

**No. L-7/25(5)/2003-CERC
CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram

**Shri Bhanu Bhushan, Member
Shri R. Krishnamoorthy, Member**

In the matter of

Amendment of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 – Statement of Reasons – Part II

And in the matter of

Consideration of comments/suggestions/objections

A proposal published on 24.10.2007 to invite suggestions and objections to amendment of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 (the 2004 regulations) covered three distinct issues, namely:

- (a) Amendment of Regulation 5, to the effect that submission of Forms – 5B and 5C shall not be necessary at the time of applying for provisional tariff.
- (b) Amendment of Regulations 19 and 35, to the effect that infirm power shall be accounted for as Unscheduled Interchange (UI), and
- (c) Amendment of Regulations 42 (2) and 45 to allow a flexibility in the operation of hydro-electric generating stations.

2. After careful consideration of the suggestions and objections received, the Commission has finalized the amendments vide notification dated 28.12.2007, to be

effective from 00.00 hrs of 7.1.2008. We now proceed to formally record our decisions on the suggestions and objections received.

Amendment of Regulation 5

3. On the first issue, the following respondents have concurred with the proposal:

- (i) Andhra Pradesh Power Coordination Centre
- (ii) Maharashtra State Electricity Distribution Co. Ltd.
- (iii) Meghalaya State Electricity Board
- (iv) National Hydroelectric Power Corporation Ltd
- (v) North Eastern Electric Power Corporation Ltd
- (vi) Punjab State Electricity Board
- (vii) Satluj Jal Vidyut Nigam Ltd

4. Tripura State Electricity Co. Ltd., while concurring with the proposal, has desired that details under Forms – 5B and 5C should be filed with any new/fresh petition, where such details have not been filed earlier. As this is already implied and forms 5B and 5C have to be filed in every case along with the application for approval of final tariff, no amendment of the proposal already circulated was necessary based on the comments of Tripura SECL. Tehri Hydro Development Corporation Ltd has suggested that Form 5D should also be added to the list, along with Forms 5B and 5C. The suggestion is considered to be reasonable, and has been accepted by the Commission. The same has been incorporated in the notification dated 28.12.2007. As the respondents are generally in agreement with the proposal made, Regulation 5 has been amended as proposed,

except that in addition to Forms 5B and 5C it will not be necessary to file Forms 5D while seeking approval for provisional tariff.

Amendment of Regulations 19 and 35

5. Divergent views have been expressed on the second issue. The following respondents have concurred with the Commission's proposal :

- (i) Meghalaya State Electricity Board
- (ii) North Eastern Electric Power Corporation Ltd
- (iii) Satluj Jal Vidyut Nigam Ltd
- (iv) Tehri Hydro Development Corporation Ltd

6. CLP Power India Pvt Ltd has also concurred with the proposal but has sought a confirmation that the adjustment of the capital cost with the revenue earned through sale of infirm power as UI should be after making adjustment of fuel costs, that is, only net revenue should be considered for adjustment in capital cost. We confirm the same as it is already implied. The entire fuel cost (both for coal / lignite / gas and oil) used during testing and commissioning of a generating station upto the date of commercial operation is even presently being capitalized as commissioning expenditure, and the same practice shall continue.

7. CLP Power India Pvt Ltd has further pointed out that when the fuel cost is so adjusted, the net revenue could be negative even when the grid frequency is below 50 Hz, because the per unit rate (UI rate) paid to the generating company may not offset the

fuel charges incurred in generating these units. This may be the case, but we are unable to accept the consequent suggestion that the payment for infirm power should be at the applicable UI rate or variable charge, whichever is higher. Any revenue shortfall gets automatically built in the project's capital cost as incidental expenses during construction. CLP Power India Pvt. Ltd has rightly pointed out that there is no major benefit accruing to the generating companies from sale of infirm power, as the net revenue earned on account of sale of infirm power goes in lowering the capital cost of the generating station. The Commission never intended to grant them any such benefits either and this situation obtains even now.

