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Sent: Friday, July 19, 2024 2:13:36 PM
Subject: Comments of NHPC Limited on draft CERC (IEGC) (First Amendment) Regulations, 2024.

Sir,

Please find attachment for comments of NHPC Limited on draft CERC (IEGC) (First Amendment) Regulations, 2024.
Comments/Suggestions have already been uploaded on SAUDAMINI Portal on 15.07.2024.

Regards

NHPC Limited
Commercial Division.

COMMENTS OF NHPC ON DRAFT CENTRAL ELECTRICITY REGULATORY COMMISSION (INDIAN ELECTRICITY GRID CODE) (FIRST AMENDMENT) REGULATIONS 2024

Sl. No.	Regulation Clause No. and Draft Regulation	Comments of NHPC
1.	<p>“(7-a) Revision of Declared Capacity and schedule of a generating station or ESS (as an injecting entity) shall be allowed only in case of bilateral transactions and not in case of collective transaction as per following details:</p> <p>(a)The generating station (other than lignite, gas based thermal generating station, and hydro generating station) or ESS (as an injecting entity), shall be allowed a maximum of 4 (four) revisions of Declared Capacity and schedule in a day subject to a maximum of 60 (sixty) revisions during a month, due to reasons such as a partial outage of the unit or variation of fuel quality or any other technical reason to be recorded in writing.</p> <p>(b) The generating station based on lignite, gas or hydro generating station shall be allowed 6(six) revisions of Declared Capacity and schedule in a day subject to a maximum of 120 (One hundred twenty) revisions during a month, due to reasons such as partial outage of the unit or water availability for hydro generating stations or fuel quality or variations in supply of gas for gas generating stations or any other technical reason to be recorded in writing.”</p>	<p>The regulations 49 (7) of IEGC 2023 is depicted as under:</p> <p>“Revision of Declared Capacity and schedule, shall be allowed on account of forced outage of a unit of a generating station or ESS (as an injecting entity) only in case of bilateral transactions and not in case of collective transaction. Such generating station or ESS (as injecting entity) or the electricity trader or any other agency selling power from the unit of the generating station or ESS shall immediately intimate the outage of the unit along with the requisition for revision of Declared Capacity and schedule and the estimated time of restoration of the unit, to SLDC or RLDC, as the case may be. The schedule of beneficiaries, sellers and buyers of power from this generating unit shall be revised on pro-rata basis for all bilateral transactions. The revised Declared Capacity and schedules shall become effective from the time block and in the manner as specified in clause (4) of this Regulation”:</p> <p>As per above Regulations, the revision of declared capacity of generating stations shall be allowed on account of forced outages of a unit in case of collective transaction and there was no limitation in no. of revisions.</p> <p>However, Hon'ble Commission has proposed in the 1st amendment of IEGC 2023 to restrict the no. of revisions in a day i.e. 6 (six) revisions in a day subject to a maximum of 120 revisions during the month for lignite, gas or hydro generating station.</p> <p>In this regard following is submitted:</p> <ol style="list-style-type: none"> 1. The hydro power stations declare their day ahead schedule based on previous days inflow pattern of respective power stations. Whereas, the actual inflow varies depending upon the rain or snow melting in the upstream of reservoir and there is always possibility of increase or decrease in inflow w.r.t. to forecasted inflow. Accordingly, hydro

