

**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

**I.A No. 73/2023
in
Petition No. 286/MP/2023**

**Coram:
Shri Jishnu Barua, Chairperson
Shri I.S. Jha, Member
Shri Arun Goyal, Member
Shri P.K. Singh, Member**

Date of order: 10th October, 2023

In the matter of

Petition under Section 79 of the Electricity Act, 2003 read with appropriate provisions of applicable law *inter alia* seeking extension of time to comply with the directions of the Respondent No. 2 to install the required reactive power compensation device for the Petitioner's 300 MW solar power project situated at Village: Sonanda, Shekhasar, Bandhari, and Kesarpura, Tehsil Bap, District Jodhpur, Rajasthan; and consequently, restrain the Respondent No. 2 from taking coercive action against the Petitioner till such time.

**And
In the matter of**

**Azure Power Maple Private Limited,
5th Floor, Southern Park, D-II,
Saket Place, Saket,
New Delhi - 110017**

...Petitioner

VERSUS

**The General Manager,
Northern Regional Load Despatch Centre,
Grid Controller of India Limited,
(formerly Power System Operation Corporation Limited)
B-9, First Floor, Qutab Institutional Area,
Katwaria Sarai, New Delhi-110016**

**The Chairperson,
Central Electricity Authority,
Sewa Bhawan, R. K. Puram,
Sector 1, New Delhi - 110 066**

**The Chief General Manager,
Central Transmission Utility of India Ltd.**
Having its Registered office at
Plot No. – 2, Sector – 29
Near IFFCO Chowk Metro Station
Gurgaon – 122 001

...Respondents

Parties present:

Shri Aniket Prasoon, Advocate, APMPL
Shri Aman Sheikh, Advocate, APMPL
Ms. Priya Dhankar, Advocate, APMPL
Shri Sanjeev S. Thakur, Advocate, APMPL
Shri Rishabh Bhardwaj, Advocate, APMPL
Shri Sunil, NRLDC
Ms. Suruchi Jain, NRLDC
Shri Asit, NRLDC
Shri Alok Kumar, NRLDC
Shri Alok Mishra, NRLDC
Shri Lashit Sharma, CTUIL
Shri R. S. Rajput, CTUIL
Ms. Muskan Agarwal, CTUIL
Shri Chander Prakash, Chief Engineer, CEA

ORDER

The Petitioner, Azure Power Maple Private Limited, has filed the present Petition, *inter alia* seeking an extension of time to comply with the directions issued by Respondent No. 2, Central Electricity Authority (CEA) in respect of the installation of reactive power compensation devices and consequentially, refraining Respondent No.1 from taking any coercive action against the Petitioner, including disconnecting the Petitioner's 300 MW (AC) Solar Power Project from the grid till the expiry of the extended timeline(s) as may be granted by this Commission. The Petitioner mainly has submitted as under:

- (a) The Petitioner has developed a 300 MW Solar Power Project at Village, Sonanda, Shekhasar, Bandhari, and Kesarapura, Tehsil – Bap, District- Jodhpur, Rajasthan ('the Project'). In respect of the said Project, the Petitioner

has entered into a Power Purchase Agreement with the SECI dated 27.11.2019 and after obtaining the First Time Charging Approvals, the Project was commissioned in tranches ranging from 14.2.2022 to 31.3.2023.

(b) During the course of the development of the Project, in order to obtain the requisite approval from GCIL, the Petitioner vide its letter dated 17.9.2021 undertook to comply with the provisions of the Central Electricity Authority (Technical Standard for Connectivity to Grid) Regulations, 2007 ('the CEA Regulations, 2007') as well as the outcome of the meeting held on 14.7.2021 (Re. Reactive Power requirement from RE Generation Sources). In the said letter, the Petitioner also stated that if it is not able to comply with the aforesaid requirements, it will be liable for disconnection from the grid.