8. Tripura SECL has concurred with the Commission's proposal in respect of hydro generating stations, but has suggested, for thermal stations, "sale (of) infirm power with firm scheduling through traders instead of UI so that sale price consistency can be maintained." We are unable to accept this suggestion as infirm power cannot have a firm schedule, which is a pre-requisite for scheduling any trading of electricity.

9. Power Grid Corporation of India Ltd, on behalf of the RLDCs, has endorsed the Commission's proposal, stating as follows :

"Valuing infirm power at the prevailing UI rate is a step in the right direction. It would send the right signals to a generator for accommodating the requirements of the grid as well as address the concerns of stakeholders. The present practice of revision of the schedules on a post-facto basis creates a distortion. In fact many SLDCs during a shortage scenario in the past have expressed that this infirm power must be scheduled to them in advance so as to minimize their load shedding. However, considering the uncertain nature of such infirm power, scheduling is not practical. Valuing it at the applicable UI rate would therefore correct this distortion besides benefiting both the generators (in terms of better cash flows immediately after commissioning) as well as the beneficiaries (in terms of reduction in capital cost)"

10. Power Grid Corporation of India Ltd has further suggested as follows:

“In case of a first generating unit in a new power station, there could be situations when the generator draws auxiliary supply from the grid on a net basis when the unit is out. Such drawals also need to be charged at UI rates if this amendment comes into force. For the period of construction to the first synchronization of unit, the generator could have any arrangement either through Short Term Open Access (STOA) or through the retail supplier for the area. From the period of first synchronization to commercial operation the arrangement needs to be only UI rates to avoid any accounting complications.”

11. The Commission finds this suggestion reasonable. There is nothing in the 2004 regulations to prevent operationalisation of this suggestion, and the same may be adopted as a logical corollary to the proposed amendments regarding infirm power, whenever a generating company wishes to go through this route.

12. A clarification has been sought that the proposed treatment of infirm power as UI shall not apply where the tariff is determined through a transparent process of competitive bidding. It is, therefore, clarified that Regulations 19 and 35 are applicable only to the generating stations whose tariff is determined by the Commission, starting from the capital cost. These regulations necessarily require capital cost reduction (for subsequent determination of capacity charge of the generating station) to the extent of revenue earned through sale of infirm power, and, therefore, cannot be applied where capital cost does not come in picture for tariff determination. It is further clarified that in case of competitive bidding, the conditions specified in the bidding documents would in any case apply. However, in case of merchant power plants and merchant capacity, the infirm power shall be accounted for as UI.

13. There is a long list of the respondents who have opposed the proposed amendments to Regulations 19 and 35. We first take up the comments of the generating companies which have opposed the proposal, i.e. NTPC Ltd, Neyveli Lignite Corporation Ltd, National Hydroelectric Power Corporation Ltd, Lanco Amarkantak Power Pvt Ltd and Torrent Power Ltd. These are :

- (i) Payment for infirm power is presently assured through the provisions in PPAs, letter of credit and tripartite agreement, whereas there is, as of now, no fool-proof mechanism for securing payment of UI charges. It has, therefore been suggested that the amendment should be implemented along with a mechanism to guarantee payment into UI pool account.
- (ii) PPAs signed by the generating companies with the beneficiaries provide for supply of infirm power at variable charges. The contractual issues may arise if the Commission's proposal is implemented.
- (iii) In the current system, the generating companies do not get any return on their equity investment during the construction period of 3-4 years, which is compensated by return on equity (ROE) after the date of commercial operation. With the proposed scheme, billing for infirm power may increase 3-4 times, with a corresponding reduction in capital cost. This will amount to restoring a part of investment to the generating company without any return. Therefore, the proposal should be implemented along with a mechanism for providing ROE during construction period. Or else, it has

been represented, the revenue earned from sale of infirm power may not be considered for adjustment against capital cost.

