammu and Kashmir, any expenditure incurred for payment of water usage charges to the State Water Resources Development Authority, Jammu under Jammu & Kashmir Water Resources (Regulations and Management) Act, 2010 shall be payable by the beneficiaries as additional energy charge in proportion of the supply of power from the generating stations on month to month basis:

Provided that NHPC shall be entitled to recover the additional energy charges for the payment already made to State Water Resources Authority, Jammu as water usage charges as on the date of notification of these regulations along with interest at the prevailing State Bank of India base rate in six equal monthly installments:

Provided further that the provisions of this clause shall be subject to the decision of the Hon’ble High Court of Jammu & Kashmir in OWP No.604/2011 and shall stand modified in accordance with the decision of the High Court.”

H. Making applicable the provisions to the CPSUs as well the provisions which were only applicable to the hydro stations of the company not being a State controlled or owned company (Amendment of Regulation 7 (2) and 32 Note 3)

40. Fourth proviso to clause (2) of Regulation 7 of the 2009 Tariff Regulations provides as under:

“Provided also that the Commission may issue guidelines for scrutiny and approval of commissioning schedule of the hydro-electric projects of a developer, not being a State controlled or owned company as envisaged in the tariff policy as amended vide Government of India Resolution No 23/2/2005-R&R (Vol.IV) dated 31st March 2008:”

The above provision was specified in 2009 Tariff Regulations keeping in view the mandate in the tariff policy to issue guidelines for scrutiny and approval of the commissioning schedule of the hydro electric projects of a developer other than a State controlled or owned company. The Tariff Policy has been amended by the Government India, Ministry of Power vide Resolution No.23/22005-R&R(Vol-IV) dated 8.7.2011 in which the appropriate Commissions are required to issue guidelines for scrutiny and approval of the commissioning schedule of the hydroelectric projects irrespective of whether the project is developed by State controlled/owned company or a Private developer. Accordingly, it was proposed to modify the said proviso as under:

“Provided also that the Commission may issue guidelines for scrutiny and commissioning schedule of the hydro-electric projects in accordance with the tariff policy issued by the Central Government under section 3 of the Act and as amended from time to time.”

Similarly, the proviso to Note 3 under Regulation 32 had reference to project developer, not being a State controlled or owned company. It was proposed to delete the same.

41. No comment has been received on this amendment. Accordingly, the amendments have been retained.

I. Reimbursement of RLDC Charges, license fees etc by the beneficiaries to the generators {Insertion of Regulation 42(a)}

42. The Commission in its order dated 6.2.2012 in Petition No.129/MP/2011 and related petitions had decided as under:

“.....In our view, the system operation charges, market operation charges, proportionate share of NLDC charges and the registration charges etc. which are charged to the generating companies and inter-State transmission licensees whose tariff is being determined by the Commission shall be recovered from the beneficiaries.”

Further the Commission in its order dated 25.10.2011 in Petition Nos.20/2011 and 21/2011 had directed as under:

"16. Licence fee never constituted a part of O & M expenses in the past periods and therefore, it has not been captured in the norms specified by the Commission in 2004 and 2009 regulations. The respondents have suggested that the licence fee should be borne by the petitioner from the savings under O & M expenses. We are of the view that since licence fee has not been considered while fixing the norms for O & M expenses, it would not be appropriate to ask the petitioner to bear the expenditure from O & M expenses. The petitioner has placed on record the copies of the regulations issued by some of the State Commissions which deal with the issue of bearing the cost of licence fee. We notice that the State Commissions have allowed the reimbursement of licence fee of intra-State transmission licensees as part of the ARR of the distribution companies. That being the case, the licence fee paid by the petitioner should be allowed as a pass through in tariff.”

43. In view of the above decisions, a new regulation was proposed to be added after Regulation 42 as under, namely:

“42A. Reimbursement of Fees and Expenses

(1) The following fees shall be reimbursed directly by the beneficiaries or the transmission customers in proportion of their allocation in the generating stations or inter-State transmission systems:

(a) Fees and charges charged to the generating companies and inter-State transmission licensees (including deemed inter-State transmission licensee) under Central Electricity Regulatory Commission (Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations, 2009 and as may be amended from time to time;

(b) Licence fees payable by the inter-State transmission licensees (including the deemed inter-State transmission licensee) in terms of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012 or any subsequent reenactment thereof;

(c) Licence fees paid by NHPC Ltd to the State Water Resources Development Authority, Jammu in accordance with the provisions of Jammu & Kashmir Water Resources (Regulations and Management) Act, 2010;

(2) The Commission may, in its discretion and for the reasons to be recorded in writing and after hearing the affected parties, allow reimbursement of any fee or expenses as may be considered necessary.”

