

GUIDELINES FOR SETTING UP CAPTIVE POWER PLANTS IN THE STATE OF HARYANA

Notification

The 11th May, 2001

Preamble:

Section 44 of the Electricity (Supply) Act (1948) envisaged *inter-alia* that it would be necessary for any licensee, or any other person, not being the Central Government or any corporation created by a central Act or any generating company to obtain previous consent in writing of the Board before establishing or acquiring a new generating station or extending or replacing any major unit of plant or works pertaining to generation of electricity in a generating station and that such a consent shall not be withheld unless the conditions stated in Section 44 are met.

Section 21(3) of the Haryana Electricity Reforms Act 1997 stipulates *inter-alia* that the consents earlier granted by the Board would be granted by the Haryana Electricity Regulatory Commission.

Reviewing the demand-supply position in the state of Haryana, the Commission observes that Haryana is a power deficit state where supply falls short of the demand by as much as 15-20% and the quality of supply (viz. voltage profile, frequency variations etc) has also not been satisfactory. This situation has existed for long and it would be some time before supply is able to match the demand.

The Commission considers it appropriate that until this gap between supply and demand gets bridged, anyone who may wish to set up a Captive Power Plant (CPP) be allowed to do so provided certain basic conditions are fulfilled

In exercise of the powers conferred by section 21(3) of the Haryana Electricity Reforms Act, 1997 (Act 10 of 1998), the Haryana Electricity Regulatory Commission hereby lays down the following guidelines for setting up CAPTIVE POWER PLANTS in the state of Haryana.

1.0 Definitions

1.1 "Captive Power Plant" or "CPP": means any generating station set up by a person to meet its own power requirement.

1.2 Words and expressions used not defined in these guidelines but defined in the Electricity (Supply) Act, 1948 (Act No. 54 of 1948), the Indian Electricity Act, 1910 (Act No. IX of 1910) and HER Act 1997 (Act 10 of 1998), have the meanings respectively assigned to them in these Acts.

2.0 Categories of captive Power Plants:

2.1 Captive power plants are divided into following two categories:

Category-I	CPPs that operate on stand alone or standby basis but not in parallel with the licensee's system. (A) Capacity up to 50KW (B) Capacity more than 50 KW.
Category-II	CPP's that are proposed to be run in parallel with the Licensee's system whether on continuous basis or intermittently.

2.2 The total installed capacity of the Generating Station shall be reckoned as capacity of CPP.

3.0 Filing of application

3.1 For CPP of Category -I A

No application would be required for a Captive Power Plant having total installed capacity upto 50 KW. Subject to such CPP owners complying with all other laws in force from time to time, the consent of the Commission would be deemed to have been granted.

3.2 For CPP of Category I B & II

- a) Ordinarily the consent for setting up of CPP shall be considered for a capacity not exceeding twice the Connected Load. This capacity limitation would not apply to CPP's based on renewable energy sources and cogeneration plants.
- b) Application for setting up a CPP shall be made in duplicate in the prescribed form as per format at Annexure-I to the Secretary of the Commission at following address .

Haryana Electricity Regulatory Commission,
SCO # 180, Sector-5, Panchkula-134 109.

- c) The owner of power plant shall be the applicant who shall produce evidence that the CPP and the load are under the same ownership.
- d) For CPP's of capacity 25 MW and above three Copies of Detailed Project Report/Feasibility Report would be furnished with the application.
- e) Each application for a CPP shall be accompanied with non-refundable processing fee as prescribed in para 4 below.

4.0 **Fee Structure**

The Fee for different categories of CPP would be as follows

	Capacity	Fee
a)	Up to 50 KW	No fee
b)	above 50 KW	Rs. 1000 per MW or part thereof

CPP's based on renewable sources of energy/ cogeneration plants shall be exempted from payment of fee.

The fee shall be payable along with the application in the form of bank draft drawn in favour of the Secretary, Haryana Electricity Regulatory Commission and payable at Panchkula.

