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IWPA/CERC/2022-23/015

August 31, 2022

The Secretary,
Central Electricity Regulatory Commission,
3rd & 4th Floor, Chanderlok Building,
36 Janpath,
New Delhi 110 001.
secy@cercind.gov.in; shilpa@cercind.gov.in

Dear Sir/Madam,

Sub: Draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2022

A reference is made to Public Notice No. L-1/265/2022/CERC dated 7.6.2022 issued by the Hon'ble Commission with regard to the Draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2022. In response thereto, the Indian Wind Power Association is pleased to submit its comments / suggestions / objections (Attached)

The Indian Wind Power Association is an all-India not-for-profit Association focused on creating an enabling regulatory and policy environment, conducive to investment in the wind industry, whose members collectively own around 26,000 MW of the installed wind energy capacity in the country.

We request that our comments be taken on record and an opportunity be provided to enable us to present our views

Thanking you,

Yours Sincerely

For Indian Wind Power Association.

Ajay Devaraj
Secretary General

Attachments: IWPA Comments

Indian Wind Power Association

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INDIAN WIND POWER ASSOCIATION

IWPA Comments on CERC Draft IEGC Regulations, 2022

The Comments of the IWPA on the draft IEGC

Draft IEGC	Suggested Draft Regulations and reason for such suggestions
<p>3. DEFINITIONS 15. Captive Generating Plant means a power plant set up by any person to generate electricity primarily for his own use and includes a power plant set up by any cooperative society or association of persons for generating electricity primarily for use of members of such cooperative society or association;</p>	<p>“Captive Generating Plant” may be defined as “Shall have the same meaning as defined in the Electricity Act 2003 and the Rules made there on” since the “Captive Generating Plant” has already been defined in the Act.</p> <p>Further The Electricity Rule 2005 has prescribed the conditions such as percentage of equity, consumption by captive users etc. elaborately. Hence, new definition is not required and it will convey meaning in entirety.</p>
<p>3. DEFINITIONS 56. ‘Generating Unit’ b) for solar photo voltaic generating stations including hybrid, each inverter along with associated modules shall be reckoned as a separate generating unit;</p> <p>c) for wind generating stations including hybrid: each wind turbine generator with associated equipment shall be reckoned as a separate generating unit;</p>	<p>In old WEGs, multiple WEGs are connected to a single service connection with no metering for individual WEGs. Hence, this may please be modified suitably taking into account the old / existing wind turbines.</p>
<p>3. DEFINITIONS</p>	<p>The word “grid security” has not been defined elaborately in the draft Regulation 3 (61). If it is not clearly defined, the SLDCs may misuse their power and in the name of “grid security” may curtail</p>



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61. 'Grid Security' means the power system's capability to retain a normal state or to return to a normal state as soon as possible, and which is characterized by operational security limits;

the RE power. This is what happened in many states. For this reason, the Hon'ble APTEL in its order Dated: 2nd August, 2021 in APPEAL NO. 197 of 2019. (*National Solar Energy Federation of India vs Tamil Nadu Electricity Regulatory Commission*) **has clearly defined some of the critical conditions which cannot be construed as "grid security" issues** and the RE power should not be curtailed in the name of grid security. The same are reproduced below.

(i) For Future, any curtailment of Renewable Energy shall not be considered as meant for grid security if the backing down instruction were given under following conditions:

a) System Frequency is in the band of 49.90Hz-50.05Hz b) Voltages level is between: 380kV to 420kV for 400kV systems & 198kV to 245kV for 220kV systems.

c) No network over loading issues or transmission constraints

d) Margins are available for backing down from conventional energy sources

e) State is overdrawing from the grid or State is drawing from grid on short-term basis from Power Exchange or other sources simultaneously backing down power from intrastate conventional or non-conventional sources.

These conditions have to be incorporated in "grid security" definition so as to avoid misusing of "grid security" conditions by SLDCs and curtail RE power.



