



सत्यमेव जयते

भारत सरकार/ Government of India  
विद्युत मंत्रालय/ Ministry of Power  
केन्द्रीय विद्युत प्राधिकरण/ Central Electricity Authority  
ग्रिड प्रबंधन प्रभाग/ Grid Management Division

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सं.: 12/एक्स/एस.टी.डी.(सी.ओ.एन.एन)/जी.एम./2023/ 615

दिनांक: 22.05.2023

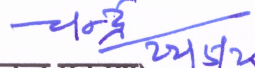
विषय: दिनांक 18.05.2023 (गुरुवार) को अपराह्न 02:30 बजे अध्यक्ष, सीईए की अध्यक्षता में आरई डेवलपर्स के लंबित कॉन-4/फर्स्ट टाइम चार्जिंग (एफटीसी) आवेदनों से संबंधित मुद्दों पर बैठक का कार्यवृत्त।

Minutes of the Meeting held on 18.05.2023 (Thursday) at 02:30 PM under the Chairmanship of Chairperson, CEA to discuss issues related to pending CON-4/ First Time Charging (FTC) applications of RE developers.

अध्यक्ष, सीईए की अध्यक्षता में दिनांक 18.05.2023 (गुरुवार) को अपराह्न 02:30 बजे आयोजित बैठक के कार्यवृत्त आपकी जानकारी एवं आवश्यक कार्यवाही हेतु संलग्न है। यह पत्र सक्षम अधिकारी द्वारा अनुमोदित है।

Please find enclosed the minutes of the meeting held under Chairmanship of Chairperson, CEA on 18<sup>th</sup> May 2023 at 02:30 PM. It is issued on approval of Competent Authority.

संलग्नक: यथोपरि।

  
(चन्द्र प्रकाश)  
(मुख्य अभियन्ता)

बैठक के सभी प्रतिभागियों को ई-मेल द्वारा प्रेषित

**Minutes of the Meeting held on 18.05.2023 (Wednesday) at 02:30 PM under the Chairmanship of Chairperson, CEA to discuss issues related to pending CON-4/ First Time Charging (FTC) applications of RE developers.**

A meeting under the chairmanship of Chairperson, CEA was held on 18.05.2023 (Wednesday) at 02.30 P.M. with the participants from GRID India, Central Transmission Utility of India Limited (CTUIL) and various RE developers to discuss the issues related to pending applications of CON-4/ FTC applications of RE developers. The list of the participants is enclosed at **Annexure-I**.

2. Chairperson, CEA welcomed all the participants to the meeting and asked GRID-India and CTUIL to highlight the major reasons for holding the CON-4/ FTC applications of RE developers.

3. CTUIL informed that presently, total 8 nos. of CON-4 applications of RE developers with a cumulative quantum of 2197.6 MW are under process with region wise pendency of NR - 8, SR - 4 and WR – 2. Some of the reasons for pendency are non-submission of modelling/Simulation files, violation in harmonics limits and inadequate dynamic reactive power compensation at point of Interconnection (PoI). The details of the pending applications are attached in **Annexure II**.

4. GRID-India informed that presently, 9 nos. of FTC applications of RE developers with a cumulative quantum of 458.7 MW are under process with region wise pendency of WR – 8 and NR – 1. Some of the reasons for pendency are non – submission of Type test/ Measurement reports, deficiency in modelling files and Purchase Orders (PO) for procurement of Capacitors Banks etc. The details of the pending applications are attached in **Annexure III**.

5. The representative of ADANI stated that one of the reasons for not getting the FTC/ CON-4 approval is Ambient Temperature criteria. The existing Wind Turbine Generator (WTG) of various Original Equipment Manufacturers (OEMs) start de-rating as the temperature rises beyond a limit and no machine can demonstrate rated capacity at maximum possible temperature. This is an issue for all RE developers across the country. Some plants have long stop date coming up in month of May and June and if these plants are not commissioned within that date their PPA's would get truncated/ terminated. The existing plant which are installed and ready for commissioning should be allowed FTC. Further, there is gap in bidding documents with respect to ensuring CEA compliances. It was also mentioned that a lot of complaints are received for Inox machine about noncompliance. Inox WTG must complete all testing along with model development by 12<sup>th</sup> June 2023 else Inox WTG may be blacklisted in India.

