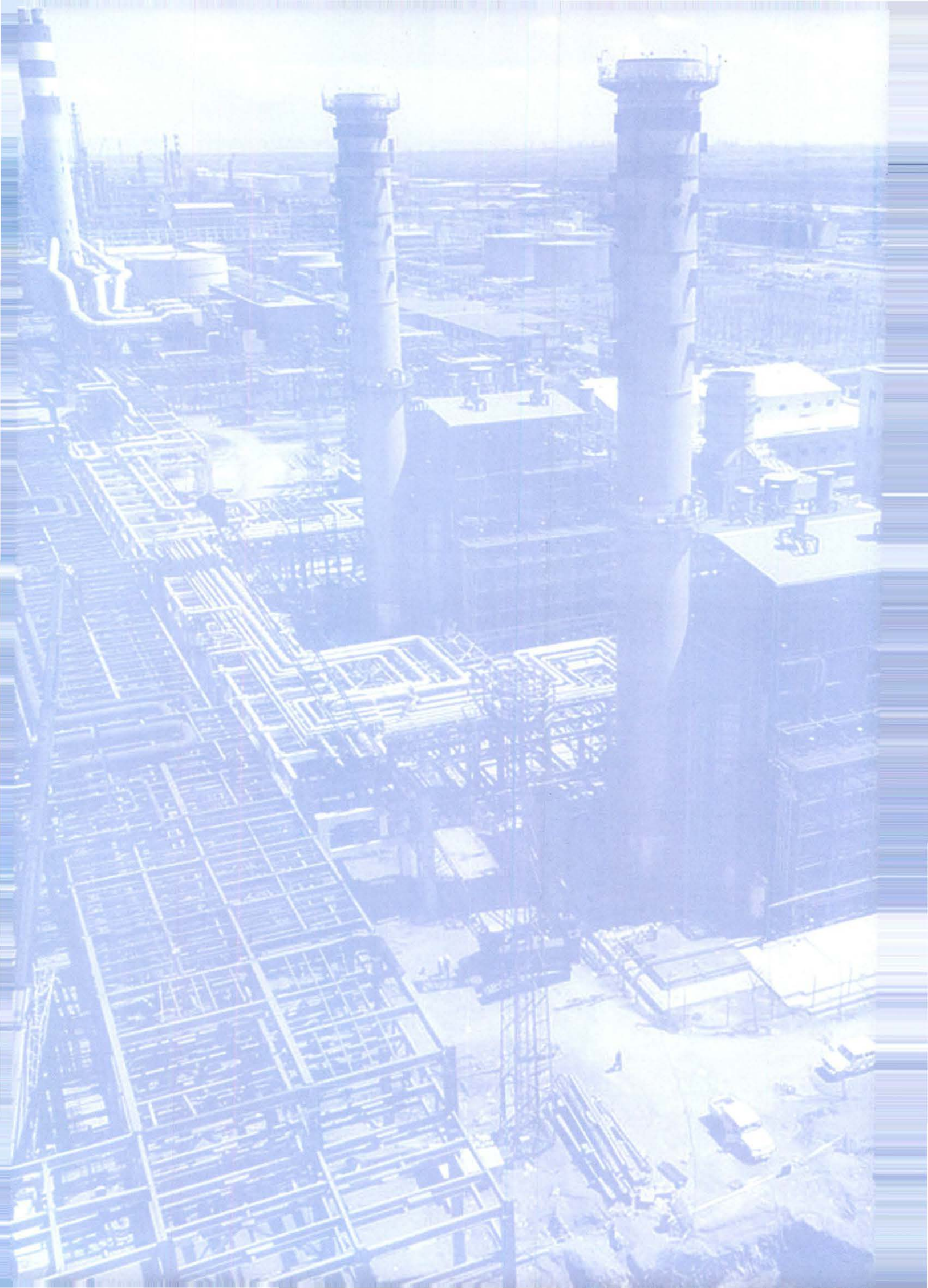


**Report of the
Comptroller and Auditor General of India
on
Ultra Mega Power Projects under
Special Purpose Vehicles**

for the year ended March 2012

**Union Government
Ministry of Power
Report No. 6 of 2012-13
(Performance Audit)**



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Preface

The Audit Report has been prepared for submission to the President of India under Article 151 of the Constitution of India.

The Report contains the results of the Performance Audit of 'Ultra Mega Power Projects under Special Purpose Vehicles' with focus on the effectiveness and transparency in award of Ultra Mega Power Projects (UMPPs) to the Developers. Ministry of Power (MOP) prescribed the Special Purpose Vehicle route and designated Power Finance Corporation Limited (PFC), a financial institution under the administrative control of MOP, as the Nodal Agency to carry out preliminary activities and undertake the bidding process for identifying the Project Developer. The first audit was conducted during January 2009 to September 2009 and the significant issues, based on the audit of records of Ministry of Power and Power Finance Corporation Limited, were flagged to the Management as well as the Ministry of Power. Since Empowered Group of Ministers (EGOM) was constituted to take crucial decisions concerning UMPPs, audit was again conducted in MOP/PFC wherein action taken by Management/MOP (including EGOM) on the issues pertaining to four awarded UMPPs was examined in August – September 2011. The draft Report was issued to the Ministry of Power, in October-November 2011. The Report has been finalised after considering the response of the Ministry received in December 2011, January 2012 and March 2012 and the views expressed during the Exit Conferences held in February and March 2012.

Audit wishes to acknowledge the cooperation received from Power Finance Corporation Limited and the Ministry of Power at each stage of the audit process.



Executive Summary

1. Background

Energy is one of the most critical components of infrastructure that determines the economic development of a country. The growth rate of demand for power is generally higher than the GDP growth rate. The XI Five Year Plan emphasized the need for removing infrastructure bottlenecks for sustained growth and proposed an investment of around ₹ 21 lakh crore in infrastructure sectors. Considering the magnitude of expansion the power sector required, Government of India (GOI) decided (November 2005) to develop Ultra Mega Power Projects (UMPPs)¹, each with a projected capacity of around 4000 MW and cost of ₹ 16,000-20,000 crore. Ministry of Power (MOP) designated (November 2005) Power Finance Corporation Limited (PFC) as the nodal agency for the purpose of development of UMPPs through Special Purpose Vehicles (SPVs).

2. Status of Ultra Mega Power Projects

Out of 16 UMPPs identified so far (March 2012), PFC floated 12 SPVs as its wholly owned subsidiaries for development of UMPPs. The main activities undertaken by the SPVs are appointment of consultants, preparation of bid documents, evaluation of bids and award of projects, acquisition of land, fuel tie-up and obtaining various statutory clearances.

SPVs invited bids for six UMPPs during March 2006 to March 2012 and awarded four UMPPs, viz. Sasan in Madhya Pradesh, Mundra in Gujarat, Krishnapatnam in Andhra Pradesh, and Tilaiya in Jharkhand to the identified Developers. The remaining eight UMPPs are yet to be awarded. One unit of 800 MW of the Mundra UMPP was commissioned in February 2012.

¹ *UMPP is an ultra mega power project using supercritical technology having a capacity of around 4000 MW and is developed on Build, Own and Operate (BOO) basis.*

3. Process of Selection of Project Developers for UMPPs

For selection of Project Developers two stage bidding was adopted. In the first stage called 'Request for Qualification' (RFQ), the bidders satisfying the minimum technical and financial criteria were shortlisted. The bidders successful in the first stage were eligible to participate in the next stage called 'Request for Proposal' (RFP) and were required to quote the tariff for 25 years from the Scheduled Commercial Operation Date of the concerned UMPPs.

After evaluation of bids jointly with professional consultants (M/s Ernst & Young), four UMPPs viz. Sasan, Mundra, Krishnapatnam and Talaiya were awarded to prospective Developers at lowest levelised tariff², which ranged between ₹ 1.196 and ₹ 2.333 per unit of electricity.

4. Audit scope and objectives

The concept of UMPPs was conceived by MOP in 2005 in the backdrop of growing demand for power. To address the deficit, a need was felt for development of large capacities in power sector in India and to bring in potential private investors for developing such projects at a stage having major clearances, fuel tie-up and sale of power agreements in place. The UMPPs would meet the power needs of a number of states/distribution companies located in the states and were to be developed on a Build, Own and Operate (BOO) basis through creation of "Shell" companies³. Each UMPP was projected to have a capacity of around 4,000 MW with cost ranging between ₹ 16,000 - 20,000 crore per project.

Audit was conducted to obtain a reasonable assurance on the competitiveness of the Standard Bidding Documents, bidding process and to assess whether selection of the Project Developers/consultants was done with objectivity and in a transparent manner and whether land was acquired and captive coal blocks were allocated to the Developers as per their optimum requirement.

Audit commenced (January 2009) with Entry Conference with PFC and was completed in September 2009. The significant issues noticed during the audit were flagged to PFC and MOP in June 2010 and August 2010 respectively. An Empowered Group of Ministers (EGOM)⁴ was constituted to take all major decisions concerning

² *Tariff consists of escalable and non-escalable components. While levelised tariff to identify the lowest bidder was calculated on the basis of escalation rates notified by CERC for bid evaluation purpose as per the trend of last twelve year data, payment of tariff to the Developer would be made at the actual escalation rates notified by CERC twice a year based on previous years' data.*

³ *It is a company which serves as a vehicle for business transactions without itself having any significant assets or operations.*

⁴ *Constituted (June 2007) to expedite the decision making process for UMPPs.*

UMPPs including coal linkage. Since a very important role was played by MOP in this, audit was again conducted in August–September 2011 to assess the action taken by the Management/MOP (including EGOM) on the issues flagged to them. The draft report was issued to MOP in October–November 2011 and their response was received in December 2011/January 2012. The Exit conference with the Ministry and Management of PFC was held in February 2012. After incorporating the views of the Ministry, the draft Audit report was again issued to MOP in March 2012. This was followed by another Exit conference in March 2012.