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<p>19. DRAWAL OF START UP POWER AND INJECTION OF INFIRM POWER</p> <p>(1) A unit of a generating station including that of a captive generating plant which has been granted connectivity to the inter-State Transmission System in accordance with GNA Regulations shall be allowed to inter-change infirm power with the grid during the commissioning period, including testing and full load testing before the COD, after obtaining prior permission of the concerned Regional Load Despatch Centre:</p> <p>Provided that concerned Regional Load Despatch Centre while granting such permission shall keep the grid security in view.</p> <p>(2) The period for which such interchange shall be allowed shall be as follows: -</p> <p>(a) Drawal of start-up power shall not exceed 15 months prior to the expected date of first synchronization and 6 months after the date of first synchronization; and (b) Injection of infirm power shall not exceed six months from the date of first synchronization.</p>	<p>Drawal of start-up power for a limited period shall not be applicable to Wind, Solar & Hybrid Generators since grid supply is essential for starting up the Wind, Solar & Hybrid Generators and frequent start-ups are common in such Generators. Hence, this Regulation may please be modified suitably.</p>
<p>22. TRIAL RUN OF GENERATING UNIT</p> <p>.....</p> <p>(3)(b) Successful trial run of a wind turbine(s) aggregating to 50 MW and above shall mean flow of power and</p>	<p>This clause may please be modified to remove the minimum 4 hours of trial run when wind is available as sometimes the commissioning can be done during low wind period and hence</p>



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<p>communication signal for a period of not less than four (4) hours during periods of wind availability with the requisite metering system, telemetry and protection system in service. The generating company shall record the output of the unit(s) during the trial run and corroborate its performance with the wind speed recorded at site(s) during the day and plant design parameters:</p> <p>Provided that-</p> <p>(i) the output below the corroborated performance level with the wind speed 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 wind velocity, COD may be declared subject to the condition that the same shall be demonstrated immediately when sufficient wind velocity is available after COD.</p>	<p>the date of synchronisation with the grid as witnessed by the designated agency shall be considered as the date for COD.</p>
<p>24. DOCUMENTS AND TEST REPORTS PRIOR TO DECLARATION OF COMMERCIAL OPERATION</p> <p>(5) Documents and Tests Required for the Generating Stations based on wind and solar resources:</p> <p>(a) The generating company shall submit certificate confirming compliance to CEA Technical Standards for Connectivity.</p>	



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<p>(b) The following tests shall be performed:</p> <p>(i) Frequency response of machines as per the CEA Technical Standards for Connectivity.</p> <p>(ii) Reactive power capability as per OEM rating at the available irradiance or the wind energy, as the case may be.</p> <p>(iii) Grid-forming capability, wherever provided, in inverter-based units that may be used as black start resource.</p>	<p>(i) It is not possible for wind and solar generators to conform with the frequency response requirement as the generation solely depends on the availability of the wind speed/Solar insolation. Hence wind and solar generators may be exempted from this requirement.</p> <p>(ii) All wind energy generators are not equipped to provide reactive power support. It is possible only in gearless and DFIG WEGs and hence this clause may be exempted for WEGs that are not capable of complying with this.</p>
<p>26. DECLARATION BY GENERATING COMPANY AND TRANSMISSION LICENSEE (4) Wind, Solar, Storage, and Hybrid Generating Station</p>	<p>To facilitate the Generators to sign by an authorised person, the Draft Regulation may be modified as below.</p>



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<p>(a) 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, that the said generating station or the ESS as the case may be, including main plant equipment such as wind turbines or solar inverters or auxiliary systems, as the case may be, has complied with all relevant provisions of CEA Technical Standards for Connectivity, CEA Technical Standards for Communication and these regulations.</p>	<p>26. DECLARATION BY GENERATING COMPANY AND TRANSMISSION LICENSEE (4) Wind, Solar, Storage, and Hybrid Generating Station (a) 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 <u>or any officer authorized by the Board of the Company</u> to the concerned RLDC and to the Member Secretary of the concerned RPC before declaration of COD, that the said generating station or the ESS as the case may be, including main plant equipment such as wind turbines or solar inverters or auxiliary systems, as the case may be, has complied with all relevant provisions of CEA Technical Standards for Connectivity, CEA Technical Standards for Communication and these regulations.</p>
<p>27. DECLARATION OF COMMERCIAL OPERATION (DOCO) AND COMMERCIAL OPERATION DATE (COD) (1) A generating station or unit thereof or a transmission system or an element thereof or ESS may declare commercial operation as follows and inform CEA, the concerned RLDC, the concerned RPC and its beneficiaries: </p> <p>(e) Generating Stations based on Wind and Solar resources; ESS and Hybrid Generating Station</p>	<p>As suggested above for the draft Regulations 22,24 and 26.</p>



