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**Sent:** Monday, October 31, 2022 4:08:57 PM

**Subject:** BYPL Comments on Draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2022

Sir/Madam,

Please find enclosed BYPL comments on the subject matter for kind consideration of the Hon'ble Commission.

Regards,

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## **Comments on draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2022**

The Central Electricity Regulatory Commission (“CERC” or “the Hon’ble Commission”) has brought out the draft Terms and Conditions for Indian Electricity Grid Code Regulations, 2022. The objectives of these Regulations, as may be inferred from the definitions and clauses are as under:

- reliability and adequacy of resources;
- technical and design criteria for connectivity to the grid including integration of new elements, trial operation and declaration of commercial operation of generating stations and inter-State transmission systems;
- protection setting and performance monitoring of the protection systems including protection audit;
- operational requirements and technical capabilities for secure and reliable grid operation including load generation balance, outage planning and system operation;
- unit commitment, scheduling and despatch criteria for physical delivery of electricity;
- integration of renewable;
- ancillary services and reserves; and
- cyber security.

Therefore, the draft Indian Electricity Grid Code Regulations, 2022 has come up to maintain stable, reliable and secure grid operation in order to achieve maximum economy and efficiency of the power system. The comments and suggestions on the draft Regulations and its terms on behalf of BSES Yamuna Power Limited (BYPL) are provided in the following matrix for the kind perusal of the Hon’ble Commission.

S.N	CERC, Indian Electricity Grid Code Regulations, 2010 and its amendments	Draft CERC, Indian Electricity Grid Code Regulations, 2022.	BYPL's Comments/Suggestions
<b>Definitions</b>			
1	<p><b>'Ancillary Services' Means</b> in relation to power system (or grid) operation, the services necessary to support the power system (or grid) operation in maintaining power quality, reliability and security of the grid, e.g. active power support for load following, reactive power support, black start, etc.</p>	<p><b>'Ancillary Services'</b>: in relation to power system operation, means the service necessary to support the grid operation in maintaining power quality, reliability and security of the grid and <u>includes Primary Reserve Ancillary Service, Secondary Reserve Ancillary Service, Tertiary Reserve Ancillary Service, active power support for load following, reactive power support, black start and such other services as defined in this Code.</u></p>	<p>In the proposed Regulations, the ancillary services include primary, secondary and tertiary reserves which will help in the management of active power.</p>
2	-	<p><b>'Automatic Generation Control' or 'AGC'</b>: means a mechanism that automatically adjusts the generation of a control area to maintain its</p>	<p>BYPL welcomes the definition of Automatic Generation Control which was not present in the previous Regulations.</p>

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		interchange schedule plus its share of frequency response;	
3	<p><b>'Available Transfer Capability (ATC)'</b> means the transfer capability of the <u>inter-control area transmission system available for scheduling commercial transactions (through long term access, medium term open access and short term open access) in a specific direction</u>, taking into account the network security. Mathematically ATC is the Total Transfer Capability less Transmission Reliability Margin;</p>	<p><b>'Available Transfer Capability' or 'ATC':</b> means power transfer capability of the <u>inter control area transmission system or across electrical regions or between ISTS and state network or between cross-border interconnections available for scheduling transactions</u> in a specific direction, taking into account the network security declared by the concerned load despatch centre. Mathematically, ATC is the Total Transfer Capability less Transmission Reliability Margin;</p>	-
4	-	<b>'Cold Start'</b> in relation to steam turbine means start up after a shutdown period exceeding 72 hours	BYPL welcomes the new definitions which were not present in the previous Regulations.

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		(turbine metal temperatures below approximately 40% of their full load values);	
5	-	<b>'Fault Locator' or 'FL':</b> means a device installed at the end of a transmission line to measure/ indicate the distance at which a line fault may have occurred;	
6	<b>'Force Majeure'</b> means any event which is beyond the control of the persons involved which they could not foresee or with a reasonable amount of diligence could not have foreseen or which could not be prevented and which substantially affects the performance by person such being the following including but not limited to:-	-	<p>The definition of Force Majeure is missing in the proposed Regulations, since 2010 Grid Code stands repealed.</p> <p>It is necessary to have such definition in the Regulations.</p> <p>BYPL requests the Hon'ble Commission to add the said definition in the Final Regulations.</p>

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	<p>a) Acts of God, natural phenomena, floods, droughts, earthquakes and epidemics;</p> <p>b) Enemy acts of any Government domestic or foreign, war declared or undeclared, hostilities, priorities, quarantines, embargoes;</p> <p>c) Riot or Civil Commotion;</p> <p>d) Grid's failure not attributable to the person.</p>		
7	<p><b>'Short-term Open Access'</b> means open access for a period up to one (1) month at one time;</p> <p><b>'Medium-term Open Access'</b> means the right to use the inter State transmission system for a</p>	-	<p>The proposed Regulations don't have the definitions of Short-term Open Access, Medium-term Open Access and Long-term Access</p> <p>BYPL request the Hon'ble Commission to add the said definitions in the Final Regulations.</p>

