

**Central Electricity Regulatory Commission
New Delhi**

Coram:

**Shri D. P. Sinha, Member
Shri G. S. Rajamani, Member
Shri K. N. Sinha, Member**

**Petition No 54/2001
(Suo motu)**

In the matter of

Regulations for procurement of electricity and electricity transmission service through competitive bidding

The following were present on the date of hearing:

1. Dr. Surat Singh, Advocate, PGCIL
2. Shri Jagdev Singh, Advocate, PGCIL
3. Shri S. Garg, DGM(JPTC), PGCIL
4. Shri V.K. Sharma, Manager (Law), PGCIL
5. Shri Sanay Rai, Sr. Engineer (IPTC), PGCIL
6. Shri G.S. Dhir, Manager (Law), PTC
7. Shri S. Seth Vedantham, PTC
8. Shri O.P. Maken, VP (P), PTC
9. Shri S.K. Agarwal, CE (T), NHPC
10. Shri A.K. Mathur, DNHPC
11. Shri R. Kapoor, DNHPC
12. Shri N.K. Deo, DGM, RPL
13. Shri Krishna P. Maheswari, Manager RPL
14. Shri Prashant V. Singh, Sr. Manager, PWCSP
15. Shri Asad, PHDCCI
16. Shri Ravi Wig, PHDCCI
17. Shri M.R.K. Rao, NTPC
18. Shri S.N. Goel, NPTC
19. Shri C.K. Mondal, Sr. Mgr, NTPC
20. Shri Sudhir Gupta, Statkraft SF Norway

ORDER
DATE OF HEARING 27- 9 - 2001

Background

The electricity services in India were generally provided by the State Electricity Boards as it was believed that being under the control of the State governments, they could protect the consumer interests against exploitation. Over a period of time, it, however, came to be realized that because of their monolithic nature, the State Electricity Boards suffered from operational inefficiencies on account of which they had incurred heavy losses. The services rendered by them were also of poor quality. These factors forced the governments to think in terms of commercialization of the services so that the additional investments necessary for infrastructure development become available through private sector involvement and the services rendered become globally competitive. On these considerations, the Central Government issued a policy resolution dated 22-10-1991 on private sector participation in power sector. It was followed by necessary changes in the legal framework. Despite the policy of liberalization, the entry of new players continued to be regulated by the government who remained the final arbiter in all matters, including tariff fixation. It became necessary, therefore, to provide a level playing field to new players and to provide for competition. The ills plaguing the power sector were deliberated upon in the meetings of Chief Ministers of all states in late 1996 to find a lasting solution to the problems. It was decided to encourage private sector participation in the generation, transmission and distribution since future expansion could not be achieved through public resources alone. Thus, the phenomenon of private sector involvement in power sector is a relatively modern reaction to the revealed concerns and issues associated with complete reliance on the public sector provision of infrastructure. These concerns relate to both the effectiveness of investment and efficiency of service provision. In the said meetings of the Chief

Ministers, it was also decided to set up independent Central and State Regulatory Commissions. As a sequel to this decision, the Electricity Regulatory Commissions Act, 1998, hereinafter referred to as " the Act ", was enacted by the Union Parliament, which provided for the constitution of the Regulatory Commissions at the Centre and in the States.

2. Under Section 13 of the Act, the Central Commission is assigned the following functions, among others,

" (a) to regulate the tariff of generating companies owned or controlled by the Central Government;

(b) to regulate the tariff of generating companies, other than those owned or controlled by the Central Government specified in clause (a), if such generating companies enter in or otherwise have composite scheme for generation and sale of electricity in more than one state;

(c) to regulate inter-State transmission of energy including tariff of transmission utilities;

(d) to promote competition, efficiency and economy in the activities of electricity industry;

....."

3. In view of the above provisions, promotion of competition, efficiency and economy in electricity industry are some of the key roles entrusted to the Commission, which are considered complementary to each other, These roles can be conveniently achieved through the process of competitive bidding. The Central Government issued detailed guidelines for competitive bidding of power projects in January 1995

('Guidelines for competitive Bidding Route') whereby the competitive procurement of power sector projects was made mandatory. These guidelines laid emphasis on project identification, justification and development before taking up competitive bidding. The tariff structure and norms for bid evaluation, not addressed in detail in these guidelines, were introduced in May-June 1997 through "Thermal Power Generating Stations awarded through Competitive Bidding" and "Guidelines for inviting Tariff Based Bids".

4. Competitive bidding for products such as engineering and consulting services is tried and tested and used extensively, based on well-defined procedures. In contrast, competitive bidding for procurement of infrastructure services is more complex. It involves rigorous definition of service standards and contracting for provision of these services over long periods of time (typically ranging from 15 to 50 years). The problem of procurement of infrastructure services in developing countries like India, through competitive bidding is compounded because often these economies are unstable, markets are evolving and there is little experience of private participation.

5. Competitive bidding for electricity generation projects has been in existence in world over, including the developing countries phenomenon. This is on account of difficulties in the negotiated route the competitive bidding for procurement of generation of power services was made mandatory. The other countries which procure/try to procure generation using the competitive bidding route include Philippines, Thailand, Turkey, Columbia, China. Brazil have been very active in procuring transmission services through the Build-Own-Operate route. Most of the developed countries relied on cost or rate based regulation until competition was infused into electricity markets.

Table below provides a summary of private participation in power sector in developing countries.

Table
Private participation in power sector in developing countries

	Philippines	Thailand	Turkey	India	Columbia
Private participation in power	1987	1993	1984	1991	1992
Competitive bidding in procurement	1992	1994	1985	1995	1994
Whether regulator present	No	No	No	No	No

Need for Regulations for Competitive Bidding

6. The Commission, in its Consultation Paper on Bulk Electricity Tariffs published during September 1999 had given an expression of its thought that its tariff setting regulations and practices must simulate market conditions, where monopolistic dominance prevails and induce competition, where possible. In the process of its working, the Commission felt the need to provide clear guidance on competitive procurement of generation and transmission services. The Commission decided to issue comprehensive regulations for procurement of electricity and electricity transmission service through competitive bidding in discharge of its role under clause (d) of Section 13 read with the powers conferred under Section 55 of the Act.

7. The Commission appointed PricewaterhouseCoopers as the consultants to assist it in development of regulations for procurement of electricity and the transmission service through competitive bidding with a view to infusing international best practices in

their procurement, within the framework of existing policy of the Central Government and prevailing administrative and legal environment.

8. The consultants prepared a report entitled 'Report on recommendations on the bid process and specifying tests, minimum conditions and criteria' which was discussed in a meeting of experts from utilities, private players, investment bankers and academics in New Delhi on November 7, 2000. Subsequently, the consultants prepared the draft regulations for competitive bidding guided as they were by the deliberations held at the meeting of experts, following which the Commission initiated a *suo motu* proceedings for finalization of the regulations for competitive bidding. The document containing the draft regulations prepared by the consultants was widely circulated to elicit views of the stakeholders (120 approximately) in the electricity sector and forms the subject matter of said petition.

9. The following parties responded to the Draft Document circulated:

- (i) Powergrid Corporation of India Ltd (POWERGRID)
- (ii) Power Trading Corporation Of India Ltd (PTC)
- (iii) National Thermal Power Corporation of India Ltd (NTPC)
- (iv) Naptha Jhakri Power Corporation (NJPC)
- (v) Government of Sikkim (GOS)
- (vi) Himachal Pradesh Electricity Regulatory Commission (HPERC)
- (vii) Rajasthan Electricity Regulatory Commission (RERC)
- (viii) Orissa Electricity Regulatory Commission (OERC)
- (ix) Reliance Power (Reliance)
- (x) Bombay Suburban Electricity Supply (BSES)

- (xi) Tata Electric Companies (TELC)
- (xii) Prayas
- (xiii) Shri AK Mathur (AKM)
- (xiv) Malana Power Company
- (xv) Statkraft
- (xvi) Central Electricity Authority (CEA).
- (xvii) PHD Chamber of Commerce (PHDCC)

10. Before dealing with the respective submissions of the parties on merits, it is necessary to deal with certain preliminary issues arising out of these proceedings.

