

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 94/MP/2013

Coram:

Shri V S Verma, Member

Shri M Deena Dayalan, Member

Date of Hearing: 20.06.2013

Date of Order: 11.12.2013

In the matter of

Petition under Section 29 (5) of the Electricity Act, 2003 and Regulation 2.3.1 (7) of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 seeking a direction against the Respondent to permit the revision of the schedule for Petitioner's Karcham Wangtoo Hydro Electric Plant (Karcham Wangtoo HEP) more than once on account of high silt in the Sutlej River.

And

In the matter of

Jaiprakash Power Ventures Limited

Petitioner

Vs

Power Systems Operation Corporation Ltd
Northern Regional Load Despatch Centre

Respondent

Parties Present:

Shri Vishal Gupta, Advocate, JPVL

Shri Kumar Mihir, JPVL

Shri Sanjeev Goel, JVPL

Shri P.Mukhopadhaya, POSOCO

ORDER

The petitioner, Jaiprakash Power Ventures Limited has filed present petition under sub-section (5) of Section 29 read with Regulation 2.3.1 (7) of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 (the Grid Code) with the following prayers, namely –



- “a) declare that occurrence of high silt level in river Sutlej where the Petitioner's Karcham Wangtoo HEP is located is a force majeure event and it will be entitled to revise the schedule of its generating plant more than once in such force majeure situation;
- b) declare that Indian Electricity Grid Code does not restrict or impose a bar to revise the schedule more than once on account of shut down of a generating plant due to force majeure;
- c) direct the Respondent to accept the revised schedule more than once before original schedule become effective from the expected time of restoration provided by the generator in case the shutdown is necessitated due to the force majeure condition/event; and
- d) pass any other or further order/s as this Hon'ble Commission may deem fit and proper in the facts and circumstances of the present case.”

2. The petitioner owns, operates and maintains Karcham Wangtoo HEP, a 1000 MW run-of-the-river generating station with pondage, located in the basin of at Sutlej River in the State of Himachal Pradesh. The petitioner has stated that many a time it was forced to shut down Karcham Wangtoo HEP due to high silt in Sutlej River, a *force majeure* condition which causes revision of the generation schedule. However, the petitioner has alleged that the respondent, Northern Regional Despatch Centre, has refused to allow the petitioner to further revise the generation schedule before or after the expected time of restoration communicated to the respondent in case the silt subsides earlier than, or continues beyond, the expected time of restoration. The petitioner has submitted that the respondent enforces the original schedule after expiry of the expected time of restoration indicated by the petitioner while informing of the shutdown.

3. The petitioner has submitted that on 25.7.2011 it informed the respondent through e-mail (sent at 11:07 hrs) that on account of high silt level in Sutlej River; Karcham Wangtoo HEP had to go into forced shutdown at 10:30 hrs. The position was

confirmed by the respondent to all concerned on 25.7.2011 itself. The petitioner's e-mail was followed by a letter of the same date informing the respondent that the estimated time of restoration was 24:00 hrs on 26.7.2011. Again on 26.7.2011, the petitioner sent another letter informing the respondent that the expected time of restoration had been extended to 24:00 hrs on 27.7.2011. However, the respondent did not accept the revised schedule relying upon Regulation 6.5.19 of the Grid Code and informed the petitioner accordingly, by its fax message dated 26.7.2011. The generation at Karcham Wangtoo HEP was restored at 13:00 hrs on 27.7.2011.

4. The petitioner has submitted that on 16.8.2011, Karcham Wangtoo HEP had to be put under forced outage again because of rise in silt level. The petitioner requested the respondent to revise the schedule from 13:00 hrs to 24:00 hrs on 16.8.2011 which was further sought to be revised to 24:00 hrs on 17.8.2011. The petitioner has stated that its request was verbally declined by NRLDC on the ground that the petitioner had already availed revision of schedule for the same reason. The petitioner, however, implemented the original schedule with effect from 08:45 hrs on 17.8.2011 as the silt level had normalized by that time.

5. The petitioner has submitted that again on 1.8.2012, Karcham Wangtoo HEP was put under forced shutdown for reason of rise in silt level in Sutlej River and accordingly the petitioner sought revision of schedule from 16:30 hrs of 1.8.2012 to 24:00 hrs of 4.8.2012. However, the petitioner has submitted that on 2.8.2012, the silt level receded and Karcham Wangtoo HEP was in a position to generate power with

effect from 14:00 hrs. The petitioner requested the respondent for restoration of the original schedule but its request was not acceded to on the ground that revision of schedule was not permitted more than once.