This Audit Report has been finalized after incorporating the views of MOP.

5. Major Audit Findings

5.1 Appointment of bid process management consultant

Though the lowest bidder (M/s ICRA) was declared technically qualified for the consultancy assignments for two UMPPs (Sasan and Mundra) by the bid evaluation committee, their bid was not considered and the contract was awarded at a higher price to M/s Ernst & Young (M/s E & Y), on the ground that they had advised on bid process management of a power project in Bangladesh. M/s. E&Y was also awarded the consultancy assignment for Krishnapatnam UMPP. The consultancy work for Tilaiya Project was also awarded to M/s. E&Y without inviting bids. Thus, principle of equity in public procurement laid down in the General Financial Rules of the GOI was not followed while awarding consultancy assignments to M/s E&Y. Later, PFC debarred them for three years for their lapses in bid evaluation.

(Para 3.2)

5.2 Bid Documentation

Audit observed that the Bid Documents used for calling bids in respect of UMPPs awarded were not vetted by the Department of Legal Affairs. Further, softening of the following conditions in the Standard Bidding Documents (SBDs) was carried out by MOP from time to time based on feedback received from the bidders and recommendation of PFC.

(Para 3.3)

5.2.1 Change in equity holding requirement of Parent/Affiliate

As per the bid criteria, a bidding company could take 100 per cent benefit of the technical and financial capability of a Parent or its Affiliates for the purpose of qualification. As per the initial bid document issued in March 2006, the equity holding requirement of such Parent/Affiliate in the bidding company was 51 per cent but after pre-bid conference with bidders, the equity holding requirement was

scaled down from 51 per cent to 26 per cent in May 2006. The change which was made based on feedback from bidders and advice of the consultant M/s. E & Y violated the basic principle of 'ownership' and 'control' given in Accounting Standard Interpretation (ASI) 24 issued by the Institute of the Chartered Accountants of India. ASI 24 defines 'control' as 'the ownership, directly or indirectly through subsidiary(ies), of more than one-half of the voting power of an enterprise or control of the composition of the Board of Directors in the case of a company so as to obtain economic benefits from its activities'. Model RFQ document of Government of India for PPP projects also prescribes more than 50 per cent shareholding as the criteria.

{Para 3.3.1(i)}

5.2.2 Reduction of Normative Availability and Penalty

The normative availability⁵ for UMPPs was reduced from 85 per cent to 80 per cent on the suggestion of PFC. For the levy of penalty, the base was reduced from 80 per cent to 75 per cent before receiving financial bids. Audit observed that since the UMPPs were meant to have higher operational efficiency, this reduction in normative availability and penalty base was not in the interest of operational efficiency of UMPPs.

{Para 3.3.1(ii)}

5.2.3 Dilution of equity lock-in requirements for the sponsoring entity

Equity lock-in requirement for the selected bidder in the SPV was reduced from 12 years from Commercial Operation Date (COD) to 5 years for Krishnapatnam and Tilaiya UMPPs after award of Sasan and Mundra UMPPs. In addition, in all the 4 UMPPs the Developers were permitted to cede managerial control (i.e. equity holding can be reduced from 51 per cent to 26 percent) after two years of commercial operation, even though the quoted tariff was valid for 25 years.

Allowing the Developers to cede management control after 5 years of the COD may not be advisable since adequate backing of the sponsoring entity would be lacking for the SPVs during the major part of the operational period. Moreover, this may not also provide a safeguard against the Developer using substandard capital equipment which may breakdown frequently during the operational period after control is ceded.

{Para 3.3.1(iii)}

5.2.4 Lower net worth requirement for bidders

Minimum net worth of ₹ 1,000 crore (which is 5 per cent of ₹ 20,000 crore being the project cost) prescribed in the bid documents of all four UMPPs was on lower side

⁵ *Availability means the quantum of time that a power plant is able to produce electricity over a certain period divided by the amount of time in the period.*

when compared to minimum net worth requirement of 15 per cent fixed by Ministry of Finance for PPP project costing ₹ 1,000 crore or more. Audit is of the opinion that fixing low net worth criteria involves unwarranted risk for the UMPPs.

(Para 3.3.2)

6. Gaps in Bid Evaluation

As per the minimum technical qualifying criteria stipulated in RFQ document, the Bidding Company or a Consortium Member (including Lead Member) and Affiliate must meet technical requirement of having experience of developing projects in the last 10 years whose aggregate capital costs must not be less than ₹ 3,000 crore. Out of these projects, the capital cost of at least one project should be equivalent to or more than ₹ 500 crore.

Audit observed that in all the three UMPPs which were awarded to the Project Developer, Reliance Power Limited (RPL), they claimed having experience of developing projects based on additions to the fixed assets (₹ 3,123.88 crore for Sasan & Mundra, ₹ 2,137.49 crore for Krishnapatnam and ₹ 2,254.61 crore for Tilaiya UMPPs) during the last 10 years despite the fact that only capital cost of projects commissioned during the last 10 years was eligible to be counted for project experience.

{Para 4.2(i)}

7. Excess acquisition of land

Central Electricity Authority finalized its report on land requirements for thermal plants in December 2007. Audit noticed that when compared to these new norms, land agreed for Mundra and Krishnapatnam was in excess by 1538 acres and 1096 acres respectively. EGOM allowed the excess land to be retained by the Developers instead of utilizing the same for other 'Public purpose.'

The excess value inherent in the extra land allocated should be suitably monitored in the interest of the State and the power consumers.

(Para 4.3)

8. Financial benefit to Project Developer

Three coal blocks viz. Moher, Moher-Amlohri Extension and Chhatrasal were allocated to Sasan UMPP to meet its coal requirement of 16 Million Tonne per annum. In November 2007, Chief Minister of Madhya Pradesh requested the Prime Minister, to allow RPL to use the surplus coal from the captive blocks of Sasan UMPP in the power plant being set up by RPL at Chitrangi tehsil in the vicinity of these

mines. The matter was referred to EGOM and the issue was deliberated in the two EGOM meetings held on 28 May 2008 and 14 August 2008. EGOM recommended that RPL be allowed to use the surplus coal from blocks allotted to Sasan UMPP for its other projects where power was sold through tariff based bidding. Accordingly, the permission was accorded.

While this decision resulted in financial benefit of ₹29,033 crore with a net present value (NPV) of ₹11,852 crore to the Project Developer, a detailed analysis of the chronology of events which took place in granting permission for use of surplus coal at Chitrangi Project from the coal blocks allocated for Sasan Project, also revealed as under:

(a) Allocation of surplus coal

- (i) It is not clear how MOP on 9 October 2006 came to the conclusion that the two initially allocated blocks for the Sasan UMPP would be inadequate.
- (ii) The basis on which MOC was prevailed upon in October 2006 itself to allot an additional block (Chhatrasal) of coal to Sasan UMPP by de-allocating it from the Public Sector NTPC is not clear.
- (iii) Till March 2009, MOC was taking the stand that coal from two blocks (Moher and Moher-Amlohri Extension) was sufficient for the Sasan UMPP and that there is no justification for allocating a third block (Chhatrasal) to the Developer.
- (iv) In March 2008, RPL maintained that there was no possibility to enhance production beyond 12 million tonne from the two blocks of Moher and Moher-Amlohri Extension.
- (v) However, on 6 August 2008, RPL intimated of their intention to use latest world class technology leading to increased recovery factor and higher annual production leading to the mined coal from these three blocks becoming surplus to the requirement of Sasan UMPP.
- (vi) This indeed was the position which the Chief Minister of Madhya Pradesh was aware of when he wrote to the Prime Minister in November 2007 itself seeking diversion of the surplus coal to Chitrangi.
- (vii) This revelation by RPL, provided to the EGOM in its meeting on 14 August 2008, led to their deciding that indeed surplus coal would be available and this could be diverted to other projects.

(b) Vitiating of the Bidding Process

The permission to use surplus coal in other projects of the Developer vitiated the sanctity of the bidding process since it amounts to post bid concessions to the Developer having significant financial implication as explained below:

- The EGOM in its meeting held on 28 May 2008 had sought information about structure in respect of ownership, mode of sale of power and tariff of Chitrangi Project. However, without getting this information from Madhya Pradesh Government, EGOM recommended (14 August 2008) granting of permission for usage of incremental coal.
- EGOM in its meeting held on 14 August 2008 had recommended that power generated by utilizing incremental coal from captive coal blocks of Sasan UMPP **would be sold through tariff based competitive bidding**. But RPL was granted permission by MOC (February 2010) to use the surplus coal in Chitrangi Project **the tariff of which was already accepted in May 2008 at ₹2.45 per unit i.e. prior to the EGOM decision on usage of surplus coal for Chitrangi Project**. For this purpose RPL had bid along with other bidders citing independent fuel arrangement (from Mahanadi Coalfields Limited/112.22 million tonne of coal reserves in the Rampia and dip-side of Rampia non-coking coal blocks in the state of Odisha).
- The clauses of the coal allocation letter do not explicitly state that Central Government would indeed grant permission to the Developer to use the surplus coal in their other projects. This fact was not disclosed upfront in the allocation letters and in the absence of clarity on this issue, it was left to the bidders to interpret the implication of the clauses of allocation letter. The relevant clauses in the allocation letter are reproduced below:

‘The coal produced from these mines would be exclusively used in the Sasan UMPP’- Clause (i).

‘The modalities of disposal of surplus coal/middlings/rejects, if any, would be as per the prevailing policy/instructions of the Government at the relevant point in time and could also include handing over such surplus coal/middlings/rejects to the local CIL subsidiary or to any person designated by it at a transfer price to be determined by the Government.’- Clause (vi).