Jurisdictional issue

11. POWERGRID has raised a preliminary objection that in view of Sections 27A & 27C of the Indian Electricity Act, 1910, the Commission does not have jurisdiction to prescribe procedure for private participation and other matters through the proposed regulations. A similar objection was raised by POWERFRID in Petition No. 111/2000, regarding prescription of procedure, terms and conditions of grant of transmission license, etc, through private participation route, decided by the Commission vide order dated 14-6-2001. After detailed examination of the legal position, we concluded that:

" such a power is considered incidental for effective exercise of power under clause (d) of Section 13 of the Act to promote competition, efficiency and economy in the electricity industry."

12. For the reasons already stated by us in our order dated 14-6-2001 in petition No 111/2000, we reject the preliminary objection raised on behalf of POWERGRID.

Definition of Procuring Agency

13. In the draft regulations, the term " Procuring Agency " is defined as the entity responsible for managing the tendering process of a qualified project and shall be the purchaser of electricity generation or transmission services from the qualified project under a long-term agreement. It has been suggested that the definition of the procuring agency should distinguish between the purchaser of electricity generated and the entity responsible for managing the tender process and if required, there should be two separate definitions. It has been pointed out that while the entity responsible for managing the tender process shall invariably be the concerned government, the one interested for purchase of power could be termed as the "Power Procurement Agency". Another suggestion that has been received is that the procuring agency could be the state industrial development corporation or any other agency entrusted for the task by the State Government/utilities. It is also suggested that the definition of the procuring agency should also include multiple buyers (SEBs/STUs) as is being followed for central generating companies. We are of the view that the procuring agency should be the agency managing the tender process and at the same time, it should either be the purchaser(s) of electricity generation or transmission services or should be an agency or authority representing such purchaser(s).

Definition of Qualified Project

14. The draft regulations define the " Qualified Project " as a generation and transmission project whose tariffs shall be governed by the regulations. Any generation

or transmission project that meets the conditions laid down in the draft regulation 5 shall be a qualified project. Suggestions have been received that these regulations should be applicable to new projects, where bidding process has not been completed and the project has not been assigned to the developer as on the date of their coming into effect. The projects where competitive bidding process has been completed and preferred bidder has been selected should be excluded from the purview of these regulations, in which cases, the Commission may only approve the tariff. NTPC has suggested that definition of qualified project should include generating companies under Section 13(a) of the Act in order to provide level playing field for Central Sector Generating Companies to participate in the bidding process. We direct that in cases of the projects already in progress on the date of coming into force of the regulations for competitive bidding, the Commission shall be approached for exemption of the steps already completed and the Commission shall take a view on a case-by-case basis. A suitable provision to that effect shall be made in the regulations. We make it clear that the projects that are exempted from competitive bidding under any law for the time being in force shall not be governed by the regulations to be notified based on this order. We do not believe that the definition of the qualified project as contained in the draft regulations imposes any restrictions on participation of the Central Sector Generating Companies in the bidding process, if they are otherwise qualified.

Mode of procurement for generation projects

15. In the draft document prepared by the consultants a view is expressed that the mode of procurement for generation services shall be under an IPP framework, where the procurer through a two-part tariff structure retains most of the fuel price risks and

dispatch risks. Reliance has suggested that power block (setting of power plants irrespective of fuel, technology or site location) should be allowed to those developers who are willing to enter into such agreements whereby an agreed quantum of power at agreed price would be delivered at an agreed location on the grid system to the procuring agency. In our opinion at the present, the conditions in the Indian power sector do not permit the procurement framework suggested by Reliance for two reasons – (a) the grid system dispatch mechanisms are not sufficiently developed to balance a system based on traded power blocks; and (b) such a framework may not bring forward new capacity, as it gives potential developers neither assurance about the recovery of their investment nor any means of risk mitigation. Accordingly, we consider that the mode of procurement for generation services would continue to be under an IPP framework until such time transition to markets becomes more imminent. The IPP framework shall consist of two-part tariff structure that transfer most of the fuel price and dispatch risk to the procurer. A consequence of this is that an IPP competition must be based on power being provided at a specified location and for a specified fuel (or at least, a specified energy component indexation to a specified fuel). Inter-fuel and/or inter-location IPP competitions are, therefore, not permitted. However, we intend to bring forward regulations governing the use of broad-based procurement frameworks to encourage the addition of new capacity simultaneously using various locations, fuels, and technologies at the appropriate time.

Benchmark price

16. The benchmark price is an estimate prepared by the procuring agency of the price that should be paid for power from the project with the given configuration and specifications. The relevant customers (i.e. SEBs/STUs) must agree to contract for the power which is being procured, provided the price is less than or equal to the benchmark

price. The consultants have proposed that a benchmark price should be prepared by the procuring agency for the project and that it should be a single price with a stated confidence interval. This interval can then be taken into consideration if the procuring agency wishes to accept the best bid above the benchmark price. The confidence interval would reflect the uncertainty inherent in estimating current bid prices through a desk exercise, estimating the impact of ground conditions, deciding on appropriate element sizing and redundancy requirements, etc. It should not relate to fundamentally different technology or design decisions – if such alternatives exist, the most cost effective should be selected in setting the benchmark price. Further, the benchmark price should be made public and disclosed before the bidding process starts.

17. We have received different suggestions on this issue. It has been pointed out in some of the responses that the benchmark price should at best be internal estimate, should not be binding and should not be made public in view of difficulty in arriving at the benchmark prices. On the other hand, the preparation of the benchmark price and making it public has drawn support from certain quarters. However, some of the responses have raised the issue of having a clearer approach and methodology for setting the benchmark price. On the issue of the manner of employment of the benchmark price, POWERGRID has submitted that the tariff should be acceptable if it is within the range of benchmark price while Prayas has submitted that the tariff above the benchmark price should be accepted only after the approval of the SERCs. PTC has stated that the proposed process of accepting tariffs above benchmark price should be reviewed. Reliance has proposed a methodology of benchmark price bands and a threshold limit of benchmark price.

18. We have deliberated at great length on the issue of benchmark price and we believe that the methodology used for preparing the benchmark price, the benchmark price and the manner of employment of benchmark price should be made a part of the approval to process petition to be filed by the procuring agency. We however do not feel it necessary to specify a confidence interval over the benchmark price, as acceptance of a price above the benchmark price will reduce the intended purpose of prescribing the benchmark price and its effectiveness. Accordingly, we direct that the benchmark price shall be a single number without any confidence interval. The benchmark price would be kept secret and would not be disclosed. This direction is however, subject to review after three years, when the review of the regulations will be undertaken.

Term of the PPA

19. Suggestions have been received that PPA should be for the entire life of the project (15-20 years for gas/liquid fuel based plants and 25-30 years for coal/lignite based plants). If the validity of the PPA is decided for a lesser period than the project life, there is likely to be a mismatch between the tariff charged by the developer during the tenure of the PPA, residual value of the plant at the end of the tenure of the PPA and likely earning capacity/tariff of the project for the balance life of the project. The provision for co-relating the term of the PPA with the life of the plant would afford the offtakers the benefit of cheap power in the long run.

20. The consultants have proposed that the two key drivers for determining the term of the PPA are (a) the longest term debt availability in the financial markets yielding potential value for money benefits and (b) developments in power markets which would otherwise lead to benefits from truncating PPA terms. On the one hand, if the longest

available maturity in the market were 12 years post construction, the lenders' requirements would be met provided there is a financial tail of 3-4 years. The lenders usually insist on this as a margin against defaults during operation of the project. On the other hand, longer term PPAs could become stranded when a competitive market for power develops. Accordingly, as a balance between the two imperatives, the consultants have suggested that the current situation points for the term of the PPA to be between 15-20 years. The consultants have noted that in the Indian context, the term of the PPA is related to the economic life of the plant so as to incentivise the project developer to be interested in proper maintenance of the plant. This is further reinforced by profiling the tariff so as to "force" the project developer to take the returns over the total term of the PPA and not just during the initial period. Maintaining the plant through Prudent Utility Practices is a contractual obligation under the PPA and the rigor with which this is enforced should be used to ensure that the plant is maintained well rather than forcing the Project Developer to spread the returns. At the end of the PPA term, the plant could revert back to the Public procurer at a pre-agreed price.

