

**Government of India  
Ministry of Power**

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**ULTRA MEGA POWER PROJECTS**

**1.0 Background**

1.1 Development of Ultra Mega Power Projects (UMPPs) has been identified as a thrust area. These are very large sized projects, approximately 4000 MW each involving an estimated investment of about Rs. 16,000 crore. These projects will meet the power needs of a number of States/ distribution companies located in these States, and are being developed on a Build, Own, and Operate (BOO) 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. Guidelines for determination of tariff for procurement of power by distribution licencees have been notified in January 2005 under the provisions of the Electricity Act, 2003. The Power Finance Corporation (PFC), a PSU under the Ministry of Power, has been identified as the nodal agency for this initiative.

**1.2 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 saving of fuel and lower green-house 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.

**The Bidding Process**

1.3 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 levellised tariff.

## **Selection of Sites for Setting up of UMPPs**

1.4.1 Nine such projects had been identified to be taken up, 4 at pithead and 5 at coastal locations. The nine sites for the UMPPs identified by the Central Electricity Authority (CEA) in consultation with the States are as follows:-

I. Five coastal sites at:- Mundra in Gujarat, Krishnapatnam in Andhra Pradesh, Tadri in Karnataka, Girye in Maharashtra, and Cheyyur in Tamil Nadu.

II. Four pithead sites at :- Sasan in Madhya Pradesh, Tilaiya in Jharkhand, Sundergarh District in Orissa and Akaltara in Chhattisgarh.

1.4.2 In addition Tamil Nadu has identified additional site at Marakanam. Further, more Karnataka has also suggested an additional site at Ghataprabha in Belgaum District. The Central Electricity Authority is examining the preliminary feasibility of these sites for development of UMPPs.

1.5 **Role of the Ministry of Power** :- 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.

## 2. **Concept of Special Purpose Vehicles (SPVs)**

2.1 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. Accordingly, PFC has set up separate Special Purpose Vehicles (SPVs) for each of the 9 UMPPs identified so far to act as authorized representatives of the procurers (distribution companies of the power procuring States). These SPVs are 100% owned subsidiaries of the PFC. The names of the SPVs are:-

- (i) Sasan Power Limited for the project at Sasan, Madhya Pradesh.
- (ii) Coastal Gujarat Power Limited for the project at Mundra (Gujarat).
- (iii) Coastal Karnataka Power Limited for the project at Tadri, Karnataka.
- (iv) Coastal Andhra Power Limited for the project at Krishnapatnam, Andhra Pradesh.
- (v) Coastal Tamil Nadu Power Limited for the project at Cheyyur in Tamil Nadu.
- (vi) Coastal Maharashtra Mega Power Limited for the project at Girye, Maharashtra.
- (vii) Orissa Integrated Power Limited for the project in Sundergarh District in Orissa.
- (viii) Jharkhand Integrated Power Limited for the project near Tilaiya dam, in Jharkhand.
- (ix) Akaltara Power Limited for the project at Akaltara in Chhattisgarh.

2.2 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.

### 3. **Role of SPVs**

3.1 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 finalise RfQ/ RfP documents in consultation with States / bidders
- To carry out RfQ/ RfP process and award of project

- Acquisition of land for the project
- Obtaining Coal blocks for pit-head projects
- Getting clearance regarding allocation of water by the State Govt. for pit-head 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

#### 4. **Role of States**

4.1 States hosting the UMPPs and the other power procuring States are playing a pro-active 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.

#### 5. **Status of Projects**

##### 5.1 **UMPP at Mundra in Gujarat**

5.1.1 Mundra in Gujarat is one of the coastal sites. Based on the competitive bidding procedure, M/s. Tata Power Company Ltd. was identified as the project developer as it had quoted the lowest levellised tariff of Rs. 2.26 per kilo watt hour.

5.1.2 The Special Purpose Vehicle i.e. Coastal Gujarat Power Limited (CGPL) which had been set up for the project has been transferred to the developer, and further development work will be undertaken by the developer.