- (iv) The proposal amounts to taking the schedule of a generating unit before its date of commercial operation as zero. Application of UI rates may complicate the issue.
- (v) During the commissioning stage, the generating units are in the hands of the contractors, and the generating companies/beneficiaries have no control over their operation and infirm power generation. The very objective of the proposal may, therefore, not be achieved.
- (vi) The proposed amendment to Regulation 35 applicable to hydro electric generating stations would be a welcome step provided it incentivises the hydro generating company to maximize injection of power during peak load hours and minimize it during off-peak hours. But because of prospective loss of return as per (iii) above, the generating company may be induced to do the opposite.
- (vii) If infirm power is accounted for as UI, as proposed, the generating company will be induced to programme its testing activities only during periods of high UI rate, in which case commissioning of the generating station may get delayed.
- (viii) Testing of coal-based generating units intermittently, to take advantage of UI rates, is not feasible, nor is it advisable from grid security angle.

- (ix) Post-facto changes to schedules of beneficiaries cannot be totally eliminated till atomic power generating stations are brought under ABT regime.
- (x) When infirm power is accounted for as UI, the revenue may fall short of fuel cost, and capital cost may get jacked up (compared to the case in which infirm power is priced as per variable charge).

14. Each of the above objections deserves a serious consideration. This has been attempted below, *ad seriatim*.

- (i) Payment security for UI charges is urgently required, not only on this but on many other counts. The Commission is working on it separately. However, the Commission would not like the proposed rationalization to be kept pending till finalization of payment security mechanism for UI charges.
- (ii) PPAs for the central generating stations generally have a provision that the tariff shall be as decided by the Commission. We see no reason for the contractual issues being raised to block a rationalization exercise being carried out by the Commission, in exercise of its statutory power and through statutory amendments. In fact, rationalization of tariff is one of the objectives of the Electricity Act, 2003. However, the Commission may be approached in case of any difficulty in giving effect to the amendment already notified.
- (iii) This is a matter of perception about value of money in the hands of a company. If the generating companies really feel that getting a part of the

investment back upfront is not in their interest, there is perhaps a case for reducing the assured rate of return that they presently earn in accordance with the 2004 regulations. It is also possible for a generating company to repay some part of loan through the revenue earned from infirm power, leaving its equity investment intact. This will take care of their concern. We also note that only a few generating companies feel the way the objection has been raised.

- (iv) The reference is perhaps to clause (2) of Regulations 24 and 42 regarding generation above 101% and 105% being viewed as gaming. It would be illogical for any entity to ask for application of this clause to the infirm power period.
- (v) The Commission's intention was never to insist on testing activities to be synchronized with high UI rate period. The intention has been only to offer the correct incentives to the concerned utilities to work in a manner (to the extent possible) which is beneficial for the whole system. There is no compulsion, but only an option.
- (vi) The comment is premised on an apprehension that the generating company may suffer a loss of return, and it is not in its interest to have a larger upfront recovery of its investment. This issue has been addressed in para (iii) above.
- (vii) & (viii) There is a contradiction between the two suggestions coming from the same respondent. In fact, we would not have expected these comments from a utility in private sector.

- (ix) We are aware of the fact that at present the atomic power generating stations are not under ABT regime, and are initiating the process to bring them also within the common framework.
- (x) Perhaps the comment has been made in the context of combined cycle generating stations using costly fuel and consequently having a variable charge exceeding the average UI rate. In any case, the differential amount would get compensated as an adjustment in the capital cost.

15. We now take up the objections raised by the beneficiaries, which include Andhra Pradesh Power Procurement Committee, M.P. Power Trading Co. Ltd and Punjab SEB. The grounds for objecting to the amendments of Regulations 19 and 35 (regarding infirm power) are :

- (i) Sanctity of GOI orders on percentage allocations in plant capacity would be lost, and there would be inequity.
- (ii) UI is third component of ABT, and ABT becomes applicable only after declaration of commercial operation.
- (iii) Upfront recovery of capital cost is detrimental to the beneficiaries.
- (iv) Central generating companies are already making huge profits and the proposal would get them double benefits; IDC plus capital cost recovery before the commercial operation.
- (v) The generating companies may deliberately delay commercial operation declaration.