21. After careful consideration of the recommendations of the consultants and the suggestions received and in view of the conditions prevailing in India, we see merit in the arguments given by the consultants regarding the term of the PPA. We are equally convinced that it should be possible to design tariff structures and performance specifications over a term longer than that proposed by the consultants. We therefore direct that for thermal and hydro projects that the term of the PPA shall not be less than 15 years. We are not stipulating any upper limit for the term of the PPA. In any case, the term of the PPA would need to be justified by the procuring agency. For transmission projects which has strong natural monopoly characteristics and where markets are unlikely to develop, we direct that the term of the TSA should be 30 years as stipulated

in Commission's order dated 14-6-2001 in petition No. 111/2000 on Grant of Transmission License (Procedure, Term and Conditions of License, etc) and the subsequent notification dated 24-8-2001 based on the said order dated 24-8-2001 and any modification from time to time.

Treatment of foreign currency indexation

22. CEA has suggested that SEBs should not guarantee protection in tariffs against exchange rate fluctuations. There should be ceilings on tariffs as regards foreign component which should also be convertible based on one time conversion in Indian Rupees at a particular exchange rate or after a certain period. Also domestic inflation indexed component of tariff would need to be clearly defined. PTC has suggested that as an alternative to specifying a limit to the foreign exchange component, an express evaluation methodology based on a conservative estimate of rupee depreciation shall serve the same purpose and encourage rupee denominated tariffs. Additionally, this would not unnecessarily curb the flexibility of bidders to contract for rupee or foreign currency denominated financing. AKM suggested that no guideline has been provided regarding limits of foreign currency index component and domestic inflation index component of the capacity charge.

23. The basic principle of currency denomination dictates that since the revenue source of the ultimate distribution and supply entity will be denominated in rupees, there is no natural hedge for foreign currency that could accommodate the generator's tariffs being denominated in foreign currency. Further, if it were possible to make a reasonable assessment for the foreign currency movement vis-à-vis Indian rupee over a long term, the procurer could make a better assessment of the risks associated with the foreign

currency denominated component in the generator's tariffs. We agree that at this stage in Indian economy, it is impossible to forecast USD-INR exchange rates over long periods (over 25 years) with any degree of accuracy. It has been erroneously concluded that since the project cost for large projects or gas based projects would be denominated in foreign currency, the tariff should also be denominated in foreign currency. It is possible for a generator to hedge during the 3-4 year construction period and thus still avail a rupee debt, thereby not have any component of foreign currency component provided the procurer is willing to allow such hedging costs. Compare this to the procurer assuming unhedged foreign currency exposure over 20-25 year PPA term or in the very least, till the debt term of 10-12 years post construction. This then points to a fully rupee denominated bid for availability (capacity), in principle whether or not the equipment is being sourced from outside, so long as the foreign exchange movement risk has been adequately shared during the construction period. Of course, there are a series of argument expounded – there are not enough rupee funds available in the Indian market to absorb large sized projects; the Government of India policy for power sector wants to promote foreign investment into the country; Export Credit Agencies who would be the obvious choice for lending would provide only foreign currency denominated funds. We believe that if the project is properly structured and payment security mechanism is robust, there is no insufficiency of funds for such projects. This has time and again been reiterated by the major lenders. The Government of India policy initiated by inviting foreign investment but quickly made amends by removing the ceiling for rupee funding. Export Credit Agencies have started to consider guaranteeing local currency funding instead of only providing host country denominated funding. Government of India is liberalizing norms of investments for pension funds, provident funds, life insurance agencies, etc. so that a larger amount is available for infrastructure funds. The impression of fully rupee denominated tariffs not being financeable also

owes itself to the failures that have been observed in the Indian power sector particularly relating to the short gestation liquid fuel projects. A closer look reveals that the changes in commitments and the project fundamentals were more responsible than a fully rupee denominated tariff. If a project is bid out on the basis of providing foreign currency indexation and when tariffs are received, the procurer decides that foreign currency indexation will not be provided but the bidders will not be allowed to re-bid the tariffs, one is asking for a non-bankable project. One must, however, recognize that an abrupt jump to fully rupee denominated tariffs might not go well with the project developers and lenders. We must also keep in mind the current practice of Indian lenders who lend their foreign currency sourced funds in foreign currency. Accordingly, we believe that, as a first step, the procuring agency sets limits (caps) for the amount of tariff qualifying for foreign currency indexation and the profile. These caps should be justified before the Commission.

Role of State Commission

24. BSES in its submission has emphasized the involvement of the State Commissions from inception, especially with regard to payment capacity of the procuring agency (SEB/STU) and reference scheme preparation, whilst HPERC has requested for greater clarity in the role of State Commission. OERC does not foresee any possibility of any kind of involvement of the State Commissions. PTC has suggested that the approval of State Commissions in respect of the projects which are otherwise within the jurisdiction of the Central Commission may be sought only for purchase of power by the utilities from the composite scheme of such projects and seeking approval from the State Commission would unduly elongate the entire bidding process and would also involve duplication of the regulatory approval process. We believe that the procuring agency should ensure proper coordination with the State Commission in the matters related to

requirement of power by concerned state and capacity to pay for power and other matters that fall within the jurisdiction of the State Commission. This will add to the credibility of the bidding process. Otherwise, we do not see any conflict in the roles of the Central and the State Commissions.

Minimum conditions

25. In sub-clause (a) of clause (4) of the draft regulation 12 it is provided that land for the proposed project should be acquired before seeking approval of process by the procuring agency. It is suggested that land acquisition could be a precondition to financial closure and not for approval of bidding process as land acquisition is a time-consuming process, especially when it involves rehabilitation and resettlement of the population likely to be displaced in the process of locating the projects. In such situations, the bidding process may be proceeded with after identifying the entire land required for setting up the project. The concerns raised appear to be genuine and, therefore, we direct that sub-clause (a) of clause (4) of the draft regulation 12 be suitably amended.

26. It has been further suggested that the procuring agency should prepare detailed rehabilitation and resettlement plan and that the procuring agency should acquire land for rehabilitation and resettlement along with project land before initiating the process of competitive bidding. We agree with the suggestion and direct the following to be added to the minimum conditions:

“If the project site requires rehabilitation and resettlement, the procuring agency shall have prepared a detailed rehabilitation and resettlement plan and provided an estimate of the costs of rehabilitation and resettlement in the RfP. In addition,

land acquisition requirement outlined in the draft regulation 12 (4) (a) will equally apply for the rehabilitation and resettlement land”.

27. Sub-clause (d) of clause (4) of the draft regulation 12 lays down the different in-principle clearances that may be obtained before the procuring agency petitions the Commission for obtaining approval of process, which includes the techno-economic clearance from CEA. It has been suggested that the procuring agency may not be able to obtain the techno-economic clearance under Section 29(2) of the Electricity (Supply) Act, 1948 since it involves cost aspects of the project, which would not have been finalized by the time when the approval of process is being obtained. Further, if TEC of CEA is required at this stage, most of the project details sought to be looked into by the Commission through the approval of process proceedings would have been examined by the CEA. Nevertheless, we are not inclined to reconsider the provisions made in the draft on this matter.

28. The suggestions have been received that the details on payment security mechanism should be mentioned at a greater length as tariffs and the bidding process will be largely influenced by this factor. The methodology for working out the escrowable capacity of the SEBs has also been suggested. POWERGRID has suggested that the Transmission Service Charges would be paid by POWERGRID (or any other agency) based on back-to-back arrangements with SEBs and the other state utilities to ensure recovery of dues. We believe that the SEBs/STUs should be able to demonstrate to themselves, their regulators and the prospective bidders that they possess the capacity to pay the benchmark price before committing themselves to the bidding process. On our part we do not consider it necessary to enquire into the paying capacity of the

SEBs/STUs. We, however, direct that for avoidance of any doubt, the draft regulation 12(5) be suitably amended to provide for demonstration of paying capacity (either on its own capacity or its off-takers' capacity or both) of the procuring agency for purchase of power generated or the transmission services to be availed of from the reference scheme.

