

Central Electricity Authority Regulations, 2004
on Concurrence of Hydro Electric Schemes

1. Short Title, Commencement, Extent and Interpretation

- (i) These Regulations may be called the Central Electricity Authority Regulations, 2004 on Concurrence of Hydro Electric Schemes framed as per provisions under Section 177 and Section 8 of the Electricity Act, 2003.
- (ii) These Regulations shall come into force on the date of their publication in the Official Gazette of India published by the Authority unless a definite subsequent date is stipulated in particular Regulations or Sub Regulations.
- (iii) These Regulations extend to the whole of India except the State of Jammu & Kashmir.
- (iv) In these Regulations, a word expressed in masculine gender includes feminine gender, the singular includes the plural and the plural includes the singular.

2. Definitions

- (i) In these regulations unless the context otherwise requires, -
 - (a) 'Act' means the Electricity Act, 2003.

- (b) 'Authority' means the Central Electricity Authority constituted under sub-section (2) of Section 70 of the Act.
- (c) 'Design Energy' means the quantum of energy, which could be generated in a 90 percent dependable year with 95 percent availability of installed capacity of the station on annual basis.
- (d) 'Generating Station' or 'Station' has the same meaning as defined in the Act.
- (e) 'Generating Company' has the same meaning as defined in the Act.
- (f) 'Installed capacity' means the summation of the name-plate capacity of all the generating units in the station.
- (g) 'Primary Energy' means the quantum of energy generated up to design energy on an annual basis by the station.
- (h) 'Project' means the complete hydropower generating facility covering all components such as dam, intake, water conductor system, power station, generating units of the scheme etc.
- (i) 'Regulations' mean Central Electricity Authority Regulations, 2004 on Concurrence of hydroelectric schemes.

- (j) 'Secondary Energy' means the quantum of energy generated in excess of the design energy on an annual basis by the station.
- (ii) The words and expressions used and not defined in these regulations but defined in the Electricity Act, 2003 shall have the meaning assigned to them in the said Act.
- (iii) The provisions of the General Clauses Act, 1897 as amended from time to time shall apply to these regulations.

3. Applicability of the Regulations

These regulations are applicable to any generating company intending to set up a hydro generating station which involves a capital expenditure exceeding such sum, as may be fixed by the Central Government, from time to time, by Notification under Section 8 (1) of the Act.

4. Objectives and Scope

- (i) Hydroelectric schemes constitute an integral part of the overall development of the water resources of the river basins for multipurpose use and often an element of a series of single/multipurpose schemes. In the overall river basin context, the impact of the operation of the upstream hydroelectric schemes, water availability undergoing changes over the life of the scheme on account of progressive development in the river basin, constraints imposed by the downstream schemes, requirements of drinking

water, irrigation diversions downstream, flood moderation, navigation, etc. are to be considered.

The scheme shall be designed for optimum benefits and shall not adversely affect the operation of the upstream and downstream schemes and shall take into consideration the impact of the future upstream development in the river basin.

(ii) Procedures are required to be laid down in order to ensure that:

- (a) a generating company is well informed in advance of the necessity of optimum development of the water resources of the river basin where the Scheme is proposed to be located,
- (b) the scheme is consistent with water requirement for irrigation, navigation, flood control, drinking water and other downstream uses of water,
- (c) the scheme takes into account the progressive development of consumptive use of water and new water resources development schemes in the river basin due to which the water availability may undergo change over the period,
- (d) adequate studies have been done for the optimization of location of dam and other river works.
- (e) the scheme meets the norms regarding dam design and dam safety.

- (f) the impact of the scheme development on the environment has been assessed and adequate measures have been taken to mitigate adverse effects, if any,
- (g) Rehabilitation & Resettlement (R&R) Plan is prepared along with its implementation programme. R&R Plan has to be in line with National Policy on R&R.
- (h) The proposed scheme is either included in National Electricity Plan drawn by the Authority under Section 3(4) of the Act or results in generation of power at reasonable tariff.