5.0 **Processing of consent**

The following procedure would be adopted by the Commission for the grant of consent to the setting up of CPP's:

5.1 **For existing CPPs.**

Within 60 days of notification of these guidelines, all existing CPP owners above 50 kW would file applications in the same manner as expected of the new applicants (Ref. Para 5.2 to 5.6) together with a copy of the consent already granted by the Licensee except that they would not be required to deposit the processing fee.

5.2 All CPP owners not covered under 5.1 will be required to file fresh application in accordance with these guidelines.

5.3 **For New CPPs of category -I (A)**

As laid down in para 3.1 above, CPP's of category 1A (i.e. CPP's of capacity up to 50 KW and not operating in parallel with the Licensee's system) would not be required to obtain consent of the Commission.

5.4 **For New CPP of category -I (B)**

a) As laid down in para 3.2 above, applications for CPP of category -I (B) (i.e. CPP's of capacity more than 50 KW and not operating in parallel with the Licensee's system) would be filed with the Secretary of the Commission in duplicate.

b) A copy of the application would be forwarded by the Commission office to the designated Officer of the Distribution & Retail Supply licensee or to the Transmission licensee concerned as the case may be for comments.

- c) The Licensee shall send its comments on the application to reach the Commission within 30 days of the receipt of the application. If no comments are received within 30 days it will be presumed that the Licensee has no objection to the grant of consent by the Commission.
- d) If the Licensee has conveyed "No Objection" or if objection has not been received within the time specified above and the application is complete to the satisfaction of the Commission, the Commission may grant consent without conducting any hearing.
- e) If the licensee has any objection to the grant of consent, the detailed reasons should be furnished to the Applicant as also to the Commission within the time specified above. In such a case, the Commission, may at its discretion, initiate proceedings as per procedure laid down in Haryana Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.
- f) Ordinarily consent for setting up of a CPP would be granted within 60 days of receipt of application with the Commission except in case of CPP's of capacity higher than 25 MW. The period of 60 days would be counted from the date of filing complete information.
- g) For categories 1 A) and 1 B) i.e. for standby and standalone cases, the CPP owner would install an interlocking change over switch of proper rating to avoid parallel operation and damage to the licensee's installations which will be ensured by the licensee concerned.

5.5 For new CPP's of Category II. (Where CPP is proposed to be operated in parallel with the system):

- a) Except co-generation plants or generation from non-conventional energy sources no generating unit of less than 1 MW capacity would be allowed to operate in parallel with the Licensee's system.
- b) Procedure as laid down in para 5.4 (a) to (f) would be followed. In addition, the following conditions for technical interfacing, metering and tariff etc would apply:
- c) Technical interfacing:
 - i. The CPP must comply with the Grid Code and Distribution Code as applicable. All the requirements of these Codes shall be treated as a part of the conditions of the Commission's consent and any violation thereof may entail disconnection of the applicant's installation from the Transmission /Distribution System to which it is connected.

- ii. The synchronisation with the Licensee's system would be at 11KV or higher voltage.
 - iii. The procurement and installation of the equipment required for interfacing with the Licensee's system including transformers, panels, kiosk, protection, metering, inter linking lines from the points of generation to the Licensee's system as well as maintenance will be undertaken by the owner of CPP as per the specifications and technical requirements of the Licensee, at his (CPP's) own cost. Such equipments may include :
 - a) Over current and earth fault relay
 - b) Differential relay for generator protection with no bias
 - c) Over/under voltage relay
 - d) Under frequency relay