6. The petitioner has cited yet another instance of non-revision of schedule. It has been stated that on 20.8.2012, on account of very high silt level in the river, all units of Karcham Wangtoo HEP had to be put under forced outage and accordingly the petitioner approached the respondent for revision of schedule from 11:30 hrs of 20.8.2012 to 12:00 hrs of 22.8.2012. The petitioner has submitted that since it felt that silt level was unlikely to abate, it requested for extension of the revised schedule till 17:00 hrs of 22.8.2012. The petitioner has pointed out that its request for extension of revised schedule was rejected orally informing the petitioner that the original schedule would automatically be restored after expiry of the expected time of restoration and further extension of the revised schedule was not warranted.

7. The petitioner has submitted that when on account of continuation of *force majeure* condition, Karcham Wangtoo HEP remained under shutdown beyond the expected time of restoration notified by it, but further revision of schedule was not permitted. It has been submitted that despite further non-revision of schedule, the buyer entities continue to draw power as per the schedule which can seriously endanger the grid security because of short supply of power to the extent of about 1000 MW as Karcham Wangtoo HEP is not generating. It has been further submitted that the respondent, contrary to its mandate of achieving maximum economy and efficiency in

the power system operation, is preventing the petitioner from generating electricity as per the contracts even when the petitioner is fully capable of generating on account of early abatement of the force majeure conditions. The petitioner has alleged that these actions of the respondent render the petitioner liable for payment of the Unscheduled Interchange (UI) charges which gravely prejudices it monetarily. According to the petitioner, the present petition has been filed since similar situations are likely to recur in future as well.

8. According to the petitioner, reliance by the respondent on Regulation 6.5.19 of the Grid Code in support of its actions is misplaced as the petitioner was required to shut down its generating station on occurrence of *force majeure* event and not on account of forced outage. The petitioner has urged that occurrence of a *force majeure* event relieves the affected party from performing its obligations and duties under all situations. According to the petitioner, Regulation 6.5.19 of the Grid Code covers the situations of forced outage only. It has been stated that the respondent has failed to appreciate that the Commission has not provided for a procedure for dealing with situation of outage on account of *force majeure* events. The petitioner has alleged that the respondent has been erroneously invoking Regulation 6.5.19 of the Grid Code, to the detriment of the interest of the petitioner.

9. During hearing on 28.5.2013, the petitioner explained that the generating station was designed to operate at a maximum level of around 4500 PPM (parts per million) silt level and beyond that it was imperative to shut it down. The petitioner vide affidavit

dated 3.6.2013, has submitted that the maximum permissible limit of the silt level at which the turbine of Karcham Wangtoo HEP can be operated is 5000 PPM and in accordance with the agreement signed with the equipment supplier, the turbine must stop when the silt content is more than 5000 PPM. It has been submitted that the de-silting chamber is capable to withhold 90% of all particles larger than 0.2 mm according to the specification. The petitioner has placed on record copy of the agreement executed with the equipment manufacturer.

10. The respondent has disputed the interpretation placed by the petitioner on Regulation 6.5.19 of the Grid Code. The respondent has stated that Karcham Wangtoo HEP was shut down on 1.8.2012 and 20.8.2012 without ample prior information and thereby the security of the grid was put in jeopardy. The respondent has pointed out that the petitioner can avoid the situations by making conservative estimates of the time of revival. The respondent has argued that the provisions relating to forced outages in the Grid Code take within their fold the outages on account of high silt levels since the definition of 'Forced Outage' in the Grid Code covers an outage on account of a fault or other reason not planned. The respondent has vociferously argued that only one revision of schedule is permitted under the Grid Code in case of forced outage in respect of bilateral transactions but such a facility is not available in case of the collective transactions through the power exchanges. In support of its submission the respondent has relied upon the Statements of Reasons published by the Commission in support of Regulation 6.5.19 of the Grid Code as originally enacted in 2010 and as subsequently amended in March 2012. The respondent has submitted that frequent

revisions in short-term open access transactions would render them to be used as 'Options' and not as binding contracts which create obligation to supply and take delivery.