- (vi) Provision in the tariff regulations, 2001 regarding commercial operation within 15 days for hydro power generating stations should be restored.
- (vii) Proposal cannot be applied for competitively bid projects.
- (viii) Frequent amendments to the tariff regulations create uncertainty in the regulatory process. The proposal should presently be deferred, and taken up only for the new tariff period beginning 1.4.2009.
- (ix) There is presently no cause of action for amendment of Regulations 19 and 35 since neither the generating companies nor the beneficiaries have raised any issue on this matter.
- (x) Proposal is not in consumers' interest.
- (xi) The Commission should specify the procedure for calculating expected revenue in terms of section 62(5) read with section 178 of the Electricity Act 2003, and examine whether the return to the generating company is reasonable, before undertaking any further amendments to the Regulations, which benefit only the generating companies.
- (xii) Only beneficiaries are burdened and generating companies are benefited. Such a scheme does not ensure equity to all.
- (xiii) Rate of infirm power during peak load conditions may be more than firm power, which may be an anomalous situation.

16. The Commission has deliberated on these objections as well, and its findings are as follows, *ad seriatim*:

- (i) The proposed amendments to Regulations 19 and 35 do not dilute the sanctity of GOI orders on percentage allocations in the central generating stations in any manner. When the infirm power revenue is applied for reduction in capital cost, it benefits the allocatees in direct proportion to their respective shares in the capacity allocated, through tariff reduction. Further, even if the extra power available in the grid through infirm power injection is drawn / utilized by a party who is not a beneficiary of the new generating station or a unit thereof, the UI charges paid by it would go to the benefit of the identified beneficiaries. There is thus absolutely no inequity in the mechanism proposed and since finalised.
- (ii) While UI has commonly been referred to as the third component of ABT for a layman's understanding, it is really a settlement mechanism for deviations from schedules. Regulations 15 and 37 of the 2004 regulations are quoted below, from which it should be abundantly clear that what applies from the commercial operation date is a two-part tariff, which does not include UI charges.

“15. Components of Tariff : (1) Tariff for sale of electricity from a thermal power generating station shall comprise of two parts, namely the recovery of annual capacity (fixed) charges and energy (variable) charges.

“37. Computation of Annual Charges : The two-part tariff for sale of electricity from a hydro power generating station shall comprise of recovery of annual capacity charge and primary energy charges :.....”

The respondents' objection therefore has no validity.

- (iii) This is a matter of perception of the individual utility, its own expectation of returns on investment and how commercially minded it is. We have heard some beneficiaries (in cases of tariff determination) preferring upfront payment

over deferred recovery of the capital cost component through tariff (a life-long liability). On the other hand, in the present matter, strange as it is, some generators have objected to the proposal perceiving it as detrimental to their interest. From the regulatory angle, we consider the proposal as neutral, since the upfront reduction of capital cost would have the same NPV (when discounted at an appropriate rate) as that of consequent tariff reduction. The objection, therefore, has no force.

- (iv) There would be no double benefits to the generating companies, in view of the consideration given in the previous sub-para. The matter regarding generating companies making huge profits has been addressed by specifying a cap on UI rate for generation above the schedule, in case of coal, lignite and APM gas fired generating stations. The same shall apply to sale of infirm power as well.
- (v) If a generating company deliberately delays commercial operation declaration to earn excessive UI, not only would it lose capacity charge and energy charge for the period of delay, but its future capacity charge recovery would also come down due to reduction of capital cost. There will thus be enough disincentive for the generating company not to deliberately delay the commissioning of the generating station.
- (vi) The matter got settled in 2004 at the time of finalization of the 2004 regulations for the current tariff period. There is no reason to reopen the matter at this stage.
- (vii) Regulations 19 and 35 are a part of tariff regulations which apply only for cases where tariff is to be determined by the Commission based on capital cost, and

they are not applicable to the competitively bid projects, as is clearly specified in Regulation 2 of the 2004 regulations. This has been clarified in para 12 above also.

