



# HIMACHAL PRADESH STATE LOAD DESPATCH CENTRE

(AN APEX BODY)

GOVERNMENT OF HIMACHAL PRADESH



No. HPSLDC/Scheduling/Vol.-II/2022-23- 6659-60  
To

Dated: 19.10.2022

The Secretary,  
Central Electricity Regulatory Commission,  
3<sup>rd</sup> Floor, Chanderlok Building,  
36, Janpath, New Delhi – 110001.  
Email: [secy@cercind.gov.in](mailto:secy@cercind.gov.in)

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

- Reference**
1. Your office letter No. L-1/265/2022/CERC dated 07.06.2022.  
Your office letter No. L-1/265/2022/CERC dated 30.08.2022 regarding Extension of date for seeking comments/suggestions on Draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2022.
  2. Your office letter No. L-1/265/2022/CERC dated 29.09.2022 regarding Extension of date for seeking comments/suggestions on Draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2022.
  3. Your office letter No. L-1/265/2022/CERC dated 29.09.2022 regarding Extension of date for seeking comments/suggestions on Draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2022.


Sir,

Enclosed please find herewith the comments, suggestions and objections of HPSLDC on draft **Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2022** as per **Annexure A**. It is humbly requested to consider the comments, suggestions and objections of HPSLDC while finalizing these regulations.


This is for your kind information please.

Yours faithfully,

DA: As above

  
Chief Engineer,  
HP State Load Despatch Centre,  
Govt. of HP, Totu, Shimla-11(H.P.).

Copy of the above is forwarded to the Secretary, H. P. Electricity Regulatory Commission, Vidyut Aayog Bhawan, SDA Complex, Block-37, Kasumpti, Shimla (HP) -09 for information please. Email id: [hperc@rediffmail.com](mailto:hperc@rediffmail.com)

  
Chief Engineer,  
HP State Load Despatch Centre,  
Govt. of HP, Totu, Shimla-11(H.P.).

SLDC Complex, Totu, Shimla-171011

Phone: 0177-2838666, Telefax: 0177-2837649 GST No. 02AAAAH7757E1ZX

Email: [sehpslhc@gmail.com](mailto:sehpslhc@gmail.com), [cehpslhc@gmail.com](mailto:cehpslhc@gmail.com), [mdhpslhc@gmail.com](mailto:mdhpslhc@gmail.com), Web: [www.hpslhc.com](http://www.hpslhc.com)

## Comments of HPSLDC on Draft Indian Electricity Grid Code- 2022.

| Sr. No. | Existing Draft Regulation  | Comments / Suggestions / Objections  |
|---------|--|--|
| 1.      | <p><b>Chapter 3</b><br/> <b>Connection Code</b><br/> <b>New sub-clauses (4) and (5) to be added in Clause 11 i.e. Data and Communication Facilities.</b></p>   | <p><b>It is requested to add new sub clauses under Clause No. 11 i.e. Data and Communication Facilities:</b><br/> <b>Sub-clause (4) and (5) of Clause 11:</b></p> <p>(4) All the State entities connected on 66 kV and above network shall provide reliable real time data communication connectivity/ Telemetry with SLDC/ RLDC control centre, preferably on Fiber optic network.</p> <p>(5) In case reliable data is not provided at SLDCs/ RLDCs by the State entities affecting the drawl &amp; demand of the State/ Region/ Nation, then after issuance of a notice by the concerned RLDC/ SLDC, the defaulting state entities will be required to establish a reliable communication with RLDC/ SLDC control centre within 01 month from the date of issuance of such notice.</p> <p>If the defaulting State entity (ies) is / are still unable to provide the reliable data communication, then there shall be a provision of penalty per day per station for non-reporting of real time data of their respective station.</p> |
| 2.      | <p><b>Sub-clause (4) of Clause 15 i.e. Protection Audit Plan: -</b><br/> (4) The third-party protection audit report shall contain information sought in format enclosed as Annexure-1. The protection audit reports, along with action plan for rectification of deficiencies detected, if any, shall be submitted to the respective RPC and RLDC within a month of submission of third-party audit report.</p> | <p><b>Suggestion:</b><br/> <b>Sub-clause (4) of Clause 15 i.e. Protection Audit Plan: -</b><br/> (4) The third-party protection audit report shall contain information sought in format enclosed as Annexure-1. The protection audit reports, along with action plan for rectification of deficiencies detected, if any, shall be submitted to the respective RPC, RLDC <b>and SLDC</b> within a month of submission of third-party audit report.</p>  |
| 3.      | <p><b>Sub-clause 2(b) of Clause 19 i.e. Drawl of Startup Power and Injection of Infirm Power:</b><br/> 2(b) Injection of infirm power shall not exceed six months from the date of first synchronization.</p>  | <p><b>Observation:</b><br/> In case of Unit wise/ phased manner commissioning of a Power Plant, it becomes difficult for SLDC to segregate firm power of unit whose COD has already been declared and infirm power whose COD of other units yet to be declared.</p>  |
| 4.      | <p><b>Sub-clause (1) of Clause 23 i.e. Trial Run of Inter-State Transmission System: -</b><br/> (1) Trial run of a transmission system or an element thereof shall mean successful energization of the transmission system or the element thereof at its nominal system voltage</p>  | <p><b>Observation:</b><br/> What is the treatment for the transmission system or an element thereof connected with Run-of-River (RoR) hydro station where the availability of flow</p>   |