11. The respondent has submitted that in case of tripping of a unit, the generator can avail of other avenues like power exchange and short-term bilateral contracts to meet the shortfall on account of forced outages. The respondent has alleged that the petitioner appears to be exploiting the market without taking any responsibility and the issue has been raised because of its commercial interest only. According to the respondent, better forecasting of silt conditions can be achieved by more frequent sampling at a number of upstream locations and that would assist the petitioner in better optimization of generation facility and controlling outages. The respondent has pointed out that though the petitioner was granted connectivity for 1000 MW, the petitioner chose to obtain long-term access for 880 MW only and has been supplying entire power by availing short-term open access. The respondent has further brought out that the petitioner has been operating Karcham Wangtoo HEP at 1200 MW level, that is, with over-load capacity of 20% over the installed capacity of 1000 MW, which compromises safety and security of the system, generating station and workforce. Against this background, the respondent has made following prayers:

- “1) Dispose of the petition as regulations framed by Hon'ble Commission are unambiguous and clearly provide for only one revision for short term bilateral transactions for forced outage. Other market avenues are also available to keep generation as per schedule.
- 2) Direct the Petitioner (Karcham Wangtoo HEP) for better forecasting/monitoring of silt conditions.

- 3) Direct the petitioner to get Long Term Access (LTA) for entire quantum.
- 4) Direct the plant to get its stated 20% over load capacity certified from Central Electricity Authority (CEA) so that safety of plant, safety of personnel and safety of power system are ensured.
- 5) Consider the issue of “Market Design” for robust market operation.
- 6) Any other directions as deemed fit in the circumstances of the case.”

12. We have heard learned counsel for the petitioner and the representative of the respondent. We have perused the record and have bestowed our thoughtful consideration to the issues raised by the parties.

13. The first issue that has been raised by the petitioner is that it is required to shut down Karcham Wangtoo HEP on account of high level of silt which is a *force majeure* condition, not covered under Regulation 6.5.19 of the Grid Code dealing with the situations of forced outage only. The petitioner has relied upon the definition of *force majeure* given in the Grid Code and has urged that outages for the reason beyond the control of the petitioner, as in the present case, are on account of *force majeure* conditions and cannot be governed by Regulation 6.5.19. The respondent has urged that outage on account of silt is within the definition of “*forced outage*” and is governed by Regulation 6.5.19.

14. We have considered the matter in the light of rival contentions. “Forced Outage” is defined under the Grid Code as “an outage of a Generating Unit or a transmission facility due to a fault or other reasons which has not been planned”. The term “forced outage” has been used in contradistinction to the “planned outage” which is decided in

advance for reasons of maintenance, etc., and is thus a foreseen situation/occurrence. ***Therefore, any unplanned outage on account of unforeseen circumstances falls within the scope of forced outage. In our view, forced outage is a generic term and covers specific outages such as on account of sudden development of fault in plant and machinery, natural calamities, outbreak of diseases, enemy action, etc., which cannot be reasonably foreseen, estimated and planned. The outage because of presence of silt which is on account of unusual occurrence in river water used for electricity generation can be covered under 'other reasons' in the definition of "forced outage".*** It is also pointed out that the Grid Code does not make any specific provision to deal with the outages arising out of *force majeure* events, though the term "force majeure" has been defined in the Grid Code. In our view, a harmonious reading of the definition of the terms "forced outage" and "force majeure" will lead to the conclusion that an outage of a generating unit or transmission facility arising out of "forced majeure" events will be covered under 'other reasons which has not been planned' of the definition of 'forced outage' as such events have not been planned and are in fact beyond the control of the generating company or transmission licensee. Therefore, we are not in agreement with the contention of the petitioner that outages for reason of high silt levels in river water are outside the purview of Regulation 6.5.19 of the Grid Code.

15. The next question is to examine the exact scope of Regulation 6.5.19 of the Grid Code. For this purpose, Regulation 6.5.18, 6.5.18(a) and 6.5.19 are extracted as under:

"18. Revision of declared capability by the ISGS(s) having two part tariff with capacity charge and energy charge (except hydro stations) and requisition by beneficiary(ies) for the remaining period of the day shall also be permitted with advance notice. Revised schedules/declared capability in such cases shall become effective from the 6th time block, counting the time block in which the request for revision has been received in the RLDC to be the first one. Provided that RLDC may allow revision, of the DC at 6 hourly intervals effective form 0000,0600,1200 and 1800 hours in case of Run of the River (ROR) and pondage based hydro generating stations, if there is large variation of expected energy (MWh) for the day compared to previous declaration.