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<p>(i) The commercial operation date in case of units of a renewable generating station aggregating to 50 MW and above shall mean the date declared by the generating station after undergoing successful trial run as per clause (3) of Regulation 22 of these regulations, submission of declaration as per clause (4) of Regulation 26 of these regulations, and subject to fulfilment of other conditions, if any as per PPA.</p> <p>(ii) In case of a generating station as a whole, the commercial operation date of the last unit of the generating station shall be considered as the COD of the generating station.</p> <p>(2) Scheduling of generating station or unit thereof shall start from 0000 hours of the Commercial Operation Date of the said generating station or unit thereof.</p>	
<p>30. FREQUENCY CONTROL AND RESERVES</p> <p>(10) Primary Control:</p> <p>(g) The generating units shall have their governors or controllers in operation at all times with droop settings of 3-6 % or as specified in the CEA Technical Standards for Connectivity as per the requirements mentioned in the Table 4</p> <p>TABLE 4: PRIMARY RESPONSE OF VARIOUS TYPES OF GENERATING UNITS</p>	<p>It is not possible for wind and solar generators to change their outputs conforming to the frequency response as their generation solely depends on the availability of the wind speed/Solar insolation. Since the wind speed/Solar insolation itself are varying in nature, wind and solar generators may be exempted from this requirement. The Regulation may be modified accordingly.</p>



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Fuel/Source	Minimum unit size/Capacity	Up to	
Coal/Lignite Based	200 MW and above	±5% of MCR	
Hydro	25 MW and above non-canal based	±10% of MCR	
Gas based	Gas Turbine above 50 MW	±5% of MCR (corrected for ambience temperature)	
Wind/Solar/Renewable Hybrid Energy Project* (commissioned after the date as specified in the CEA Technical Standards for Connectivity)	Capacity of Generating station more than 10 MW and connected at 33 kv and above.	10% of the maximum Alternating Current active power capacity in case of frequency deviations in excess of 0.3 HZ	
45. GENERAL PROVISIONS (9) Ramping Rate to be Declared for Scheduling: (a) The regional entity generating station shall declare the ramping rate along with the declaration of day-ahead declared capacity in the following manner, which shall be accounted for in the preparation of generation schedules:			It is not possible for wind and solar generators to ramp up / ramp down their output since their generation solely depends on the wind speed/Solar insolation. Since the wind speed and Solar insolation, itself are varying in nature, wind and solar generators may be exempted from this requirement.



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<p>(iv) Renewable Energy generating station shall declare a ramp up or ramp down rate as per CEA Connectivity Standards.</p>	
<p>47. PROCEDURE FOR SCHEDULING AND DESPATCH FOR INTER-STATE TRANSACTIONS (3) Power to revise schedules: (a) Curtailment of Scheduled transactions for grid security When for the reason of transmission constraints or in the interest of grid security, it becomes inevitable to curtail power flow on a transmission corridor, the transactions already scheduled may be curtailed by the Regional Load Despatch Centre (keeping in view the transaction which is likely to relieve the threat to grid security) as follows: (i) Transactions under T-GNA shall be curtailed first followed by transactions under GNA. (ii) Transactions under T- GNA shall be curtailed in the following order: (a) Within transactions under T-GNA, bilateral transactions shall be curtailed first followed by collective transactions under day ahead market followed by collective transactions under real time market; (b) Within bilateral transactions under T-GNA, curtailment shall be done first from generation sources</p>	<p>The “Must Run” status to Wind and solar power generation specified in the existing IEGC is the main reason for the phenomenal growth of Wind and solar power in the country in the last few decades especially in the RE rich states. Even with the must run provisions the SLDCs like Tamil Nadu SLDC were curtailing the wind power rampantly and the wind and solar generators are undergoing lots of difficulties. There were cases filed in the appropriate forums on must run provisions. In one such case, the Hon’ble APTEL upheld the must run status to solar generators in its order Dated: 2nd August, 2021 in APPEAL NO. 197 of 2019. (National Solar Energy Federation of India vs Tamil Nadu Electricity Regulatory Commission). Based on this order, the TNERC has also upheld the must run provisions for wind power in the state. If the must run status is removed, the existing Wind and Solar power Generators will suffer to a great extent and its future growth in the country will also be stalled.</p> <p>It is not correct to remove the time tested and Hon’ble APTEL’s upheld must run provision from the IEGC.</p> <p>Further, in all other PPAs and purchase transactions, the generators would be protected or compensated through</p>