		<p>generator need to revise their schedule in higher side or lower side depending on the actual inflow pattern in line with the IEGC regulations to utilize the excess inflow and also to avoid spillage.</p> <p>It is also pertinent to mention here that intermittent sudden increase /decrease of inflow is beyond the control of generator. Therefore, it is submitted that intermittent change in inflow may be considered in the IEGC Regulation and the revision in declared capacity due to forecasted error may be allowed as and when required to safeguard the interest of generator.</p> <p>2. There are so many power stations operating in cascade. The generation of downstream power plants are totally depend on the water, being discharged from upstream projects. The water inflow to downstream projects is being regulated mostly during lean season by upstream projects</p> <p>Further, at times of emergency shutdown, stoppage of units or tripping of machines of Upstream projects, there happens a sudden and sharp drop of water level at Reservoir / Intake of downstream projects. In this situation, the downstream projects are left with no time to go for revision of schedule. When this occurs at the Peak Schedule, it leads to imposition of heavy negative DSM penalty. In addition to this, non-adherence to schedule with huge variation also affects the stability of grid.</p> <p>In NHPC, Chamera-2 & Chamera-3, Lower Jhelum, Uri-1 & Uri-2 and TLD-3 & TLD-4, Parbati-2 & Parbati-3 power stations are operating in cascade. Also, there is IPP/Pvt. Projects in the upstream of Chamera-3 i.e. Budhil and Sainj in the upstream of Parbati-3.</p> <p>Therefore, it is proposed that the proposed regulation may be modified as under:</p>
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		<p><i>The generating station based on lignite, gas or hydro generating station (Pondage & Storage) shall be allowed 8 (eight) revisions of Declared Capacity and schedule in a day subject to a maximum of 120 (One hundred twenty) revisions during a month, due to reasons such as partial outage of the unit or water availability for hydro generating stations or fuel quality or variations in supply of gas for gas generating stations or any other technical reason to be recorded in writing.”</i></p>
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Additional Points for consideration

1	<p>Regulation 49(12(a) of Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 is as under:</p> <p>“Energy Metering and Accounting: (a) The CTU shall be responsible for procurement and installation of Interface Energy Meters (IEMs), at the cost of respective entity, at all the ISTS interface points, points of connections between the regional entities, cross border entities and other identified points for recording of actual active and reactive energy interchanged in each time-block through those points, and its operation and periodic calibration shall be done by the respective entity. CTU shall be responsible for replacement of faulty meters”.</p>	<p>Regulation 6.4(21) of Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 is as under:</p> <p><i>The CTU shall install special energy meters on all inter connections between the regional entities and other identified points for recording of actual net MWh interchanges and MVARh draws. The installation, operation and maintenance of special energy meters shall be in accordance with Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006. All concerned entities (in whose premises the special energy meters are installed) shall take weekly meter readings and transmit them to the RLDC by Tuesday noon The SLDC must ensure that the meter data from all installations within their control area are transmitted to the RLDC within the above schedule.</i></p> <p><i>In the IEGC, 2023, it has been proposed that, “The CTU shall be responsible for procurement and installation of Interface Energy Meters (IEMs), at the cost of respective entity”.</i></p> <p>In this regard, CTU has prepared a SOP for replacement of Special Energy Meters. As per SOP, CTU has been appointed Power Grid as an agent for such works. SOP is attached as Annexure-I.</p> <p>There is long process in replacement of Faulty IEM/SEM as the new regulation says that CTU shall replace the SEM at the costs of Utilities. The brief of procedure for replacement is as under:</p> <p>1. RLDC shall communicate the entity within 3</p>
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		<p>working days from the detection of defective IEM/SEM.</p> <p>2. The Entity shall send a communication (through letter or e-mail) to CTUIL, within next 3 working days requesting replacement of the defective IEM/SEM.</p> <p>3. On receipt of the above communication from the Entity, CTUIL within 3 working days from receipt of the said communication, shall advise POWERGRID to replace the defective IEM/SEM.</p> <p>4. The POWERGRID shall raise the invoice on the concerned Entity within 7 working days from the receipt of the advice from CTUIL.</p> <p>5. Power Grid shall replace the defective IEM/SEM within 8 working days from date of acceptance of invoice by the entities.</p> <p>As per proposed SOP for replacement of SEM/IEM, it has been observed that the timeline involve to complete the replacement process of faulty meters may go to a maximum of 24 days. Special Energy Meters are being installed at Power Stations for recording of generation/transmission (Ex-bus) data and on the basis of SEM data the DSM/REA/RTDA accounts are being prepared by respective RPCs.</p> <p>Sub-proviso (e) of proviso 12 of Regulation 49 of CERC (Indian Electricity Grid Code) Regulations, 2023 provides that <i>“Entities in whose premises the IEMs are installed shall be responsible for taking weekly meter readings for the seven-day period ending on the preceding Sunday 2400 hrs and transmitting them to the RLDC by Tuesday noon”.</i></p> <p>As per above regulations, the entity has to submit the weekly data on every Tuesday, whereas, the timeline to complete the replacement of SEM may took 24 days (Maximum).</p> <p>Whereas, as per SOP, if a meter got faulty then it would not be possible to replace the meter within a week time.</p> <p>Since SEM is very crucial item which can impact the revenue of entity in case it is not replaced timely.</p>
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		<p>Therefore, it is proposed that the recovery of cost of SEM may be kept with CTU/PowerGrid as per prevailing Tariff Regulations, which was being followed previously.</p> <p>Hence, it is submitted that the Regulation 49(12)(a) may be replaced as under:</p> <p>The CTU shall be responsible for procurement and installation of Interface Energy Meters (IEMs), at all the ISTS interface points, points of connections between the regional entities, cross border entities and other identified points for recording of actual active and reactive energy interchanged in each time-block through those points, and its operation and periodic calibration shall be done by the respective entity. CTU shall be responsible for replacement of faulty meters”.</p>
2	<p>Requirement of giving higher DC by hydro station during high inflow of water</p>	<p>Regulation 45(8)(a) of IEGC 2023 provides as follows:</p> <p align="right">Quote</p> <p>The regional entity generating station other than the WS seller shall declare ex-bus Declared Capacity limited to 100% MCR less auxiliary power consumption, on day ahead basis as per the provisions of Regulation 49 of these regulations:</p> <p>Provided that the hydro generating stations may declare ex-bus Declared Capacity more than 100% MCR less auxiliary power consumption limited to overload capability in terms of sub-clause (a) of clause (10) of this Regulation during high inflow periods:</p> <p>Provide further that a high inflow period for this purpose shall be notified by the respective RPC.</p> <p align="right">Unquote</p> <p>Further Regulation 45(10)(a) of IEGC 2023 provides as follows:</p> <p align="right">Quote</p> <p>Optimum Utilization of Hydro Energy:</p> <p>(a) During high inflow and water spillage conditions, for Storage type generating station and Run-of-River Generating Stations with or without Pondage, the declared capacity for the day may be up to the installed capacity plus overload capability (up to 10% or such other limit as certified by the OEM and approved by CEA) minus auxiliary consumption, corrected for the reservoir level. In case, the overload capability of such a station is more than 10% as approved, such a station shall declare the overload capability in advance.</p>

