

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

- 1. Shri Bhanu Bhushan, Member**
- 2. Shri R. Krishnamoorthy, Member**

Petition No.17/2008

In the matter of

Initiate proceeding to amend the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 w.r.t putting a cap on UI rate for UI receivable by a generator for generation above the scheduled generation.

And in the matter of

National Thermal Power Corporation Limited, New Delhi

....**Petitioner**

Vs

1. Northern Regional Load Despatch Centre, New Delhi
2. Western Regional Load Despatch Centre, Mumbai
3. Eastern Regional Load Despatch Centre, Kolkata
4. Southern Regional Load Despatch Centre, Bangalore
5. Uttar Pradesh Power Corporation Limited, Lucknow
6. Jaipur Vidyut Vitran Nigam Ltd., Jaipur
7. Ajmer Vidyut Vitran Nigam Ltd., Ajmer
8. Jodhpur Vidyut Vitran Nigam Ltd., Jodhpur
9. Delhi Transco Limited, New Delhi
10. Haryana Power Generation Corporation Ltd., Panchkula
11. Punjab State Electricity Board, Patiala
12. Himachal Pradesh State Electricity Board, Shimla
13. Power Development Deptt., Govt. of Jammu & Kashmir, Srinagar
14. Power Department (Union Territory of Chandigarh), Chandigarh
15. Uttaranchal Power Corporation Limited, Dehradun
16. Madhya Pradesh Power Trading Co. Ltd., Jabalpur
17. Maharashtra State Electricity Distribution Co. Ltd., Mumbai
18. Gujarat Urja Vikas Nigam Ltd., Vadodara
19. Chhattisgarh State Electricity Board, Raipur
20. Electricity Department, Govt. of Goa, Panaji, Goa
21. Electricity Department, Administration of Daman & Diu, Daman
22. Electricity Department, Admn. of Dadra Nagar Haveli, U.T. Silvassa
23. West Bengal State Electricity Distribution Co. Ltd., Kolkata
24. Bihar State Electricity Board, Patna
25. Jharkhand State Electricity Board, Ranchi
26. Grid Corporation of Orissa Ltd., Bhubaneshwar
27. Power Department, Govt. of Sikkim, Gangtok
28. Eastern Power Distribution Company Ltd., Visakhapatnam

29. Southern Power Distribution Company Ltd., Tirupathi
30. Northern Power Distribution Company Ltd., Warangal
31. Central Power Distribution Company Ltd., Hyderabad
32. Electricity Department of Puducherry, Puducherry
33. Tamil Nadu State Electricity Board, Chennai
34. Kerala State Electricity Board, Thiruvananthapuram
35. Bangalore Electricity Supply Company, Bangalore
36. Mangalore Electricity Supply Company, Mangalore
37. Chamundeshwari Electricity Supply Corporation, Mysore
38. Gulbarga Electricity Supply Corporation, Gulbarga
39. Hubli Electricity Supply Company, Hubli
40. Assam State Electricity Supply Company, Hubli
41. Meghalaya State Electricity Board, Shillong
42. Tripura State Electricity Corporation Ltd., Agartala
43. Electricity Deptt., Govt of Manipur, Imphal
44. Deptt. Of Power, Govt. of Nagaland, Kohima
45. Power & Electricity Deptt., Govt. of Mizoram, Aizwal
46. Deptt. Of Power, Govt. of Arunachal Pradesh, Itanagar
47. Damodar Valley Corporation, Kolkatta
48. National Hydro Power Corp. Ltd., Faridabad
49. Neyveli Lignite Corp., Neyveli

....Respondents

The following were present:

Shri S.N. Goel, NTPC

**ORDER
(DATE OF HEARING : 28.2.2008)**

The petitioner has filed this petition with a prayer for initiation of proceedings to amend Regulation 24 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 (hereinafter referred to as “the 2004 regulations”), as amended, which put a cap on UI rate of Rs.4.06/kWh receivable by a generating station with coal or lignite firing or burning only APM gas, for its generation above the scheduled generation.