'No coal shall be sold, delivered or disposed of except for the stated captive mining purposes except with the previous approval of the Central Government.'- Clause (xii).

A normal understanding of reading these three clauses would imply the meaning that they are restrictive and designed to ensure non-diversion of coal.

- This seems to have been the conclusion that even NTPC came to as they did not factor into their bid the possibility of using the surplus coal from the captive mines of Sasan UMPP.
- M/s. Tata Power Company Limited, which was also a bidder for the Sasan UMPP has also contested the post-bid permission of surplus coal diversion facility to RPL as that was not their understanding either, from a reading of the pre-bid conditions. A special leave petition filed (May 2009) by Tata Power Limited against permission to RPL to use surplus coal from captive coal mines of Sasan UMPP is pending in the Hon'ble Supreme Court of India.
- The Inter Ministerial Group (IMG), while deliberating on the safeguards issue against misuse of coal mine noted in September 2007 that the allocation of coal mine had an explicit condition that its coal should be used solely for the purpose of the Sasan UMPP or else the lease was liable to be cancelled. This IMG was constituted in August 2007 by the MOP on the recommendation of EGOM to review the Standard Bidding Documents for UMPPs.
- Since fuel cost is an important aspect of commercial consideration in arriving at the tariff, any relaxation of condition subsequent to bidding would vitiate the bidding process. As explicit mention of usage of surplus coal in other projects was not unambiguously transparent in the coal block allocation letters, the bidders who lost out did not have equal opportunity to bid under the relaxed condition.

To sum up, the conclusion that can be drawn is:

- (i) The advice of MOP in October 2006 that Sasan UMPP would require an additional coal block was based on insufficient data as mining plan of Moher and Moher-Amlohri Extension was not available.
- (ii) The condition purportedly permitting diversion of surplus coal was not explicitly stated in the bid document.
- (iii) The EGOM evidently was not provided accurate information about adequacy or otherwise of coal availability in the two blocks initially

allocated to Sasan UMPP leading to their decision permitting usage of surplus coal.

- (iv) Permission to utilize surplus coal for projects with tariff based competitive bidding has been violated since tariff for Chitrangi Project, for which such permission was granted, was already fixed before the permission was granted.

Government need to generate confidence among bidders of future UMPPs of its equity and fairness. Audit would recommend that to ensure fair play, a level playground and transparency of the bidding process for future Developers to derive comfort in Government action, the allocation of the third coal block (Chhatrasal) be appropriately reviewed. Since the Developer had committed that he would be able to source 20 million tonne from the two blocks (Moher and Moher-Amlohri Extension) there would be adequate coal to feed the Sasan UMPP.

{Para 5.1 & 5.2}

9. Conclusion

Permission for use of excess coal by RPL from the three coal blocks allocated to Sasan UMPP after its award not only vitiated the bidding process but also resulted in undue benefit to RPL.

To ensure fair play, a level playground and transparency of the bidding process for future Developers to derive comfort in Government action, the allocation of the third coal block (Chhatrasal) be appropriately reviewed. Since the Developer had committed that he would be able to source 20 million tonne from the two blocks there would be adequate coal to feed the Sasan UMPP.



CHAPTER - 1

Introduction

1.1 Profile of Power Sector

Energy is one of the most critical components of infrastructure that determines the economic development of a country. The growth rate of demand for power is generally higher than the GDP growth rate. Studies point that in order to have 8 per cent GDP growth per annum, power supply needs to grow around 12 per cent annually. The XI Five Year Plan emphasized the need for removing infrastructure bottlenecks for sustained growth. It, therefore, proposed an investment of around ₹ twenty one lakh crore (US \$500 billion) in infrastructure sectors through a mix of public and private sectors to reduce deficits in identified infrastructure sectors. Public-private partnership (PPP) model was introduced to augment resource availability as well as to improve the efficiency of infrastructure service delivery.

During the X Five Year Plan, the capacity addition achieved by the power generation sector was 21,080 MW as against the target of 41,110 MW. The cumulative installed capacity at the end of X Plan was 1,32,329 MW including 86,015 MW of Thermal. The XI Plan initially envisaged a power generation capacity addition of **78,700 MW**, of which **59,655 MW** was to be added in Thermal. At the time of the Mid Term Appraisal of the XI Plan, the total target was revised to **62,374 MW** with target for Thermal getting reduced to **50,757 MW**. Against this the capacity addition achieved at the end of XI Plan was 54,964 MW¹ which included capacity addition of 48,540 MW in the Thermal Sector.

The Ministry of Power (MOP), Government of India is primarily responsible for the development of electrical energy in the country. It is concerned with perspective planning, policy formulation, processing of projects for investment decision and enactment of legislation in regard to power generation, transmission and distribution. Electricity is a concurrent subject under the Constitution of India.

¹ Source: Central Electricity Authority (CEA)

1.2 Development of Ultra Mega Power Projects

To augment the generation capacity, the Government of India (GoI) decided (November 2005) to develop Ultra Mega Power Projects (UMPPs) using Super Critical Technology². The UMPPs would meet the power needs of a number of states/distribution companies located in the states and were to be developed on Build, Own and Operate (BOO) basis through creation of "Shell" companies. Each UMPP was projected to have a capacity of around 4,000 MW with cost of ₹ 16,000-20,000 crore per project. The identification of the Project Developer was to be done on the basis of tariff based competitive bidding as per "Guidelines for determination of tariff by bidding process for procurement of power by distribution licensees" issued by Ministry of Power (MOP) in January 2005.

The MOP has a crucial role in the development of UMPPs. Some of the key areas requiring MOP's intervention include coordination with Central Ministries/Agencies for ensuring coal block allotment/coal linkage, environment/ forest clearances, water linkage etc. MOP designated (November 2005) Power Finance Corporation Limited (PFC) as the nodal agency for the purpose of development of UMPPs.

An Empowered Group of Ministers (EGOM) was constituted on 14 June 2007 for facilitating expeditious decisions on all major issues concerning UMPPs. While the 1st meeting of EGOM took place on 20 June 2007, the latest (14th) meeting was held on 28 April 2012.

1.3 Concept of Special Purpose Vehicles

MOP prescribed the Special Purpose Vehicles (SPVs) route for the UMPPs. SPV is a legal entity (usually a limited company or a limited partnership) created to fulfill narrow, specific or temporary objectives and are typically used by companies to isolate them from financial risk. As per the methodology followed, SPVs acted as the 'Authorised Representative' for carrying out the bidding process on behalf of the procurers³ and facilitated preliminary activities like site identification with Central Electricity Authority (CEA), land acquisition, coal block allocation (in the case of

² *Supercritical technology means technology with the following minimum steam parameters at steam turbine inlet:*

Main steam pressure : 247 kg/cm² (abs)

Main steam temperature : 535 deg C

Reheat steam temperature : 565 deg C

³ *Procurers – Beneficiary States and their Power distribution utilities*

pithead stations) obtaining various clearances relating to environment, forest etc. After the bidder was identified, the SPV was transferred to the successful bidder on execution of the Share Purchase Agreement and payment of the acquisition price to PFC.

The SPVs, being separate companies, were managed by a Board of Directors (BoDs). The Chairmen of the BoDs were nominated by PFC from its own Functional Directors. The day to day affairs of each SPV were looked after by its Chairman and Chief Executive, who was also represented in the BoDs.

1.4 Status of UMPPs

Initially, nine UMPPs were identified to be taken up and later on seven more projects were added to the list of UMPPs. Out of the 16 UMPPs so far identified (March 2012), PFC floated 12 shell companies (SPVs) as its wholly owned subsidiaries, each with a paid-up share capital of ₹5 lakh during 2005-06 to 2011-12 for development of UMPPs at six pithead sites and six coastal sites. The six pithead sites are Sasan in Madhya Pradesh, Talaiya in Jharkhand, Surguja in Chhattisgarh and Sundergarh, Sakhigopal & Ghogarpalli in Odisha. The six coastal sites are Mundra in Gujarat, Krishnapatnam in Andhra Pradesh, Tadri in Karnataka, Munge in Maharashtra, Cheyyur in Tamil Nadu, and Tatiya in Andhra Pradesh.



Mundra UMPP

The SPVs invited bids from prospective bidders for six UMPPs during March 2006 to March 2012. Bidding process had been completed and contracts were awarded in respect of four UMPPs viz. Sasan, Mundra, Krishnapatnam and Tilaiya while the remaining eight are yet to be awarded (March 2012). Details of the four UMPPs awarded so far are tabulated below:

Name of the UMPP	Name of the SPV	Developer to whom awarded	Levelised Tariff accepted (₹ per unit of electricity) *	Tariff collection for 25 years (₹ in crore) [@]	Current Status
Mundra 4000 MW (5 x 800 MW)	Coastal Gujarat Power Limited (incorporated on 10-02-2006)	Tata Power Company Limited	2.264	1,67,784	One unit of 800 MW commissioned in February 2012 and the Project is scheduled to be commissioned on 30 th October 2013.
Sasan 3960 MW (6x660 MW)	Sasan Power Limited (incorporated on 10-02-2006)	Reliance Power Limited	1.196	87,749	Not yet commissioned as scheduled date of commissioning of first unit of 660 MW is 31-01-2013. The Project is scheduled to be commissioned by 30 th June 2014.
Krishnapatnam 3960 MW (6x660 MW)	Coastal Andhra Power Limited (incorporated on 24-08-2006)	Reliance Power Limited	2.333	1,71,169	Not yet commissioned. Scheduled date of commissioning of first unit and the Project is September 2013 and October 2015 respectively. However, Developer has stopped work at Project site citing new regulation of Government of Indonesia as a reason which prohibits sale of coal below benchmark market price.
Tilaiya 3960 MW (6x660 MW)	Jharkhand Integrated Power Limited (incorporated on 02-01-2007)	Reliance Power Limited	1.77	1,29,862	Not yet commissioned as scheduled dates of commissioning of first unit and Project are May 2015 and June 2017 respectively.