| Sr. No. | Existing Draft Regulation  | Comments / Suggestions / Objections  |
|---------|--|--|
|         | <p>through interconnection with the grid for continuous twenty-four (24) hours flow of power and communication signal from the sending end to the receiving end and with requisite metering system, telemetry and protection system:</p> <p>Provided that under exceptional circumstances and with the prior approval of CEA, a transmission element can be energized at lower nominal system voltage level.</p>   | <p>of water is uncertain or in case of RE, where solar generation is not available at night?</p>   |
| 5.      | <p><b>Sub-clause 3(b)(iv) of Clause 24 i.e. Documents and Test Reports Prior to Declaration of Commercial Operation: -</b><br/>3(b)(iv) Operation in synchronous condenser mode wherever designed.</p>   | <p><b>Suggestion:</b><br/>It should be made mandatory for upcoming generators after the notification of the IEGC, 2022.</p>  |
| 6.      | <p><b>Sub-clause (2) of Clause 25 i.e. Certificate of Successful Trail Run: -</b><br/>(2) After completion of successful trial run and receipt of documents and test reports as per Regulation 24 of these regulations, the concerned RLDC shall issue a certificate to that effect to the concerned generating station, ESS or transmission licensee, as the case may be, with a copy to their respective beneficiary(ies).</p>   | <p><b>Suggestion:</b><br/>The timeline to issue such a certificate by respective RLDC should be mentioned.</p>   |
| 7.      | <p><b>Sub-clause (7) of Clause 28 i.e. Operating Philosophy: -</b><br/>(7) Every generating station and transmission substation of 132 kV and above shall have a control room manned by qualified operating personnel round the clock. Alternatively, the same may be operated round the clock from a remotely located control room, subject to the condition that such remote operation does not result in delay in execution of any switching instructions and information flow:<br/>Provided that a transmission licensee owning a transmission line but not owning the connected substation, shall have a round the clock coordination center.</p> | <p><b>Suggestion:</b><br/>In case of non-compliance, the course of action should be mentioned.</p>   |
| 8.      | <p><b>Sub-clause (9) of Clause 29 i.e. System Security: -</b><br/>(9) Provisions of protection and relay settings shall be coordinated periodically throughout the regional grid, as per plan finalized by the respective RPC in accordance with the Protection, Testing and Commissioning Code of these regulations.</p>  | <p><b>Suggestion:</b><br/>Periodicity of co-ordination of the protection and relay settings should be 06 months for all Substations and transmission lines of 132 kV and above voltage level and 12 months for 66 kV and below voltage levels.</p> |

| Sr. No. | Existing Draft Regulation  | Comments / Suggestions / Objections   |
|---------|--|---|
| 9.      | <p><b>Sub-clause 13(d) of Clause 29 i.e. System Security: -</b><br/>           13 (d) SLDC shall ensure that telemetered data of feeders (MW power flow in real time and circuit breaker status) on which UFR and df/dt relay are installed is available at its control centre. SLDC shall monitor the combined load in MW of these feeders at all the time. SLDC shall share the above data with the respective RLDC in real time and submit monthly exception report to the respective RPC. RLDC shall inform SLDCs as well as the concerned RPC on quarterly basis, durations during the quarter when combined load in MW of these feeders was below the level considered while designing UFR scheme by the RPC. SLDC shall take corrective measures within a reasonable period and inform the respective RLDC and RPC.</p> | <p><b>Suggestion:</b><br/>           In the absence of data, the action which needs to be taken by the SLDC to ensure the data availability may be mentioned.</p> |
| 10.     | <p><b>Sub-clause 8 of Clause 30 i.e. Frequency Control and Reserves: -</b><br/>           (8) The primary response of the generating units shall be verified by the LDCs during grid events.</p>   | <p><b>Suggestion:</b><br/>           The timeline regarding verification needs to be mentioned.</p>   |
| 11.     | <p><b>Sub-clause 10 (o) of Clause 30 i.e. Frequency Control and Reserves: -</b><br/>           10 (o) NLDC, RLDCs and SLDCs shall grade the median Frequency Response Performance annually, considering at least 10 reportable events. In case the median Frequency Response Performance is less than 0.75 as calculated as per Annexure-2, NLDC, RLDCs, SLDCs, as the case may be, after analyzing the FRP shall direct the concerned entities to take corrective action.</p>   | <p><b>Suggestion:</b><br/>           The timeline for taking corrective action needs to be mentioned.</p>   |
| 12.     | <p><b>Sub-clause 2 (d) of Clause 32 i.e. Outage Planning: -</b><br/>           2(d) Protection relay related outages, auto-re-closure outages and SPS testing outages shall be planned on monthly basis with prior permission of the concerned RPC, which shall consult the concerned RLDC &amp; NLDC.</p>   | <p><b>Suggestion:</b><br/>           The concerned SLDC may also be informed in such cases.</p>   |
| 13.     | <p><b>Sub-clause 12 of Clause 33 i.e. Operational Planning Study: -</b><br/>           (12) NLDC, RLDCs and SLDCs shall compare the results of the studies of impact of new elements on the system and transfer capability addition with those of the interconnection and planning studies by CTU and STUs, and any</p>  | <p><b>Suggestion:</b><br/>           In case of any significant variations, the studies may be reviewed and submitted to the RPC for final decision.</p>          |



