

**Date: 31.10.2022**

The Secretary  
Central Electricity Regulatory Commission  
3<sup>rd</sup> & 4<sup>th</sup> Floor, Chanderlok Building,  
36, Janpath, New Delhi- 110001

**Sub: Submission of comments and suggestions on the proposed Draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2022.**

**Ref:** No. L-1/265/2022/CERC Dated: 07.06.2022

Dear Sir,

Comments and suggestions on proposed Draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2022 on behalf of 'Adani Green Energy Ltd (AGEL) is enclosed herewith for suitable consideration while finalizing the aforesaid Regulations.

looking forward to your favorable consideration in the matter.

Thanking you,

Yours faithfully,

**For & Behalf of Adani Green Energy Limited**



Ravi Sinha  
Manager- Regulatory Affairs

Encl. As above

# AGEL COMMENTS ON DRAFT IEGC REGULATIONS, 2022

| SN | Section                               | Existing Description   | Observations/ Comments  |
|----|---------------------------------------|--|---|
| 1. | Chapter 5<br>Clause 22.3<br>Page - 42 | <p>Trial Run of Wind/Solar/Storage/Hybrid Generating station:</p> <p>a)..... For the trial run, a declaration shall be given by the generating company that no panel has been replaced or added or taken out or design of the plant has been altered:</p> <p>Provided that:</p> <p>(i) The output below the corroborated performance level with the solar irradiation of the day shall call for repeat of the trial run:</p> <p>(ii) If it is not possible to demonstrate the rated capacity of the plant due to insufficient solar radiation, COD may be declared immediately when sufficient solar irradiation is available after COD.</p> | <p>MNRE in its advisory/clarification dated 05.11.2019 w.r.t DC capacity of Solar PV power plants, has advised that design and installation of solar capacity on the DC side should be left to the generator/developer. Also as per law, the setting up of generation capacity is an unlicensed activity therefore any person is entitled to set up any capacity which he desires to set up, and sell power to any entity which may want to but it.</p> <p>Also, there is no clarity on the methodology to decide the "corroborated performance level with the solar radiation of the day" and procedure to demonstrate the rated capacity. Solar plant has different AC and DC rated capacity. Generation on AC side is dependent on the DC capacity, module alignment i.e. Fixed tilt/Single axis Tracker/Dual axis tracker, Angle of alignment, inverter type, shadow effect, soiling loss, terrain, cable type and losses, other weather parameters like wind, humidity, temperature etc. There can be a situation in case of wind project when because of OEM restriction/SOP manual, WTG operation would be limited to certain capacity and same would be progressively increased to maximum capacity. In such case demonstration of rated capacity would not be possible even irrespective of the wind parameters and whether condition.</p> <p>Further, as such the irradiation or wind parameters-based generation estimation could not be achieved very precisely in real time due non availability of precise whether data and continuous variation in whether data. In such case it would never be possible to demonstrate the generation to match the generation estimation as per rated capacity.</p> |

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|    |                                       |   | <p>With so many variables affecting actual generation of RE and to avoid unnecessary delays in commissioning of green power project, and to promote generation from renewable power as per Electricity Act 2003 it is suggested to delete the requirement of "corroborated performance level" or "to demonstrate the rated capacity".</p> <p>Since declaration asked in draft grid code is in contravention with above mentioned MNRE advisory, we request to delete the requirement of declaration also at the time of trial run.</p> <p>Even if such trial run is retained under IEGC for RE generating stations in such scenario irradiance/wind-based generation estimation formula may please be prescribed in the IEGC itself and some tolerance up to 20% may be allowed while comparing same with real time generation fro COD declaration.</p> <p>During readiness of trial run and up to the successful trail run period, project may inject infirm power in to the grid, same may be allowed to be compensated under DSM regulation for such infirm power injection as it may take several days for making it ready for trial run depending upon the size of RE plant.</p> |
| 2. | Chapter 5<br>Clause 24.5<br>Page - 47 | Documents and Tests Required for the Generating Stations based on wind and solar resources: | NLDC/RLDC may kindly issue the clear & detailed guidelines for the tests to be conducted before commissioning. Some of the tests like frequency response, reactive power response,  |