*Note: Levelised tariff is the weighted average tariff.

[@] Worked out on levelised tariff basis.

1.5 Status of Remaining UMPPs

The Status of the remaining 12 UMPPs is detailed below:

Sl. No.	Name of SPV	Location of UMPP	Date of Incorporation of SPV	Present Status as on 31.3.2012
1.	Chhattisgarh Surguja Power Limited (Pithead)	Village Salka and Khamaria, District Surguja, Chhattisgarh.	10.02.2006	RFQ Bids issued in March 2010. Last date of submission of RFQ extended from time to time till June 2012.
2.	Coastal Karnataka Power Ltd. (Coastal)	State Government has suggested Tadi as suitable site.	10.02.2006	Site has not been finalized due to opposition by local people because of environmental impact of the project.
3.	Maharashtra Mega Power Limited (Coastal)	State Government has given the consent for the site near village Munge in Tehsil Deogarh	01.03.2006	The local agitation prevented site visit. Site to be finalised in consultation with Govt. of Maharashtra and people's representatives of that area.
4.	Orissa Integrated Power Limited, (Pithead)	Sundergarh Distt. Meenakshi,	24.08.2006	RFQ Bids opened in August, 2011 and evaluation was in progress.
5.	Coastal Tamil Nadu Power Limited, (Coastal)	Cheyur Village in Kancheepuram district	09.01.07	Initial notification for land acquisition issued. Amount of compensation for land was being finalized.
6.	Tatiya Andhra Mega Power Limited (Coastal)	Kothapeta site in Prakasam district received from Govt of Andhra Pradesh	17.04.2009	Site finalized but land was not given by the GOAP due to resistance by local residents.
7.	Ghogarpalli Integrated Power Limited (Pithead)	Site is yet to be finalized (Odisha)	09.02.2010	Site has not yet been finalized.
8.	Sakhigopal Integrated Power Limited, (Pithead)	Site is yet to be finalized (Odisha)	09.02.2010	Site has not yet been finalized.
9.	SPV not yet formed	Gujarat 2nd UMPP	Not applicable	Site has not yet been finalized.
10.	SPV not yet formed	Jharkhand 2nd UMPP	Not applicable	Site has not yet been finalized.

Sl. No.	Name of SPV	Location of UMPP	Date of Incorporation of SPV	Present Status as on 31.3.2012
11.	SPV not yet formed	Tamil Nadu 2nd UMPP	Not applicable	Site has not yet been finalized.
12.	SPV not yet formed	Andhra Pradesh 3rd UMPP	Not applicable	Due to want of clarity on site, MOP decided to shelve the project.



Krishnapatnam Site

CHAPTER - 2

Audit Approach

2.1 Audit Scope, Objectives and Methodology

The Performance Audit was commenced with the entry conference with management of PFC in January 2009. The records of PFC were initially examined between January 2009 and September 2009 to assess comprehensiveness of the bidding guidelines⁴ and bidding documents, effectiveness and transparency of the bidding process, clarity in defining the role of consultants, etc. Important issues noticed during the audit were flagged to the Management and MOP in June 2010 and August 2010 respectively.

Since EGOM was constituted to take all major decisions concerning UMPPs including their coal linkages and a very important role was being played by MOP in this, as a sequel, audit was again conducted in MOP/PFC during August – September 2011, wherein action taken by the Management/MOP (including EGOM) on the issues pertaining to the so far awarded four UMPPs communicated to MOP in August 2010 and other related issues were examined with following objectives:

- Standard Bidding documents were comprehensive without any ambiguity;
- Selection of Consultants for Bid Process was made through a transparent system;
- Bid Process management was carried out efficiently and in transparent manner;
- Land and coal linkages provided to the UMPPs were justified.

The draft report was issued to MOP in October-November 2011 and the response of the Ministry was received in December 2011/ January 2012. The Exit conference with MOP and management of PFC was held in February 2012. After incorporating the views of the Ministry, the draft audit report was again issued to MOP in March, 2012 which was followed by another Exit conference with MOP in March 2012. MOP brought officials of Reliance Power Limited (RPL), the Developer for Sasan UMPP,

⁴ MOP notified (January 2005) 'Guidelines for determination of tariff by bidding process for procurement of power by distribution licensees', referred to as 'bidding guidelines' in this report.

who made presentations during the Exit conferences. MOP, however, in the exit conference stated (March 2012) that it could not endorse the facts and figures of RPL as they were commercial in nature. MOP's reply to the draft Audit Report received in March 2012 has also been considered while finalising this report.

2.2 Audit Criteria

Audit criteria adopted for the Performance Audit included:

Gol Guidelines for Tariff based Competitive Bidding.

Standard Bidding Documents developed and used for awarding UMPPs.

Reports of Consultant and Bid Evaluation Committees at both RFQ and RFP stage.

Memorandum and Articles of Association of PFC and SPVs.

Agenda/Minutes of meetings of Board of Directors of PFC/SPVs.

Documents related to various linkages provided to UMPPs.

Agenda/Minutes of meetings of EGOM.

2.3 Audit findings

Audit findings are discussed in the subsequent chapters.

2.4 Audit Acknowledgement

We take this opportunity to acknowledge the cooperation extended by MOP and PFC in facilitating the conduct of our audit.

CHAPTER - 3

Bid Process Management

3.1 Bidding Process

Promotion of competition is one of the key objectives of the Electricity Act, 2003. As such, identification of the Project Developers for UMPPs was to be done on tariff based bidding.

The bidding process for UMPPs involved two stages.

In the first stage called '**Request for Qualification(RFQ)**', the bidders were required to present their technical and financial capability in the prescribed formats. The bidders satisfying the minimum technical and financial criteria were eligible to participate in the second stage.

In the second stage called '**Request for proposal(RFP)**', the bidders were required to quote the tariff for 25 years from the Scheduled Commercial Operation Date and the bidder who quoted the lowest levelised tariff was declared as the successful bidder.

The bids were jointly evaluated by professional consultants (M/s. Ernst & Young) and an Evaluation Committee having PFC executives and representative of Central Electricity Authority (CEA) as members. The evaluation was overseen by an Apex Level Committee having members of the level of Chairman and Managing Director of PFC, Chairperson CEA, Principal Secretary (Energy) of power procuring States and other experts from the industry. The evaluation reports were accepted by the Board of Directors of the respective SPVs/the High Level Committee.

The SPVs invited competitive bids for six UMPPs during the period from March 2006 till March 2012 and bidding process has been completed and contracts awarded in respect of four UMPPs viz. Sasan, Mundra, Krishnapatnam and Tilaiya. Bid (RFQ) for Chhattisgarh Surguja UMPP was invited on 15 March 2010 but last date for submission of bids has been extended from time to time upto 04 June 2012. In respect of the UMPP at Sundergarh, RFQ bids were opened on 1 August 2011 and bid evaluation was in progress (March 2012).

The tariffs quoted by the bidders in the four awarded UMPPs are tabulated in **Annexure 1**.

3.2 Appointment of bid process management Consultant

Competitive bids were invited for appointment of Consultants to assist PFC in conducting the bid process for five UMPPs. The scope of Consultants involved participation in preparation and issue of Bidding Documents (RFQ & RFP), participation in pre-bid and post-bid conferences, evaluation of Bid documents and assisting in finalizing the agreement with successful bidders. Audit found that the lowest bids of M/s. ICRA of ₹ 54.50 lakh and ₹ 44.50 lakh for Sasan and Mundra UMPPs respectively were not considered though the bidder was declared technically qualified. The work was awarded to M/s. Ernst & Young (M/s E & Y) at higher rates of ₹ 1.28 crore each on the ground that they were managing bid process of Anpara power project in Bangladesh.

Further, ICRA had quoted ₹ 54.50 lakh for Krishnapatnam UMPP. However, the consultancy job for this UMPP was awarded to M/s. E&Y at ₹ 60 lakh as against ₹ 1.28 crore first quoted by them. For Tilaiya UMPP the job was awarded to M/s. E&Y at ₹ 60 lakh without inviting any bid.

Thus, principle of equity in public procurement laid down in Rule 160 of General Financial Rules was not followed in the appointment which also resulted in extra expenditure of ₹1.68 crore.⁵

Ministry replied (December 2011 and March 2012) that there was large variation in the technical rating and prices quoted. UMPPs being a prestigious assignment, it was found prudent to have presentations from the top three bidders (ICRA, E&Y and CRISIL). Since M/s E & Y had advised on bid process management of power projects, the High Level Committee⁶ found them most suitable for the assignment.

The reply is not acceptable since M/s. ICRA was technically qualified by bid evaluation committee but its offer was not considered even though their price was the lowest. Audit further noticed that PFC had to subsequently debar M/s. E & Y for a period of three years from future assignments from July 2011 due to deficiencies in

⁵ *Difference between the offers of M/s. E & Y and ICRA. i.e. ₹ 1.28 crore x 2 – (₹ 54.50 lakh + ₹ 44.50 lakh) plus 2 x (₹ 60 lakh – ₹ 54.50 lakh).*

⁶ *High Level Committee constituted by MOP had representation of State Bank of India, CEA, IDBI, IDFC and PFC.*

Bid evaluation. The Ministry has also issued a show cause notice to them for their omission and commission in the evaluation of bid documents of Sasan & Mundra UMPPs.