44. There is no objection to reimbursement of RLDC Charges by the beneficiaries to the generators and the transmission licensees. However, with regard to reimbursement of license fees for Water usage in the State of J&K, UPPCL has submitted that any decision in this matter may be deferred till the decision of Hon’ble High Court of Jammu & Kashmir. With regard to reimbursement of license fee by the beneficiaries to the generators, a consumer Ms Mallika Sharma Bezbarua has submitted that as per procedure for grant of licensee, a licensee must pay the necessary fees. If the same fee will be loaded in the tariff to the consumers, the licensee cannot be treated as licensee and the provision under section 15 will be violated. Therefore, reimbursement of license fee should not be allowed. NHPC and PGCIL have submitted that there should be provision for recovery of accumulated amount with retrospective effect. PGCIL has further submitted that the following fees and expenses should also be payable to CTU as specified as below:

(a) Provision of raising of bills monthly;

(b) Reimbursement of System Operation Charges paid as ISTS Licensees;

- (c) Reimbursement of System Operation Charges paid as buyers for ISGS allocation to HVDC Stations;
- (d) Reimbursement of Market Operation Charges paid as buyers for ISGS allocation to HVDC Stations;
- (e) Reimbursement of additional bills raised by generating utilities on account of Fees and Charges;
- (f) Reimbursement of any other Fees and Charges raised by RLDCs; and
- (g) The sharing of ULDC (POWERGRID communication portion) shall be on similar lines as the system operation charges for RLDCs under RLDC Regulations.

NLC has submitted that the fees for renewal of Boiler license which are statutory payments made by the generator may be made admissible under Regulation 42A.

Analysis and Decision of the Commission

45. We have carefully considered the suggestion/comments of the stakeholders. We are of the view that the license fee is an expense in the hands of the transmission licensee and therefore, should be reimbursed to them. With regard to reimbursement of RLDC charges to the generator and the transmission licensees, there is no objection and this also being an expense in the hands of the generator and the transmission licensees, should be reimbursed to them. The expenses as indicated by the PGCIL as quoted in sub-para (b) to (f) are already part of RLDC charges and as such, no separate provision is required for these. However, the sharing of ULDC (POWERGRID communication portion) needs to be reimbursed to the transmission licensees on similar lines as the system operation charges for RLDCs under RLDC Regulations. According, this is also being provided for in the

amendments. Fees for renewal of Boiler license though a statutory payments but recurring in nature and is part of O&M expenses and therefore, we are unable to agree with the views of NLC.

46. Accordingly, Regulation 42A of the Principal Regulations has been retained in the final regulations as under:

“42A. Reimbursement of Fees, Charges and Expenses

(1) The following fees and charges shall be reimbursed directly by the beneficiaries in proportion of their allocation in the generating stations or by the transmission customers in proportion to their share in the inter-State transmission systems determined in accordance with Regulation 33 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 upto 30.6.2011 and thereafter, in accordance with the Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010 as amended from time to time;

(a) Fees and charges paid by the generating companies and inter-State transmission licensees (including deemed inter-State transmission licensee) under Central Electricity Regulatory Commission (Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations, 2009, as amended from time to time;

(b) Licence fees paid by the inter-State transmission licensees (including the deemed inter-State transmission licensee) in terms of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2008 and Central Electricity Regulatory Commission (Payment of Fees) Regulations 2012 or any subsequent amendment or re-enactment thereof;

(c) Licence fees paid by NHPC Ltd to the State Water Resources Development Authority, Jammu in accordance with the provisions of Jammu & Kashmir Water Resources (Regulations and Management) Act, 2010.

(2) The generating companies and inter-State transmission licensees (including deemed inter-State transmission licensee) shall be entitled to recover the fees and charges as mentioned in clause (1) of this regulation which have been paid till the notification of these regulations.

(3) The Commission may, in its discretion and for the reasons to be recorded in writing and after hearing the affected parties, allow reimbursement of any fee or expenses as may be considered necessary.”