TEST FOR COMPETITION

30. The question involves prescription of minimum and maximum number of valid bids in the interest of credibility and integrity of the bidding process. For this purpose, certain stipulations have been made in the draft regulations circulated for response by the stakeholders. The majority of the responses reveal that the stakeholders do not favour prescription of the minimum and maximum number of applications at RfQ stage, though some of them suggest that Commission may prescribe the minimum number for pre-qualified parties but not the maximum number. The responses received do not favour any ranking of RfQ proposals and it is suggested that all applicants meeting the minimum threshold criteria should be considered eligible to participate for RfP, Similarly, it is suggested that there should not be any limit at RfP stage on minimum number of bidders as long as the tariff submitted by the bidders is matching with the benchmark price. A suggestion is made that for true competition and fulfillment of tests of competition, it is essential to specify that no one industrial/business/investor group should be part of more than one bid. A further suggestion is made that non-compliant bids should not be rejected outright even if the number of technically qualified bidders is more than 3. The procuring agency may evaluate the deviations proposed by the bidders and decide whether to accept some of the deviations proposed. If any deviations are considered reasonable, acceptance of such deviations should be communicated to all bidders to allow them to factor the same before submission of price

bids. Another suggestion is that if the tender process is amended, then there should be specific mention of the amendment (e.g., whether the Qualification Criteria or Benchmark Price or Technical Competence is to be amended). Because of this amendment, the process of re-tendering should follow.

31. We feel that the concerns expressed in the written submissions are genuine given the low credibility of competitive bidding process and it is important that these regulations create suitable environment for credible transactions. After a careful consideration of the issue of minimum and maximum number of bids, we direct that while the minimum number of bids should be prescribed for RfP and RfQ stage, no restriction should be imposed on the maximum number of bids at any of these stages. The procuring agency may proceed further only after obtaining approval of the Commission in case number of valid bids falls below the minimum prescribed number.

32. TELC has suggested that due consideration should be given in case the bids are submitted by consortium who have purchased RfQ and got qualified. Our interpretation of this comment is that if 4 bidders were pre-qualified and they formed two consortia of the pre-qualified bidders, then this should not attract the test of competition, as there are still all the pre-qualified parties. We do not believe this to be appropriate as this effectively represents two bidders and reduced competition.

33. PTC has suggested that the provision of the draft regulation 37 (which deals with the non-compliant situation where the number of bids is less than the threshold permitted) provides that the tender process shall be amended to increase the number of technical bids only in exceptional circumstances and if the number of technically

compliant bids falls below 3. On consideration of the suggestion, we direct to amend the regulation 37 of the draft regulations to provide as under since the technical evaluation cannot be revisited after the price bids are opened, the intention of the draft regulation 37 being to allow for a modified tender process to take place, in case of exceptional circumstances:

“ if there are justifiable reasons for the lack of the minimum number of compliant bids that could not have been reasonably foreseen and tender process should be allowed to proceed.”

Petition for Approval of Tariff

34. Chapter V of the draft regulations prescribe the procedure for approval of tariff after selection of the preferred bidder. The respondents have queried the role of the Commission in the approval of tariffs arrived at pursuant to the competitive bidding process and the price of the lowest bidder meets the benchmark price criterion. It is suggested that the Commission should restrict its considerations to the examination of fairness of the process followed. A suggestion is also made that the number of stages for filing petition and obtaining orders of the Commission should be reduced. The final stage should be an automatic approval if the tests for competition and compliance have been observed throughout the tender process. We agree that the role of the Commission in approval of tariffs through the competitive bidding process is to ensure that the procedure prescribed under these regulations is complied with and deviations, if any, properly explained. The Commission's role envisaged under these regulations is of oversight than direct involvement in all the stages of the bidding process.

35. It is suggested that approval of project documentation (RfQ/RfP) be sought prior to the issue of RfQ and the approval of project agreements may be sought later prior to issue of RfP as this recognizes that finalisation of the project agreements like PPA requires more time to arrive at consensus on the risk sharing amongst the offtakers. We do not see any merit in such argument and if anything, the public hearing at approval of process stage should generate public opinions and views on the PPA and other agreements.

36. In one of the responses it is suggested that public should be granted at least some opportunity to comment on the intermediate stage petitions (which are proposed to be at the discretion of the Commission). We are mindful of the concerns expressed but at the same time, we have to balance the project timetable and would like to retain the discretion on conducting public hearing on intermediate stages to the minimum, unless absolutely necessary in order to ensure integrity of the bidding process.

37. PTC has raised an issue that certain changes in the agreements may be required even subsequent to the commercial close in order to meet the lenders' requirements and whether this would require fresh approval. We do not believe that lenders' requirements are to be accorded any special consideration. The developers and the procuring agency should ensure that their proposed agreements are fully acceptable to the lenders and the Commission would not allow any change in the agreements nor entertain any petition for change on the grounds that it is the lenders' requirements.

Process Timetable

38. It has been suggested that the procuring agency should hold pre-bid conference at least 8 weeks after distributing the RfP (instead of 2-4 weeks) as time period of 2-4 weeks is considered grossly inadequate considering that bidders need to study legal and financial implications of RfP, prepare cost estimate in consultation with EPC contractor, talk to lenders, etc. We do not see any problem in the procuring agency conducting another pre-bid conference 8 weeks after distributing the RfP.

39. Before analyzing the representation on the process timetable and validity of Commission's approval, we would like to point out that Malana Power anticipates a power block procurement where the site of the hydropower project is bid out separately from the tender for procuring generation services. In this matter we would like to reiterate that we have already decided against the power block mode of procurement and in favour of IPP mode of procurement, until the time a transition to market-based solution in power procurement becomes imminent.

40. Schedule 1 to the draft regulations prescribes the time schedule for completion of the entire bidding process, with three months for completion of RfQ process and the remaining nine months for the RfP process. The respondents have suggested that it should be extended if the reason for delay is beyond the control of bidder, though some of them have suggested certain variations to the given timeframe. We believe that the process timetable proposed in Schedule 1 is appropriate and does not call for any changes.

41. POWERGRID has represented that the process timetable for the project development is grossly inadequate and this will lead to the entire process from start to finish to take an estimated 252 weeks (including project preparation and time for financial closure) and the bid process taking up to 136 weeks. POWERGRID has expressed an apprehension that in the manner the commencement of operations through private sector participation would take an estimated eight years if these regulations were followed. We believe that the POWERGRID's evaluation of the bid process timeframe is based on overestimation including excessive time estimates for intermediary stages and in-bid time.

42. PTC has submitted that the in-bid time be reduced, e.g., RfQ receipts to RfP issue should be reduced to 1 month (it is currently proposed in the regulations as 1.5 months) and the issue of final RfP be reduced to 2 months (it is currently proposed in the regulations as 3 months). We believe that this would be a difficult timetable to achieve with the bidders being unduly pressurized. We also believe that PTC has perhaps not fully understood the bid process under the draft regulations as it has proposed that the validity of the approval of tariff be increased from 6 months to 12 months because, *inter alia*, many of the contracts like PPA, FSA, etc. would have to be negotiated during this period. Under the proposed regulations, the in-bid time will be utilized for negotiating the contracts with all bidders so that there are no negotiations post price bids.

43. PTC has also raised the issue that price bids are usually valid for 12 months and so the validity of the approval of tariffs be increased from 6 months as laid down in the draft regulation 42, to 12 months. Reliance Power has also pleaded that validity of approval of tariffs needs to be extended. NJPC has suggested that if bidders require

more time to process the bids and request time extension for bid -submission, then it should be clearly stated whether extension of time should be granted, and if so, then the extra period by which extension can be granted should also be stated. We believe that the objective of keeping a tight validity period for approval of tariffs will invigorate the preferred bidder and the procuring agency to strive for early commercial closure. We are of the opinion that integrity of the bid process, to a large extent, depends upon timely completion of the bid process. Therefore a timetable for the bid process needs to be prescribed and enforced. However, if the procuring agency has to seek the approval of the Commission for deviations from the approved process, then time required for sorting out the deviations should not count as part of the process timetable prescribed for the entire bid process. In other words, if sorting out a deviation takes 1 month then the process timetable for the bid process will automatically get adjusted .

44. Malana Power has suggested that the 12 months period prescribed in the draft is neither practicable nor feasible in case of hydro-projects where location of site is determined by nature and which requires extensive study of geology and topography of the site, followed by a detailed exercise and model testing for optimizing and freezing the design unlike the thermal power plants which can be designed in modules for installation at almost any location. We believe that unless the location of site is determined and the studies are completed there is no point in initiating the procurement process. Therefore, the period prescribed is considered to be reasonable and adequate.