##### 5.1.3 **Commissioning Schedule**

5.1.3.1 The Power Purchase Agreement (PPA) was signed on 22.4.2007 with M/s Tata Power Co. Ltd. As per this PPA, M/s. Tata Power has, for the five units of 800 MW each indicated by it, intimated the commissioning schedule as set out in column 2 of the table below, based on which the commissioning dates would work out to be as given in column 3: -

Unit No.	Months from PPA signing	Scheduled COD as worked out based on date of signing of PPA
1	64	22.8.2012
2	70	22.2.2013
3	76	22.8.2013
4	82	22.2.2014
5	88	22.8.2014

5.1.3.2 Project developer has an option under the PPA to advance the above commissioning schedule.

## 5.2 UMPP at Sasan in Madhya Pradesh

5.2.1 Although the RfP bids had been received earlier, and the Letter of Intent had also been issued, however, transfer of Special Purpose Vehicle (SPV) remained on hold due to certain legal and contractual issues.

5.2.2 Subsequently, Sasan Power Limited (SPL) received revised offers from the valid bidders, of which the bid of M/s. Reliance Power Limited, offering a levelled tariff of Rs.1.19616 per kilo watt hour was the lowest. SPL issued the Letter of Intent to M/s. Reliance Power Limited on 1st August, 2007, and has thereafter carried out the necessary documentation on 7th August, 2007 for the transfer to them of the Special Purpose Vehicle, Sasan Power Limited which had been set up for the Sasan UMPP. Power Purchase Agreement (PPA) was signed on 7.8.2007.

5.2.3 **COMMISSIONING SCHEDULE:** The Power Purchase Agreement (PPA) has been signed on 7.8.2007. M/s Reliance Power Ltd., the lowest evaluated bidder, has quoted six units of 660 MW each proposed to be commissioned as per following schedule:

Unit No.	Months from PPA signing	Scheduled COD as worked out based on date of signing of PPA
1	69	06.05.2013
2	76	06.12.2013
3	83	06.07.2014
4	90	06.02.2015
5	97	06.09.2015
6	104	06.04.2016

5.2.4 Project developer has an option under the PPA to advance the above commissioning schedule.

## 5.3 UMPP at Krishnapatnam in Andhra Pradesh

5.3.1 The RfQ stage is over and the RfP documents were issued to 13 qualified bidders.

5.3.2 The following major activities have been initiated/ clearances are available:-

- Total land required for the project is about 2600 acres (for the main plant and ash dyke). The land acquisition process has been initiated.
- The Coastal Regulation Zone clearance is available.
- The Krishnapatnam port is being developed by Government of AP through a private agency for handling coal.
- Mega status to the project has been accorded.
- Rehabilitation and resettlement package has been finalized.
- State forest clearance has been obtained.
- Power Purchase Agreement has been signed.

5.3.3 Submission of RfP documents by the qualified bidders is expected in November, 2007.

#### 5.4 **UMPP near Tilaiya dam, Jharkhand**

5.4.1 The following major activities have been initiated/ clearances are available:-

- Site has been identified by Central Electricity Authority in consultation with the State.
- The State Govt. had also confirmed the availability of land and water for the project. Total land required for the main plant & ash dyke is about 3000 acres. The land acquisition process has been initiated.
- Coal blocks have been allocated.
- Water availability has been confirmed.

5.4.2 RfQ was initially invited on 1<sup>st</sup> February, 2007. In response 10 bidders submitted the RfQ document. However, to bring more clarity in the bidding process, some changes have been carried out in the bidding documents. Based on the revised documentation, bidding process will be carried further by the Special Purpose Vehicle i.e. Jharkhand Integrated Power Limited. New RfQ document was issued on 25<sup>th</sup> September, 2007.

### **6. Status of other UMPPs**

#### **6.1 UMPP in Sundergarh district in Orissa**

The status of activities is as follows :-

- CEA had identified Bedabahal in Sundergarh district as the proposed site.
- However, the bidding process could not be initiated due to the demand of the State Government for creation of an Environment fund. Now on 14<sup>th</sup> March, 2007 the State Government has agreed not to insist on any pre-conditions.