J. Providing for consideration of the capital expenditure projected to be incurred after cut-off date (Amendment of Regulation 9 (2))

47. In clause (2) of Regulation 9 of the Principal Regulations, the words “or projected to be incurred” were proposed to be added after the words “the capital expenditure incurred”. There is no comment from the stakeholders. We have therefore, incorporated this amendment.

K. Deletion of existing clause (8) of Regulation 21

49. The existing provision of Regulation 21(8) is as follows:

“(8) The landed price of limestone shall be taken based on procurement price of limestone for the generating station, inclusive of royalty, taxes and duties as applicable and transportation cost for the month.”

This was proposed to be deleted inadvertently. This provision has been retained.

L. Miscellaneous:

50. Apart from above, some additional amendments have been sought by the stakeholders, which are discussed below:

Provision regarding supply of 100 units per month to each project affected families in Regulation 32

51. NHPC has submitted that 2009 Tariff Regulations provide that free power shall be 13% which shall also include 100 units per month to each Project Affected Families (PAF) whereas Tariff Policy and allocation letter issued by MOP, GOI provide that saleable energy shall be derived by deducting 13% free power and energy corresponding to 100 units per month to each PAF. This ambiguity may be corrected through amendment. In our view, the ambiguity pointed out by NHPC cannot be rectified through the present amendment without consultation with the stakeholders including beneficiaries.

Provision Regarding Sale of Infirm Power (Regulation 11)

52. NHPC has submitted that as per the provisions of Regulation 11 of the 2009 Tariff Regulations, the supply of infirm power shall be accounted as Unscheduled Interchange (UI) and paid for from the regional or State UI pool account at the applicable frequency-linked UI rate. However, the Commission vide a subsequent amendment dated 5.3.2012 to the UI Regulations has fixed flat rates for infirm power and the infirm power no more linked to the applicable frequency during which power is injected. It has been suggested that the phrase “at the applicable frequency-linked UI rate” in Regulation 11 of 2009 Tariff Regulations should be replaced with the words “at the rate specified in CERC (UI Charges and related matters) Regulations, 2009 as amended from time to time.”

53. We have considered the submission of NHPC. The Commission has amended the Central Electricity Regulatory Commission (Unscheduled Inter-change Charges and related matters) Regulations, 2009 vide Notification dated 5.3.2012 after due stakeholders’ consultation and the amended regulations provide that during the testing and commissioning of the generating stations or units thereof, infirm power can be injected into the grid and shall be payable at the rates specified in the UI regulations. After the amendment of UI Regulations, there is a requirement to align Regulation 11 of 2009 Tariff Regulations with the amended provisions of UI Regulations. Accordingly, the words “at the applicable frequency-linked UI rate” appearing in Regulation 11 of the 2009 Tariff Regulations has been substituted with the words “in accordance with the Central Electricity Regulatory Commission (Unscheduled Interchange and Related Matters) Regulations, 2009 as amended from time to time.”

Allowing provisional tariff based on the truing up petition

54. NTPC has submitted that tariff is determined at the beginning of tariff period based on projected capital expenditure. If actual capital expenditure is lower than projected capital expenditure, there would be additional recovery of tariff from the beneficiaries, which shall be refunded after truing up. For the beneficiaries, it would be added financial burden in the current difficult times. As disposal of truing up petition may take some time, NTPC has submitted that provisional tariff based on truing up petition may be considered to be allowed.

55. We have considered the submissions of NTPC. In the 2009 Tariff Regulations, capital cost on projection basis has been allowed in order to avoid frequent tariff revision on account of additional capital expenditure. The generating companies and transmission licensees are saddled with the responsibility to ensure that the projected capital expenditure is realistically included in the tariff petitions. In order to discourage the tendency to include inflated projected capital expenditure, a self regulating mechanism in the form of refunding the excess recovery with interest at the SBI base rate has been provided. In our view, no such provision as projected by NTPC is considered necessary if the generating companies and transmission licensees are careful in making the estimates of additional capital expenditure which can be capitalised during the tariff period.

sd/-
(M. Deena Dayalan)
Member

sd/-
(V. S. Verma)
Member

sd/-
(S. Jayaraman)
Member

sd/-
(Dr Pramod Deo)
Chairperson