

Date: 01.12.2024

The Secretary
Central Electricity Regulatory Commission
7th Floor, World Trade Centre,
Tower B, Naurojinagar,
New Delhi-110029

Sub: Submission of comments/suggestions on Staff Paper on modifications in the Central Electricity Regulatory Commission (Connectivity and General Network Access to the inter-State Transmission System) Regulations.

Ref: CERC notification No. L-1/261/2021/CERC Dated: 09.10.2024

Dear Sir,

On behalf of 'Adani Green Energy Ltd' (AGEL), we hereby submit our comment & suggestion, as enclosed with **Annexure-I**, on the staff paper for suitable consideration while proposing the amendment/modifications to the Connectivity and General Network Access to the Inter-State Transmission System Regulations.

Thank you,

Yours faithfully,

For & Behalf of Adani Green Energy Limited



Ravi Sinha Manager- Regulatory Affairs

Encl. As above

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SN.	Question in Staff Paper	Answer/ Suggestion to the Question	Rational
1	Issue No-1: Substitution of GNA quantum under Regulation 17.1(i) to Regulation 17.1(iii) to the GNA Regulations	Substitution of GNA quantum under Regulation 17.1(i) to GNA/under Regulation 17.1(iii)-should be allowed	Improve Flexibility in power procurement: Flexibility to bulk consumers and Discoms intending to connect to ISTS network in sourcing power.  Cost Efficiency: By utilizing the ISTS network, DISCOMs/Bulk Consumers can potentially reduce transmission charges and losses, when they have higher dependency on power from ISTS network.  Improved Reliability: The ISTS network is generally more robust and better maintained than many STU networks, leading to fewer outages and better overall reliability.  Access to Renewable Energy: The GNA regulations facilitate easier integration of renewable energy sources, which can help DISCOMs meet their renewable purchase obligations.  Scalability: The ISTS network can better accommodate future growth in demand and generation capacity, providing a scalable solution for expanding power needs.
2	Issue No. 2: Use of GNA of a Connectivity grantee by an entity connected with an intra-State network that is not a GNA grantee	1. Utilization of GNA of a GNA grantee by an entity who is not a GNA grantee, should be allowed subject to following conditions  a. Availability of margin in ISTS network  b. Limited to drawl points in the same state.  c. NOC from STU  2. Utilization to include GNA and GNARE Waiver of Transmission Charges should be considered based on the renewable energy	Improvement utilization:  . Enabling flexibility of utilization of GNA by a non GNA grantee will optimize the overall usage of GNA. Allotee will have opting to use it as GNA or GNA <sub>RE</sub> based upon its requirement.

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		total GNA capacity allocated irrespective of	
		the GNA bifurcation done by allottee	
3	Issue No 3:	Dual Connectivity to the Bulk Consumer	Improved Reliability: Multiple bulk consumers
	Dual Connectivity to the Bulk	and Captive Generating Plant for the same	operate at critical load which needs dual source
	Consumer for the same load capacity	load capacity <b>should be allowed</b>	of power for 100% redundancy.  CEA Manual for Transmission Planning Criteria
			<b>2.1.14</b> specifies the critical load which needs to
			have interconnection from two different
			sources of supply.
			Minimum and maximum percentage of the
			<b>connectivity</b> with ISTS grid need to be specified
			for dual connection with the Discom, which will
			take care of grid connectivity becoming
4	Issue No 5:	Utilisation of the Connectivity granted to a	stranded or underutilized.  Improve Efficiency: Subsidiaries can leverage
4	Utilisation of the Connectivity	subsidiary by another subsidiary of the	each other's connectivity based on operational
	granted to a subsidiary by another	same Parent company <b>Should be allowed</b>	needs, leading to better resource optimization
	subsidiary of the same Parent	,,,,,,,	Simplified Regulatory Compliance: The ability to
	company		transfer connectivity within the same corporate
			group simplifies regulatory compliance and
			administrative processes, reducing the need for
-	Issue No. C.	A controlled college platform in <b>Oritical</b> to	multiple applications and approvals
5	Issue No 6: Platform for providing NOC by the	A centralized online platform is <b>Critical</b> to be implemented for processing the	<b>Improve Efficiency</b> : A centralized platform ensures that applications for NOCs are
	STU in a time-bound and a transparent	application for grant of NOC by the STU in	processed in a time-bound manner, reducing
	manner	terms of availability of transmission	delays.
		capacity in the intra-State network.	Transparency and Accountability: Despite
			notification of Green Open Access Rule and
			subsequent regulation by states, there is still
			considerable delay and arbitrary rejection of
			open access application without providing valid
			reasons. An online platform will provide real time tracking and accountability for application
			processing.
	O Ene		<b>Ease of Access</b> : A centralized online portal
			simplifies the application process for the
	PV James		entities seeking NOCs as well as the STU.