2. The Commission vide its notification dated 28.12.2007, after previous publication and on consideration of the suggestions and comments made by the

stakeholders, has substituted clause (1) of Regulation 24 of the 2004 regulations as under:

“24. **Unscheduled Interchange(UI) Charges:** (1) Variation between actual generation or actual drawal and scheduled generation or scheduled drawal shall be accounted for through Unscheduled Interchange (UI) Charges. UI for a generating station shall be equal to its actual generation minus its scheduled generation. UI for a beneficiary shall be equal to its total actual drawal minus its total scheduled drawal. UI shall be worked out for each 15-minute time block. Charges for all UI transactions shall be based on average frequency of the time block and the following rates shall apply:

Average frequency of time block (Hz)		UI Rate
Below	Not below	(Paise per kWh)
----	50.50	0.0
50.50	50.48	8.0
50.48	50.46	16.0
-----	-----	-----
-----	-----	-----
49.84	49.82	272.0
49.82	49.80	280.0
49.80	49.78	298.0
49.78	49.76	316.0
-----	-----	-----
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49.04	49.02	982.0
49.02	-----	1000.0

(Each 0.02 Hz step is equivalent to 8.0 paise/kWh in the 50.5-49.8 Hz frequency range, and to 18.0 paise/kWh in the 49.8-49.0 Hz frequency range)

Provided that in case of generating stations with coal or lignite firing and stations burning only APM gas, UI rate shall be capped at 406 paise per kWh when actual generation exceeds the scheduled generation.

Note

The above average frequency range and UI rates are subject to change through a separate notification by the Commission.”

3. The petitioner has submitted that the Commission while inviting the suggestions and comments on the draft amendments which, *inter alia*, included amendment of Clause (1) of Regulation 24 of the 2004 regulations to revise the UI vector, proposing maximum UI rate of Rs. 10.00/kWh applicable to all cases of over-generation and under-generation as also over-drawal and under-drawal. However,

the Commission in its notification dated 28.12.2007, effective from 7.1.2008, also introduced the following additional proviso to Clause (1) of Regulation 24:

“Provided that in case of generating stations with coal or lignite firing and stations burning only APM gas, UI rate shall be capped at 406 paise per kWh when actual generation exceeds the scheduled generation.”

4. It has been submitted that since the proposal for capping of UI rate in case of coal/lignite/APM gas-fired generating stations was not contained in the draft amendments, the petitioner has been denied opportunity to make its representation. It has been urged that the addition of proviso to Clause (1) of Regulation 24, without such an opportunity may amount to defeating the provisions of sub-section (3) of Section 178 of the Electricity Act, 2003 (“the Act”), since, it has been stated, the proviso has been introduced without previous publication.

5. During the hearing, Sh. S.N Goel, appearing for the petitioner, submitted on merits that in the event of tripping of a unit for the reason beyond the control of the generating company, actual generation would be lower than the scheduled generation. For such under-generation, the generating company would be liable to pay UI charges. It was submitted that payment of UI charges by the generating company for under-generation in the above circumstances, could be compensated through over-generation on other occasions. However, in view of capping of UI rate at Rs.4.06/kWh, such recovery has been restricted to the disadvantage of the generating company, and on this account the generating company would be suffering losses. The representative of the petitioner stated that on an average tripping rate of a generating unit was 8 in a year.

6. It was further submitted that capping of UI rate for over-generation may also lead to conservative declaration of capacity by the generating station to avoid a possible situation of payment of UI charges for under-generation and this may deprive the grid of considerable capacity.

7. The representative of the petitioner further submitted that in the circumstances when it became necessary to draw power from the grid, like in case of start-up power etc. the generating station would be required to pay UI charges at Rs. 10/kWh. Therefore, it was argued, there could be no possible reason to not pay the generating station UI charges at the appropriate equivalent rate. By extending this argument, it was submitted that if UI charges payable to the generating station are to be capped, UI charges payable by the generating station in the situation of under-generation should also be restricted to Rs. 4.06/kWh.

8. The petitioner submitted that cap on payment of UI charges to the generating station was contrary to the very purpose of inducing the utilities to help the grid in case of need and for this reason as well, the compensation should be equivalent to the amount payable by the generating company as UI charges.

9. We firstly consider the preliminary issue of denial of opportunity to the petitioner on incorporation of proviso to Clause (1) of Regulation 24. Sub-section (3) of Section 178 of the Act legislates that the regulations made by the Commission shall be subject to the condition of previous publication. Section 23 of the General Clauses Act prescribes the procedure applicable to making rules or bye-laws after previous publication. Under this procedure, before making rules or bye-laws, the authority

having power to make the rules or bye-laws is required to publish the draft of the proposed rules or bye-laws for information of persons likely to be affected thereby. The concerned authority, under sub-section (5) of Section 23 of the General Clauses Act is enjoined to consider any objection or suggestion received from any person with respect to the proposals made in the draft.

