

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 105/MP/2015

Coram:

Shri Gireesh B. Pradhan, Chairperson

Shri A.K Singhal, Member

Shri A.S Bakshi, Member

Date of Hearing: 18.6.2015

Date of Order : 17.9.2015

In the matter of

Petition under Section 79 (1) (c) of the Electricity Act, 2003 and Regulation 32 of the Central Electricity Regulatory Commission (Grant of Connectivity, Long Term Access and Medium Term Open Access in Inter State Transmission and related matter) Regulations, 2009

And

In the matter of

NTPC Limited
NTPC Bhawan
Core-7, Scope Complex,
7, Institutional Area, Lodhi Road,
New Delhi- 110003

....Petitioner

Vs

1. Powergrid Corporation of India Limited
Saudamini, Plot No 2
Sector 29
Gurgaon- 122001

2. Uttar Pradesh Power Corporation Limited
Shakti Bhawan,
14, Ashok Marg,
Lucknow- 226001

3. Ajmer Vidyut Vitran Nigam Limited
Old Power house, Hathi Bhata,
Jaipur Road, Ajmer, Rajasthan

4. Jaipur Vidyut Vitran Nigam Limited
Vidyut Bhawan, Janpath, Jaipur
Rajasthan- 302005

5. Jodhpur Vidyut Vitran Nigam Limited
New Power house, Industrial Area, Jodhpur, Rajasthan

6. Tata Power Delhi Distribution Limited
33 kV substations, Hudson Limited
Kingway Camp, Delhi- 110009.

....Respondents

Following were present:

Shri Ajay Dua, NTPC
Shri R.K Sood, NTPC
Shri K.K Narang, NTPC
Shri Dilip Rozekar, PGCIL
Ms. Jyoti Prasad, PGCIL
Shri S.S. Barpanda, NLDC
Ms. Abilia Zaidi, NLDC

ORDER

This petition has been filed by NTPC Limited seeking directions to CTU to grant connectivity to the 8 MW Hydro renewable project at its 2000 MW Singrauli Super Thermal Power Station (SSTPS) located in the State of Uttar Pradesh in terms of the Central Electricity Regulatory Commission (Grant of Connectivity, long term access and medium term access in inter-State transmission and related matters) Regulations, 2009 (Connectivity Regulations) as amended from time to time .

2. The petitioner has set up a 15 MW solar power plant at SSTPS and declared it under commercial operation on 30.12.2014. The power generated from Singrauli Solar plant is being supplied to the Himachal Pradesh State Electricity Board Limited (HPSEB Ltd.). The power generated at the Singrauli Solar modules has been pooled at the 33

kV pooling switchgear at project site and power is being injected into the ISTS system through single circuit 132 kV transmission line (approx. 12 km long) to the 132 kV Switchyard at NTPC Singrauli.

3. The petitioner is constructing a 8 MW (2X4 MW) small hydro project (Singrauli Hydro) on the outfall of discharge channel of Singrauli thermal generating station. Ministry of power vide its letter dated 31.10.2013 has allocated the power of Singrauli Hydro to the distribution companies of Rajasthan, Uttar Pradesh Power Corporation Limited and Tata Power Delhi Distribution Ltd. and PPA has already been signed with the respective beneficiaries.

4. On 25.5.2012, the petitioner on behalf of the beneficiaries, made an application to CTU for grant of Long Term Access (LTA) for Singrauli Hydro. On 23.4.2013, the petitioner also made an application to CTU for grant of connectivity for Singrauli Hydro which was approved in the 32nd LTA meeting held on 31.8.2013.

5. The petitioner has submitted that in terms of the Central Electricity Regulatory Commission (Grant of Connectivity, Long term Access and Medium Term Open Access in inter-State Transmission and related matters) (Third Amendment) Regulations, 2013 (Third Amendment to the Connectivity Regulations), the petitioner's hydro and solar projects are entitled to obtain connectivity with ISTS. The Statement of Reasons issued on 26.3.2013 mandates the CTU to separately consider 8 MW Singrauli Hydro renewable project for granting connectivity and separate metering for the same. However, CTU did not grant the connectivity and LTA for the Singrauli Hydro on the

ground that the Connectivity Regulations provided metering at single point for all renewable generating stations. However, Connectivity Regulations do not specifically bar such grant of connectivity and facilitate such connectivity to the renewable generation station.

6. On the above background, the petitioner has made the following prayers:

“(a) Direct the CTU to urgently grant connectivity to the 8 MW Hydro renewable Project at Singrauli;

(b) Permit the scheme of connectivity of Singrauli small Hydro through existing electrical system of generating station in the line with Third Amendment to the connectivity regulation 2009 & direct the CTU for grant of connectivity & LTA for Singrauli small Hydro (2x4MW); and

(c) Pass any other as it may deem fit in the circumstances mentioned above.”

7. Reply to the petition has been filed by Power Grid Corporation of India Limited and Power System Operation Corporation Limited.