(c) Subsequently, the Working Group issued a consolidated Report in respect of the Data Submission Procedure and Verification of Compliance to the CEA Regulations on Technical Standards for Connectivity to the Grid by RE Generators in July 2022 ('WGR, 2022'). After the issuance of the WGR, 2022, various requirements/compliances, viz. (i) requirement of designing the generating station in a way that it shall be capable of delivering the 'rated output at the specified design temperature insofar as the reactive power is concerned, (ii) requirement to demonstrate dynamic power capability to operate at least up to V curve boundaries, and (iii) requirement of designing the solar generating station while considering the maximum and minimum possible ambient temperature for 12 months and to further consider a 1°C margin, etc. were introduced and made applicable w.e.f 1.11.2022.

(d) At the stage of bid structuring & planning for the Project and/or construction phase of the Project, as per the law in vogue, i.e., the CEA Regulations, 2007, there was no requirement whatsoever mandating and/or regulating the generation of power from the RE projects specifically solar power projects from the standpoint of operating at ambient temperature. Similarly, there was no provision for a RE-generating unit to operate at the maximum rated output. Further, as per the CEA Amendment Regulations, 2013, on being connected to the grid, the generating station was required to supply the varying

reactive power in order to maintain the power factor within the limits of 0.95 lagging to 0.95 leading.

(e) In a meeting held on 10.1.2023 under the Chairmanship of CEA, it was deliberated that the provisions for ambient temperature for RE projects would be incorporated in the forthcoming CEA (Technical Standards for Construction of RE Power Plants) Regulations, 2023, and that the requirement for an ambient temperature of 50°C in the CEA (Technical Standards for Construction of Electric Plants and Electric Lines) Regulations, 2010 is for conventional generators.

(f) Issuance of the WGR, 2022 qualifies as a Change in Law event under Article 12 of the PPA. However, at this stage, the Petitioner only craves leave from the Commission to file an appropriate Petition at a later stage, and the Petitioner has already proceeded to comply with the new requirements provided in the WGR, 2022.

(g) In order to comply with the requirement to install reactive power compensation devices, the Petitioner is required to install 24 MW inverters and 80 MVar STATCOM (which provides dynamically varying reactive power support). Accordingly, the Petitioner had already entered into an agreement with Wattkraft as far back as 27.4.2023 for the supply of the inverters. However, the Petitioner had to face significant hurdles in securing commitment for delivery of the required 130 inverters due to global supply chain disruptions and a short supply of IGBT, which is an important component of the inverters.

(h) Despite the various difficulties being faced by the Petitioner, the Petitioner has been able to complete the laying of AC cables and AC cable termination at the panel end and the installation of 48 out of 130 inverters at the Project site by 20.9.2023. The Petitioner will put into service an additional 70 inverters by 15.10.2023 and the remaining 60 inverters thereafter by the end of November 2023. Accordingly, by way of the present Petition, the Petitioner is seeking an extension of time to install the requisite 130 inverters to meet the reactive power compensation demand by the end of November 2023.

(i) Insofar as the installation of 80 MVAR STATCOM is concerned, the Petitioner will have to provide design parameters to its vendors, which include the ambient temperature criteria. While the WGR 2022 provides certain specifications with respect to the ambient temperature, the said specifications are still being discussed among the CEA, CTUIL, GCIL, and SECI and the various stakeholders. Till such time as there is clarity on the ambient temperature criteria, the Petitioner will not be able to procure and install the said STATCOM.

(j) Unlike the other RE developers, who are procuring and installing the Capacitor Banks to provide the reactive power support, the Petitioner has opted for STATCOM due to its enhanced capacity to provide the dynamically varying reactive power support.

(k) The Petitioner, in its various communications to GCIL, MNRE, and CEA, had duly highlighted the steps taken by the Petitioner to comply with the requirement to install the reactive power compensation devices, the difficulties being faced by it. The petitioner has, therefore, been requesting an extension of the timeline for installation, and also a waiver of the requirement to install 80 MVAR STATCOM due to a lack of clarity on ambient air temperature criteria. However, GCIL, in its letter dated 19.9.2023 has called upon the Petitioner to comply with the requirement of installing the required reactive power compensation device before 30.9.2023 relying on the minutes of the meeting held on 1.3.2023 and the circular dated 12.5.2023.