10. In keeping with the prescribed procedure, the Commission published draft of the amendments proposed to be made to the 2004 regulations to invite suggestions and objections from the stakeholders, which include the State Utilities. In the draft, Clause (1) of Regulation 24 of the 2004 regulations was proposed to be amended so as to fix UI ceiling rate of Rs.10.00/kWh, to be applicable uniformly for under-generation/over-generation and under-drawal/over-drawal. Some of the State Utilities represented that increase in UI ceiling rate would lead to further increase in the profits of the generating companies, already making huge profits through recovery of UI charges, and it would encourage them to further flog their machines. In the light of these representations, the Commission decided to limit the UI rates payable to the generating companies, in compliance with the procedure prescribed and sub-section (5) of Section 23 of the General Clauses Act. The Commission in the Statement of Reasons dated 31.12.2007 noted as under:

“30. Now we come to the issue which has been agitating the State utilities the most, i.e. the alleged gaming by the central generating companies in declaration of their generating station’s availability, through which they have been able to earn large sums of extra revenue through UI mechanism. The Commission has so far endeavoured to retain the totally reciprocal nature of UI mechanism, with every regional entity having the same frequency-linked UI rate at a particular time, and the same rate being applicable both for over-/under-drawl and over-/under-generation. It means that any extra supply (above the schedule), irrespective of its source, is paid the same price, at a particular time, and whoever avails this extra supply also pays the same price.

31. However, it is also a fact that central generating stations have a scope for extra income by generating above their schedule, which normally matches the declared capacity. The generating stations can presently maintain extra generation within the

allowable operational tolerance limit of 1% so as not to attract the provisions of gaming, but may still result in substantial extra income for the generating companies, which are already assured reimbursement of all expenditure and a specified return, in the present day regime of cost-plus tariff determination. The Commission would not object to extra income arising out of higher efficiency and performance above the specified normative levels. But sustained extra income through suppression or manipulation of availability declaration is another matter, particularly when the beneficiaries are already paying for the entire cost of the generating station installation through payment of capacity charges. This must be curtailed.

32. In case of the hydro power generating stations, the possibility of making any extra money on the above account is being plugged through certain amendments initially proposed separately, but implemented simultaneously with revision of UI rates under notification dated 28.12.2007 *ibid.*”

11. The Commission in the Statement of Reasons further observed that:

“33. In case of thermal power generating stations, UI rate for generation above the schedule by coal and lignite-fired stations, and the stations burning only APM gas, shall now be capped at 406 paise per kWh. These stations have a variable cost in range of 50 – 200 paise per kWh. They would still have a fairly good incentive for maximizing their generation, but there would be no windfall gains. It is clarified that the above UI rate cap shall not be applicable for RLNG/liquid-fired generating stations, hydro power stations, merchant plants, merchant capacity and any other generating station for which its fixed cost is not being reimbursed through capacity charge, etc.

34. The central generating stations may complain about discrimination. It is therefore clarified in advance that UI is not a prerogative. What is important is that the mechanism is well-known in advance and there is total transparency. UI is primarily a mechanism for settlement of deviations from schedules. It also provides incentives to all parties to do the right thing. There is no compulsion to deviate. One can see UI rate on-line (through a frequency meter), and decide whether and to what extent he would deviate from the schedule. The Commission is basically reducing (not eliminating) consciously the incentive for coal, lignite and APM gas fired stations to over-generate. This has been considered necessary for removing any perverse incentives for flogging the plants, manipulating the availability declaration, etc, and for removing a ground of wide-spread opposition to any tariff rationalization.

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38. If the under-drawing State utilities are not paid the enhanced UI rate even when frequency is low, there may not be sufficient inducement for them to take the above measures. For example, the captive generation with a fuel cost higher than the applicable UI rate would be effectively barred from coming into the grid. This has also been succinctly brought out in the response of Gujarat UVNL quoted in para 28.”

12. It is to be noticed that the Commission did not put ceiling limit on UI charges receivable by a generating company, of its own. The proviso to Clause (1) of

Regulation 24 was introduced in view of the objection from the State Utilities. Under these circumstances, it was neither practicable nor desirable to make fresh draft for amendments. In case such a procedure is adopted the process may go *ad inifinitum* and it would become difficult, if not impossible, to take the process of amendment to its conclusion.