3.3 Bid Documentation

The bid documents for the UMPPs (RFQ and RFP) were prepared by the Consultant (M/s. E&Y) based on the 'Standard Bidding Documents' (SBDs) developed and notified (March 2006) by the MOP. It was noticed in Audit that EGOM in its meeting held on 06/07 September 2007 directed that the SBDs being utilized for UMPPs may be got vetted from a Solicitor/law consultancy firm having sufficient experience in dealing with international power sector contracts. Accordingly, two⁷ legal firms were engaged for this work but on getting their divergent view on the SBDs, EGOM in its meeting held on 15 January 2010 directed that the comments of the Planning Commission, Department of Legal Affairs and Department of Economic Affairs should be obtained on SBDs. Bids for infrastructure projects of such huge magnitude had, thus, been called for on the basis of bid documents which were not vetted by the Department of Legal Affairs.

3.3.1 Softening of conditions in the Standard Bidding Documents (SBDs)

The following significant amendments were carried out in the SBDs by MOP from time to time based on feedback of the bidders and recommendations of PFC.

(i) Change in equity holding requirement of Parent/Affiliate

As per the bid criteria, a bidding company could take 100 per cent benefit of the technical and financial capability of a Parent or its Affiliates for the purpose of qualification. As per the initial bid document issued in March 2006, the equity holding requirement of such Parent/Affiliate in the bidding company was 51 per cent but after pre-bid conference with bidders, the equity holding requirement was scaled down from 51 per cent to 26 per cent in May 2006. This amended criteria was made effective in the bidding documents of all four UMPPs awarded so far. The change which was made on the request of bidders and advice of the Consultant M/s. E & Y violated the basic principles of 'ownership' and 'control' given in Accounting Standards Interpretation (ASI) 24 issued by the Institute of Chartered Accountants of India. ASI 24 defines 'control' as 'the ownership, directly or indirectly

⁷ M/s. K.L. Gates (International Law Firm) and M/s. Fox and Mandal (Indian interface for legal vetting of the documents)

through subsidiary(ies), of more than one-half of the voting power of an enterprise or control of the composition of the Board of Directors in the case of a company so as to obtain economic benefits from its activities'. Model RFQ document of Government of India for PPP Projects has also prescribed more than 50 percent share holding as the criteria.

The recommendation for making the amendments was sent by PFC (May 2006). Audit examined the files of MOP relating to approval of the above proposal and found that initially MOP had reservations⁸ about the dilution and stated that management control should be included as a condition in addition to 26 per cent equity holding. This view was, however, changed later citing discussions held with the consultant M/s. E & Y who explained that it would be difficult to describe 'effective management control' and assured that 26 per cent shareholding meant control.

At the time of bid submission by RPL for Sasan, Mundra and Krishnapatnam UMPPs, **Reliance Energy Limited⁹ (REL) had an equity holding of only 26 per cent in RPL. RPL did not have any technical or financial capability of its own and had used that of REL.**

Ministry stated (March 2012) that the bidders were required to submit an undertaking supported by Board Resolution for equity commitment in the project to enable the bidding company to draw upon the experience of the Parent/Affiliate. The Ministry further added that in all the UMPPs, the same criteria were followed for all the bidders without having any specific Developer in mind and that in no case, the bidder defaulted for want of financial and technical support of the parent/affiliate.

The reply does not take into account the fact that shareholding of 26 per cent would only enable an entity to block any special resolutions requiring three-fourth majority whereas the power to pass ordinary resolutions by way of 51 per cent shareholding is needed to draw upon the experience of the Parent/Affiliate to execute a large project.

⁸ *File notings made by Director (Reforms & Restructuring) of MOP on the files relating to Standard Bidding Documents for UMPPs which were approved by higher officials and the Minister of Power.*

⁹ *Now called Reliance Infra Limited*

(ii) Reduction of normative availability and penalty

In the original version of SBDs (March 2006), the normative availability¹⁰ for UMPPs was prescribed at 80 per cent. Based on the suggestions of CERC and the concern of the procuring States like Gujarat about the incentive above 80 per cent availability being too liberal, the normative availability was raised to 85 per cent in the revised Standard bidding documents issued in August 2006.

The normative availability was however, reduced from 85 per cent stipulated in the RFP issued in August 2006 to 80 per cent in September 2006 to bring down the risk of Developers. The penalty is used as a deterrent to avoid any slippages in envisaged terms and conditions by the Project Developers. However, the base for levy of penalty was also reduced from 80 per cent to 75 per cent before receiving financial bids. These two amendments were made effective in the bidding documents of all four UMPPs awarded so far. Audit observed that since the UMPPs were meant to have higher operational efficiency, reduction of both normative availability from 85 per cent to 80 per cent and penalty base from 80 per cent to 75 per cent were not in the interest of operational efficiency of UMPPs.

Ministry replied (March 2012) that as per the SBDs, the normative availability shall be aligned to the level specified in the tariff regulations of CERC prevailing at the time of bid process (which was 80 per cent). The Ministry also added that there is a need to instill confidence in the power Project Developers since they have a higher risk perception and that high performance parameters would generally lead to high cost and result in higher tariff.

The reply is not acceptable since as per amendment to the Guidelines for Determination of Tariff by Bidding Process for Procurement of Power by Distribution Licensees notified in August 2006, the normative availability shall be higher by a maximum of 5 per cent of the level specified in the tariff regulations of the Central Electricity Regulatory Commission (CERC) prevailing at the time of the bid process. In view of this, the reduction of normative availability in September 2006 was not in accordance with the Guidelines. Moreover, while revising the normative availability to 85 per cent in January 2009, CERC observed that the average availability of NTPC thermal power stations for the period 2004-05 to 2007-08 having 200 MW sets and

¹⁰ *Availability means the quantum of time a power plant is able to produce electricity over a certain period divided by the amount of time in the period.*

above was in the range of around 86 to 97 per cent except Farakka thermal power station due to problem in coal supply. Therefore, reduction of normative availability from 85 per cent to 80 per cent and reduction of base for levy of penalty for UMPPs which are based on superior technology was not justified.

(iii) Dilution of equity lock-in requirements for the sponsoring entity

Equity lock-in requirement for the selected bidder in the SPV, was reduced (September 2007) from 12 years from COD to 5 years from COD for **Krishnapatnam** and **Tilaiya** UMPPs after the award of Sasan and Mundra UMPPs.

Further, the Developers were permitted to cede managerial control (i.e. equity holding can be reduced from 51 per cent to 26 per cent) in all the four UMPPs after two years of commercial operation, though the quoted tariff was valid for 25 years. A comparison of initial and revised equity lock in requirements for UMPPs is tabulated below:

UMPPs	
Initial equity lock in requirements	Revised equity lock-in requirements
(a) 51 percent up to a period of two years after COD of the power station	(a) 51 per cent up to a period of two years after COD of the power station
(b) 26 percent for a period of ten years thereafter	(b) 26 per cent for a period of three years thereafter

Ministry stated (January & March 2012) that equity lock-in has been ensured in the pre-COD phase of the project when the investment is to be made in the project in the form of equity and debt and that the project risk is comparatively less once the project is commissioned. Ministry further stated (March 2012) that equity lock-in provisions were changed after approval of Empowered Group of Ministers (EGOM).

UMPPs are mega projects using super critical technology and their economic, efficient and effective operations is very important throughout the 25 years of their operation by the Developers to ensure supply of energy to consumers at agreed rates. Thus, allowing the Developers to cede management control after 5 years of the COD may not be advisable since adequate backing of the sponsoring entity would be lacking for SPVs during the major part of the operational period which may adversely affect the operational performance of UMPPs resulting in non-availability of power to consumers at agreed rates. Moreover, this does not provide safeguard

against the Developer using substandard capital equipment which may breakdown frequently during the operational period after control is ceded.

In brief, some of the key conditions of the Standard Bidding Documents were diluted citing the need for increasing competition or providing comfort to the Developers. However, these measures have decreased the maintenance safeguards for the projects.

Ministry of Power informed in the Exit Conference held on 21 February 2012 that the Audit concerns would be considered in the revised Standard bidding documents which were under finalisation in the Ministry.

3.3.2 Lower networth requirement for bidders

As per Ministry of Finance guidelines, for PPP projects costing ₹ 1000 crore or more the requirement of net worth of the bidders should not be less than 15 per cent. However, in the case of UMPPs, the minimum net worth for bidders was ₹ 1000 crore or equivalent USD which was around 5 per cent of Project Cost of around ₹ 20000 crore.

Ministry stated (December 2011 and March 2012) that the qualification requirements enabled wide competition among the bidders and had a reflection in lower tariff.

Audit is of the opinion that fixing low net worth criteria involves unwarranted risk for the UMPPs.

To conclude, inappropriate dilution of SBD conditions of equity holding, normative availability/penalty, equity lock in period and low networth for bidders etc. warrant a stringent and close monitoring not only on the completion/commissioning of the Projects but also on the efficient operation of UMPPs by the Project Developers.