45. PTC has suggested that the regulations should permit for an extension in the validity of the approval of process. Such extension should be based on adequate justification by the procuring agency. The Commission may need to evaluate such

extension in approval if an alternative proposal is received for a project in the same region. TELC has suggested that while the approval of process may require a public hearing, the approval of tariff should not require a public hearing, as public hearing at the second stage will delay the project. POWERGRID has suggested that there should not be any public hearing for any of the petitions as holding public hearing for the approval of process and at intermediate stages should not be done. This will delay the process timetable and will discourage investors/bidders. We would like to clarify that there will be a public hearing for the approval of tariff as well as the approval of process stage. However, if there is(are) any public hearing(s) on account of any deviations in between the approval of process and the approval of tariff stage, the process timetable as well as the approval of process validity shall be extended by the time taken for such public hearing(s). Apart from this, there would be no other extension of the validity of the approval of process. However given the distinct nature of transmission activity (standardization of the process and documents is relatively easier in the case of transmission as POWERGRID is the sole procurer and transmission has strong natural monopoly characteristics and is likely to remain regulated) the Commission has decided that procurement of transmission services be governed by the guidance on process timetable stipulated in its order dated 14.6.2001 in petition no 111/2000 and the subsequent notification on Grant of Transmission License-Procedure, Term and Conditions dated 24-8-2001. However since no guidance on the overall time frame for the approval of bidding process and validity of tariff was provided in the Commission's order dated 14.6.2001 and subsequent notification, these shall be applicable as stipulated in the present order.

BEST PRACTICE GUIDELINES

46. These regulations are process regulations in that they govern the process by which generation or transmission services shall be procured. We, however, feel it appropriate and important to include guidance on key aspects of the tender documentation in order to facilitate and encourage standardization, transparency, fairness and competition.

47. POWERGRID is opposed to the recommendation of the consultants that the evaluation of RfQ/RfP should be submitted to the Commission. This, according to POWERGRID, amounts to micromanaging and breach of confidentiality. Besides, this will elongate the process. Further, when the evaluation report becomes known to the bidders then unsuccessful bidders may resort to uncalled for litigation leading to delays and uncertainties. In our view since the evaluation report is to be submitted to the Commission and not to the bidders it does not involve breach of confidentiality. The Commission as the final authority to regulate tariff has to be satisfied that it will finally promote competition, efficiency and economy. However, in slight modification of the provision stipulated in the draft regulations, we direct that the evaluation reports shall be submitted to the Commission when specifically called for in case of allegations of malafides by any of the parties.

48. POWERGRID has tried to argue that disclosure to all the bidders a clarification given to one of them would tantamount to breach of confidentiality and thus should be avoided. We believe that this requirement is essential for ensuring the integrity and transparency of the bidding process and should be retained as the best practice guideline.

49. POWERGRID has suggested that the procuring agency should not be required to notify the shortlist of the bidders to the Commission and should not be required to publish the same. This will not serve any purpose and simply add to the time-frame of the project. POWERGRID has also suggested that it is not recommended to intimate reasons for rejection of bid to a bidder as it will involve unnecessary litigation and will elongate the total time schedule. We are of the view that in the interest of over all transparency it is essential that the Commission is informed of the competition levels and the essential details.

50. The consultants had recommended that while the applicant can be qualified at the RfQ stage on his own, but for the RfP stage the bidder shall identify and obtain in-principle commitments from the financiers and equipment suppliers. One of the respondents has argued that it will not be possible to obtain in principle commitments at RfP stage itself. It is pointed out that such a requirement should not be necessary as the bidders would be required to submit a proposal guarantee that would adequately protect the procuring agency from frivolous bids. At the RfP stage, various bidders may approach the same banks/equipment suppliers while submitting their bids. Bidders may also not prefer or may not be in a position to disclose this information till such time as they are declared as the preferred bidder. We agree with the consultants' recommendation, as the proposed step would minimize the "daylight risk" and improve the credibility of the bidding process.

51. PTC has suggested that the validity of the bid security should be concurrent with the validity of the price bid, which should not be less than 12 months from the date of

submission of price bid. POWERGRID has suggested that the bid security should be allowed through the Bank Guarantee and not by bank draft as it reduces the financial obligations of the party. Bid security validity should be till development security is submitted by the selected bidder and accepted by the procuring agency as 180 days stipulated is grossly inadequate. We agree with the suggestions of made and direct that the clause XII (1) (d) in draft regulations should be suitably amended to read as

"Bids and bid securities shall be valid for a period to be prescribed by the procuring agency in the bidding documents but in no case beyond twelve months from the date of submission of bids. Bid security shall be given in the form of bank guarantee".

Bid opening and evaluation

52. PTC has suggested that the provision of allowing any participating bidder the right to inspect any of the other bids may not be acceptable in a Build Own Operate Transfer (BOOT) process because in order to be competitive, bidders may propose certain confidential or proprietary technology, which they would not desire to be accessed by other bidders. A similar suggestion is also made by POWERGRID. According to it, as the bids contain certain important information of the bidders which if shared with others, particularly competitors, may create problems. The confidentiality of the information given by the bidder to the procuring agency has to be maintained. In view of the comments made, we direct that the relevant provision be modified providing that the bid packages shall be opened in public. The bid packages shall be checked for overall compliance with tender conditions, e.g., performance bond, submission requirements, etc. All bidders shall have the right of access to the bid opening stage. The draft regulation 31 should be modified accordingly.

53. NJPC has suggested to substitute "Bids" with "Technical Bids" in the draft regulations 31 and 32 as the current formulation implies that both the technical bids and price bids can be opened simultaneously whereas the price bids of the compliant bids only are to be opened after the evaluation of the technical bids. We agree with NJPC and direct that the draft regulation 32 should be suitably modified.

54. NTPC has suggested that bid evaluation criteria should not be left to the procuring agency and the criteria should be laid down through the regulations. Bid evaluation should use levelised tariffs with the parameters affecting the levelised tariffs such as discount factor, extent of tariff loading during debt service period and beyond should be notified by the Commission. Firm tariffs should be furnished year-wise for the entire life of the plant, which shall be binding on the bidder and shall be incorporated in the PPA. This is in order to have uniformity and that no arbitrary decisions are taken.

55. The consultants had recommended that the procuring agency should work towards standardizing the comparison of price bids and ensure that comparison is objective, fair and transparent. They suggested two alternatives: single number bidding versus multiple parameter bidding. Single number bidding entails evaluation of bids on a single parameter. In this approach the entire commercial framework is set by the procurer with no admission of variation. Technical submissions are required to demonstrate compliance with the functional specification and finance deliverability, but are not evaluated beyond that hurdle test. The financial submission then consists literally of a single number, being the one tariff parameter not specified by the procurer. A single number bid by definition requires no further evaluation – the winning bidder is known as soon as the bids are opened, and they can sign the PPA there and then. In

contrast to this multiple parameter bidding allows degrees of freedom in the financial submission, and perhaps in the technical submission also. Evaluation is therefore immediately more complex, combining qualitative and quantitative factors, and requiring sophisticated economic modeling in order to relate bid heat rates to availability charges requiring, inter alia, the projection of dispatch rates and fuel prices over the life of the project. If bidders can bid different proportions of foreign exchange linked components and domestic inflation indexed components of availability charges then evaluation requires the projection of future exchange rates. If bidders can bid different availability charge profiles, then the choice of discount rate will be potentially critical in differentiating bids. Complexity of evaluation is not in itself the problem. The problem is to be fair between bidders and to make the right decision when selecting the winning bid. Because if (as must be expected) outturn exchange rates or dispatch differ from the projections used in bid evaluation, it is quite possible that second bidder might in actuality turn out to have been cheaper than the winner. In order to make the evaluation more robust a wider range of key variables would have to be allowed in generating projections. If ranges are used, rather than point estimates, there is a further loss of transparency.

56. We believe that the regulations require that the procuring agency lays down and justifies the bid evaluation criteria that it proposes to use, during the approval of process. Thus, there is freedom to the procuring agency to select the bid evaluation criteria and there is check on the procuring agency, as it is required to justify it before the Commission. This freedom to the procuring agency is considered essential to take care of a diverse range of procurements.