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		<p>(b) During high inflow and water spillage conditions, the concerned RLDC shall allow scheduling of power from hydro generating stations for overload capability up to 10% of Installed Capacity or any other limit as per sub-clause (a) of this clause without the requirement of additional GNA for such overload capacity, subject to the availability of margins in the transmission system.</p> <p style="text-align: right;">Unquote</p> <p>As per the above-mentioned clauses, hydro generating stations are allowed to declare DC up to 110% of normative ex-bus capacity, only during the high inflow periods specified by respective RPC. However, it has been observed that high inflow period declared by RPC does not necessarily coincide with the actual high inflow period in a year. For instance, high inflow period declared by RPC for FY 2024-25 is June to September, but high inflow was observed in month of May 24 also.</p> <p>Hence in view of optimum utilization of the hydro resources and to avoid spillage, it is requested that hydro stations may be allowed to declare DC up to 110% of normative ex-bus capacity whenever there is high inflow which may be beyond the RPC declared high inflow period.</p>
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Standard Operating Procedure (SOP)

Procurement & Installation of ISTS Interface Energy Meter (IEM/SEM)

Introduction:

This Standard Operating Procedure (SOP) for Procurement and Installation of Interface Energy Meter (IEM/SEM) will be applicable only for the IEM/SEM falling under the purview of CTU as per the provisions under Regulations 49.12 (a) of CERC (Indian Electricity Grid Code), Regulations, 2023 and as per clause 6 (1)(a) of CEA (Installation and Operation of Meters) Regulations and amendments thereof. The Regulation 49.12(a) & 6 (1) is re-produced below:

“49.12 Energy Metering and Accounting:

- (a) *The CTU shall be responsible for procurement and installation of Interface EnergyMeters (IEM/SEM), at the cost of respective entity, at all the ISTS interface points, points of connections between the regional entities, cross border entities and other identified points for recording of actual active and reactive energy interchanged in each time-block through thosepoints, and its operation and periodic calibration shall be done by the respective entity. CTU shall be responsible for replacement of faulty meters.”*

“6. Ownership of meters-

- (1) **Interface meters** (a) *All interface meters installed at the points of interconnection with Inter-State Transmission System (ISTS) for the purpose of electricity accounting and billing shall be owned by CTU.*

The objective of this procedure is to ensure timely installation of IEM/SEM in the new ISTS system and timely replacement of the defective IEM/SEM by CTU or their authorized agency. The procedure also aims for timely payment by the respective entities to authorized agency of CTUIL against supply & installation of the IEM/SEM.

Presently, POWERGRID is the authorized agency for procurement of IEM/SEM, installation of new IEM/SEM and replacement of defective IEM/SEM. Any mention of POWERGRID in this procedure shall also mean any other agency authorized by CTUIL, if any, to carry out the aforesaid functions. CTUIL may authorize any other agency to carry out the aforesaid functions in future. Replacement/Installation of IEM/SEM shall mean all the activities including supply of new IEM/SEM, its installation, testing and commissioning.

The complete cycle of installation/replacement of IEM/SEM has been divided in various steps as described in Part A & B. Since timely procurement and availability of sufficient no. IEM/SEM is the key requirement, Part D of this procedure deals with timely estimation of requirement & procurement of IEM/SEM. Part C and Part E are for payment & warranty and inventory management respectively.

Applicability:

The procedure shall be applicable for the entities which are in the RLDCs control area and whose metering and energy accounting is done at the regional level. Thus, all Gencos including RE generators and all other utilities connected to ISTS Grid are the entities for the purpose of this procedure.

Effectiveness:

The date of effectiveness of this procedure shall be notified separately on CTUIL website.

A. Procedure for replacement of Faulty ISTS IEM/SEM

1. Identification of faulty IEM/SEM and communication to CTU:

1.1 Any Entity who wants IEM/SEM replacement shall inform concerned RLDC about such requirement along with the reasons thereof. RLDC also identify inconsistent SEM/IEM based on its observations on IEM/SEM data (received through AMR system or otherwise). The RLDC shall send a communication to the entity within 3 working days from the detection of inconsistent data or defective IEM/SEM.

1.2 The Entity shall take immediate steps to get all the issues rectified within 7 working days from receipt of above communication from RLDC. If the issue is not rectified within 7 working days or if it is established that IEM/SEM needs to be replaced, the Entity shall send a communication (through letter or e-mail) to CTUIL, within next 3 working days requesting replacement of the defective IEM/SEM. The said communication shall include the followings:

- a. The location, serial no., make and model of the defective IEM/SEM along with accessories (required if any)
- b. The date of installation of the above IEM/SEM
- c. The observations w.r.t. the said defective IEM/SEM
- d. Consent for payment, as per the provision of this procedure, towards supply and installation of IEM/SEM

A copy of this communication shall be sent to respective RLDC and regional nodal officer of POWERGRID. The contact details of POWERGRID Nodal officers shall be made available on CTUIL's website. The amount to be charged by POWERGRID towards Supply & Installation of the IEM/SEM shall be made available on CTUIL website.

1.3 In line with applicable Regulations, the replacement of IEM/SEM shall be on a chargeable basis. The Entity shall undertake in the said communication that they will make payment for supply & installation of the IEM/SEM, in accordance with the provisions of this procedure, as per the invoice raised by POWERGRID.

2. Communication to POWERGRID:

2.1 On receipt of the above communication from the Entity, CTUIL within 3 working days from receipt of the said communication, shall advise POWERGRID to replace the defective IEM/SEM. A copy of the advice shall also be sent to the respective Entity.

3. Replacement of Faulty IEM/SEM:

3.1 The POWERGRID shall raise the invoice on the concerned Entity within 7 working days from the receipt of the advice from CTUIL and shall replace the defective IEM/SEM within 8 working days from date of acceptance of invoice by the entities. POWERGRID shall inform CTUIL after replacement of the defective IEM/SEM.