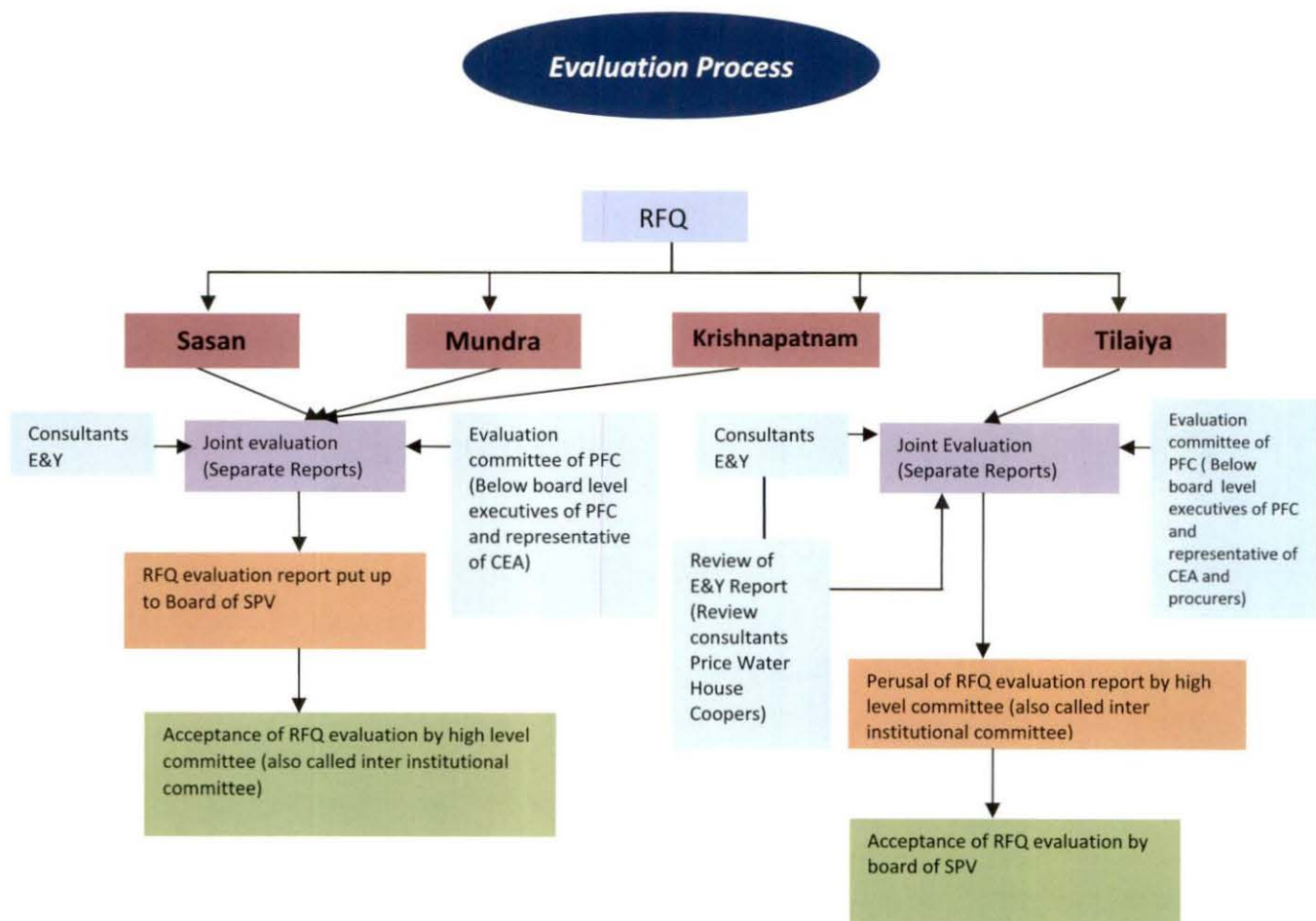


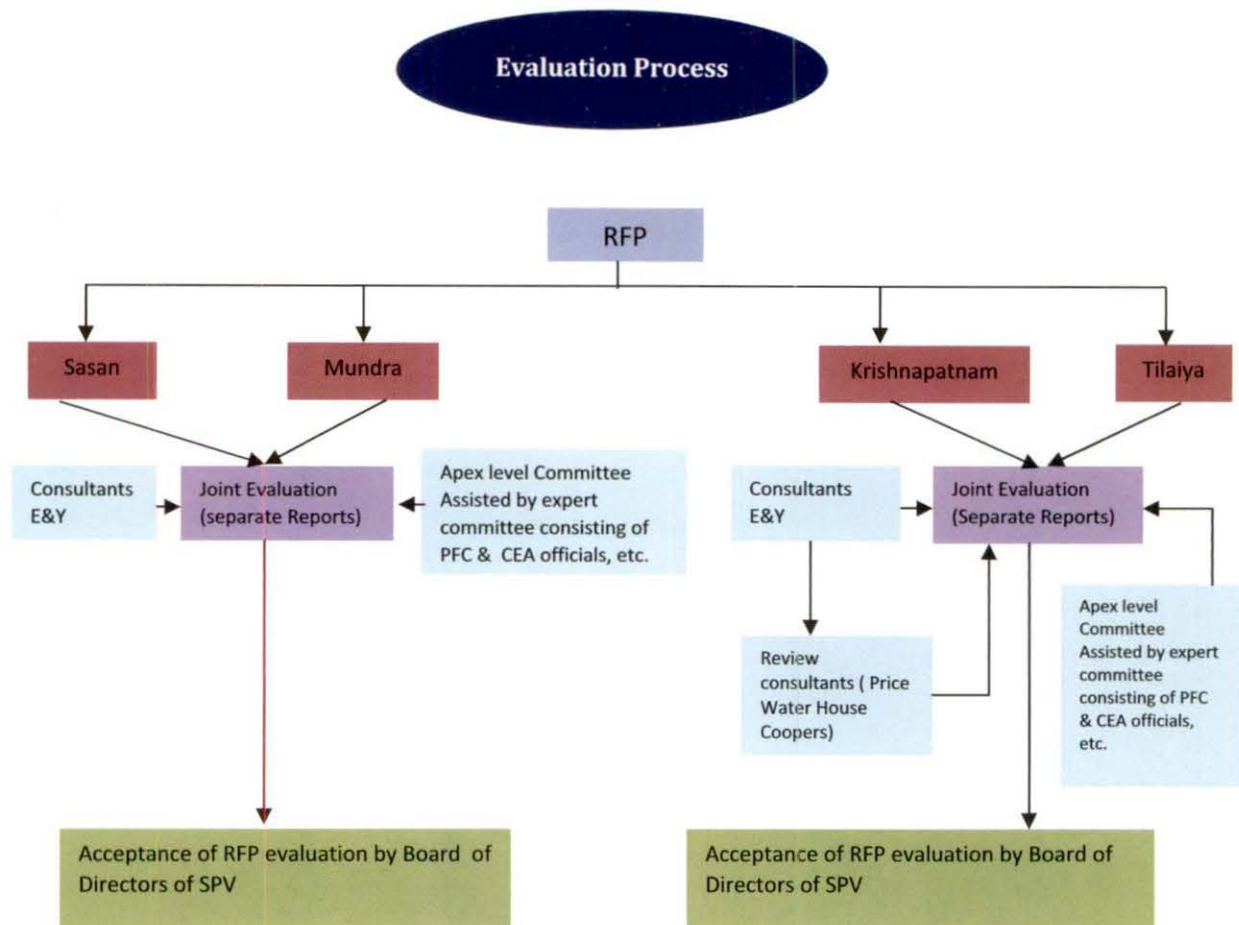
CHAPTER - 4

Bid Evaluation

4.1 Gaps in Bid Evaluation Process

A hierarchy of Committees comprising professional consultants, PFC executives and independent experts conducted evaluation of bids both at RFP and RFQ stages. The flow chart of the evaluation process is given below:





Audit observed the following deficiencies in bid evaluation:

4.2 Fulfillment of qualifying criteria by selected bidder

As per the minimum technical qualifying criteria stipulated in the RFQ document, the bidder must meet technical requirement of having experience of developing projects (not necessarily in the power sector) in the last 10 years whose aggregate capital cost must not be less than ₹3000 crore. Out of these projects, the capital cost of at least one project should be equivalent to or more than ₹500 crore.

The Bidding Company or a Consortium Member (including Lead Member) can take 100 per cent benefit of the technical and financial capability of a Parent or its Affiliates for the purpose of Bid Evaluation by submitting a legally binding undertaking¹¹ supported by a Board resolution in the RFP stage from its Parent company or its Affiliates.

¹¹ The undertaking to be given was that all the equity investment obligations of the Bidding Company or the Member of the Consortium shall be deemed to be equity investment obligations of the parent company or its affiliates and in the event of any default the same shall be met by the parent company or its affiliates.

Audit observed that the initial RFQ document for Sasan and Mundra UMPP did not define the term 'developing project' and subsequent to the pre-bid conference, 'developing project' was defined as 'successful commissioning of a project in which the bidder held equity stake of not less than 26 per cent at the time of commissioning.'

While the definition for 'developing project' remained the same for Krishnapatnam UMPP, it was revised for Tilaiya UMPP, as 'developing project means successful commissioning of a project in which the bidder held equity stake of not less than 26 per cent from financial closure till commissioning'. Audit observed that fulfillment of these qualifying requirements were not verified during bid evaluation as discussed in subsequent paras:

(i) Failure to check admissibility of experience claimed

Reliance Power Limited (REGL¹² at the time of bid submission) claimed the following experiences in its bid responses for the four UMPPs namely Sasan, Mundra, Krishnapatnam and Tilaiya:

In case of Sasan and Mundra, RPL claimed an experience of ₹ 4416.60 crore (aggregate capital cost) which also included (i) Generation, Transmission & Distribution (T&D) Projects executed by the parent company i.e. REL, (ii) Distribution Projects pertaining to two affiliate companies¹³ and (iii) Augmentation of T&D network of three Odisha Distribution Companies¹⁴. In case of Krishnapatnam and Tilaiya Projects, RPL claimed an experience of ₹ 3430.21 crore and ₹3505.41 crore respectively which included Generation, Transmission & Distribution (T&D) Projects executed by the parent company. Audit noted that major part of the experiences claimed by RPL were based on additions to the fixed assets instead of capital expenditure pertaining to projects commissioned during the last 10 years. RPL did not furnish details of such Projects. Audit also noticed that in the case of Sasan UMPP, despite agreeing (14 June 2007) to furnish the details of the commissioned Projects, RPL did not furnish the details before issuance of LOI on 1 August 2007. The required details were neither furnished by RPL nor asked for by the various evaluation committees in the case of Krishnapatnam and Tilaiya Projects as well.