6. Broadly, all the Wind developers mentioned that the extreme high temperature and rated wind speed coexist very rarely. With the increase in the temperature, the wind speed reduces to such a low value that the WTGs won't be able to operate. Apart from this, the developers also mentioned that the generators used by them are in accordance to the models listed in Revised List of Models and Manufacturers (RLMM) issued by Ministry of New and Renewable Energy (MNRE) on the issue of ambient temperature and other non- compliance highlighted by CTUIL and GRID-India.

7. RE developers mentioned that all the requirements of Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations may be included in the bidding document so that these are known a priori to the prospective bidders at the bidding stage. The Working group shall involve MNRE and SECI regarding ambient temperature design criteria for RE plant and how it can be included in new bidding documents. However, they requested that the existing and old projects may be exempted from this criterion.

8. The representative of INOX WTG stated that all the requisite data/ files would be ready by 12<sup>th</sup> June, 2023. On this the representative of ADANI stated that four additional weeks are required to meet all the requirements for FTC. It was also brought to the notice that a number of complaints are there w.r.t the INOX .

9. The representative of Tata Power also mentioned that they have submitted the application for the FTC clearance on 18.05.2023. The same is being examined.

10. After the detailed discussions on the pending applications and based on the submissions made by GRID-India, CTUIL and RE Developers, Chairperson, CEA directed the following -

- a. INOX WTG testing and subsequent model development with benchmarking shall be completed in the present pending cases latest by 15<sup>th</sup> June 2023. In case of non-compliance the action may be initiated against INOX.
- b. Provisional FTC/ CON-4 is to be granted to the cases discussed in the meeting based on the undertaking by the RE developers that all the compliance shall be completed by them latest by 30<sup>th</sup> September, 2023 else the provisional FTC/CON-4 granted shall stand cancelled and the capacity would be disconnected w.e.f. 1<sup>st</sup> October, 2023.
- c. Working Group shall prepare the updated report for compliance by consulting the stakeholders within 2 months.
- d. The bidding documents for RE projects shall be aligned with the Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations and the recommendations of the Working Group.
- e. All the future projects should be designed as per Indian ambient conditions.

The meeting ended with thanks to the chair.

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## **Annexure-I**

### **List of participants in the meeting on 19/05/2023 at 02:30 PM**

#### **Central Electricity Authority (CEA)**

1. Sh. Ghanshyam Prasad, Chairperson
2. Sh. B.K. Arya, Member (GO&D)
3. Sh. Chandra Prakash, Chief Engineer (Grid Management)
4. Sh. Himalaya Shubham, Deputy Director (Grid Management)
5. Sh. Sandeep Kumar, Deputy Director (Grid Management)
6. Sh. Shubhender Singh, Assistant Director (Grid Management)
7. Sh. Dhruv Kawat, Assistant Director (Grid Management)
8. Sh. Sakil Ahmad, Assistant Director (Grid Management)
9. Sh. Shubam Kumar Singh, Assistant Director (Grid Management)

#### **GRID India**

1. Sh. Vivek Pandey, GM (SO)
2. Sh. Ibtesam Asif, AM
3. Sh. Rajiv Porwal, ED (NRLDC)
4. Sh. Prabhankar Porwal, Manager

#### **Central Transmission Utility of India Limited (CTUIL)**

1. Sh. PC Garg
2. Sh. Ajay Kumar
3. Sh. Kashish Bhambhani
4. Sh. Anil Kr Meena

#### **Representative of RE developers**

1. Adani Green
2. Alfanar
3. Inox Wind
4. Amplus Solar
5. EDF India
6. Tata Power
7. Continuum Energy
8. Torrent Power
9. Renew
10. JSW Energy