3.2 After replacement of faulty IEM/SEM, the entity shall inform respective RLDC & CTUIL about the same with necessary details (Meter SI.No, Make, Model, Date of replacement and meter location) within 2 days. The verification testing with respective RLDC shall be ensured by the Entity.

B. Procedure for Installation of ISTS IEM/SEM for new systems

1. The Entity shall request CTUIL for installation of new IEM/SEM along with the Metering Scheme Letter issued by respective RLDC in line with the scheme approved by RPC, if any. Entity shall make such request to CTUIL at least three months in advance of the anticipated COD of the new system.
2. On receipt of the above request from the Entity, CTUIL within 5 working days from receipt of the said request, shall advise POWERGRID to install the IEM/SEM in the new system as per the scheme suggested by RLDC. A copy of the advice shall also be sent to the respective Entity.
3. The entity shall approach POWERGRID along with the CTUIL letter regarding requirement of IEM/SEM along with required accessories, intimating the timeframe for IEM/SEM installation. Accordingly, POWERGRID shall raise the invoice on the Entity. The entity shall accept the invoice in next 7 days thereafter.
4. The entity shall approach POWERGRID regarding requirement of IEM/SEM and the accessories along with the CTUIL letter intimating the timeframe for IEM/SEM installation. Accordingly, POWERGRID shall raise the invoice on the Entity. The entity shall accept the invoice in next 7 days thereafter.
5. POWERGRID shall install IEM/SEM in the new system at least 15 days before anticipated COD of the new system. POWERGRID shall inform CTUIL after installation of the IEM/SEM in the new system.
6. After installation of IEM/SEM, the entity shall inform respective RLDC & CTUIL about the same with necessary details (Meter SI.No, Make, Model, Date of replacement and meter location) within 2 days. The verification testing with RLDC shall be ensured by the Entity.

C. Payment and Warranty:

1. The Entity shall make payment to POWERGRID within 45 days from the date of replacement of IEM/SEM failing which the late payment surcharge @ 0.04% of the invoice amount per day shall be payable for the delayed period. In no case, the delayed period shall exceed 60 days. In case, any payment is pending even after 60 days from the date of last IEM/SEM replaced for the particular entity, no further supply/replacement of any IEM/SEM for that entity will be carried out. In such a case, the onus of continuing with the defective IEM/SEM shall solely be on the entity.
2. IEM/SEM once replaced, shall be under warranty for a period of 1 year from the date of installation. During this warranty period, the entity shall take up the matter directly with POWERGRID's nodal officers with a copy to CTUIL. POWERGRID's nodal officer shall arrange to replace such faulty IEM/SEM within 15 working days from the date of intimation by the entity.

D. Standardized charges for Supply, and Supply and Installation of IEM:

1. CTU, in consultation with POWERGRID, shall device region wise standardized rate for Supply, and Supply and Installation of IEM for each Financial Year.

E. Bulk Procurement of ISTS IEM/SEM

1. By the end of September of each year, CTUIL/STU shall provide the details of ISTS projects coming up in the next 2 years to respective RLDC.
2. RLDC shall work out the metering scheme for total requirement of IEM/SEM under the following heads:
 - i. For new ISTS system
 - ii. Spares @10% of the IEM/SEM population in the region
 - iii. Projected requirement towards replacement of defective IEM/SEM based on past 2-year trend.

RLDC will get the total IEM/SEM quantity approved by respective RPCs and inform to CTUIL by November end.

3. On receipt of the IEM/SEM quantity from RLDCs, CTUIL shall aggregate the requirement on PAN India basis and issue procurement advice to POWERGRID by December end.

F. Inventory Management

Each month RLDC would furnish the report on working, suspect and defective IEM/SEM in respective region to CTUIL. POWERGRID would furnish the region-wise numbers of the IEM/SEM available with them to CTUIL.

Based on this input CTUIL may issue suitable directions for diversion of spares from one region to another or initiate timely action for procurement of spares.