5. Procedures/Inputs for concurrence of hydroelectric schemes

- (a) The Generating Company after completing essential site survey and investigations shall prepare Detailed Project Report (DPR) of hydroelectric scheme in accordance with the latest editions of “Guidelines for Formulation of Project Reports for Power Projects” published by Authority and “Guidelines for preparation of Detailed Project Report of Irrigation & Multipurpose Schemes” published by Central Water Commission and submit the same to the Authority.
- (b) Detailed Project Report shall include a checklist incorporating tie-up of essential inputs/statutory clearances, salient features of the project, executive summary, geological aspects, defence aspects, hydrology, power potential studies, optimization of location of dam and other civil works detailing various alternatives considered, studies for optimization of dam height, detailed

design calculations for checking dam design & safety, civil design aspects, construction machinery, construction material, inter-state/ international aspects, environmental & forest aspects, rehabilitation & resettlement aspects, legal aspects, justification of the scheme from power supply-demand consideration, electro-mechanical design aspects, detailed scheme for evacuation/wheeling of power, construction programme, cost estimates for civil works, cost estimates for electrical & mechanical works, phasing of expenditure, financial & commercial aspects, financial package, tariff calculations – first year tariff and levelised tariff and Drawings.

- (c) The Electrical & Mechanical cost estimates shall be based on the latest edition of “Guidelines for Formulation of Project Reports for Power Projects” published by Authority and civil cost estimates shall be based on the latest edition of “Guidelines for preparation of Estimates for River Valley Schemes” published by Central Water Commission.
- (d) The detailed project report shall also include the following:
 - (i) Information on environmental and forest aspects and status of clearance from Ministry of Environment & Forest.
 - (ii) Clearance from Ministry of Defence if required.
 - (iii) Information on Tribal population affected and status of clearance from Ministry of Social Justice and Empowerment/Tribal Affairs, if tribal population is affected.
 - (iv) Certificates from State Government in respects of water availability and land availability.

- (v) Consent of the concerned State Government(s) for the scheme.
- (e) Fifteen numbers of hard copies of the Detailed Project Report (DPR) along with one soft copy on compact disk shall be submitted to the Authority.
- (f) In case of DPR not being complete in all respects, the Authority shall return the same to the Generating Company for its revision/modification and resubmission thereafter.
- (g) DPR complete in all respects will be taken up for detailed examination by the Authority. The queries raised by the Authority, if any, shall be promptly replied by the generating company within the stipulated time schedule as prescribed by the Authority failing which the DPR shall stand returned to the generating company.
- (h) In case the scheme is found technically and economically viable with necessary inputs/clearances having been tied-up, the Authority may accord techno-economic clearance (TEC) to the scheme, as far as practicable, within a period of 90 (ninety) days from the date of submission of DPR complete in all respects.
- (i) On tying up of all essential inputs/ statutory clearances, the Generating Company shall submit the updated detailed project report on compact disk in the software format prescribed by the Authority along with 5 (five) Nos. of hard copies incorporating all the changes/ modifications as agreed during deliberations for accord of techno-economic clearance for concurrence of the

Authority. The Authority, after considering the updated detailed project report and being satisfied, may issue the concurrence to the scheme.

6. The Authority may take the assistance of any institution like Central Water Commission, Ministry of Water Resources, Geological Survey of India, etc. for examination of DPR as it may consider necessary.

7. Availability of the Guidelines and Formats for Formulation of Detailed Project Report (DPR)

Central Electricity Authority Guidelines and formats for formulation/ submission of Detailed Project Report (DPR) of the hydroelectric schemes shall be available on the web site of the Authority: www.cea.nic.in.

8. Fee for Techno- Economic Clearance/ Concurrence

- (i) Every proposal for techno- economic clearance/ concurrence to hydro electric scheme by the Authority shall be accompanied by a fee of Rs 25,00,000/- (Rupees twenty five lakhs only).
- (ii) The fee payable under these regulations shall be paid by means of bank draft or pay order, drawn in favour of the Secretary, Central Electricity Authority, payable at New Delhi.

9. Amendment to Regulations

The Authority may, as and when considered necessary, amend these regulations, by notification.