(l) If Respondent No.1 is permitted to disconnect the Petitioner's Project from the grid due to the non-installation of reactive power compensation devices, that too, due to no fault of the Petitioner, would result in grave and irreparable harm to the Petitioner as the solar energy which could have been converted into electricity would be completely wasted. The Petitioner has also indicated that between the months of September and December 2023, the active power generation from the Project will be restricted to 270 MW, and for such a scenario, the Project does not require any additional reactive power compensation devices. Therefore, the grant of an extension of time as sought by the Petitioner will not adversely impact the grid.

Interlocutory Application

2. The Petitioner has also filed IA No. 73/2023 seeking an ad-interim order restraining Respondent No.1 from taking any coercive steps against the Petitioner including disconnecting the Petitioner's 300 MW solar Project from the grid pending disposal of the present Petition.

Hearing dated 9.10.2023

3. During the course of the hearing, the learned counsel for the Petitioner submitted that the matter has been listed for the hearing in terms of the directions of the Appellate Tribunal for Electricity (APTEL) vide order dated 3.10.2023 in DFR No. 560/2023 and Ors. whereby the APTEL has directed the Commission to take-up the IA filed by the Petitioner and pass an appropriate order in accordance with law in view of the Petitioner's grievance that the hearing of the IA for interim relief was deferred by the Commission for more than three weeks despite the Petitioner having expressed the apprehension of an imminent threat of being disconnected from the grid. Learned counsel for the Petitioner, *inter-alia*, submitted as under:

(a) By Record of Proceedings for the hearing dated 29.9.2023, the Commission refused to grant an ad-interim relief at that stage prior to considering the views of Respondent No.1, NRLDC with regard to the safety and security of the grid in the absence of installation of the requisite reactive power compensation devices. Pertinently, the matter was listed after the notice to all Respondents, including NRLDC, and the representative of the NLDC/NRLDC was also present during the course of the hearing on that day in another matter but chose not to appear in the present case. Such conduct on their part clearly reflects that there are no serious implications for the safety & security of the grid requiring the disconnection of the Petitioner's 300 MW Solar Power Project.

(b) Apart from the Petitioner's Project, there are certain other Projects being developed by Developers such as NTPC Renewable, SBSR, and ReNew Surya in the Northern Region who are/were yet to comply with the requirement of

installation of required reactive compensation devices before 30.9.2023. Such Projects are also not disconnected from the grid as on date. Similarly, in the Western Region, there are 5-6 Projects which are yet to comply with the requirement of the installation of required compensation devices within the stipulated timeline, and none of them have been disconnected from the grid yet.

(c) As regards the queries/concerns regarding the jurisdiction of the Commission in the present case, the Petitioner has already submitted during the course of the hearing on 29.9.2023, the direction issued by Respondent No.1 in its letter dated 19.9.2023 which would qualify as a direction issued by RLDC under Section 29(1) of the Electricity Act, 2003 ('the Act'), and any dispute in relation to such a direction can only be referred to this Commission under Section 29(5) of the Act. Apart from Section 79 of the Act, the Petition has also been filed, referring to all appropriate provisions of applicable law. The mere non-mentioning of Section 29 of the Act in the Petition/Cause title does not render the present Petition non-maintainable.

(d) In any case, this Commission has, in the past, issued direction(s) to the CEA in many cases, and in this regard, reliance was also placed on the Record of Proceedings for the hearing dated 29.9.2023 in Petition No. 279/MP/2023.

(e) Although Regulation B(2).1 to the Central Electricity Authority (Technical Standard for Connectivity to Grid) Amendment Regulations, 2013 provided that the generating station shall be capable of supplying dynamically varying reactive power support so as to maintain the power factor within the limits of 0.95 lagging to 0.95 leading, there was no clarity with respect to implementation of the aforesaid requirement vis-à-vis renewable generators, even as per the Respondents, until 2021, as clearly recorded in the minutes of the meeting regarding the reactive power requirement from the RE generation sources held on 14.7.2021.

(f) It was only pursuant to the issuance of the Working Group Report, 2022 (WGR, 2022) in July 2022, that certain clarity with respect to the installation of the reactive power compensation devices and the ambient temperature criteria for the renewable energy projects were introduced. According to the Petitioner,

WGR, 2022 introduces additional requirements/compliances, under the garb of clarifications to the CEA Regulations, which were not there prior to its issuance.