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	<p>period exceeding 3 months but not exceeding 3 years;</p> <p><b>'Long-term Access'</b> means the right to use the inter-State transmission system for a period exceeding 12 years but not exceeding 25 years;</p>		
<b>Chapter 2 Resource Planning Code Regulations</b>			
8	-	<p><b>5. Integrated Resource Planning:</b></p> <p><b>(2) Demand Forecasting:</b></p> <p>(iii) Forum of Regulators may develop guidelines for demand estimation by the distribution licensees for achieving consistency and statistical accuracy by taking into consideration the factors such as economic parameters, historical data and sensitivity and probability analysis.</p>	<p>The mandate to DISCOMS to estimate the demand for next five years as per specific method has to be harmoniously done in consultation with the SERC's so that there is no conflict between the IEGC and the SERC Regulations.</p> <p>The demand estimation by STU for specific States cannot be done in isolation only based on the demand</p>

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			<p>estimates furnished by the DISCOMS and must take into account the provisions of the State Regulations, SERC directions and SLDC findings, because SLDC under section 32 has statutory functions which includes integrated operation of power system, optimum scheduling and despatch, monitoring grid operations, etc. in fact the STU has no role in the function of estimation of demand. STU has functions only of transmission and planning related to intra-state transmission systems and not demand estimation for the entire State. Hence, this provision in para 5(2)(ii) is contrary to the Electricity Act. Similarly, para 5(3)(d) giving</p>



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			<p>power to STU to provide demand forecasting etc. details on behalf of DISCOMS to NLDC is totally extraneous to the functions of STU under section 39 of the Electricity Act. The actions of the STU in regard to the estimation of demand cannot bind the DISCOMS.</p> <p>Furthermore, the provision of generation adequacy and penalty for its failure cannot come in the Grid Code of CERC, since this is a matter which is entirely an occupied field of the SERC.</p> <p>BYPL humbly submits that while forming the guidelines for demand estimation, the Forum of Regulators needs to consider the following factors:</p>

S.N	CERC, Indian Electricity Grid Code Regulations, 2010 and its amendments	Draft CERC, Indian Electricity Grid Code Regulations, 2022.	BYPL's Comments/Suggestions
			<p>Weather data: Temperature, humidity, rainfall, etc.</p> <p>Social data: Consumer price index and Whole sale price index.</p> <p>Demand data: Historical consumption of electricity.</p>
9	-	<p><b>5. Integrated Resource Planning:</b></p> <p><b>(3) Generation Resource Adequacy Planning:</b></p> <p>(a) After the demand estimation as per sub-Regulation (2) of this Regulation, each distribution licensee shall (i) assess the existing generation resources and identify the additional generation resource</p>	<p>BYPL submits that more clarity is required on different time horizons.</p> <p>The Hon'ble Commission is requested to specify the various time horizons and provide definition of the same.</p>

S.N	CERC, Indian Electricity Grid Code Regulations, 2010 and its amendments	Draft CERC, Indian Electricity Grid Code Regulations, 2022.	BYPL's Comments/Suggestions
		requirement to meet the estimated <u>demand in different time horizons, and</u>	
10	-	<p><b>5. Integrated Resource Planning:</b></p> <p><b>(3) Generation Resource Adequacy Planning:</b></p> <p>(g) For the sake of uniformity in approach and in the interest of optimality in generation resource adequacy in the States, <u>FOR may develop a model Regulation stipulating inter alia the methodology for generation resource adequacy assessment, generation resource procurement planning and compliance of resource adequacy target by the distribution licensees.</u></p>	A timelines needs to be defined for Forum of Regulators which states that by when it will develop a model Regulations as mentioned.
<b>Chapter 6 Operating code Regulations</b>			

S.N	CERC, Indian Electricity Grid Code Regulations, 2010 and its amendments	Draft CERC, Indian Electricity Grid Code Regulations, 2022.	BYPL's Comments/Suggestions
11	-	<p><b>29. System Security</b></p> <p><b>(2) Isolation, Taking out of service and Switching off of an element of the grid:</b></p> <p>(a) No element(s) of the grid shall be isolated from the grid, except (i) during emergency as per the Detailed Operating Procedure(s) of NLDC or RLDC or SLDC, as the case may be, where such isolation would prevent a total grid collapse or would enable early restoration of power supply; (ii) for safety of human life; <u>(iii) when serious damage to a costly equipment is imminent and such isolation would prevent it; and</u> (iv) when such isolation is specifically instructed by NLDC or RLDC or SLDC, as the case may be.</p>	<p>More clarity is required on the aspect of costly equipments. BYPL requests the Hon'ble Commission to kindly specify the minimum cost range for the equipments to be entitled as "<i>costly equipments</i>" under these Regulations.</p>