8. Power Grid Corporation of India Ltd. (PGCIL) in its reply dated 27.5.2015 has submitted as under:

(a) As per Regulation 2 (b) (i) (e) of the Third Amendment to the Connectivity Regulations and Statement of Reasons thereof, if there are more than one renewable generating stations in the premise of existing generating station, then these shall have to be connected at one single point for the purpose of metering and scheduling. The principle behind is that the principal generator shall coordinate all the operational and commercial responsibilities for such renewable generating stations.

(b) In the present regulatory arrangements, all the renewable generating stations being setup in the premises of existing generating station shall have to be connected at single point. However, in the present case, the petitioner is seeking connectivity and LTA for its solar power plant and hydro generation station separately. If such renewable generating station involves solar and non-solar generation, then the issue with respect to segregation of energy generated for payment of transmission charges and losses gets complicated as exemption for the same has been provided only for solar energy. However, no such exemption has been made for non-solar renewable energy.

(c) The petitioner made two separate applications for grant of connectivity and LTA for solar and hydro projects. Since, these projects are connected at different locations, the requirement of all renewable generating stations to be inter-connected at one single point for the purpose of scheduling and metering is not being met. Therefore, the question arises that as to whether the connectivity can be granted separately for the above renewable projects when they are being pooled at two different points within the existing generating station.

(d) While granting connectivity to the petitioner`s solar project it was clarified that connectivity to Singrauli Hydro would be granted after receipt of suitable directions from the Commission.

9. Power System Operation Corporation Limited (POSOCO) in its reply dated 29.5.2015 has submitted as under:

(a) The Commission in the Statement of Reasons of the Third Amendment to the Connectivity Regulations has clarified that the generating station shall have to ensure that power generated from the renewable generating station is measured separately and responsibility of separate declaration and measurement of this renewable power should rest with generating station and should be communicated to respective RLDCs/ RPCs. The Commission has further clarified that the meter shall be installed at the inter-connection point as per the provisions of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2012 and as per these Regulations, the inter-connection point is the line isolator on the outgoing feeder on HV side of generator transformer.

(b) The intent of the Third Amendment to the Connectivity Regulations was to facilitate development of renewable generators in the premises of pre-existing generating station. The Regulations do not bar connectivity in case single point metering is not possible.

(c) In the case of two different types of renewable generators i.e. solar and hydro, single point metering would not be feasible. However, in the Third Amendment to the Connectivity Regulations, the difficulty in single point metering for different renewable generators might not have been envisaged as at the

same time no specific provision prohibiting separate metering was laid down. Therefore, in such cases, connectivity to such generating stations may be granted in terms of 2nd proviso of Regulation 8 of the Connectivity Regulations and metering may be done separately. Injection of power by these renewable generators of different type would be shown separately in the schedule issued by RLDC.

(d) The Commission should amend the Connectivity Regulations for segregation of connectivity /scheduling/metering/accounting of similar type of RE generators based on vintage, tariff etc. in such ISGS stations.

Analysis and Decision:

10. We have considered the submissions of parties and perused documents on record. The present petition has been filled seeking directions to CTU to grant connectivity to the 8 MW Hydro project at Singrauli. Regulation 2b (i) (e) of the Connectivity Regulations provides as under:

"2b. "Applicant" means:

2b (i) (e). Any renewable energy generating station of 5 MW capacity and above but less than 50 MW capacity developed by a generating company in its existing generating station of the description referred to in sub-clauses (b)(i)(a) to (c) of this clause and seeking connectivity to the existing connection point with inter-State Transmission System through the electrical system of the generating station."

The second proviso to Clause (1) of Regulation 8 of the Connectivity Regulations provides as under:

"Provided further that the application by the applicant defined under Regulation 2(1) (b)(i) (e) shall be considered by CTU only if the existing generating station agrees to act as the "Principal Generator" on behalf of the renewable energy generating station(s) seeking connectivity through the electrical system of the generating station and formalizes a written agreement/arrangement among them to undertake all operational and commercial responsibilities for the renewable energy generating station(s) in following the provisions of the Indian Electricity Grid Code and all other regulations of the Commission, such as grid security, scheduling and dispatch, collection and payment/adjustment of Transmission charges, UI charges, congestion and other charges etc., and submit a copy of the agreement to the CTU, alongwith the application for connectivity, with copy to the respective RLDC in whose control area it is located."

The Commission in para 13 and 21 of the Statement of Reasons on the Third Amendment to the Connectivity Regulations had clarified as under:

13. In our view, it may be desirable that the generation from the renewable power generating station whether situated within the power plant boundary or facilities located away from the power plant boundary of the existing generating station like Railway siding / MGR, Ash Dyke, Colony, etc. can be integrated at the nearest voltage level such as 11 kV / 33 kV available within the power plant. This is in order to avoid Stepping up small capacity renewable power to EHV level (400 kV / 765 kV) which would entail transformer iron losses and accordingly would make renewable energy generating station uneconomical and unviable. However, it should not be connected to the state transmission system. **Further, the generating station shall have to ensure that power generated from the renewable generating stations is measured separately and responsibility of separate declaration and measurement of this renewable power should rest with generating stations and should be communicated to respective RLDCs / RPCs.** The meter shall be installed at the inter connection point as per CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2012.