18 (a) Notwithstanding anything contained in Regulation 6.5.18, in case of forced outages of a unit, for those stations who have a two part tariff based on capacity charge and energy charge for long term and medium term contracts, the RLDC shall revise the schedule on the basis of revised declared capability. The revised declared capability and the revised schedules shall become effective from the fourth time block, counting the time block in which the revision is advised by the ISGS to be the first one.

19. Notwithstanding anything contained in Regulation 6.5.18, in case of forced outage of a unit for a Short Term bilateral transaction, where a generator of capacity of 100 MW and above is seller, the generator or trader or any other agency selling power from this generating station shall immediately intimate the same along with the requisition for revision of schedule and estimated time of restoration of the unit, to SLDC/RLDC as the case may be. The schedule of all the long- term and medium-term beneficiaries and the buyers under short-term bilateral transaction, getting power, directly under long-term Power Purchase Agreements or through sale by trader or any other agency or by generator itself under short-term open access, from the generating station of which the unit has gone under forced outage, shall be reduced on pro-rata basis. The schedule of beneficiaries, sellers and buyers of power from this generating station shall be revised, accordingly. The revised schedules shall become effective from the 4th time block, counting the time block in which the forced outage is declared to be the first one. The RLDC shall inform the revised schedule to the seller and the buyer. **The original schedule shall become effective from the estimated time of restoration of the unit.** However the transmission charges as per original schedule shall continue to be paid for two days.

Provided that the schedule of the buyers and sellers shall be revised after forced outage of a unit, only if the source of power for a particular transaction has clearly been indicated during short-term open access application and the said unit of that generating station goes under forced outage.

Provided also that the provisions of this sub-regulation in respect of revision of schedule by electricity traders and any other agency (except the generating station) shall be operative with effect from 1st July 2012."

16. Regulation 6.5.19 starts with a non-obstante clause and has the overriding effect over Regulation 6.5.18, which relates to revision of declared capability by generating stations, having two part tariff with capacity charge and energy charge. Regulation

18(a) provides for revision of declared capacity of such station in case of forced outage for long term and medium term contracts. Regulation 6.5.19 deals with revision of declared capacity due to forced outage in case of short term open access. In order to invoke Regulation 6.5.19 *qua* a generator, the following conditions are required to be satisfied, namely –

- (a) The generator selling power from a generating station having a generation capacity of 100 MW or more, through short-term bilateral transactions has to immediately intimate the forced outage of its unit to RLDC/SLDC with a requisition for revision of schedule and the estimated time of restoration of the unit.
- (b) The revision of schedule is not applicable in case of collective transaction through the power exchange.
- (c) The schedule of the beneficiaries, sellers and buyers of power from the generating unit shall be revised in accordance with the requisition sent to RLDC/SLDC.
- (d) The revised schedules become effective from the 4th time block, counting the time block in which the forced outage is declared to be the first one.
- (e) RLDC is mandated to inform the revised schedules to the seller and the buyer.

- (f) The original schedule becomes effective from the estimated time of restoration of the unit.
- (g) The transmission charges as per original schedule are to be paid for two days.
- (h) The schedule of buyers and sellers shall be revised as a consequence of forced outage of a unit only if the source of power for a particular transaction has been indicated in the application for the short-term open access.
- (i) In case of revision of schedule of a generating unit, the schedules of all transaction under long term access, medium term open access and short term open access shall be reduced on pro-rata basis.

17. From the above, it is noticed that Regulation 6.5.19 does not expressly restrict the revision of schedule in case of forced outage ('which we have held to include **force majeure event**'), earlier or later than the anticipated time of restoration. It only provides that the original schedule becomes effective from the estimated time of restoration of the unit. The question therefore arises whether a generating unit in the event of forced outage due to a force majeure condition is permitted under Regulation 6.5.19 to revise the estimated time of restoration as indicated earlier, in the event the force majeure condition is removed earlier than estimated or continues beyond the estimated time of restoration.

18. The respondent in its reply has submitted that “.... it is clear that only one revision has been allowed by the Hon’ble CERC in case of forced outage of generating unit” In support of its contention, the respondent has placed reliance on the Statement of Reasons in support of the Grid Code. The relevant paras in the Statement of Reasons in support of Regulation 6.5.19, reads as below:

"43.10 on draft Regulation 6.5.19, CEA has suggested the following:

"In case of a forced outage all generating stations irrespective of their nature of PPA, whether long term, medium term or short term, should be allowed to revise their schedule with the exception of schedules for day ahead collective transactions cleared through a power exchange. If large number of generating stations supplying power under long term, medium term and short term bilateral contracts are not allowed to revise their schedule under forced outage, it may result in serious grid imbalances."