the centralize communication STU3.  Integration and be integrated as those of CT will ensure be processing of Portal.    6   Issue No 7:   Solar hours Connectivity and Non-Solar Allowing exist.	submit their details online, and ted platform can facilitate between the applicant and the domain on the domain of
Connectivity and Non-Solar Connectivity through the Transmission system  Transmission system  Transmission system  Transmission system  Transmission system should be allowed for upcoming transmission infrastructure where connectivity is yet to be granted/allocated  Additional Provision:  Solar projects under PPA should now be provided to install excess solar capacity along with ESS and shall be free to sell the excess power as per their convenience, without compromising the energy supply obligation under PPA.  Transmission system should be allowed for upcoming transmission infrastructure where connectivity is yet to be granted/allocated  1. Utilization by their in rated capacity along with ESS and shall be free to sell the excess power as per their convenience, without compromising the energy supply obligation under PPA.  2. Installing E in reduction which is conditions 3. ESS installing E in reduction which is conditions 4. Allowing et term PPA will help infrastruction to the provided to install excess solar capacity along with ESS and shall be free to sell the excess power as per their convenience, without compromising the energy supply obligation under PPA.	of Clipped power, as Solar panels ature generates energy upto it city, and due to overloading, the out from a plant exceeds its by quantum which have to be stallation of ESS with Solar plant utilization of excess generation e plants for charging of the ESS.  SS with the Solar plant shall help g the variability in generation dependent on the weather ed with Solar plant, and allowed to outside the PPA from same plant in optimizing the peak power cost ges.  xisting solar project with long to setup solar capacity with ESS in optimizing the Grid

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			allowed to be sold outside the PPA from will also help in optimizing the peak power cost on exchanges.
			While making changes in GNA Regulation in the Connectivity for Solar and Non-Solar, following concern need to be addressed:
			<ul> <li>Loss of generation when Solar and Non- Solar's cumulative generation is more than the connectivity grant.</li> </ul>
			<ul> <li>Sharing of transmission infrastructure and Transmission loss between two entities.</li> <li>Settlement of DSM charges</li> </ul>
7	Issue No 8.: Provision for Minimum Transmission Capacity Utilisation for Hybrid ISTS Connectivity	Mandatory annual utilization, i.e., 50%, for RHGS may be mandated- <b>To Be removed/deleted</b>	<ol> <li>Mandating connectivity to minimum utilization of 50% may not be feasible for all the project locations as wind and solar profile may not be complementing each other and may increase the clipping of power.</li> <li>A clear bifurcation is needed between colocated and remote/dispersed hybrid project to avoid complication in allocation of connectivity at existing connectivity grantee interconnection point.</li> <li>Allocation of unutilized connectivity at hybrid plants needs to be done without increasing the clipping of power. A clear criteria for allocation of unutilized connectivity will minimize underutilization of new capacity and also protect against loss of generation due to clipping of power.</li> </ol>
//	en Energy		4. The unutilized capacity will be re allocated to other REGS equipped with storage or standalone ESS, as per the following criteria:

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			<ul> <li>a. Difference between connectivity granted and installed capacity of solar during solar hours.</li> <li>b. Difference between connectivity and installed capacity of wind during non-solar hours.</li> <li>c. For remote/dispersed projects, the allocation is to be done as per Solar and Non-Solar Hour Connectivity provisions.</li> </ul>
			<ol> <li>Selection among the above criteria shall be at discretion of the Project developers who have Connectivity effective as on the date of the effectiveness of these proposed regulations and they will be free to choose any of the above criteria as per their need/requirement.</li> </ol>
			6. Allowing Connectivity quantum on average of maximum injection in any time block is against the nature of the generation from solar and wind. Due to dependency on weather parameters, wind and solar resources keeps on changing periodically, the average power generation will always be less than connectivity granted and the corresponding peak generation,. In no case, it should be reduced below the peak power injection what have been achieved at any timeslot.



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			bulk consumers and Discoms intending to connect to ISTS network in sourcing power.  Cost Efficiency: By utilizing the ISTS network, DISCOMs/Bulk Consumers can potentially reduce transmission charges and losses, when they have higher dependency on power from ISTS network.
			Improved Reliability: The ISTS network is generally more robust and better maintained than many STU networks, leading to fewer outages and better overall reliability.  Access to Renewable Energy: The GNA regulations facilitate easier integration of renewable energy sources, which can help DISCOMs meet their renewable purchase obligations.  Scalability: The ISTS network can better accommodate future growth in demand and generation capacity, providing a scalable solution for expanding power needs.
2	Issue No. 2: Use of GNA of a Connectivity grantee by an entity connected with an intra-State network that is not a GNA grantee	1. Utilization of GNA of a GNA grantee by an entity who is not a GNA grantee, should be allowed subject to following conditions  a. Availability of margin in ISTS network  b. Limited to drawl points in the same state.  c. NOC from STU  2. Utilization to include GNA and GNA <sub>RE</sub> Waiver of Transmission Charges should be considered based on the renewable energy total GNA capacity allocated irrespective of the GNA bifurcation done by allottee	Improvement utilization:  . Enabling flexibility of utilization of GNA by a non GNA grantee will optimize the overall usage of GNA. Allotee will have opting to use it as GNA or GNA <sub>RE</sub> based upon its requirement.

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3	Issue No 3: Dual Connectivity to the Bulk Consumer for the same load capacity	Dual Connectivity to the Bulk Consumer and Captive Generating Plant for the same load capacity should be allowed	Improved Reliability: Multiple bulk consumers operate at critical load which needs dual source of power for 100% redundancy.  CEA Manual for Transmission Planning Criteria 2.1.14 specifies the critical load which needs to have interconnection from two different sources of supply.  Minimum and maximum percentage of the connectivity with ISTS grid need to be specified for dual connection with the Discom, which will take care of grid connectivity becoming stranded or underutilized.
4	Issue No 5: Utilisation of the Connectivity granted to a subsidiary by another subsidiary of the same Parent company	Utilisation of the Connectivity granted to a subsidiary by another subsidiary of the same Parent company <b>Should be allowed</b>	Improve Efficiency: Subsidiaries can leverage each other's connectivity based on operational needs, leading to better resource optimization  Simplified Regulatory Compliance: The ability to transfer connectivity within the same corporate group simplifies regulatory compliance and administrative processes, reducing the need for multiple applications and approvals
5	Issue No 6: Platform for providing NOC by the STU in a time-bound and a transparent manner	A centralized online platform is <b>Critical</b> to be implemented for processing the application for grant of NOC by the STU in terms of availability of transmission capacity in the intra-State network.	Improve Efficiency: A centralized platform ensures that applications for NOCs are processed in a time-bound manner, reducing delays.  Transparency and Accountability: Despite notification of Green Open Access Rule and subsequent regulation by states, there is still considerable delay and arbitrary rejection of open access application without providing valid reasons. An online platform will provide real time tracking and accountability for application processing.  Ease of Access: A centralized online portal simplifies the application process for the entities seeking NOCs as well as the STU. Applicants can submit their details online, and the centralized platform can facilitate communication between the applicant and the STU3.  Integration and Coordination: The platform can be