| Sr. No. | Existing Draft Regulation   | Comments / Suggestions / Objections   |
|---------|---|---|
|         | significant variations observed shall be communicated to CTU and STUs for immediate and long-term mitigation measures.  |   |
| 14.     | <p><b>Sub-clause 7 of Clause 39 i.e. Reactive Power Management: -</b><br/>           (7) Reactive power facility shall be in operation at all times and shall not be taken out without the permission of the concerned RLDC or SLDC.</p>  | <p><b>Suggestion:</b><br/>           In case of non-compliance, the course of action should be mentioned.</p>   |
| 15.     | <p><b>Sub-clause 9 of Clause 39 i.e. Reactive Power Management: -</b><br/>           (9) Hydro and gas generating units having capability shall operate in synchronous condenser mode operation as per instructions of RLDC or SLDC of the respective control area. Standalone synchronous condenser units shall operate as per instructions of RLDC or SLDC, as per respective control area.</p> | <p><b>Suggestion:</b><br/>           In case of non-compliance, the course of action should be mentioned.</p>   |
| 16.     | <p><b>Chapter 7</b><br/> <b>Scheduling and Despatch Code</b><br/> <b>New sub-clause 7 to be added in Clause 43 i.e. Control Area Jurisdiction of Load Despatch Centre.</b></p>  | <p><b>It is requested to add new sub-clause under Clause 43 i.e. Control Area Jurisdiction of Load Despatch Centre:</b><br/> <b>Sub-clause 7 of Clause 43: -</b><br/>           (7) If an ISGS is connected with host State intra-state transmission system and the different States have power shares in that ISGS, then that ISGS shall come under the jurisdiction of the host State SLDC, if the host State has a power share of more than 50% otherwise that ISGS shall come under the jurisdiction of respective RLDC.</p>  |
| 17.     | <p><b>Chapter 8</b><br/> <b>Cyber Security</b><br/> <b>New sub-clauses (3), (4), (5) and (6) to be added in Clause 48 i.e. General</b></p>  | <p><b>It is requested to add new sub-clauses under the Clause 48 i.e. General (Cyber Security): -</b><br/> <b>Sub-clause (3), (4), (5) and (6) of Clause 48:</b><br/>           (3) Due to adoption of advanced technologies for monitoring and automation of power system, all Field equipment / Operational Technology (OT) shall be tested from designated laboratories for cyber security conformance and shall be in conformance with the latest communication and security protocol standards.<br/>           (4) Every organization shall implement ISO 27001: Information Security Management Systems (ISMS) and form Information Security Division (ISD), ISD must be functional on 24x7 (Round the Clock) basis and is manned by sufficient numbers of IT Engineers having valid certificate of successful completion of course on cyber security of Power Sector for maintaining cyber security.</p> |

| Sr. No. | Existing Draft Regulation | Comments / Suggestions / Objections   |
|---------|---------------------------|---|
|         |                           | <p>(5) Electronic Security Perimeter: The organization shall identify and document the Electronic Security Perimeter(s) and all Access Points to the perimeter(s) as per IEC 62443 / IS16335 (as amended from time to time). Each organization shall ensure that every Critical System resides within an Electronic Security Perimeter. Cyber-Vulnerability Assessment of all electronic Access Points connected within the Electronic Security Perimeter(s) should be performed at least once in every 6 (six) months and/or after any change in the Security Architecture.</p> <p>(6) Security and Testing of Cyber Assets: The organization shall ensure security of all in-service phase as well as standby Cyber Assets through regular firmware/Software updates and patching, Vulnerability management, Penetration testing (of combined installations), securing configuration, supplementing security controls. A separate test execution environment shall be configured for testing of all patches prior to their implementation. Cyber assets hardening shall also be performed in the testing environment to both identify potential gaps and evaluate possible physical impact.</p> |

  
**Chief Engineer,**  
**HP State Load Despatch Centre,**  
**Govt. of HP, Totu, Shimla-11 (HP).**