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|    |  |   | <p>etc may not be practically feasible to conducted physically at site, however same can be demonstrated through simulation models.</p> <p>To avoid unnecessary delay in commissioning, we request to accept &amp; consider the test reports on simulation basis or to accept OEM certification confirming same to allow the RE project for commissioning. Actual test at plant level may be conducted in due course of time as per feasibility and availability of testing equipment's at site.</p>  |
| 3. | Chapter 5<br>Clause 26.4<br>(a)<br>Page – 51 | The generating station based on wind and solar resources, the ESS and the hybrid generating station shall submit a certificate signed by the authorized signatory not below the rank of CMD or CEO or MD to the concerned RLDC and to the Member Secretary of the concerned RPC before declaration of COD,..... | <p>It is a general industry practice that the employee/individual authorized through Board Resolution signed/approved by Director &amp; company secretary who can sign the documents/declaration or any other documents required on behalf of the company. CMD or CEO or MD may not be appointed or be available for signing of the documents.</p> <p>In view of above we request you to delete the requirement of declaration to be signed by authorized signatory not below the rank of CMD or CEO or MD. Any person authorized by the company through a valid Board Resolution should be allowed to sign such declaration.</p> |
| 4. | Chapter 7<br>Clause 45.6<br>Page 108         | <p>Adherence to Schedule:</p> <p>Each regional entity shall regulate its generation or demand or both, as the case may be, so as to adhere to schedule of net injection into or net drawal from the inter-State transmission system.</p>  | <p>Generation from Solar or Wind sources are infirm/intermittent in nature and are impossible to schedule with the 100% accuracy, as it is dependent on various local weather conditions viz Wind Speed, Solar Irradiation, Wind Density, temperature etc. Under DSM regulation also solar and wind generators are allowed to revise schedule once in 1.5 Hr slot i.e. 16 revision in a day.</p>  |

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|    |  |  | <p>In view of above constraints and unavailability of accurate weather predictions, Solar and wind generation are very likely to deviate from its schedule.</p> <p>It is therefore requested to exempt/relax the applicability of clause 45 (6) renewable generating plants.</p>   |
| 5. | Chapter 7<br>Clause 45.11<br>(b)<br>Page - 110 | <p>(11) Scheduling of renewable energy generating station by QCA</p> <p>(b) NLDC shall notify a procedure for aggregation of pooling stations for the purpose of combined scheduling and deviation settlement for wind or solar or renewable hybrid generating stations within six (6) months of notification of these regulations.</p>                          | <p>Procedure for aggregation of pooling stations may have impact on the Annexure-5 Procedure specifying data, forecasting and scheduling for renewable energy generating stations (REGS) at Inter-state level and the CERC (Deviation Settlement Mechanism and Related Matters) Regulation 2022, it is requested to issue a procedure also along with Grid Code and corresponding amendments to be made in the DSM Regulation 2022</p>   |
| 6. | Chapter 7<br>Clause 45.15<br>Page -112         | <p>A generating station including renewable energy generating station shall be allowed to draw power from ISTS during non-generation hours, whether before COD or after COD, only after obtaining schedule for such drawal of power in accordance with a valid contract entered into by it with a seller or distribution licensee or through power exchange.</p> | <p>Drawal of Power by Solar generating plant during non-generating hours are mainly to keep the system in charged condition and transformer losses. Drawal being less than 0.2% of the generation, CERC in its tariff order for Solar plants has not considered the same while calculating the Generic tariff.</p> <p>Further, it is not possible to schedule the drawal of power prior to COD during testing and commissioning phase</p> <p>In view of above, and in order to promote RE generation we request to allow drawal by RE generators including Solar/Wind/Hybrid/ESS during non-generating hours without having valid contract and drawl schedule.</p> |

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| 7. | Annexure-5<br>Page -163 | Procedure specifying data, forecasting and scheduling for renewable energy generating stations (REGS) at Inter-state level                           | <p>CERC (Deviation Settlement Mechanism and Related Matters) Regulation 2022 does not incorporate the provisions of the procedure.</p> <p>To avoid ambiguity and effective implementation, it is requested to issue suitable amendment in the DSM Regulation 2022 incorporating the provisions of Forecasting and Scheduling procedure proposed in the Grid Code along with the final Grid Code.</p>                               |
| 8. | -                       | 'Must Run' status has been given to RE generating stations under the IEGC 2010, which have not been considered under the present draft of IEGC 2022. | <p>It is proposed to reinstate the 'Must Run' status to RE generating station under IEGC 2022 also and to mandate System operator (SLDC/ RLDC) to make all efforts to evacuate the available RE power and same shall not be subjected to 'merit order despatch' principles aligning same with the MoP's Electricity (Promotion of Generation of Electricity from Must-Run Power Plant) Rules, 2022 notification dt 22.10.2021.</p> |