- (viii) The nature of the proposed amendment is such that it can be introduced at any time without causing any upset. It is not necessary to keep it pending till the beginning of the new tariff period, particularly because it does not change the notified tariff (capacity charge and energy charge) for any generating station.
- (ix) There is no bar under the law to introducing rationalization and streamlining the grid operation by the Commission, of its own or based on the suggestions received. The Commission is competent to act in that direction and this is the mandate of the 2003 Act.
- (x) We have already noted in sub-para (iii) above that the proposal is revenue neutral. Additional payment by a beneficiary, if any, prior to the commercial operation of the generating station shall reflect in a commensurate reduction in tariff over its life.
- (xi) This is a separate issue. In any case, the present proposal is revenue neutral, as already noted.
- (xii) We do not agree with the respondent's views.
- (xiii) Under the proposal, the rate of infirm power would be same as that of UI, which tends to be the system marginal price. It would not be appropriate to compare the infirm power rate with the price of firm power, because the latter would have already got exhausted. Infirm power would constitute an extra source of

power from time to time, and it would be perfectly logical to price it at the same level as UI.

17. In its comments, ERPC Secretariat has opined that the proposed treatment of infirm power as UI may not be proper. However, the arguments to support this are not very clear to us. Similarly, it is not quite clear from the response of Maharashtra SEDCL whether it has supported or opposed the proposal and as such no cognizance thereof has been taken.

18. A large number of responses have been received from the State Electricity Regulatory Commissions also, the main thrust of which is insufficient time allowed for making the suggestions, and alleging that “CERC is possibly not thinking of considering the comments/suggestions that may be given by the stakeholders seriously.....” The factual position is recounted below.

19. The State Electricity Regulatory Commissions have referred only to the press release dated 21.11.07, and have stated that the time given for receiving comments and suggestions from public was too short, and that in all fairness, at least a fortnight’s time should have been allowed. They have failed to note that the draft of the proposed amendments with the supporting Explanatory Memorandum was published on 24.10.2007 and put up on the Commission’s website on the same date to invite comments/suggestions by 16.11.2007. Subsequently, through another public notice dated 20.11.2007, the time for submission of comments/suggestions was extended upto

30.11.2007, and a press release was accordingly issued on 21.11.2007. It is, therefore, clear that sufficient notice had been given, and the question of issuing a fresh notice did not arise. It is also noted that as many as 26 responses have been received by the Commission, which shows that the proposals had received adequate publicity.

20. The main technical objection in these responses from the State Electricity Regulatory Commission is that UI cannot be applied where there is no schedule, UI is not and cannot be a pricing mechanism, and cannot substitute a tariff determinable by the Appropriate Commission. It is unfortunate that the concept of UI has not been understood by the respondents concerned even after 5 years of its successful operation. We may recall here that we have already decided in our order dated 11.9.2007 in Petition No. 65/2007 that the entire injection of Muzaffarpur TPS till its operation stabilizes shall be accounted as UI. Even the Tariff Policy issued by Govt. of India on 6.1.2006 provides as follows under clause 6.3 on harnessing of captive generation, obviously referring to UI:

“Alternatively, a frequency based real time mechanism can be used and the captive generators can be allowed to inject into the grid under the ABT mechanism.”

21. One of the respondents has stated as follows :

“How much successful this commercial signal had been in the management deficit in the grid is for anyone to see from the grid parameters like deteriorating frequency and the huge transaction of UI charges every week between the various participants in the grid.”

22. Perhaps the respondent should ponder as to where the Indian power system would have been if ABT and UI had not been implemented in 2002-2003.

23. A question has been raised about grid security. We would only say that our regional grids are now much more robust, are capable of and have in fact been withstanding much larger outages.

24. Some of the State Electricity Regulatory Commissions have objected to the proposal on grounds already covered in the foregoing discussion, while dealing with objections of the generating companies and the beneficiaries and therefore, these are not being discussed separately.

25. To conclude, we do not find much strength in the arguments put forward to oppose the proposals for amendment of Regulations 19 and 35. UI rate is synonymous with the system marginal price, or the “pool price” in other electricity markets. UI mechanism is also like the “balancing market”. Applying UI rate for the uncertain (non-firm) supplies is, therefore, logical. Therefore, Regulations 19 and 35 have been amended as originally proposed on 24.10.2007.