(g) The Central Electricity Authority (Technical Standards for Connectivity to Grid) Regulations, 2007 (CEA Regulations, 2007) only prescribed that the effects of temperature extremes must be considered in the design and operation of the connected facilities and, as such, did not prescribe any ambient temperature criteria for renewable generating stations. Though the Central Electricity Authority (Technical Standards for Construction of Electric Plants and Electric Lines) Regulations, 2010 prescribed an ambient temperature requirement of 50 degrees Celsius, the said requirement was only applicable to thermal power projects.

(h) CEA, in a meeting held on 10.1.2023, categorically admitted that the ambient temperature criteria for renewable energy projects were required to be standardized and the same would be incorporated in the forthcoming CEA (Technical Standards for Construction of RE Power Plants) Regulations, 2024, which are admittedly yet to be issued.

(i) The undertaking to comply with the requirements of the CEA Regulations, 2007 was given by the Petitioner on 17.9.2021 i.e. prior to the issuance of the WGR, 2022. Thus, at that stage, the Petitioner could not have envisaged the introduction of new requirements/compliances as introduced by the WGR, 2022.

(j) At the time of commissioning its Project, the Petitioner had already installed 1624 Nos. of inverters (185 kW) which are capable of providing reactive power support for 270 MW up to 40 degrees Celsius (as against 50 degrees Celsius as now required). Also, the Petitioner is in the process of installing and commissioning additional 24 MW of solar inverters (185 kW × 130 Nos. – out of which 48 Nos. of inverters have already been installed) which will be done by the end of November 2023 and consequently, the Petitioner's Project will be capable of supplying dynamic reactive power support for the entire Project capacity up to 40 degrees Celsius.

(k) As per the data available on the website of the Indian Meteorological Department, the temperature for Jodhpur, where the Project is located, has not

exceeded 40 degrees Celsius in the months of October to March for the past 69 years, and thus, the active power generation for the Project for such months will be restricted below 270 MW, which as such does not require any additional reactive power compensation device. Hence, there will be no threat to the safety or security of the grid if the Project of the Petitioner is allowed to remain connected to the grid.

(l) In order to meet the requirement of providing dynamic reactive power support for the entire Project capacity for temperatures beyond 40 degrees Celsius, the Petitioner will also be installing 80 MVar STATCOM. However, in the absence of clarity with regard to the ambient temperature criteria for the renewable energy projects, the Petitioner is not able to even place an order for the supply of such STATCOM.

(m) Respondent No.1, NRLDC, in its affidavit, has pointed out various instances of grid disturbances due to the non-desirable performance of renewable energy generators, including instance(s) related to low voltages in RE pockets due to acute shortages of reactive power. However, as pointed out by the Petitioner, there are several RE developers, who are yet to comply with the requirement of the installation of reactive power compensation devices, and the Petitioner's Project cannot be singled out and disconnected from the grid. Additionally, the Petitioner has already indicated that there is no threat to grid safety or security if the Petitioner's Project is allowed to remain connected to the grid during the winter months.

4. At the outset, the representatives of Respondent No.1, NRLDC, and Respondent No.3, CTUIL, objected to the maintainability of the Petition on the ground that the matter pertains to compliance with the CEA Regulations, 2007 and, as such, does not fall within the jurisdiction of this Commission. The representative of Respondent, NRLDC, also submitted that NRLDC has also filed its brief reply in the matter. He submitted that, as per the CEA Regulations, 2007, the Petitioner was required to factor into the temperature extremes in the design and operation of the connected facilities and its generating station to be capable of supplying dynamically varying reactive power support so as to maintain power factor within the limits of 0.95 lagging to 0.95 leading. The representative of the NRLDC further submitted that