57. With regard to the choice of bid evaluation methodology, the Commission prefers simplicity in evaluation of the price bids to the extent that it does not interfere with or restricts competition and has the potential to obtain the lowest price bid. As there are multiple inter-related parameters and variables, the procuring agency shall consider the parameters and variables that shall be specified and therefore pre-determined and the remaining shall be solicited in the RfP. Thus for the parameters that are solicited, the procuring agency shall ensure that the evaluation has considered a reasonable and exhaustive range of variations that are possible which fully capture the impact of the parameters solicited. For the parameters that are pre-determined, the procuring agency shall ensure that these are achievable and do not restrict or hinder competition in any way. Complexity in evaluation shall need to be justified by possibility of obtaining lower tariffs. In all cases, the evaluation methodology and assumptions for evaluating the price bids shall be set out fully.

58. PTC has suggested that the reference to a tariff profile is not clear. The procuring agency may specify a desired profile for the capacity charge. However, there should be flexibility granted to the bidders in quoting the capacity charge to ensure most competitive terms while ensuring comparability. The Commission is of the view that if the procuring agency has provided a profile with due consideration to IPP financing, the bidders will still have sufficient flexibility to ensure most competitive terms. Financing of IPP projects should follow tariff profile stipulations and not the other way round. Further, unless a profile is provided, comparability of tariffs is just a mathematical exercise.

Technical Evaluation Criteria

59. The consultants proposed that the procuring agency shall evaluate the Technical Bids that are found compliant in accordance with the following minimum Technical Criteria, inter alia,

Technical soundness: The basic engineering design of the project shall be capable of delivering the Minimum Functional Specification set by the procuring agency as prescribed in the bidding documents.

Operational feasibility: The proposed organisation, methods, and procedures for operating and maintaining the completed facility shall be well defined, shall conform to the prescribed performance standards, and shall be shown to be workable.

Environmental Standards: The proposed design and the technology of the project to be used shall be in accordance with the prevailing environmental standards. Any adverse effects on the environment relative to the reference scheme shall be properly identified, including the corresponding corrective/mitigating measures to be adopted.

Project Financing: The proposed financing plan shall show that it is credible and achievable.

60. CEA has suggested that this needs to be reconciled with the principle stated in the foreword that the RfP document will lay down only output and minimum functional specification leaving design freedom to the bidders. It is mentioned in Clause XVI of Schedule 2 of the draft regulations that technical specifications should not be prescribed

in the RfP. It is preferable that a minimum technical specification indicating sizing criteria/redundancy levels/quality considerations for major equipments need to be specified by the procuring agency and ensure compliance with the bidders. This will also help in examining and comparing the installation costs on notional plant basis. We do not see any conflict and hence any need for reconciliation. Clause XIX (1) of Schedule 1 refers to evaluation of technical design of the plant. The RfP will specify the Minimum Functional Specifications but will solicit information relating to the technical specifications of the plant proposed by the bidders. The issue is that the technical specification should be sought from the bidders rather than the procuring agency specifying them in the RfP.

61. Reliance do not seem to favour credibility and achievability of the project financing plan being made an evaluation criteria. Having clarified in technical bid, competitiveness of tariff would be the sole criterion for selecting the preferred bidder. Once tariff is determined, it should be the prerogative of the developer to decide on particular structure of financing the project. Judging whether a particular financing plan is credible and achievable involves a lot of subjectivity which should not be encouraged. One of the RfQ criteria is to judge the financial strength and resourcefulness of the bidders. It is therefore not required to once again judge the credibility and achievability of the project financing plan. Further it questioned if it means that a preferred bidder can not change his financing structure at the time of actual implementation and that it does not make sense as financial markets are very dynamic and exact choice of structure depends on the state of the market when finances are drawn. We believe that it is the prerogative of the developer to decide on the particular structure of financing the project. Judging any plan (including technical plans) involves a lot of subjectivity and it is essential that the bidder is able to convince that he can deliver the project. Evaluating

the financial strength and resourcefulness of the bidder, similar to evaluating its project development and operating experience, focuses on historical performance. Evaluating the project financing plan, similar to evaluating the technical designs, focuses on the specific context. Further, actual financing responsibility and risk is to the bidders account and it is expected that he can change the terms of financing so long as the bid tariff is not altered.

62 After dealing with these general issues we now turn to the specific issues in Hydro and Thermal Generation and Transmission.

SPECIFIC ISSUES ON HYDROPOWER PROJECT SOLICITATION

63. Given the nature of hydro projects, it is generally recognized that there is little competition for privately financed hydro projects worldwide and less so in India. Further, there is very limited experience of private sector participation through competitive bidding route in green-field hydro projects worldwide. The Policy on Hydro Power Development acknowledges the constraints to private financing of hydro power projects and has laid down that public sector (and within that, the Central Public Sector Units) would continue to play a more significant role in hydro projects. The Policy identifies multi-purpose projects, projects on inter-State rivers, projects for peaking power, mega hydro projects and those involving rehabilitation and resettlement to be more suited to public sector implementation. This list of the types of hydro projects covers all but small run-of-river hydro projects that are thus more suited for private financing and development. The Policy also lays a heavy emphasis on well-defined and fully developed hydro projects (all investigations being completed, all necessary clearances obtained and pre-construction activities completed) for private sector participation. If the

private sector is not interested, the state/central agencies are required to implement the projects under the public sector. The policy also envisages sharing of geological risks by reference to determination by an Expert Committee at the state and Central levels.

64. It appears from the oral and written submissions made on behalf of Malana Power, PHDCC and Statkraft that there should not be any tariff based competitive bidding for hydropower projects as it does not work for hydro projects. Whilst Malana Power and PHDCC argue for a procurement similar to power block procurement but without any tariff based bidding (instead the procuring agency sets the price), Statkraft argues for MoU route projects as being the only possible route for private sector involvement in hydro projects. Statkraft has suggested that sponsors should be selected on competence and financial strength. Competitive bidding selection criteria cannot be established and competitive bidding adds to delays to the entire process. Statkraft has further argued that process of inviting competitive bids for selections of developers for projects above 100 MW has failed and that no single project world-wide where hydro projects have been awarded on a competitive bidding basis and have been successful. Malana Power has suggested that the hydro policy restricts allocating sites above 100 MW to private sector and this should be removed as they are wholly inappropriate to hydropower projects. The policy of Government of India is quite clear on this and we believe that procurement of electricity from hydro projects through competitive bidding should be encouraged.

65. We have seen from the submissions made that there are restrictions on site allocations set by the Central Government and the relevant State Government or an agency of the State Government conducts that auction of site. The next significant issue

is the manner in which the competitive bidding for such hydro projects be conducted. PHDCC has noted that the State Government has to play a very important role and that the State Government must facilitate the entire process. At the first instance, it is noted that there should not be any RfQ stage for each project. Instead, a Central Agency like CEA should pre-qualify the bidders for developing the hydro projects. It is proposed that the royalty (in terms of free power to the state) should be different from project to project. Currently, some states like Himachal Pradesh and Uttarakhand charge 12% of the power generated as royalty. It is proposed that difficult hydro projects should have a lower royalty whilst easy hydro projects should have higher royalties. It notes that benchmark price is a must for hydro projects and that a benchmark price can be prepared for each river basin. It proposed that there should be a shelf of hydro projects for which Detailed Project Reports have been prepared and State Government has provided its consent. Instead of tariffs, the royalties should be bid for the projects. The State Government should share some risks and the royalty should be available for adjusting against significant risks, e.g., geological risks. We find merit in these suggestions and hope that the State Governments take cognizance of the merits of this approach.

66. In developing the draft of competitive bidding regulations, the consultants assumed that there would be a single bidding process for awarding the site as well as setting the tariff and that the concerned State Governments and their agencies would coordinate to ensure that this is the case. Clearly, the competitive bidding process under these regulations becomes meaningless in case the State Government has already awarded the project site to a developer – the allocation of site precludes any competition for tariffs. Therefore, we would suggest that it would be more sensible if the procuring agency co-ordinates with the State Government where the sites are located and that

there is a single tender which is governed under these regulations to allocate site as well as to determine the tariff through competitive bidding process.