21. It may also be possible that the existing generating station may have more than one renewable generating plant in the generating station premise or near its plant facilities. In such situation the existing generating station should act as "Principal Generator" and all such renewable generating stations shall be inter-connected one single point for the purpose of scheduling and metering."

As per the above provisions, CTU shall grant connectivity to RE generating station of 5 MW and above but less than 50 MW at the existing connection point with the ISTS through electrical system of the generating station if existing generating station agrees to act as "Principal Generator". The intent of said provision was to facilitate

development of renewable generating stations in the premises of existing generating station. The following discussions and decisions taken in the 32nd LTA Meeting of the NR constituents regarding Connectivity and Open Access held on 31.8.2013 are relevant in this regard:

“3.4. ... NTPC vide letter dated 10.7.2013 was requested for submission of suitable declaration that the Principal Generator shall undertake the provisions of the above Regulations. In response we have received a letter dated 30.8.2013 from NTPC Ltd. Stating as under:

“Since ‘Singrauli SMALL hydro Plant’ is also under the ownership of NTPC, Shift Charge Engineer of Singrauli Super Thermal Power Station will be responsible for all day to day coordination with RLDC in regard to declaration of schedules, submission of metered data etc in regard to ‘Singrauli Small Hydro Plant’. Further Singrauli Super Thermal Power Station agrees to act as principal Generator on behalf of ‘Singrauli Small Hydro Plant’ and agrees to undertake all operation & commercial responsibilities for ‘Singrauli Small Hydro Plant’ in following the provisions of IEGC & all other regulations of CERC. However, ‘Singrauli Small Hydro Plant’ will be considered as a separate User’ for which energy accounts to be issued separately.

It is, therefore, evident from the above that Singrauli Super Thermal Power Station agrees to act as “Principal Generator” on behalf of Singrauli Small Hydro Plant. However, Singrauli Small Hydro Plant will be considered as separate user for which energy accounting shall be done separately. The petitioner has pleaded that in case where there are renewable generators of different nature, namely solar and hydro, as in the present case, single point metering would not be feasible. The petitioner has pleaded that due to different tariff for solar and hydro generators, it is not techno-economically feasible to integrate the renewable energy generators. The petitioner has submitted that in terms of the Central Electricity Regulatory Commission (Sharing of inter-State Transmission charges and Losses) Regulations, 2010 (Sharing Regulations) solar generators are exempted from payment of transmission charges whereas no such

exemption is granted to hydro generators. The petitioner has submitted that since the distance between solar and hydro generating stations is about 8 kms, it is not feasible to integrate the hydro generating station with 15 MW solar plant. As per the above provisions, the Principal Generator is required to ensure that power generated from the renewable generating station is measured separately and to communicate the same to respective RLDCs/RPCs.

11. POSOCO has contended that the Connectivity Regulations do not bar the connectivity in case single point metering is not possible and injection by these renewable generators of different type will be shown separately in the schedule issued by RLDC. POSOCO has stated that connectivity to such generators may be granted as per the provisions of second proviso of Regulation 8 of the Connectivity Regulations and metering may be done separately. PGCIL has clarified that there is no technical difficulty if LTA and connectivity is granted to two different renewable energy generating stations at different connection point.

12. In the Statement of Reasons to the third Amendment of the Connectivity Regulations, the Commission has clarified that RE generator within the power plant boundaries or facilities located away from power plant boundaries can be integrated at the nearest voltage level such as 11 kV/33 kV available within the power plant. In the present case, the petitioner has set up 15 MW solar power plant and is constructing 8 MW hydro generating station which is situated at distance of around 8 km from Singrauli Super Thermal Power Station of the petitioner. Both projects of the petitioner are

connected at different locations within the existing Singrauli project. Also scheduling methodology for solar and hydro generators is different due to 16 revisions in schedule allowed in case of solar/wind based generation. Since, the beneficiaries and tariff for Solar power plant and Hydro generating station are different, it requires segregation of their point of injection of power.

13. In view of the above, we allow the scheme of connectivity of Singrauli Hydro through existing electrical system of generating station and direct CTU to grant connectivity to the petitioner for 8 MW hydro project. Metering for Singrauli Hydro and Solar power plants shall be done separately and injection by both projects shall be shown separately in the schedule issued by NRLDC.

14. POSOCO has suggested for amendment of the Connectivity Regulations to ensure segregation of connectivity/scheduling/ metering/accounting of similar type of RE generators based on vintage, tariff etc. in ISGS stations. We direct staff of Commission to examine the issue and submit a proposal for amendment in the Connectivity Regulations for consideration of the Commission.

15. The petition is disposed of in terms of the above.

Sd/-
(A.S. Bakshi)
Member

Sd/-
(A. K. Singhal)
Member

Sd/-
(Gireesh B. Pradhan)
Chairperson