13. The petitioner has sought amendment of the 2004 regulations, which are legislative in character. In the normal course, and under the circumstances noted above, no petition should be maintainable, since there is no supporting provision in the Act. However, since the petitioner's grievance as projected in the petition is that it did not get an opportunity to make representation on the proviso introduced and has made submissions opposing introduction of proviso, on merits, we propose to consider its submissions as the petitioner's representation against the ceiling notified.

14. The petitioner has pointed out that minor variations in generation over and below the targeted generation are inherent in the operation of power stations, and that there is no difficulty if such variations are accounted as positive and negative UI as long as UI rate is same on both sides. With the new cap on UI rate for over-generation, the positive and negative variations would not cancel out, and the generator will always be put to a loss for all times to come. We would have readily accepted the petitioner's argument had the actual average generation at its plants on day-by-day basis been around (ie sometimes above and sometimes below) the generation schedule. It has been observed that average generation at almost all of its plants has consistently been around 0.5% higher than the schedule on day-by-day basis. It is primarily because of this that the State utilities have been complaining

about the petitioner being allowed an opportunity to make unjustified profit. As already explained in the extract of our order dated 31.12.2007 quoted above, the Commission has been constrained to apply the subject cap, against its earlier approach, because of the petitioner's operational record.

15. The Commission has all along been of the opinion that UI charges cannot be a constant source of income or windfall gains and this becomes evident from the extracts from the Statement of Reasons placed above. The coal and lignite-fired generating stations and the generating stations burning only APM gas still have fairly good incentive for maximizing their generation. We are unable to persuade ourselves to accept the petitioner's contention that putting the cap of Rs.4.06/kWh on UI rate for such generating stations can lead to conservative declaration of capacity by the generating station.

16. We next propose to deal with the argument of the petitioner that in the event of under-generation on account of tripping of a unit of the generating station, UI incurred would not be compensated by UI earned for over-generation. The petitioner has sought to project that this problem has arisen because of the new cap on UI rate, while the fact is that UI incurred on tripping of a unit cannot be compensated by over-generation even if there was no such cap. In fact, the petitioner is supposed to generate as per the schedule, and is not supposed to over-generate for effecting such compensation. Further, the loss incurred is not the total UI incurred, but is (UI incurred-capacity charge received – fuel cost saved). It would thus depend on the frequency at that time, and may only marginally increase because of application of the subject cap. The petitioner has not placed on record any real-time data to show that

net UI payable to it has ever been on negative side. The petitioner might have been justified in raising the issue if it were paying out UI charges, which is not the case. Therefore, we are unable to accept the petitioner's argument in this regard.

17. The petitioner has also submitted that during start-up, the generating station is required to draw power from the grid at UI rate of Rs.10/kWh and accordingly, there should be no reason why it should be denied UI charges at the corresponding rate. This argument too does not find favour with us because the generating station has myriad of options available to it. For example, during the start-up of unit, DC and injection schedule of the station (out of power generated by other units in operation) could be suitably reduced, so as not to have any negative UI. Further, UI rate might not be at Rs.10/kWh at every time of start-up and would depend upon the grid frequency at a particular time. The explanation given in the preceding para is equally applicable to start-up operations.

18. The petitioner's argument that capping of UI rate payable to the generating station is contrary to the very purpose of inducing the generating companies to help the grid in need, is also not tenable. We feel that there is sufficient incentive for coal and lignite-fired generating stations as well as the generating stations burning only APM gas to maximize their generation because of their low variable cost. The assistance provided by the generating station through extra generation is available only when there is economic sense. We do not see any reason for the generating station not to come forward to assist the Grid, when there is enough incentive for generation even with the capped UI rate.

19. In the light of above, we are not satisfied with the petitioner's contention that there is any immediate necessity to review the UI ceiling rate of Rs.4.06/kWh, specified under Regulation 24 of the 2004 regulations. However, we may add that that we are open to address any genuine hardships resulting from the amendments after some experience is gained of its working. In this direction, the Commission could consider suggestions for clubbing of two or more stages of a generating station for the purpose of scheduling and UI computation, as also for a special treatment of Mines' load in the case of the generating stations owned by NLC.

20. Paras 14 to 19 above, be suitably read as part of the Statement of Reasons dated 31.12.2007, to further support the decision to put a ceiling limit of Rs.4.06/kWh, on consideration of the petitioner's representation.

21. Accordingly, this petition stands disposed of.

Sd/-
(R. KRISHNAMOORTHY)
MEMBER

New Delhi dated the 23rd June 2008

Sd/-
(BHANU BHUSHAN)
MEMBER