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			CTU, POSOCO, RLDCs & SLDCs. This will ensure better coordination and smoother processing of applications in line with NOAR Portal.
6	Issue No 7: Provision for grant of Solar hours Connectivity and Non-Solar hours Connectivity through the same Transmission system	Solar hours Connectivity and Non-Solar hours Connectivity through the same Transmission system should be allowed for upcoming transmission infrastructure where connectivity is yet to be granted/allocated  Additional Provision: Solar projects under PPA should now be provided to install excess solar capacity along with ESS and shall be free to sell the excess power as per their convenience, without compromising the energy supply obligation under PPA.	<ul> <li>Allowing existing solar project with long term PPA to set up solar capacity with ESS will help in optimizing the infrastructure by below mentioned rationales:</li> <li>1. Utilization of Clipped power, as Solar panels by their nature generates energy upto it rated capacity, and due to overloading, the net output from a plant exceeds its connectivity quantum which have to be clipped. Installation of ESS with Solar plant will allow utilization of excess generation from these plants for charging of the associated ESS.</li> <li>2. Installing ESS with the Solar plant shall help in reducing the variability in generation which is dependent on the weather conditions.</li> <li>3. ESS installed with Solar plant, and allowed to sell power outside the PPA from same plant will assist in optimizing the peak power cost on exchanges.</li> <li>4. Allowing existing solar project with long term PPA to setup solar capacity with ESS will help in optimizing the Grid infrastructure.</li> <li>5. Power discharged from these ESS installed/associated with Solar plant if allowed to be sold outside the PPA from will also help in optimizing the peak power cost on exchanges.</li> <li>While making changes in GNA Regulation in the Connectivity for Solar and Non-Solar, following concern need to be addressed:</li> <li>Loss of generation when Solar and Non-Solar's cumulative generation is more than the connectivity grant.</li> <li>Sharing of transmission infrastructure and Transmission loss between two entities.</li> <li>Settlement of DSM charges</li> </ul>

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7	Issue No 8.:	Mandatory annual utilization, i.e., 50%, for RHGS	1. Mandating connectivity to minimum utilization of
	Provision for Minimum Transmission Capacity Utilisation for Hybrid ISTS Connectivity	may be mandated- To Be removed/deleted	<ul> <li>50% may not be feasible for all the project locations as wind and solar profile may not be complementing each other and may increase the clipping of power.</li> <li>2. A clear bifurcation is needed between co-located and remote/dispersed hybrid project to avoid complication in allocation of connectivity at existing connectivity grantee interconnection point.</li> <li>3. Allocation of unutilized connectivity at hybrid plants needs to be done without increasing the clipping of power. A clear criteria for allocation of unutilized connectivity will minimize underutilization of new capacity and also protect against loss of generation due to clipping of power.</li> </ul>
			<ul> <li>4. The unutilized capacity will be re allocated to other REGS equipped with storage or standalone ESS, as per the following criteria: <ul> <li>a. Difference between connectivity granted and installed capacity of solar during solar hours.</li> <li>b. Difference between connectivity and installed capacity of wind during non-solar hours.</li> <li>c. For remote/dispersed projects, the allocation is to be done as per Solar and</li> </ul> </li> </ul>
	en Eneco		Non-Solar Hour Connectivity provisions.  5. Selection among the above criteria shall be at discretion of the Project developers who have Connectivity effective as on the date of the effectiveness of these proposed regulations and they will be free to choose any of the above criteria as per their need/requirement.  6. Allowing Connectivity quantum on average of maximum injection in any time block is against the nature of the generation from solar and wind. Due

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			solar resources keeps on changing periodically, the average power generation will always be less than connectivity granted and the corresponding peak generation,. In no case, it should be reduced below the peak power injection what have been achieved at any timeslot.