## CON-4 applications under process in NR

## Annexure II

Applicant's Details	Connectivity Grant Details	Ambient Temperature considered for plant design as per Applicant	Installed Capacity of Inverter at Ambient Temperature	Capacitor Proposed by Applicant	Date of PO of Capacitor Bank/ Commissioning Schedule as per PO [For full compliance of Regulation]	Pending major Compliances
<b>Rajasthan Solar Park Development Company Limited (Park Developer)</b>	Model Submitted for 190 MW out of 925 MW @Bhadla-II	50	190 MVA	100 MVAR	07.03.23/ June'23	<ul style="list-style-type: none"> <li>Revised PSSE &amp; PSCAD simulation files, dynamic report and other relevant data/docs are yet to be received</li> <li>Incorporating input to PPC from 220kV Bhadla-II (PG) end (POI): response awaited from developer.</li> <li>Plant is partly compliant with CEA Standards, reply/data from RE developer awaited w.r.t processing of part CON-5.</li> </ul>
<b>Amplus+ Grian + Onevolt</b>	100 MW+100 MW+ 100 MW @Bhadla-II	51	303.96 MVA (101.32+101.32+101.32)	94 MVAR	01.04.2023/ July'23	<ul style="list-style-type: none"> <li>Revised simulation file to check the CEA compliances is pending from developer.</li> <li>Regarding Onevolt, hybrid compensation planned, revised simulation files awaited. Plant model w.r.t Amplus &amp; Grian complying with CEA Standards awaited.</li> </ul>

# CON-4 applications under process in SR

Sr. No.	Name of applicant	Quantum (MW) for which CON-4 is applied	Name of PS	Remarks
1	JSW Renew Energy Ltd	540	Tuticorin-II	<ul style="list-style-type: none"> <li>Requirement of reactive compensation has been worked by applicant out corresponding to <b>488.5</b> MW quantum (peak wind power at GSS). However, Connectivity has been granted for <b>540 MW</b> to M/s JSWREL</li> <li>Sustained oscillations in active power observed for 0.15 pu LVRT case in PSCAD</li> <li>Individual current harmonics and total harmonic distortion at POI are exceeding the limits defined in IEEE 519 standards</li> <li>Post fault clearance settling time is 4-5 sec (time taken for reactive power to return to pre fault values) which is quite high.</li> </ul> <p>Applicant has communicated that they will submit the revised reports. Revised reports and associated models are awaited.</p>
2	Renew Surya Ojas Pvt Ltd	300	Koppal	Application received on 19.04.23. First set of observations have been forwarded to the applicant. Response is awaited from the applicant.
3	Renew Solar Power Pvt Ltd	300	Koppal	Application received on 13.04.23, first set of observations have been forwarded to the applicant. Some documents are still pending and other documents are currently under scrutiny by CTU/Grid-India.
4	JSW Renew Energy Ltd	270	Karur	Application received on 11.05.23 and currently under scrutiny by CTU/Grid-India.

# CON-4 applications under process in WR

Sr. No.	Name of applicant	Quantum (MW) for which CON-4 is applied	Name of PS	Remarks
1	Netra Wind Private Limited	97.6	Bhuj PS	<p>Application received on 12.04.23 and currently under scrutiny by CTU/Grid-India.</p> <p><b>Major issues:</b></p> <ul style="list-style-type: none"> <li>• Testing of WTG not done as per CEA Technical Standards requirement</li> <li>• Delay in active power recovery observed in Senvion WTG</li> <li>• Modelling issues to be addressed</li> <li>• Dynamic compensation to be provided (applicant has planned for capacitor bank)</li> <li>• Updated models/reports awaited from RE developer</li> <li>• Power supply (2 independent sources) to Sub-station auxiliaries for the RE plant is not as per CEA Technical Standards</li> </ul>
2	Adani Green Energy Limited	200	Bhuj-II PS	<p>Application received on 17.04.23 and currently under scrutiny by CTU/Grid-India.</p> <p><b>Major issues:</b></p> <ul style="list-style-type: none"> <li>• Current harmonics exceeding the limits stipulated in IEEE-519</li> <li>• Modelling issues to be resolved</li> <li>• Dynamic compensation to be provided (applicant has planned for capacitor bank)</li> <li>• Updated models/reports awaited from RE developer</li> <li>• Power supply (2 independent sources) to Sub-station auxiliaries for the RE plant is not as per CEA Technical Standards</li> </ul>