*CEA also submitted that in the UI Regulations, 2010, a limit has been put on under injection by the generator. To do so, the generators must have facility to revise their declaration in case of forced outages. However, this Regulation of proposed IEGC allows only generator with two part tariff and long term contract to revise their schedule in case of forced outage. Therefore to have a level playing field and to enable generators to generate close to their schedule, generators supplying through bilateral transactions under open access should be given right to revise declaration in case of forced outages. **Since such events are not so common in a well maintained generating station, a limit say once per day may also be specified for this purpose.**" (Emphasis added)*

43.11 "We are in agreement with the views of CEA"

19. The above view was reiterated in the Statement of Reasons published in support of amendments of the Grid Code enacted in March 2012. The relevant part of the observation of the Commission is extracted below:

*"8.9 APTRANSCO, ERPC and NRPC have submitted that presently only one revision is allowed. They have suggested that provision may be made for multiple revisions. In this regard, it is clarified that multiple revisions would make the whole process very complex and unpredictable. **Therefore, we are of the view that the present practice of one revision should be continued and the original schedule shall be resorted in accordance with the time intimated by the generator/seller/ trader while requisitioning for schedule revision after tripping of the unit.**" (Emphasis added)*

8.10 *Torrent Power Limited has sought clarification as to whether the short term transactions through Power exchanges are not considered for prorated reductions. It is clarified that the transactions through power exchanges shall not be subjected to revision under this regulation. “*

8.11 *It may be mentioned that this provision is already existing in the IEGC.*

8.12 *It is clarified that the present amendment is only an extension of the existing provision to traders and States like Himachal Pradesh with equity power etc. whose source can be traced to a particular generating unit.”*

20. In view of the above, it is clear that only one revision has been allowed in case of short term bilateral transactions for each day during the forced outage.

21. The respondent NRLDC has argued that STOA transactions are energy only transactions and frequent revisions in these market transactions (STOAs) would render them to be used as options and not as binding contracts with obligations to supply or take delivery. NLDC is of the view that multiple revisions would distort the market and involve changes in unscheduled inter-change liabilities amongst the sellers and the buyers. The respondents have also stated that in case of tripping of a unit, other avenues like power exchange and short term bilateral are available to the sellers to purchase power and make good the short fall. The petitioner has been making use of these provisions. Therefore, the respondents have concluded that there is no difficulty for the generating stations to maintain their generation as per schedule. The respondents have suggested that better forecasting of silt conditions by more frequent sampling at a number of upstream locations, could further help the plant in better optimizing its generation/outage.

22. The contentions of the respondents have been considered and we are of the view that the forced outage in the Hydro plants due to high silt conditions need to be looked at differently from forced outage in case of thermal or hydro plants that occur due to internal system fault like boiler tube leakage, high vibration or cooling system problems etc. However, the past experience as well as the data on silt should be considered by the generator so that advance forecasting could be done in a near accurate manner. The petitioner's plea that the generator should be allowed more than one revision for short term open access transactions is not presently allowed as per the regulations in vogue and it has to be considered after taking into account the views of the stakeholders including power exchanges and the SLDC/RLDCs concerned.

23. The Grid condition is paramount and the existing provisions in the regulations permit the generators especially hydro generators who have long term and medium term open access to revise the schedule more than once in a day depending upon the circumstances. This facility is not available to short term open access generators based on sound reasons like tendencies of the generators to resort to revising schedules which may lead to problems in the exchanges and gaming. We also note that the petitioner though has obtained LTOA for 880 MW has been selling power through bilateral STOA as well as through power exchange as a merchant generator with over load of 20% capacity (1200 MW). During hearing, the representative of NRLDC brought to the notice of the Commission that the generator should shift to LTOA or MTOA in order to avoid the problems resulted by silt.

24. The Commission has not received any similar issues from the other hydro generators. Since the petitioner has not sought any directions for the past cases and has sought a declaration for future, we are of the view that the matter needs to be examined in proper perspective in order to provide for appropriate regulatory framework for future. Accordingly, we direct the staff of the Commission to prepare a consultation paper after analyzing the issues for inviting comments from the stakeholders and the NLDC/RLDCs/RPCs.

25. The petition stands disposed of, in terms of our decision in the order.

sd/-
(M. Deena Dayalan)
Member

sd/-
(V. S. Verma)
Member