67. Malana Power has suggested that the power block transactions should be allowed because of two reasons – (a) medium-long term fixed price deals are possible in hydro projects and (b) the hydro developers are not averse to taking such risks. It pointed out that the regulations in their current form restrict such power blocks development. Malana Power has also suggested that the procurement of generation services should be sought on the following (a) the market where electricity is required to be provided by the generation service provider, (b) time for commencement of supply of electricity, (c) ceiling on tariff acceptable to the procurer, spelt at annual rests over a span of 15 years or more. Competitive bidding for thermal generation would necessarily require the location and fuel to be specified. However, this process shall not be feasible for hydro stations because the location of hydro projects is determined by nature and not by the procurer or the market. The procuring agency should specify the point of sale and not the sources of supply. The tender should not distinguish between thermal and hydro energy. We have already noted that inter-fuel or inter-technology competition is not permitted under the draft regulations.

68. The method of preparation of benchmark price is important, as it is crucial to the hydropower development in India. Malana Power gave a presentation on how the benchmark tariffs could be set (essentially a base year price with indexation) and that any developer, whether hydro or thermal, should be allowed to sell electricity at those prices. It compared the tariffs of what it termed as “cost-plus based tariffs” and “efficient private sector tariffs” and concluded that if the risks of hydro projects are adequately

rewarded through tariffs, there should be plenty of hydro development in the country. It submitted that there should be a lower limit of plant capacity and only those projects having capacity above the specified limit should come to the Commission. It also submitted that public sector as well as public-private partnership projects should be allowed under these competitive bidding regulations. There is certainly merit in the arguments put forward by Malana. We however do not see any competition or benefit of competition in terms of lower electricity tariffs emanating from the approach suggested by Malana Power. If the procuring agency were to set the “benchmark tariff” as suggested by Malana, how does the procuring agency gain from the benefit of lower tariffs? We believe that the approach suggested by Malana could well work under a framework where the hydropower IPP sells its electricity to the state where it is located which in turn sells electricity to other states under bilateral arrangements. In this manner, both the developer and the state government have interest in developing the project and more public-private partnership projects would come up. Further, such projects may sign agreements with other states for duration less than stipulated in these regulations thereby avoiding attracting these regulations.

69. On hydropower pricing, the public views fell into two broad categories - first category of submissions suggested that the pricing structure of hydropower projects under these regulations should be similar to that followed for the CPSUs. Thus, there should be a variable charge that is set by reference to the variable cost of generation of a specified thermal plant in the region. The specified thermal plant would vary depending on whether the hydropower is run-of-river or storage type. The second category of submissions suggested that there should not be a variable charge or if there is, it should be limited to elements like water cess or royalty. Earlier hydropower tariff guidelines artificially sought to divide the charges of hydropower projects into annual

fixed charges and energy charges. This is an understandable way of policing the hydropower projects but could result in distortions in the merit order in so far as the actual variable cost (which is close to nil for run-of-river projects) diverges from the stipulated energy charges. The recent tariff guidelines of linking the variable charge of hydropower project to variable charge of least cost thermal power project reduces the chances of despatch distortions to a great extent. Normally, the purpose of the Energy Charge in the two-part tariff structure is to make the generator indifferent to dispatch by matching the fixed and variable cost structure faced by the generator. In case of hydro projects, the variable costs are close to nil as maintenance costs to a large extent can be factored in as fixed costs. By this logic, there should be no Energy Charge in a hydro tariff. On the other hand, the current hydro tariff structure provides at least some portion of the tariffs to be recovered through Energy Charge with an element of sharing the hydrology risks. The consultants recommended availability based single part availability tariff for hydro IPP as it would facilitate easy comparison of bid tariffs, reflects the actual cost structure of the IPP and does not distort the merit order by artificially imposing a variable charge that is not the actual variable cost of the IPP. We agree with the recommendation made by the consultants and retain the provision of single part tariff in hydropower project.

70. In procuring thermal generation projects, the thermal generation projects shall be specified by means of an output and interface based minimum functional specifications (MFS). This is a best international procurement practice in order to provide design freedom and thereby transfer design risk to the bidders. However, in the case of hydro projects, it is felt that it is more difficult to draw up an appropriate MFS in the light of the multiplicity of interests involved in the associated river basin and we therefore believe that some amount of technical specifications would need to be provided.

71. HPERC has asserted that there is a lack of adequate preparation before tendering the MoU projects nor is there any discipline on the time frames for completion of these projects. The process regulations perhaps could take care of these situations. We fully agree with HPERC and it is our endeavour to rectify the situation. The regulations would require that certain minimum conditions need to be met and project document completed before the project is tendered. The purpose behind this is to ensure that projects are soundly based and reasonably fully developed before they are exposed to the private sector. Besides, filtering out poorly structured projects at the outset, this approach helps to reduce the Commission's intervention thereafter to ensuring that competitive conditions prevail. This forms the basis for minimum conditions to be satisfied for a qualified project to be allowed for competitive bidding. These conditions will ensure that that the project is well-formulated, attractive and suitable for competitive bidding.

SPECIFIC ISSUES ON THERMAL POWER SOLICITATION

72. As noted above, the consultants recommended that procurement of electricity from thermal projects should be under the IPP framework and competition would be based on power being provided at a specified location and for a specified fuel (or at least, a specified energy component indexation to a specified fuel). This recommendation was premised on the observation that in a developing country like India geographical location, fuel supply logistics and grid access are important descriptors of the project. If for instance bidders were to select different locations, the issue of deliverability of different projects would arise. By definition, the procurer would be unable to obtain in principle clearances in advance, which in itself would tend to delay

the project. Similarly characteristics of the various fuel markets, e.g., domestic coal, imported coal, LNG, liquid fuel, natural gas, etc. as well as the requirements of associated fuel facilities have an asymmetric impact on the price of power. As a result, comparing the price of power with firing different fuels (and not dual fuel option) will be fraught with assumptions that can arbitrarily favour one or the other. Therefore, the consultants had suggested that fuel and location should be specified for bidding for thermal power projects.

73. PTC has suggested that bidders should be allowed choice of fuel or at least the source of supply (domestic coal vs. imported coal). It argued that risk profile of imported and domestic coal is not entirely dissimilar and therefore the bidding parameters can be structured to ensure compatibility. We believe that this suggestion concerned with establishing a reference scheme and the relevant clause states that a reference scheme should use a single coal specification - domestic coal, imported coal or blended coal. This would then be used by the procuring agency to determine whether or not to make advance fuel procurement arrangements and the determination of the Energy Charge components – fuel pricing and take-or-pay requirements. We do not agree with PTC; and we stipulate that the Reference Scheme has to be prepared with reference to single fuel and single location.

74. With regard to fuel supply and transportation arrangements in case of thermal generation projects, the consultants recommended that the procuring agency shall have either made prior fuel supply and transportation arrangements that can be assigned to the Preferred Bidder or at a minimum, specified key terms impacting structure and indexation of the Energy Charge: (a) in case of thermal generation projects using

domestic coal, the procuring agency shall have negotiated and reached in-principle agreements with the fuel supplier and transporter in relation to pricing mechanism, indexation, take-or-pay considerations, development charges and sharing of fuel supply and transportation risks; (b) in case of thermal generation projects using LNG, the procuring agency shall have determined the indicative terms of supply including take-or-pay levels, break-up of fixed and variable charges, indexation mechanism and foreign exchange exposure for the required fuel supply and transportation; or (c) in case of thermal generation projects relying on world spot markets for fuel supply using imported coal or liquid fuel, the procuring agency shall have determined an appropriate internationally acceptable fuel price index.

75. TELC suggested that this aspect needs to be flexible at the time of the bidding as successful bidder may have better expertise in the area of fuel markets. We are of the view that the above-referred clause provides a fair degree of flexibility.