# Western Region (WR)

## Annexure III



### Compliance status of other RE plants in WR who have applied for FTC

S. No.	RE Developer	Total Envisaged I/C (MW)	Capacity already in operation	Capacity requested for FTC (MW)	3a. Non-submission or incomplete submission of Type Test/ Measurement Report	3b. Non-submission or deficiencies In mathematical models	3c. Non-availability of real-time telemetry and/or PMU data	3d. Pending installation of Power Plant Controller or( Input to PPC from POI)	3e. Inadequate reactive power support capability at Point of Interconnection.	Remarks	CEA registration no.
1	NTPC Gandhar Solar	20	10	10	Completed	Completed	Completed	Completed	Pending (PO awaited) WRLDC letter issued on 31.3.23		1400004291
2	Masaya Solar Energy Pvt Ltd	300	0	150	Completed	Pending ( Partial Submission, compliance awaited to observations of 04.05.23 )	Completed	Completed ( Telemetry Integration in REMC pending).	Pending.(Procurement for same is under progress and shall be completed before 1 year time )	60 MVAR cap bank+ 95 MVAR SVG + 3.125 MVA inverter envisaged.	1400004297
3	Adani Wind Energy Kutch One Limited (AWEK1L)	555	543.5	11.5	Pending (Expected by 30.05.2023)	Pending ( Expected by 30.07.2023)	Completed	Completed	In addition to existing 100 MVAR, 175 MVAR planned & expected by 30-06-23 as per fortnightly report.		1400000856
	Adani Wind Energy Kutch Three Limited (AWEK3L)										1400000384
	Adani Wind Energy Kutch Five Limited (AWEK5L)										1400000397
4	Inox Wind Infrastructure Wind Limited (IWISL) Continuum Power Trading Pvt. Ltd (CNPTPL)	626	318	38	Pending ( partial submission vide mail 12.04.2023)	Partial (partial submission vide mail 12.04.2023)	1. PPC/Weather telemetry not updating. 2. Few WTGs telemetry not updating correctly. 3. LVRT/HVRT trigger SOE of WTGs yet to be configured.	Pending	Pending		1400000126

## Western Region (WR)

### Compliance status of other RE plants in WR who have applied for FTC

S. No.	RE Developer	Total Envisaged I/C (MW)	Capacity already in operation	Capacity requested for FTC (MW)	3a. Non-submission or incomplete submission of Type Test/ Measurement Report	3b. Non-submission or deficiencies In mathematical models	3c. Non-availability of real-time telemetry and/or PMU data	3d. Pending installation of Power Plant Controller or( Input to PPC from POI)	3e. Inadequate reactive power support capability at Point of Interconnection.	Remarks	CEA registration no.
5	Srijan Energy System Private Ltd.	148.5	91.8	24.3	Completed	Pending (Harmonic Violation observed in PSCAD study)	PMU data have loss about 7-10%	Completed	Completed (26 MVAR capacitor FTC done on 12.04.2023)		1400003859
6	Sitac Kabini Renewable Private Ltd.	300	256.5	43.5	Completed	Pending( (Harmonic Violation observed in PSCAD study)	PMU data have loss about 7-10%	Completed	46 MVAR capacitor installation is under progress		1400002452
7	Gujarat State Electricity Corporation Limited	200	100	100	Completed	Completed	Completed	PPC of SPD (GSECL) commissioned.	Pending (PO awaited) WRLDC letter issued on 31.3.23	Master PPC for the Solar Park is under implementation by GETCO	1400004760
8	Torrent Sidhpur	115	0	56.7	Completed	Pending (Harmonic violations are observed in PSCAD)	Completed	Completed	17 MVAR cap bank commissioning under process		<b>1400004486</b>



## FTC application received after 31.03.2023



### New FTC application received after 31.03.2023

S. No.	RE Developer	Total Envisaged I/C (MW)	Capacity already in operation	Capacity requested for FTC (MW)	3a. Non-submission or incomplete submission of Type Test/ Measurement Report	3b. Non-submission or deficiencies In mathematical models	3c. Non-availability of real-time telemetry and/or PMU data	3d. Pending installation of Power Plant Controller or( Input to PPC from POI)	3e. Inadequate reactive power support capability at Point of Interconnection <sup>#</sup> .	Remarks	CEA registration no.
9	SBSR Cleantech Eleven Pvt. Ltd. (Northern Region)	300	212.5	25	Completed	PSCAD model is Pending	Completed	Completed	<b>Pending</b>	Finalizing the quantum of compensation device and its Installation is still pending. NRLDC communicated to plant dated 10 <sup>th</sup> Feb'23 and 26 <sup>th</sup> April'23, no reply received from plant	