¹² *REGL – Reliance Energy Generation Limited*

¹³ *BSES Yamuna Power Limited and BSES Rajdhani Power Limited*

¹⁴ *Western Electrical Supply Co. of Orissa Limited, Northern Electrical Supply Co. of Orissa Limited and Southern Electrical Supply Co. of Orissa Limited*

The Bid Process management consultant M/s. E&Y in its factual note on Sasan Project has also mentioned that the experience of REL and Affiliates pertained to ongoing projects. Therefore, out of total experience claimed by RPL, the experience of ₹ 3123.88 crore (Sasan & Mundra), ₹ 2137.49 crore (Krishnapatnam) and ₹ 2254.61 crore (Tilaiya) may not conform to the stipulated qualifying requirements as detailed in **Annexure 2**. Thus, the bid evaluation process was completed and LOI issued to RPL in case of all three projects (Sasan, Krishnapatnam and Tilaiya) without verifying the admissibility of experience claimed by RPL.

Ministry in its reply stated (March 2012) that the kind of projects which are eligible was not specified in the Standard Bidding Document. Land, building, plant and machinery, vehicle, furniture and fixtures, electric fittings and apparatus, refrigerators etc. form integral part of project cost and hence they were capitalized in the books of accounts of respective companies as fixed asset and these figures were taken (for evaluation).

It is unlikely that the expenditure incurred in the last 10 years would pertain to projects commissioned prior to this period, since capitalization of any project will be based on actual expenditure incurred so far along with the liabilities/likely expenditure of the project. Further, as a conservative approach, expenditure incurred on plant & machinery, GIS Software and distribution system can be considered. Regarding experiences of affiliates, Ministry stated that expenditure incurred on transformers, switchgears, underground and overhead cables etc. can be considered for qualification.

The reply of the Ministry is not tenable in view of the following:

- In the absence of details of Projects-wise expenditure incurred by RPL for projects commissioned during the last 10 years, the additions to fixed assets, claimed by RPL as experience may also be due to (i) additional capital cost incurred on projects commissioned more than 10 years back, (ii) individual completed assets of ongoing projects, (iii) assets not forming part of any particular project or (iv) additional capitalizations on projects separately considered for qualification.
- The Auditor's certificate submitted by RPL with the bid gives only project cost incurred in generation and up-gradation of transmission and distribution network etc. during April 1996 to March 2006 by Reliance Energy Limited without mentioning the names of the projects which were commissioned during the last ten years and capital costs of such individual projects.

- Having defined, the term 'developing project', it was not proper to allow the capital cost on account of plant & machinery, GIS Software etc. without verifying whether these pertained to projects commissioned during the last 10 years.
- Ministry's argument regarding experience of affiliates is not acceptable since the consultants had stated that these pertain to ongoing works.

(ii) Role of Consultants & Evaluation Committees

The Consultants M/s. E&Y did not carry out independent diligence for evaluation of experience claimed by the bidders. Evaluation Committee members who were required to jointly conduct the evaluation of bids placed reliance on the evaluation done by the consultants M/s. E & Y. In case of Sasan UMPP, even the disclaimer of the Evaluation Committee that 'no independent diligence has been carried out for the purpose of evaluation' was merely adopted from the Consultant's Evaluation Report. The Committees also failed in preventing the above shortcomings in the bid evaluation.

Ministry stated (December 2011 and March 2012) that administrative action by way of advisory memos was issued to the three PFC executives. Ministry also stated that showcase notice was issued to M/s. E&Y for their omission and commission in the evaluation of bid documents and PFC debarred them for a period of three years.

Audit is of the view that the bidding process should be strengthened by laying down well defined procedure for evaluation of bid responses as well as acceptance of evaluation proposals.

4.3 Excess acquisition of land

CEA finalized its report on land requirements for thermal power plants only in December 2007 though the process of UMPPs started in 2005 itself. Audit observed that when compared to the new norms, the land agreed for two UMPPs was in excess by 2634 acres (Mundra: 1538 acres and Krishnapatnam: 1096 acres) as detailed in **Annexure 3**. The issue of excess land was deliberated in the EGOM meeting held in May 2008 wherein it was decided that since the land requirement had already been worked out in respect of these projects, it was now up to the Project Developers themselves to take a view on excess land thus agreed upon. Further it was decided that land requirement for yet to be awarded UMPPs be worked out by CEA based on its report.

Ministry replied (December 2011 and March 2012) that land requirement for UMPPs was estimated on the basis of prevalent norms for thermal power projects and CEA constituted a committee in April 2007 to optimize land requirement for thermal power plants in view of large capacity to be added in the XI Plan. The committee submitted its report in December 2007 and the issue was again revisited and another report circulated in September 2010. The Ministry further added that extra land, if available, could be used for power generation purpose in future.

As per CEA's new norms, land requirement for coastal power plant of the size of around 4000 MW is 1530 acres. Therefore, the usage of excess land should be monitored to ensure usage in power projects/benefit to consumers.

CHAPTER - 5

Financial benefit to Project Developer

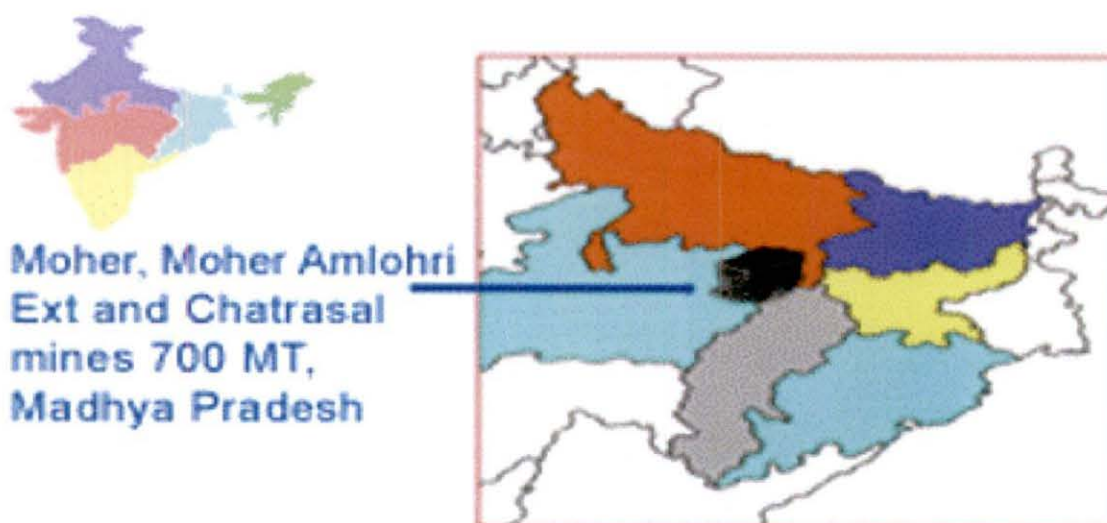
5.1 Financial benefit to Developer in permitting usage of surplus coal

(i) Allocation of coal blocks for Sasan Project

Sasan Power Limited (an SPV created for development of Sasan UMPP) was initially allocated (September 2006) two coal blocks - Moher (Geological reserves of 402 million tonne) and Moher-Amlohri Extension (Geological reserves of 198 million tonne) to meet its coal requirement. In the Request for Proposal document for the Sasan UMPP, the bidders were informed that coal blocks with reserves of about 700-800 million tonne will be allocated and the project would require the development of a coal mine with production of 18-20 million tonne per annum. The allocation was made based on Geological reserves and as the production from the above two blocks was considered insufficient by MOP, Secretary (Power) requested (9th October 2006) Ministry of Coal (MOC) to allocate another block to Sasan UMPP. Accordingly, MOC allocated (26 October 2006) Chhatrasal coal block after de-allocating the same from NTPC Limited prior to opening of financial bids (7 December 2006) for Sasan UMPP. The total Geological reserves of the three coal blocks were estimated at 700-800 million tonne. At the time of allocation of coal blocks, data regarding actual availability of coal for the project was not available in the absence of mining plan.

The Sasan UMPP was awarded to the bidder (i.e. RPL) who quoted the lowest levelised tariff and the contract agreements¹⁵ were signed on 7 August 2007 for transfer of Sasan Power Limited (the SPV) to RPL.

¹⁵ *Share Purchase Agreement between RPL and PFC; Power Purchase Agreement between Procurers and SPV*



(ii) Existence of surplus coal in the coal blocks

The Chief Minister of Madhya Pradesh wrote to the Prime Minister on 2 November 2007 stating that it made economic sense to use the excess coal in the captive blocks of Sasan UMPP for power generation by the power plant being set up by RPL at Chitrangi tehsil in the vicinity of these mines. It is, however, noticed that the mining plan of Moher & Moher-Amlohri Extension and Chhatrasal coal blocks were submitted by RPL in March 2008 (revised in September 2008) and July/August 2008 respectively. The Chief Minister's above letter sent (November 2007) three months after the contract was awarded (August 2007) to RPL referred to excess availability of coal even though the mining plans of these three coal blocks were not available on that date. Prime Minister's Office sought comments on the proposal from Ministry of Coal (MOC) which in turn, sought the comments of MOP.

(iii) Issues before the EGOM

The request made by the Chief Minister, Madhya Pradesh was referred to the EGOM on UMPPs¹⁶. In the agenda note dated 23 May 2008 for the EGOM meeting held on 28 May 2008, MOP stated that the request of the Chief Minister of Madhya Pradesh was examined by MOP with CEA and the latter pointed out that:

- (i) The total Geological reserves of the three blocks are estimated at about 630-700 million tonne and the extractable reserves are generally around 70% of GR, however, actual quantity available would be known only after the mining plans are prepared.

¹⁶ Constituted earlier (June 2007) to expedite the decision making process for UMPPs.