Amendment of Regulations 42 (2) and 45

26. We now come to the third issue, which relates to amendment of Regulations 42(2) and 45 to allow flexibility in the operation of hydro power generating stations. The reasons for proposing the amendment had already been indicated in the ‘Explanatory Memorandum’ issued on 24.10.2007 as a part of the proposal for amendment. Still,

many of the comments received indicate that the reasons have not been properly appreciated.

27. The proposal has been opposed by all the generating companies operating inter-State hydroelectric generating stations, i.e. National Hydroelectric Power Corporation Ltd, North Eastern Electric Power Corporation Ltd, Satluj Jal Vidyut Nigam Ltd and Tehri Hydro Development Corporation Ltd. The main grounds for objecting to the proposal are:

- (i) Any extra generation on Day 1, induced by the proposal could prove counter-productive for the generating company as grid situation on Day 4 may be such that it loses more money (as negative UI) on Day 4 than it gains on Day 1 (as positive UI).
- (ii) Similarly, in case of under-generation on Day 1, the generating company may lose more money as negative UI than what it may get on Day 4 as positive UI.
- (iii) Hydro generators would be disincentivised to produce higher generation during peaking hours.
- (iv) Whatever commercial benefits are already available (to the hydro generating stations) are being withdrawn, as there will be no net UI energy in the end.
- (v) Proposed amendment to clause (xii) of Regulation 45 would have a serious impact on hydro generation as revision of availability declaration (due to inflow changes etc) may not be allowed.

- (vi) Proposal is not fair and equitable as similar scheduling procedures have not been proposed for thermal power generating stations.
- (vii) Generators may be induced to vary the machine output abruptly with reference to frequency conditions, which may cause damage to the equipment, shortening of machines' life and frequent breakdowns.
- (viii) Requirements of irrigation and drinking water releases and constant river flows prevent the hydro power generating stations from operation as peaking stations.

28. However, these generating companies have supported removal of the existing cap on generation (e.g. 101%, 105%) so that they are able to contribute more to the grid.

29. NEEPCO has asked that the word "gaming" used in clause (2)(i) of Regulation 42 be clarified / elaborated. It has also asked for elaboration of the word "contingency" in clause (xii) of Regulation 45.

30. Though it has not been said so in as many words, the main objection of the above the generating companies appears to be emanating from the fact that they would no longer be able to make any extra money by generating more energy than scheduled. The 2004 regulations allow generation upto 101% of declared capacity on daily basis. Such generation is not to be treated as gaming, and the generating companies have had the scope for UI earning through this tolerance. However, this cannot be treated by them as their prerogative. The Commission has decided to plug it, in response to the

persistent complaint of the beneficiaries that the generating companies were taking undue advantage of UI mechanism. This matter has also been considered at paras 30 to 34 of the statement dated 31.12.2007, while considering comments/suggestions/objections relating to amendments to Regulations 24(1) and 42(1).

31. The foregoing should answer objection at sub-para (iv), listed in para 27 above. A perusal of paras 30 to 34 of the statement dated 31.12.2007 would also bring out that UI rate for over-generation by thermal power generating stations has been capped at 406 paise/kWh to curtail their scope for making extra money through the process. There is no such capping of UI rate for hydro power generating stations, and they could still make extra money through intelligent flexing of their generation. There is a fundamental difference between the mode of operation of hydro and thermal generating stations. The former have an energy restriction (except during high inflow period), and have to be operated with minimum generation during off-peak hours. The latter have a MW availability restriction, and their generation has to be maximized all the time. As such, there can be no direct comparison between the two, and incentives should be based on different criteria. Any question of inequity between hydroelectric and thermal power generating stations, as alleged in objection at sub-para (vi) of para 27 above, therefore, also does not arise.

32. Objections at sub-para (i) and (ii) of para 27 above are a result of lack of understanding of the basic concept that there are no compulsions, but only incentives for doing the right thing. For example, if the extra generation on Day 1 is due to a deliberate

action by the generating company, it would be only because frequency was low and UI rate high on Day 1. In such a case, there is little chance of negative UI of Day 4 being bigger than the positive UI on Day 1. In case the frequency is still lower on Day 4, the generating company can have a lesser under-generation on Day 4, and have the balance adjusted on Day 7. Further, if the generating company does not intend to take any chance, it may not deviate on Day 1 to start with, and thereby also lose the opportunity of making extra money.

