

Government of India
Ministry of Power

ULTRA MEGA POWER PROJECTS

1. Background

1.1. For meeting the growing needs of the economy, generation capacity is to double itself in every ten years in next three decades at least. As such there is need to develop large capacity projects at the national level to meet the requirement of different States. Development of Ultra Mega Power Projects (UMPPs) is one step in that direction. These are very large sized projects, approximately 4000 MW each involving an estimated investment of about 25,000 crore. The projects will substantially reduce power shortages in the country. The Central Government has accordingly taken the initiative for facilitating the development of a few Ultra Mega Power Projects of about 4,000 MW capacity each under tariff based competitive bidding route using super critical technology on build, own and operate basis.

1.2. These projects will meet the power needs of a number of States/ distribution companies located in these States, and are being developed on Design, Build, Finance, Operate and Transfer (DBFOT) basis. In view of the fact that promotion of competition is one of the key objectives of the Electricity Act, 2003, and of the legal provisions regarding procurement of electricity by distribution companies, identification of the project developer for these projects is being done on the basis of tariff based competitive bidding.

2. Salient features of the Plant and Choice of Technology

- The Ultra Mega Power Projects would use Super Critical Technology with a view to achieve higher levels of fuel efficiency, which results in fuel saving and lower greenhouse gas emissions.
- Flexibility in unit size subject to adoption of specified minimum Supercritical parameters.
- Integrated power project with dedicated captive coal blocks for pithead projects.
- Coastal projects to use imported coal.

3. The Bidding Process

3.1. For these projects, as per the provisions of the competitive bidding guidelines, a two stage selection process has been adopted. The first stage of bidding involves Request for Qualification (RfQ) containing qualifying criteria for selection of bidders. The RfQ documents submitted by the bidders are evaluated to identify those bidders who will be

eligible to participate in the second stage of the process. The second stage of the bidding process invites Request for Proposals (RfP) from the bidders so qualified. After evaluation of the RfP documents, the successful bidder is identified on the basis of the lowest levelled tariff.

4. Selection of Sites for Setting up of UMPPs

4.1. Originally nine such projects had been identified to be taken up, 4 at pithead and 5 at coastal locations. Later few more sites are identified on the requests of the State Governments. CEA/ PFC examine the suitability of location in consultation with the States.

5. Role of the Ministry of Power

5.1. The Ministry of Power is playing a crucial role for the development of the UMPPs by coordinating between various concerned Ministries/Agencies of the Central Government, and with various State Governments/Agencies. Some of the key areas requiring the Ministry of Power's intervention include –

- Coordination with Central Ministries/Agencies for ensuring:
 - Coal block allotment/coal linkage
 - Environment/forest clearances
 - Water linkage
- Required support from State Governments and their agencies.
- Working out allocation of power to different States from UMPPs in consultation with the States.
- Facilitating PPA and proper payment security mechanism with State Governments/State Utilities.
- Monitoring the progress of Shell companies with respect to predetermined timelines.

6. Concept of Special Purpose Vehicles (SPVs)

6.1. As mentioned above, competitive bidding guidelines have been issued under the Electricity Act for procurement of power by distribution licencees. These guidelines permit the procurement of electricity by more than one distribution licencee (also known as a procurer) through a combined bid process, and in such a case the procurers shall have the option to conduct the bid process through an authorised representative. The concept of “Authorised Representative” forms part of the standard bidding documents (issued under the competitive bidding guidelines) and the authorised representative is defined as the corporate body authorised by the procurers to carry out the bid process for the selection of the successful bidder on their behalf.

6.2. Accordingly, PFC – the nodal agency for the development of these projects –sets up separate Special Purpose Vehicles (SPVs) for each UMPPs to act as authorized representatives of the procurers (distribution companies of the power procuring States). These SPVs are 100% owned subsidiaries of the PFC.

6.3 The Boards of the SPVs are chaired by a Director of the PFC; their other members are officials of the PFC, and representatives of the distribution companies of the major power procuring States who are inducted on the Boards at the appropriate stage. On completion of the entire process for selection of the project developer, the SPVs are to be transferred to the selected bidders i.e. to the selected project developers.