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<p>other than wind, solar, wind-solar hybrid and run of the river hydro plants with up to three hours pondage (in case of excess water leading to spillage), pro rata based on their T-GNA quantum;</p> <p>(c) The generation from wind, solar, wind-solar hybrid and run of the river hydro plants with up to three hours pondage (in case of excess water leading to spillage) shall be curtailed pro rata based on T-GNA, after curtailment of generation from other sources, within T-GNA.</p> <p>(d) Collective transactions under day ahead market shall be curtailed after curtailment of bilateral transactions under T-GNA.</p> <p>(e) Collective transactions under real time market shall be curtailed after curtailment of collective transactions under day ahead market.</p> <p>(iii) Transactions under GNA shall be curtailed in the following order:</p> <p>(a) Within transactions under GNA, curtailment shall be done first from generation sources other than wind, solar, wind-solar hybrid and run of the river hydro plants with upto three hours pondage (in case of excess water leading to spillage), on pro rata basis based on their GNA quantum.</p> <p>(b) The generation from wind, solar, wind-solar hybrid and run of the river hydro plants with upto three hours</p>	<p>payment of fixed charges or deemed generations. In case of wind and solar power, the old PPAs were made based on single-part tariff and there is no fixed charge or deemed generation clauses for captive wheeling agreement. This is because the wind and solar generators were declared by the Central and state grid codes as “must run” stations.</p> <p>If the must run provision is removed, the existing wind / solar generators will lose their fundamental requirement / safeguard and suffer to a great extent. Hence the existing must run Regulation may be restored and added to the new IEGC.</p> <p>Without prejudice to our rights to claim the must run status, we furnish below our comments on the draft Regulations 47.</p> <p>The captive generators who are wheeling their power to their own destinations will not come under any of the transaction categories specified in the draft Regulation 47. Further they have inherent priority over other entities / transactions due to non-discriminatory open access and introduction of competition in power sector as mandated by the Electricity Act 2003. Section 9, 10 and 42 are also differentiating and safeguarding the captive generators.</p> <p>Hence, the captive generators may be brought under the bottom most category for the purpose of curtailment priority in the draft Regulation 47.</p>
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<p>pondage (in case of excess water leading to spillage) shall be curtailed pro rata based on their GNA quantum, after curtailment of generation from other sources, within GNA.</p> <p>(iv) RLDC or SLDC, as the case may be, shall publish a report of such incidents on its website.</p>	<p>Further, the word “grid security” has not been defined elaborately in the draft Regulation 3 (61). If it is not clearly defined the SLDCs may misuse their power and in the name of “grid security” may curtail the RE power. For this reason, in the said order, the Hon’ble APTEL has clearly defined some of the critical conditions which cannot be construed as grid security issues. The same are reproduced below.</p> <p><i>(i) For Future, any curtailment of Renewable Energy shall not be considered as meant for grid security if the backing down instruction were given under following conditions:</i></p> <p><i>a) System Frequency is in the band of 49.90Hz-50.05Hz b) Voltages level is between: 380kV to 420kV for 400kV systems & 198kV to 245kV for 220kV systems.</i></p> <p><i>c) No network over loading issues or transmission constraints</i></p> <p><i>d) Margins are available for backing down from conventional energy sources</i></p> <p><i>e) State is overdrawing from the grid or State is drawing from grid on short-term basis from Power Exchange or other sources simultaneously backing down power from intrastate conventional or non-conventional sources.</i></p> <p>These conditions have to be incorporated in Regulation 47 so as to avoid misusing of “grid security” conditions by SLDCs and curtail RE power.</p>
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