33. On the other hand, if over-generation on Day 1 is for the reasons beyond the control of the generating company (e.g. increased inflows), it gets UI charges, without doing anything, and a compensating adjustment should be made on Day 4 by lifting the schedule above the declared capacity. It would be expected that the generating company would generate declared capacity on Day 4, as declared, and automatically have a negative UI. The concerned RLDC/SLDC would need to give out the schedule for the day judiciously, accommodating the extra energy in a reasonable manner, for which some guidelines may have to be formulated after gaining some practical experience of operation under the amended regulations. We do not see any inequity in all this.

34. Objections at sub-para (iii) and (vii) of para 27 above, in our view, are also misconceived. As already mentioned, there is no compulsion for a generating company to deviate from the given schedule. It should not deviate in case there is any apprehension about losing money or damaging the equipment. As for objection at sub-para (v) of para 27 above, it is clarified that the objective of the amendment is to avoid

unnecessary schedule revisions, many of which were required earlier only to keep within 101% and 105% limits specified in clause 2(i) of Regulation 42. Objection at sub-para (viii) of para 27 above, is considered as not relevant to the present matter.

35. Satluj Jal Vidyut Nigam Ltd has stated that most hydro power generating stations are operating under FGMO, are responding to frequency fluctuations, and no undue money is being made. Such generating stations should have no cause for any apprehension on the proposed amendments. We, therefore, see no reason for putting the amendments on hold. As for constituting a committee of experts, there is no bar on the generating companies to do so on their own. They can also approach the Commission in case of any difficulty.

36. Indian Wind Power Association / Karnataka Council has submitted a response dated 1.12.2007, in which full support of the wind power industry has been expressed for the amendments proposed for providing more flexibility to hydroelectric generating stations. The response goes on to draw an analogy between hydro and wind power, stating that wind is more capricious in nature when compared to water inflows in hydro power generating stations. However, the ultimate request is to exempt the wind power projects from UI domain. We would refrain from examining this request in the present proceedings, which are focused on hydro-electric generating stations.

37. In its response dated 16.11.2007, Prayas Energy Group has pointed to the asymmetric division of risks between the hydro power producers and the buyers in the

current tariff regime. By its own admission, it is an issue which has not been covered in the draft amendments. This being so, we are not going into the subject in the present proceedings, but would only state that the Commission is aware of it and may be addressing it separately.

38. Out of the beneficiaries who have responded on the issue, Tripura SECL has concurred with the amendments proposed to Regulations 42 (2) and 45.

39. The proposed amendments to Regulations 42 (2) and 45 have been opposed by Andhra Pradesh Power Coordination Committee, Assam State Electricity Board, Meghalaya State Electricity Board, M.P. Power Trading Co. Ltd, and Punjab State Electricity Board, on the grounds listed below. It is not clear from the response of Maharashtra State Electricity Distribution Co. Ltd whether it is opposing or supporting the amendments proposed.

- (i) A generating company may be induced to generate above the given schedule on Day 1, as also on Day 4, Day 7, etc., if the frequency is low. It may lead to premature depletion of the reservoir and power shortage in the months prior to inflow increase.
- (ii) In case of hydro power generating stations, the issues regarding maximum continuous rating, overload capacity, etc. must be addressed first, and these should be redefined through studies by CEA.
- (iii) Existing system is good enough and no change is required.

- (iv) The limits of 105% and 101% in the 2004 regulations should not be removed, as otherwise the generating companies could indulge in unchecked gaming.
- (v) There would be operational difficulties for the generating companies.
- (vi) Allowing faster changes in schedules/re-scheduling would be a better alternative. The respondents have also referred to orders dated 4.1.2000, 8.12.2000, 5.4.2007 and 26.4.2007 of the Commission.
- (vii) Views of various stakeholders should be circulated / discussed and a public hearing held before taking a final decision.

