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Subject: Fwd: IEGC Comments
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Please find attached UPSLDC (UPPTCL) comments on draft grid code for your kind consideration

Regards

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UPSLDC's observation on draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2022

Clause no	Draft IEGC	Comment
As per definitions (118)	'Time Block' means block of duration as specified by the Commission for which energy meters record values of specified electrical parameters with first time block starting at 00:00 hours, presently of fifteen (15) minutes duration;	To increase stability in the grid and improve operating frequency band, five minutes (Time Block) scheduling which is already planned should be implemented in the time bound manner. Time schedule should be included in the grid code.
Chapter 5, Clause 22	(1) Trial Run of Thermal Generating Unit shall be carried out in accordance with following provisions: (a) A thermal generating unit shall be in continuous operation at MCR for seventy-two (72) hours on designated fuel: Provided that: (i) short interruption or load reduction shall be permissible with corresponding increase in duration of the test; (ii) interruption or partial loading may be allowed with the condition that the average load during the duration of trial run shall not be less than MCR excluding period of interruption but including the corresponding extended period; (iii) cumulative interruption of more than four (4) hours shall call for a repeat of trial run. (b) Where on the basis of the trial run, a thermal generating unit fails to demonstrate the unit capacity corresponding to MCR, the generating company has the option to de-rate the capacity of the generating unit or to go for repeat trial run. If the generating company decides to de-rate the unit capacity, the de-rated capacity in such cases shall be not more than 95% of the demonstrated capacity, to cater for primary response.	During the trial run the real time data should also be available. This will also tests the reliability of real time telemetry data. This provision may be included in the grid code.
Chapter 5, Clause 22 (3)	(ii) if it is not possible to demonstrate the rated capacity of the plant due to insufficient solar irradiation, COD may be declared subject to the condition that the same shall be demonstrated immediately when sufficient solar irradiation is available after COD.	Maximum time allowed for demonstration of peak capacity may be included in grid code.
Chapter 6-29(13 b)	Demand disconnection shall not be set with any time delay in addition to the operating time of the relays and circuit breakers	It is observed through PMU data that during oscillation in frequency, df/dt (Rate of Change of Frequency) crosses existing threshold of 0.1Hz/sec. for short duration. Therefore, there should be either uniform inherent delay in df/dt relay operation or sampling interval of the df/dt relay should be such that does not result into its operation during frequency oscillations.
Chapter 6-30(10 i)	The normal governor action shall not be suppressed in any manner through load limiter, Automatic	Inherent dead band of 0.03Hz. has been mentioned in clause 30(10i). This dead

	Turbine Run-up System (ATRS), turbine supervisory control or coordinated control system and no time delays shall be deliberately introduced. In case of renewable energy generating unit, reactive power limiter or power factor controller or voltage limiter shall not suppress the primary frequency response within its capability. The inherent dead band of a generating unit/frequency controller shall not exceed +/- 0.03 Hz	band should be accompanied by time factor as well, say for example 0.03Hz per second or per 200 millisecond. In the absence of this time factor, Dead Band depends on sampling rate of frequency by the governor which varies from one plant to another.
Chapter 7 45(8) (b)	Regional entity generating stations may be required to demonstrate the declared capacity as and when directed by concerned RLDC. RLDC shall ask each generating station, <u>at least once in a year</u> to demonstrate the declared capacity.	Demonstration of declared capacity by generating stations might be done on half yearly basis and/or as required by RLDC.
Chapter 7 47(1) (i)	The generating station whose tariff is determined under Section 62 of the Act, may sell its unrequisioned surplus as available at 10 AM in the Day Ahead Market.	<p>Clause 47(1) (i) of draft IEGC revokes beneficiary's right to seek its consent for selling power of its share in DAM which the beneficiary won't be able to call back if as and when it needs after 10 AM. Existing provision in this regard are as follows:</p> <p>As per clause 2.8(c) of CERC (IEGC) (6th amendment) 2019: <i>"An ISGS whose tariff is determined by commission , under section 62 of the Act, may sell power from share of its original beneficiary in day-ahead market with consent of such beneficiaries and in real time market without the requirement of consent from beneficiaries."</i></p> <p>As Clause 2.8(c) of CERC (IEGC) (6th amendment) 2019 allows for URS power to be sold in DAM with consent of beneficiary and in RTM without requirement of consent of beneficiary, it takes care of interests of generator as well as beneficiary, which is justified. So changes may be done in clause 47(1) (i) in accordance with Clause 2.8(c) of CERC (IEGC) (6th amendment) 2019. Existing provision may be retained.</p>

<p>Chapter 7 Clause 7(3)(c)</p>	<p>Based on the request for revision in schedule made as per sub-clauses (a) and (b) of clause 4 of this regulation, any revision made in odd time blocks shall become effective from 7th time block and any revision in schedule made in even time blocks shall become effective from 8th time block, counting the time block in which the request for revision has been received by the RLDCs to be the first one.</p>	<ol style="list-style-type: none"> 1. Scheduling software of all RLDCs have been synched and with the experience for calculations of margin etc., gate closure time needs to be reduced. 2. In between gate closure and market clearing time, revision of schedule should be allowed from 3rd/4th time block. Above will help in reducing the area control error of state and thus helping in reliable grid operations. 3. Hon'ble Commission has already recognised the need to bring the RTM market near to the time of delivery. Following is mentioned in SOR of RTM regulation that:- <i>Automation is a pre-requisite to shortening the time between RTM auction and delivery of power. The process of implementation of National Open Access Registry (NOAR) has already been initiated and once the automation is in place, the Commission would definitely like to bring Real Time Market further close to actual time of delivery.</i>
<p>NA</p>	<p>There is no such provision in draft IEGC 2022 grid code</p>	<p>Time line to be defined for issuance/reason for non issuance of operating code for connecting/dis-connecting of any element to the grid by SLDC/RLDC/NLDC.</p>
<p>NA</p>	<p>There is no such provision in draft IEGC 2022 grid code</p>	<p>There should be a provision for installation of PMU (Phaser Measurement Unit) in the grid code. For this purpose criterion may be given in grid code.</p>