If this work is executed by the Licensee, the cost will have to be borne by owners of CPP.
 - iv. In the event of any grid sub-station/line requiring augmentation to absorb the CPP power, this work shall be undertaken by the Licensee at the cost of CPP owner.
 - v. Additional data as per annexure - III would be required to be submitted in case of parallel operation with the Licensee's system.
- d) Sale of excess power to the Licensee:
- i. In case the Generating capacity is in excess of the owner's requirement the surplus energy may be sold to the Transmission & Bulk Supply licensee and/or Distribution & Retail Supply Licensee only with the consent of respective licensee and approval of the Commission.
 - ii. The rates and terms and conditions for the sale of 'excess' power by the CPP owner to the Licensee would be on mutually agreed terms subject to the approval of the Commission.
- e) Wheeling of surplus energy
- i. Wheeling of energy through the licensee's network will be allowed only if third party sale is not involved and subject to technical feasibility and the licensee agreeing to this facility on specific basis.
 - ii. Consumers opting for wheeling would have to make their own arrangements for metering, interfacing and synchronizing with the grid at both ends - i.e. at the dispatcher's as well as the receiver's end.

iii. The wheeling charges will be as per tariff approved by the Commission from time to time.

f) Prohibition of third party sales:-

No CPPs will be allowed to effect sale of surplus electricity to any person other than a licensee.

g) Metering:

The owners of CPP shall have to install two Time Of Day Electronic trivector meters having Import-export registering facility. One meter will be designated as lead meter and the other as trailer. The lead meter will form the basis for accounting of transfer of power under normal conditions. In case of any doubt about the correctness of the lead meter, the trailer meter will be taken as the reference meter for billing purposes.

The meters installed shall be calibrated and tested by the Licensee before installation. The accuracy of meter will be checked once in every six months from the date of installation or earlier, if necessary.

In case of any defect in the metering equipment, replacement will be provided by CPP owner within one month.

5.6 In case of a CPP with generating capacity exceeding 25 MW, final consent/order shall be issued only after consultation with the Central Electricity Authority.

6.0 General

Consent granted under these guidelines would be subject to the following stipulations:

- a) The consent shall be subject to provisions of other laws in force from time to time (viz. the regulations issued by the Chief Electrical Inspector, Department of Environment, State Pollution Control Board and such other instructions issued by the state/Central Government from time to time).
- b) The consent granted above will generally be valid for a period of 10 years from the date of grant of consent. The CPP owner shall apply afresh if he wishes to continue with his installations beyond this period.
- c) Every owner of the CPP with capacity more than 50 KW shall furnish a status report to the Commission by the 30th of April every year indicating the maximum capacity operated, Hours run and Units generated during the preceding year month wise.
- d) Any consent holder intending to close down his Generating station shall inform the Commission at least one month before the date of closure.

- e) If CPP is not commissioned within the periods given below or as mentioned in the consent order, the CPP owner will have to seek extension of time giving reasons for the delay

1	Gas Turbine (open Cycle), permitted Oil/ Gas based generators	24 months
2	Combined cycle Gas based turbines	30 months
3	Steam Turbine CPPs based on Fossil fuel	36 months

To

The Secretary,
Haryana Electricity Regulatory Commission,
S.C.O. 180, Sector – 5, Panchkula,
Haryana - 134109

Application for consent of the Commission to set up a Captive Power Plant

Dear Sir,

The undersigned intends to set up a Captive Power Plant (CPP) to meet his/her/its own requirement of power.

In this regard, the following documents are enclosed herewith for your kind consideration.

1. Salient details of the CPP installations as per Annexure-II together with enclosures listed at the end of Annexure-II.
2. Supporting documents to establish that the Captive Power Plant (CPP) is being set up by us and that we are the owners of this plant.

Note: *If the capacity is more than 25 MW, 3 Nos copies of the DPR would be supplied to the HERC for use by the Central Electricity Authority.*

3. Documents regarding ownership of the unit to be supplied power through CPP.
4. A Demand Draft No. _____ dated ____ for Rs. _____ /- (Rupees _____) drawn in favour of Secretary, HERC, payable at Panchkula.

Kindly convey Commission's consent.