40. The above objections have been examined below *ad seriatim*.

- (i) We do not expect the central generating companies, who own and operate the hydro power generating stations within our regulatory jurisdiction, to be that irresponsible. Further, any over-generation on Day 1 results in the schedule for Day 4 automatically being set above the declared capacity of Day 4. If there is over-generation on Day 4 as well, it would mean that actual generation is much above the declared capacity of Day 4. This should be fairly easy for the concerned RLDC / SLDC to detect, and the generating company can be questioned before it becomes a trend. Further, all hydro power generating stations have known 10-day design energy figures, which can be used as a benchmark to check whether a generating station is resorting to gaming while declaring its capacity. There is also a record of reservoir levels

during previous years, which is commonly used as a reference. We, therefore, do not feel this apprehension to be valid.

- (ii) The Commission is aware that there are issues about maximum continuous rating and overload capacity of hydro power generating stations, and proposes to address these along with an exercise to further rationalize the tariff of hydro-electric generating stations in the coming months. These issues, however, are not relevant to present discussion, where the focus is on allowing an operational flexibility to the hydro power generating station.
- (iii) We do not agree. There is always a scope for improvement.
- (iv) The limits of 101% and 105% would no longer be required, once a counter-adjustment is to be made in the scheduled energy for Day + 3, as proposed. The generating company shall have no scope for gaming at the cost of the beneficiaries.
- (v) It would be for the generating companies to bother about the operational problems they may have in case they want to take best advantage of the flexibility now being offered. It need not be a concern of the beneficiaries. Further, there is no compulsion to flex the generation. A generating company can still stick to the given schedule, in case it feels that deviating from the schedule is not in its interest.
- (vi) The orders of 4.1.2000 and 8.12.2000 have already served their purpose. We have to move on further based on the experience gained

since then. We are already acting on what has been said in the orders dated 5.4.2007 and 26.4.2007.

- (vii) The views of all the respondents, as submitted in writing, are being collated in this order, and a public hearing is not considered necessary since no adversarial proceedings are involved, and the matter relates to amendment of statutory regulations for which no public hearing is mandated under the law.

41. Shri A.K. Sachan, Member(Finance), ASEB has expressed a concern that the grid frequency presently fluctuates so much that it becomes very difficult for the players to adjust their drawals to help the grid and make money in a planned manner. He also apprehends that the proposal can be manipulated by the generating companies so as to gain windfall at the expense of the State utilities. We agree with Shri Sachan on the first point. Grid frequency does need to be stabilized, through FGMO. Putting the generating units on FGMO would require a major exercise, which has been on the Commission's agenda. On the second point, we consider the Commission's proposal to be equitable, which will benefit both, the generating companies and the beneficiaries.

42. West Bengal Electricity Regulatory Commission has proposed that instead of the proposed amendments to Regulations 42 (2) and 45, only the following proviso be inserted under clause (2)(i) of Regulation 42 :

“Provided that when a hydro electric generating station increases its generation in response to an advice for doing so by the authorized Load Despatch Centre for the purpose of maintaining load generation balance, and the resultant increased

generation crosses the limits set up by clause (i) above, the same will not be considered to be gaming”.

43. We do not feel that this would serve the intended purpose, as it covers only the case of generation increase under instructions of RLDC. In the decentralized mode of dispatch adopted at inter-State level, the generators should be flexing the generation on their own to enhance overall optimization. This is exactly what the proposed amendment would induce.

44. PGCIL, on behalf of RLDCs, has also furnished some suggestions, which are mostly cautionary in nature. Some matters of detailing have also been listed, which would be separately discussed by the Commission with PGCIL / RLDCs before taking a view. Apprehension similar to that described in para 39 (i) has been expressed. The same has already been answered in para 40 (i). On the whole, the proposed amendments have been welcomed.

45. After an analysis of all the comments received, we have come to the conclusion that the proposed amendments, which have already been notified are in the overall interest of the power sector, which include the generating companies and the beneficiaries and, therefore, are to be implemented with effect from 00.00 hrs of 7.1.2008, as already notified.

Sd/-
(R. KRISHNAMOORTHY)
MEMBER

New Delhi, dated the 7th January 2008

Sd/-
(BHANU BHUSHAN)
MEMBER