S.N	CERC, Indian Electricity Grid Code Regulations, 2010 and its amendments	Draft CERC, Indian Electricity Grid Code Regulations, 2022.	BYPL's Comments/Suggestions
<b>Chapter 7 Scheduling And Despatch Code Regulations</b>			
12	-	<p><b>46. Security Constrained Unit Commitment (SCUC)</b></p> <p><b>(4) The SCUC may be undertaken on day ahead basis, in respect of the generating stations or units thereof, for which tariffs are determined by the Commission under section 62 of the Act, as per the following process:</b></p> <p>(b) Beneficiaries of such stations, whose units are likely to be scheduled below minimum turndown level for some or all time blocks of the D day, shall be permitted to revise their requisitions from such stations by 1630 Hrs of D-1 day, in order to enable such units to be on bar. The</p>	

S.N	CERC, Indian Electricity Grid Code Regulations, 2010 and its amendments	Draft CERC, Indian Electricity Grid Code Regulations, 2022.	BYPL's Comments/Suggestions
		revised requisition from the said generating stations, once confirmed by the beneficiaries by 1630 Hrs of D 1 day, shall be final and binding after 1630 Hrs of D-1 day and <u>further reduction in drawal schedule shall not be allowed from such stations for such time blocks</u>	BYPL request the Hon'ble Commission that one oppurtunity shouldbe provided to the beneficiaries to reduce the drawal schedule before considering it as final.
13	-	<b>46. Security Constrained Unit Commitment (SCUC)</b> <b>(4) The SCUC may be undertaken on day ahead basis, in respect of the generating stations or units thereof, for which tariffs are determined by the Commission under section 62 of the Act, as per the following process:</b>	Already defined in the Act.

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		<p><b>(h) Unit Shut Down (USD)</b></p> <p>(ii) In case a <u>generating station</u>, or unit thereof, opts to go under unit shut down (USD), the <u>generating company</u> owning such generating station or unit thereof shall fulfil its obligation to supply electricity to its beneficiaries who had made requisition from the said generating station prior to it going under USD, by entering into a contract(s) covered under the Power Market Regulation or by arranging supply from any other generating station or unit thereof owned by such generating company subject to honouring of rights of the original beneficiaries of the said generating</p>	

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		station or unit thereof from which supply is arranged.	
14	-	<p><b>47. Procedure for Scheduling and Despatch for Inter-State Transactions</b></p> <p><b>(b) Entitlement of each beneficiary or buyer:</b></p> <p>(i) For generating station, where Central Government has allocated power, each State shall be entitled to a MW despatch up to the State's Share in the station's declared capacity for the day. Accordingly, based on declared capacity of such generating station, RLDC shall declare entitled <u>share of each beneficiary or buyer for 0000 hours to 2400 hours of the 'D' day, by 7 AM on 'D-1' day.</u></p>	BYPL requests the Hon'ble Commission to specify the time slots duration for declare entitled share between 0000 hours to 2400 hours of the 'D' day.



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15	-	<p><b>47. Procedure for Scheduling and Despatch for Inter-State Transactions</b></p> <p><b>(2) Additional factors to be considered while finalising schedule</b></p> <p><b>(a) Security Constrained Economic Despatch (SCED)</b></p> <p>(vi) The schedule of beneficiarinesshall not be changed on account of SCED. <u>Buyers or beneficiaries shall continue to pay the charges for the scheduled energy directly to the generating station(s) participating in the SCED.</u></p> <p>(ix) <u>The net saving to the generating stations shall be shared between the beneficiaries or buyers and the generating stations as per the</u></p>	<p>BYPL humbly submits that a provision maybe considered to net-off the saving with the charges for the scheduled energy which buyers or beneficiaries have to pay.</p> <p>The beneficiaries maybe allowed to pay the balance amount after netting off the charges and the saving.</p>

S.N	CERC, Indian Electricity Grid Code Regulations, 2010 and its amendments	Draft CERC, Indian Electricity Grid Code Regulations, 2022.	BYPL's Comments/Suggestions
		<p><u>prevailing Tariff Regulations</u>  in respect of the generating stations whose tariff is determined by the Commission under Section 62 of the Act and in respect of other generating stations as per the terms of the contracts with their respective buyers or beneficiaries.</p>	