Date:

Place:

Enclosure: as above

Signature

Name

Address

Annexure-II:

Salient Particulars of the Applicant and the CPP installations:

1.	Particulars of the Applicant		
	(a)	Name/s of the applicant	
	(b)	Registered Office Address including telephone number and email address, if any.	
	(c)	Postal Address for Communication including Tel number and email address, if any.	
	(d)	Justification for setting up CPP	
2.	In case the applicant is an existing consumer of the Licensee, the following information be furnished		
	(a)	Consumer number	
	(b)	Type of load ¹	
	(c)	Total connected load in KVA/KW	
	(d)	Contract demand in KVA/KW	
	(e)	Date of release of connection ²	
	(f)	Is the load essentially a continuous process industry or for such other use where supply is required uninterruptedly.	
3	If the applicant is not an existing consumer of the Licensee, the following information be furnished.		
	(a)	Maximum and average demand in KVA./KW	
	(b)	Whether any application has been made to the Licensee for grant of connection. If yes, give details.	
	(c)	If it is not intended to avail power supply from the Licensee, please specify reasons	
4	Location of the Proposed CPP		
	(a)	Location	

¹ Indicate whether domestic, Commercial, Agric or Industrial etc.

² If exact date is not known, approx date, month or even year be mentioned.

	(b)	Name of the Electricity Supply Division and the name of Distribution & Retail Supply Licensee	
5.	General particulars of the proposed CPP		
	(a)	Type of the CPP proposed ³	
	(b)	Capacity in K.V.A./KW unit wise	
	(c)	Generation voltage	
	(d)	Phase(s)	
	(e)	Power Factor	
	(f)	Proposed date of Commissioning	
	(g)	Others technical specifications	
	(h)	Whether adequate arrangements for segregation of load/ provision of change over switch planned/provided ?	
	(i)	Whether separate meter to record reading of units generated by CPP installed ?	
6.	Details of existing CPP, if any⁴		
	(a)	Rated Capacity unit wise	
	(b)	Date of commissioning	
	(c)	Purpose	
	(d)	Enclose copy of the permission letter	
7.	Purpose of application for CPP ⁵		

³ Coal/Gas/Diesel/Naphtha/cCogeneration/Hydro/Others (specify)

⁴ In case of existing generating stations or where extension in the installed capacity is proposed.

⁵ Indicate whether:

Generating Station to run in isolation i.e. in stand alone mode and will not require power supply from the Licensee at any time

Or

Generating Station to run in isolation i.e. in stand alone mode and may require emergency power supply from the Licensee for start up purpose

Or

Stand-by set to run in emergency only with no parallel operation with the System

Or

Generating Station to run in parallel with the System

Or

Any other purpose (Please specify)

**Additional Data required
in case of CPP proposed to operate in parallel with the grid.**

1. Generator Data.
 - (a) Direct axis, sub-transient reactance of each machine separately (positive, negative and zero sequence)
 - (b) Q-axis, sub-transient reactance of each machine separately (positive, negative and zero sequence)
 - (c) Generator capability curve (active- reactive power capability)
2. Step-up Transformer data
 - a) Number of transformers.
 - b) Voltage ratio
 - c) Vector Group of each transformer
 - d) Grounding details of neutral
 - e) Capacity in MVA
 - f) Percentage impedance of each transformer on its own base
 - g) On- load/ Off- load tap changer details
3. Inter- connection arrangement with the Grid
 - a) Length and number of circuits. Conductor size of the line connecting DG set with the licensee's sub-station switchyard.
 - b) In case of loop-in & loop-out arrangements, length of each section with conductor size and number of circuits
 - c) Line parameters ($R1$, $X1$, $R0$, $X0$, $B/2$ of each circuit)
 - d) Equipment short circuit rating capacity
 - e) Inter-connection arrangement with licensee's system as agreed and terms and conditions including any mandatory requirements under Grid Code.
4. Status of procurement of generating sets and other equipment.
 - a) Stage of purchase and / or delivery and installation.
 - b) For new purchases (underway) certificate assuring the licensee that data variation will be within 5% tolerance limit.