7. Role of SPVs

7.1. The SPVs are responsible for carrying out various activities on behalf of the procurers. Completion of these activities prior to award of the project is considered necessary to enhance the investor's confidence, reduce risk perception and get a good response to the competitive bidding process. Some of the main activities undertaken by the SPVs are:-

- Appointment of Consultants to undertake preparation of Project Report, preparation of Rapid Environment Impact Assessment Report etc.
- Appointment of Consultants for International Competitive Bidding (ICB), document preparation & evaluation
- To carry out bidding process and award of project
- Initiation of land acquisition process for the project
- Allocation of Coal blocks for pit-head projects
- Getting clearance regarding allocation of water by the State Govt. for pithead locations
- Approval for use of sea water from Maritime Board/ other Govt. Agencies for coastal locations
- Obtain clearance from the State Pollution Control Board, initiate forest clearance etc. as are required for the project and for the coal mines, followed by environment and forest clearances from the Central Government.
- Obtaining geological reports/ other related data from CMPDI for the coal blocks.
- Tie up the off-take/ sale of power

8. Role of States

8.1. States hosting the UMPPs and the other power procuring States are playing a proactive role. In particular, some of the activities in which the concerned States play a decisive role include implementation of the Rehabilitation & Resettlement Plan, provide authorization to the PFC/SPV to carry out the bidding process on behalf of the distribution utilities, participate through its representatives in various committees set up for undertaking the competitive bidding process, facilitate signing of the Power Purchase Agreement, ensure proper payment security mechanism with the distribution utilities etc.

9. Status of awarded Projects

9.1. Four UMPPs namely Sasan in Madhya Pradesh, Mundra in Gujarat, Krishnapatnam in Andhra Pradesh and Tilaiya in Jharkhand have already been awarded to the successful bidders and are at different state of development. Mundra UMPP is fully commissioned and is generating electricity. Four units of Sasan UMPP (4x660 MW) have been commissioned and one unit (660 MW) has been synchronized so far. The remaining units of Sasan and other awarded UMPPs are expected in 12th Plan (except last unit of Tilaiya UMPP, which is likely to come in 13th Plan.)

A brief details of these projects are as below:

Sl.	Name of UMPP	Type	Date of Transfer	Levelling Tariff (in Rs. Per kWh)	Successful developer
1	Mundra, Gujarat	Coastal	23.04.2007	2.264	Tata Power Ltd.
2	Sasan, Madhya Pradesh	Pithead	07.08.2007	1.196	Reliance Power Ltd.
3	Krishnapatnam, Andhra Pradesh	Coastal	29.01.2008	2.333	Reliance Power Ltd.
4	Tilaiya, Jharkhand	Pithead	7.8.2009	1.77	Reliance Power Ltd.

10. Fresh bidding for two UMPPs namely Bedabahal in Odisha and Cheyyur in Tamil Nadu is expected to come in 2015-16.

10.1 RfQ for 4000 MW Chhattisgarh UMPP issued on 15.3.2010 has been withdrawn as the captive coal blocks of the UMPP are in inviolate areas. RfQ for the project to be

issued afresh on the revised SBDs only on clearance of coal blocks allocated to Chhattisgarh UMPP or allocation of new coal blocks.

11. Projects in pipeline

- 11.1 A site at Husainabad, Deoghar Distt has been identified for setting up of 2nd UMPP in Jharkhand.
- 11.2 A site at Bijoypatna in Chandbali Tehsil of Bhadrak District for coastal location and another site at Narla&Kasinga sub division of Kalahandi District for inland location have been identified for setting up of additional UMPPs in Odisha.
- 11.3 A site at Kakwara in Banka Distt has been identified for setting up of UMPP in Bihar.
- 11.4 A site at Niddodi village in Karnataka has been identified for UMPP by CEA and Govt. of Karnataka.
- 11.5 The sites in Tamil Nadu and Gujarat for their second UMPPs and site in Uttar Pradesh are being examined by CEA/PFC.