- Coal Blocks of Meenakshi, Meenakshi-B & Meenakshi dipside in Ib Valley have been allocated by the Ministry of Coal. A request has also been made to the Ministry of Coal for allocation of Chaturdhara coal block.
- Government of Orissa has initiated a study through IDCO for identification of the site. It is understood that IDCO has submitted its report on 28.7.07. Intimation from the State Government is awaited. The matter is being pursued with the State Government.
- The allocation of 150 cusecs of water from Hirakud reservoir or other viable alternate source for the UMPP is another area on which confirmation from the State Government is still awaited. The matter is being pursued with the State Government.

The bidding process will be initiated after availability of a suitable site is confirmed by the State Government.

## **6.2 UMPP at Cheyyur in Tamil Nadu**

Keeping the locational advantage in view, Central Electricity Authority had identified Cheyyur as a potential site for development of Ultra Mega Power Project. However, State Government was initially insisted to select the site at Nagapattinam for setting up of UMPP. Now, during a function held at Vallur on 5<sup>th</sup> September, 2007, Minister of Electricity Tamil Nadu conveyed the decision to the Union Power Minister regarding approval of Cheyyur site for development of an UMPP there. On the same occasion, the Union Power Minister had agreed to the request of the Minister of Electricity, Tamil Nadu for the setting up of a second UMPP at Marakanam. Ministry of Power has written to Government of Tamil Nadu to forward the formal communication along with necessary clearances with regard to Cheyyur site so that necessary steps could be taken for initiating the bidding process. For the second UMPP at Marakanam Central Electricity Authority has been asked to initiate the preliminary study to establish the feasibility.

## **6.3 UMPP at Girye in Maharashtra**

CEA had identified the site in consultation with the State Government. About 3000 acres of land had been identified near villages Tirlot/ Saundle/ Padel in Taluka Deogarh, Distt. Sindhudurg. However, due to local agitation, requisite clearances for the land are not available. Therefore, the bidding process has not been initiated. Ministry of Power has taken up the matter with the State Government for suggesting an alternate/ additional site. In a recent communication, the State Government has indicated the availability of additional site at Dighi. However, the Central Electricity Authority, after carrying out the preliminary investigations has suggested that owing to limited availability of land, the site may not be suitable for development of the UMPP for 4000 MW. Final position from the State Government is awaited.

The bidding process will be initiated after availability of a suitable site is confirmed by the State Government.

#### **6.4 UMPP at Tadri in Karnataka**

CEA had identified the site at Tadri in consultation with the State Government. However, due to local agitation, requisite clearances for the land are not available. Though an Expert Committee was also constituted by the State Government in May 2006 to resolve local environmental issues, the matter remains unresolved as yet. Therefore, the bidding process could not be initiated so far. In a recent communication dated 6<sup>th</sup> September, 2007, Government of Karnataka has requested to establish an UMPP at Ghataprabha site in Belgaum District. This site is near the Hidkal reservoir on Ghataprabha river. Matter is under examination.

#### **6.5 UMPP at Akaltara in Chhattisgarh**

Though the site had been identified by CEA in consultation with the State Government, the bidding process could not however be initiated in the absence of clearance by the State Government as it was insisting that a portion of the power generated by the project be given to it at a variable cost. This is not possible in the envisaged scheme. The bidding process will accordingly be initiated after the State Government conveys the site clearance.

During the course of the discussion held between Secretary (P) and Pr. Secy. (Power), Chhattisgarh on 7<sup>th</sup> August, 2007, it emerged that the Government of Chhattisgarh is agreeable to extend full support to the proposed UMPP at Akaltara for its early implementation, provided substantial share from the proposed project is allocated to Chhattisgarh. According to the practice adopted for allocation of power from the UMPPs, substantial share has been offered to the host States. Accordingly, Ministry of Power is agreeable to allocate upto 50% of contracted power and has communicated the same to the State Government on 6<sup>th</sup> September, 2007. Ministry of Power has requested the State Government to put the Akaltara UMPP on a fast mode of execution.

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