76. PTC suggested that the procuring agency may determine during the project planning process whether to allocate a fuel linkage or allow bidders to retain flexibility on the same. Additionally, the procuring agency should not independently tie up with the fuel supplier prior to bidding process. In absence of any concrete proposals for project development, the fuel supplier generally does not give a serious response to a proposal for fuel supply and a realistic price estimate. Reliance suggested that a base price of the fuel can always be agreed upon based on certain assumptions about take-or-pay, sharing of fuel and transportation risks, etc. in advance even though details like location of coal receiving yard, finalisation of delivery points, acceptable quality are issues that will be difficult to be finalised at an early stage. PTC suggested that this should not be

made binding on the procuring agency. The rationale for undertaking such a detailed exercise is not evident. Such exercises are expensive and may not result in significantly different conclusions for different projects proposed in various regions of the country. Also, the result of such studies will be indicative and not contractually binding. PTC suggested that the provision of procurement of domestic coal, in-principle agreement for coal supply to be reached by the procuring agency, is restrictive and should not be retained as a Minimum Condition. PTC furnished following reasons for not making the above mentioned provision a minimum condition: (a) It does not take into account the possibility of BOOT bidders using captive mines or JV mines for sourcing the fuel. (b) It also does not take into account the gradual liberalization of the coal markets in India wherein competition can be expected amongst domestic coal suppliers. (c) Competition between domestic and imported coal for a project shall be precluded by the provision. PTC also observed that it is restrictive for the procuring agency to tie up for fuel and assign the FSA. The RfP document may however contain the principles on which energy charge shall be paid. Bidders in BOT transaction may prefer to retain the flexibility of contracting their fuel supply. In case of LNG especially, some bidders may prefer to use fuel sourced from projects internationally where they have an equity stake. Reliance suggested that in some cases, e.g., where the fuel supplier develops new mines dedicated to the project, the fuel supplier may want protection against changes in the coal market for the investment made in developing the coal mine. In case the fuel supplier is not willing to allow changes in the fuel supply agreement due to change in energy market conditions, the project company cannot do so.

77. The Commission is of the view that unless all bidders have equal access to fuel, be it captive mines, LNG, etc., it is fair for the procuring agency to negotiate with the fuel supplier in such situations. We believe that these guidelines are for current market

conditions and could be reviewed when the market changes. We have already provided our views on inter-fuel competition and that extends to domestic coal vs. imported coal. Accordingly, we direct that these stipulations be moved from "Minimum Conditions" to "Best Practice Guidelines" to accommodate changes in best practices over time.

Availability incentives

78. NTPC suggested that tariffs should not have incentives for availability (consistent with the cost based Tariff Order 21.12.2000). NTPC pointed out that the Commission's own order on cost based tariffs expressed that incentives should not be paid for mere availability of any station and incentives shall be available only when actual despatch exceeds certain level of generation. It further argued that principles to be adopted by the Commission cannot be different based on ownership or the manner in which the plant has been established. The consultants proposed that incentive payments for availability for cost-plus based regulations is different from designing bid tariff structures to incentivise plant to maximize availability. In the former, the developer would recover all fixed costs at the designated availability level (which is pre-specified and not bid) and anything over and above the designated availability level is a bonus. In the latter, the bidder's ability to offer the lowest tariff per unit of availability is determined by, inter alia, its capacity to offer highest availability. Therefore, if the availability tariff is bid on per unit availability without reference to any base level of availability, it automatically incentivizes the bidder to maximize plant availability. This does not mean that there are any explicit incentives proposed for availability. At the outset, we feel it is important to clarify that cost-based regulations (in absence of competition) will always differ from tariff based regulations (which rely on competition). Further, we do not see any merit in NTPC's argument that these regulations propose incentives for availability.

SPECIFIC ISSUES IN TRANSMISSION SERVICE SOLICITATION

79. Transmission having been recognized a distinct activity from generation by amendment of Indian Electricity Act, 1910 during 1998 there was the need for grant of transmission license to any person for undertaking transmission activities. This amendment paved way for private sector participation in transmission sector.

80. The statutory provisions set out in Section 27C of the Indian Electricity Act, 1910 as amended in 1998, empowers the Commission to prescribe the terms and conditions, forms and fees for grant transmission license to a person for undertaking inter-state transmission of energy. Further Section 13(c) of the Act, assigns the function to regulate interstate transmission of energy and tariffs to the Commission. The Commission in its Order dated 14.6.2001 and subsequent notification dated 24.8.2001 dealt with the matter of "Grant of Transmission License – Procedure, Terms and Conditions, Forms and Fees of License." The Commission in its notification dated 26.3.2001 came out with tariff regulations for cost plus tariffs for generation and transmission utilities (including POWERGRID). These regulations cover the range of the regulatory oversight of the Commission on the inter-state transmission systems. It needs to be pointed out that as all these regulations deal with generally similar matters but with different perspectives, it is inevitable that these regulations would have stipulations that may overlap or in some cases may be interpreted to contradict stipulations contained in other orders and regulations relating to inter-state transmission systems. We do not see this as inconsistency but merely an indication of the balance that needs to be struck between the objectives, stipulations and outcomes of the license regulations, the tariff regulations and the competitive bidding process regulations. Further, it may be noted that the

Commission's regulations on Grant of Transmission License-Procedure, Terms and Conditions, Form and Fees does offer guidance on competitive procurement of transmission service. In view of the fact that standardization of the process and documents is relatively easier in the case of transmission as Central Transmission Utility notified under sub-section (1) of Section 27A of the Indian Electricity Act, 1910, is the sole procurer, that transmission has strong natural monopoly characteristics and is likely to remain a regulated sector, we direct that procurement of the transmission services in case of any conflict with the present order would be governed by Commission's Order dated 14.6.2001 and the subsequent notification dated 24.08.2001. However any additional guidance offered through the regulations proposed to be notified based on this order would have to be adhered to by the Central Transmission Utility.

81. Having said that, it is important to summarize the guiding principles for regulating ISTS projects procured through the process of competitive bidding:

-  Cost-based tariff regulations would necessarily be different from tariff-based competitive bidding regulations and there cannot be any basis for arguing that there should be parity between the two.
-  The matters relating to the process of competitive bidding, *inter- alia*, the approval of process and approval of tariffs procedure, the tests for competition, benchmark price and bid evaluation procedure, would in general and in case of any conflict with the present order be governed by Commission's Order dated 14.6.2001 and subsequent notification dated 24.8.2001. However any additional guidance offered through these regulations would have to be adhered to by the Central Transmission Utility.

- ~~///~~ The process for identification of transmission projects and the procedure for grant of license shall be governed by Commission's Order dated 14.6.2001 and the subsequent notification dated 24.08.2001.
- ~~///~~ The issues relating to project agreements and documentation would be regulated equally by these regulations and the Commission's order dated 14.6.2001 and the subsequent notification dated 24.08.2001.
- ~~///~~ As per the Commission's notification dated 21.9.2001, a Transmission Majoration Factor (TMF) of 10 percent is provided to the IPTC/JV projects to encourage private investment in the transmission sector. The bidders shall factor the TMF @ 10 percent (pre-tax) on transmission service charges in their bids in accordance with the said notification. The TMF shall not be allowed on HVDC projects executed through IPTC/JV routes.

82. POWERGRID suggested that the approval of process and RfQ/RfP should not be required. At most the Commission can prescribe some guidelines on the process to be followed and POWERGRID can give a confirmation in checklist form. It argued that the approval of process and RfQ and RfP of each project amounts to micro managing the activities of POWERGRID besides delaying the process of private participation. It further argued that the Commission had earlier stipulated that CTU shall prepare model RfQ/RfP documents and prepare the same for approval of the Commission. POWERGRID expressed that the above mentioned stipulation is now in contradiction to Commission's earlier order dated 14.6.2001. We do not see any contradiction. Once the RfQ/RfP documents have been standardized, these would be automatically approved for subsequent procurements and the Central Transmission Utility would need to take approval of the Commission for any deviations to the approved documents. If anything, we see that this will help streamline the procurement process of transmission services

through tariff based competitive bidding to a great extent and thus, reduce the time taken for procurement rather than delaying the whole process.

83. Based on the above directions, the regulations on competitive bidding shall be notified after obtaining the Commission's approval. While notifying the regulations it shall be ensured that the regulations to be notified are not in conflict with the Central Electricity Regulatory Commission (Procedure, Terms & Conditions for grant of Transmission License and other related matters) Regulations, 2001 notified on 24-8-2001.

Sd/-
(K. N.Sinha)
Member

Sd/-
(G. S.Rajamani)
Member

Sd/-
(D. P. Sinha)
Member

New Delhi dated 9th May 2002