at present, the Petitioner's Project is capable of delivering only 83 MVAR (as against 98.6 MVAR at the Point of Interconnection) and its active power is limited to 253 MW, falling short of its rated capacity of 300 MW. The representative of NRLDC also informed that the ambient temperature of 50 degrees Celsius was based on the study report submitted by the Petitioner itself in respect of its Project. He submitted that, insofar as the reference to the other generating stations in the Northern Region is concerned, out of 5 such generators, 3 of them have already complied with the requirement of installation of the reactive compensation devices by installing the additional inverters, SVC, etc. and the proposal to install STATCOM to comply with such a requirement is/was the choice of the Petitioner itself. The representative of NRLDC further submitted that the Petitioner not only undertook to comply with the CEA Regulations, 2007 by its undertaking dated 17.9.2021 but also by an undertaking dated 28.3.2023 whereby the conditional First Time Charging approval was granted to the Petitioner (43 MW) based on its undertaking to comply with all necessary compliances by 30.6.2023, which was further extended to 30.9.2023. However, the Petitioner has failed to adhere to such undertakings as given by it. The representative also submitted that its communication dated 19.9.2023 was merely an intimation to the Petitioner to ensure the pending compliances (installation of a reactive compensation device) by the Petitioner by 30.9.2023 and cannot be construed as notice for disconnection of the Petitioner's Project from the grid as adverted to by the Petitioner.

5. In response to the specific query of the Commission with regard to the disconnection of any such renewable generating stations post -30.9.2023 in the event of their failure to install the required reactive compensation device(s), the representatives of the Respondents, NRLDC and CTUIL, replied in the negative. They also added that in the present case, since the Petitioner was already before the Commission and APTEL, they, as such, did not initiate any action with regard to the disconnection of the Petitioner's Project.

6. The representative of Respondent No.2, CEA, also opposed the maintainability of the present Petition on the ground that the matter relates to the CEA Regulations, 2007 as amended from time to time. The representative of CEA further submitted that the CEA Regulations, 2007 already required the renewable generators to

consider the effects of temperature extremes in the design and operation of the connected facilities and such generating projects to be capable of supplying dynamically varying reactive power support so as to maintain the power factor within the limits of 0.95 lagging to 0.95 leading. He further added that the WGR, 2022, was issued, *inter alia*, to facilitate compliance with the provisions of the CEA Regulations, 2007 by the renewable energy generators. The representative of CEA submitted that the Petitioner may be directed to approach the CEA with regard to its request in connection with compliance with the requirements of the CEA Regulations, 2007, which will be considered by CEA appropriately.

7. In response, the learned counsel for the Petitioner indicated that as such the Petitioner has no objection to approaching CEA for further extension in the timeline for installation of the required reactive compensation devices. However, the Petitioner has, in the past, already requested for grant of such extension to the Respondents, which did not yield any result.

Analysis and Decision

8. We have considered the submissions made by the learned counsel and the representatives of the parties. It is noticed that CEA has also indicated that the Petitioner may be directed to approach CEA with regard to its request in connection with compliance with the requirement of the installation of the reactive power compensation devices. It is also noted that Respondent No.1's communication dated 19.9.2023, the basis upon which the Petitioner has apprehended the imminent disconnection of its Project from the grid after 30.9.2023 and also the basis for the urgent interim relief(s) under IA No. 73/2023, is, as per the Respondent No.1's own submission, merely an intimation, and it may not be construed as a notice for disconnection of its Project from the grid. Moreover, it has also been indicated by the Respondents that other similarly placed generators, which have yet to install the required reactive compensation devices, have not been disconnected from the grid.

9. Considering the above facts and circumstances, we hereby direct the Petitioner to approach the CEA, and the CEA is requested to convene a meeting with the Petitioner within three days of this order. It is expected that the consultation process involving CTUIL, NRLDC, the Petitioner, and other similarly placed generators, will result in a resolution of the issue in the interest of the sector at large. In view of the spirit of the APTEL's order dated 3.10.2023 in DFR No. 560/2023 and Ors. and submission of the NLDC that it has only intimated and not issued any notice of disconnection, the prayer of the Petitioner seeking an ad-interim order restraining Respondent No.1 from taking any coercive steps no longer remains.

10. IA No. 73/2023 is disposed of in terms of the above.

11. The Petition will be listed for the hearing on maintainability and merits on **25.10.2023**.

**Sd/-
(P.K. Singh)
Member**

**sd/-
(Arun Goyal)
Member**

**sd/-
(I.S. Jha)
Member**

**sd/-
(Jishnu Barua)
Chairperson**