- (ii) Considering the average gross calorific value of 4000 K Cal/kg for coal, the requirement of coal for the Sasan UMPP at 90% plant load factor (PLF) for 25 years works out to be 18 million tonne per annum. According to CEA's assessment, the extractable coal reserves from Moher, Moher-Amlohri Extension and Chattrasal blocks may be just sufficient for the Sasan UMPP taking into account the consumption of Sasan UMPP. As such it may not be feasible to meet the coal requirement for an additional 4000 MW power project (Chitrangi project) from these three coal blocks.
- (iii) If surplus coal is available, it would be used by the Sasan UMPP itself during its extended span beyond 25 years.

MOP added that decision regarding disposal of surplus coal, if any, can be taken only on the basis of the prevailing policy/instruction of the government.

In the Agenda Note dated 23 May 2008 for the EGOM, MOP inter-alia proposed to communicate the following to MOC:

“Coal Ministry’s allocation letters clearly state that the coal produced from these mines would be exclusively used in the Sasan UMPP.

Since mining activity at the site has not commenced as yet, therefore, at the present there is no basis to conclude that surplus coal will be available from these blocks. If surplus coal is available, it would be used by the Sasan project itself during its extended span beyond 25 years.

Furthermore, decision regarding disposal of surplus coal if any, can be taken only on the basis of the prevailing policy/ instruction of the government at the relevant point of time as already stipulated in the allocation letter of the Coal Ministry.”

The EGOM deliberated (28 May 2008) on the issue and recorded,

“While there was clear consensus that coal from any coal mine allocated for development of a tariff based UMPP should be utilised for generation of power, it was generally agreed that in the first instance, any Developer should implement the UMPP project for which coal mines had been allocated. Thereafter it should be ascertained whether surplus coal was available from the allotted mines. It would also be appropriate to sell any additional power generated through a tariff bidding route”. EGOM directed that information about structure in respect of ownership, mode of sale of power and tariff of Chitrangi project be obtained from the State Government of Madhya Pradesh.

(iv) RPL's initial expression of inability to increase production from the mines

RPL submitted a mining plan to MOC in March 2008 for Moher & Moher-Amlohri Extension mines for a targeted production level of 12 million tonne per annum. At the time of presentation of mining plan for 12 million tonne, RPL was asked¹⁷ to examine the possibility of enhancement of production beyond 12 million tonne so that the projected total requirement of 16 million tonne to the downstream Sasan UMPP could be entirely met from Moher & Moher-Amlohri Extension Blocks. However, RPL conveyed that the blocks cannot sustain 16 million tonne production and that they have been allotted another block in the region namely Chhatrasal to meet the balance requirement of coal. This mining plan was approved by the MOC on 4 June 2008.

(v) RPL's letter dated 06 August 2008 seeking permission for using 'incremental' coal

In a surprising turnaround of the position taken by RPL in March 2008 before the Standing Committee, RPL sent letter dated 6 August 2008 to the Minister of Power stating that they have performed detailed studies on the allotted coal blocks and proposed to develop them using latest world class technologies resulting in increased recovery factor and higher annual production. RPL requested that the 'incremental' coal produced can be used for other power projects of the group, supplying power through tariff based competitive bidding with certain undertakings.

RPL, thus, established that there would be surplus coal in deviation with its earlier stand.

RPL's letter dated 6 August 2008 was also received in the MOC on 7 August 2008. Agenda Note for the EGOM meeting held on 14 August 2008 inter-alia had an item titled "Use of surplus coal, if any, from the mines allocated to the UMPPs". This agenda note did not make any reference to the RPL letter of 6 August 2008 and its changed stance. The request of RPL was taken up for consideration by EGOM and agreed to by EGOM.

(vi) EGOM recommendation

EGOM noted in the meeting held on 14 August 2008 that in terms of allotment letter of MOC dated 26 October 2006, RPL was permitted to utilize the surplus coal with

¹⁷ *As per the minutes of the meeting of Standing Committee (set up under MMDR Act, 1957) held on 9.2.2009*

the previous approval of the Central Government. Accordingly, EGOM recommended to MOC to allow RPL the use of the surplus coal from blocks allotted to Sasan UMPP by other projects of RPL subject to the following undertakings:

“Incremental coal quantity would be determined based on the Mine Plan approved by Ministry of Coal, Gol.

The 3960 MW Sasan UMPP will always have the first right and overriding priority over all coal produced from the allotted blocks and the allottee shall always ensure that the generation from the UMPP for the entire contracted period will not be allowed to be affected by utilization of incremental coal by other projects of the Group. Any loss in generation in the awarded UMPP at Sasan shall only be on account of genuine reasons such as maintenance, repairs etc.

End use of coal from these blocks would be restricted to power generation.

The power generated by utilizing incremental coal from these captive coal blocks would be sold through tariff based competitive bidding.”

The above undertakings were similar to those proposed by RPL in their letter dated 6 August 2008.

On 18 November 2008, MOC conveyed in-principle approval to the above recommendation of EGOM to the Ministry of Power with endorsement to the Developer.

(vii) Mining Plans and Approvals

In March 2009, the Standing Committee of MOC took up the Mining Plan of Chhatrasal Block (Production 5 million tonne per annum) for approval. The minutes of the Standing Committee revealed the following:

“----- EGOM decision of meeting the entire requirement of the Sasan UMPP as also utilisation of surplus coal thus stands fulfilled with the allotment of Moher & Moher-Amlori block itself. The need for the allocation of an additional block thus prima facie had no justification except that the three blocks were mentioned in the bid documents and that the EGOM decision also refers to these three blocks for the Sasan UMPP. ----- there is no justification for allocation of Chhatrasal coal block for supplying coal to the Sasan UMPP. The Committee was therefore, initially inclined to return this Mining Plan as it was originally meant primarily for supplying coal to Sasan UMPP. However, taking a larger view in the context of the overall need for

stepping up coal production and in the light of extant EGOM decision and also since this block does stand allocated for the UMPP, it was felt that the committee should go ahead and consider the mining plan as per the mining feasibility and as provided under the purview of Standing Committee”.

Thus, even the Standing Committee headed by the Secretary (Coal) was aware of the fact that Chhatrasal Coal Block was not really required by the Sasan UMPP but had to relent as this block was part of the bid documents and EGOM had already recommended usage of surplus coal by the Developer in their other Projects.

A gazette notification granting permission to the Developer to utilize up to a maximum of 9 million tonne per annum of coal from the Sasan coal blocks in the Chitrangi Project of the Developer was issued on 17 February 2010.

A chronology of the events leading to grant of permission for use of surplus coal from captive mines of Sasan UMPP for Chitrangi Project is also given in Annexure 4.

(viii) Audit Observations

(a) Allocation of surplus coal

The observations of audit on the sequence of events mentioned above and the decisions emanating from each are the following:

- (i) It is not clear how MOP on 9 October 2006 came to the conclusion that the two initially allocated blocks for the Sasan UMPP would be inadequate.
- (ii) The basis on which MOC was prevailed upon in October 2006 itself to allot an additional block (Chhatrasal) of coal to Sasan UMPP by de-allocating it from the Public Sector NTPC is not clear.
- (iii) Till March 2009, MOC was taking the stand that coal from two blocks (Moher and Moher-Amlohri Extension) was sufficient for the Sasan UMPP and that there is no justification for allocating a third block (Chhatrasal) to the Developer.
- (iv) In March 2008, RPL maintained that there was no possibility to enhance production beyond 12 million tonne from the two blocks of Moher and Moher-Amlohri Extension.

- (v) However, on 6 August 2008, RPL intimated of their intention to use latest world class technology leading to increased recovery factor and higher annual production leading to the mined coal from these three blocks becoming surplus to the requirement of Sasan UMPP.
- (vi) This indeed was the position which the Chief Minister of Madhya Pradesh was aware of when he wrote to the Prime Minister in November 2007 itself seeking diversion of the surplus coal to Chitrangi.
- (vii) This revelation by RPL, provided to the EGOM in its meeting on 14 August 2008, led to their deciding that indeed surplus coal would be available and this could be diverted to Chitrangi.

(b) Vitiating of the Bidding Process

The permission to use surplus coal in other projects of the Developer vitiating the sanctity of the bidding process since it amounts to post bid concessions to the Developer having significant financial implication as explained below:

- The EGOM in its meeting held on 28 May 2008 had sought information about structure in respect of ownership, mode of sale of power and tariff of Chitrangi Project. However, without getting this information from Madhya Pradesh Government, EGOM recommended (14 August 2008) granting of permission for usage of incremental coal.
- EGOM in its meeting held on 14 August 2008 had recommended that power generated by utilizing incremental coal from captive coal blocks of Sasan UMPP **would be sold through tariff based competitive bidding**. But RPL was granted permission by MOC (February 2010) to use the surplus coal in Chitrangi Project **the tariff of which was already accepted in May 2008 at ₹ 2.45 per unit i.e. prior to the EGOM decision (August 2008) on usage of surplus coal for Chitrangi Project**. For this purpose RPL had bid along with other bidders citing independent fuel arrangement (from Mahanadi Coalfields Limited/112.22 million tonne of coal reserves in the Rampia and dip-side of Rampia non-coking coal blocks in the state of Odisha).

Ministry of Power in its reply (December 2011 and March 2012) stated that since every qualified bidder had information about the clauses of the coal block allocation letter prior to submission of financial bid, there was no vitiating of commercial condition.

The contention of the Ministry is not tenable in view of the following:

- The clauses of the coal allocation letter do not explicitly state that Central Government would indeed grant permission to the Developer to use the surplus coal in their other projects. This fact was not disclosed upfront in the allocation letters and in the absence of clarity on this issue, it was left to the bidders to interpret the implication of the clauses of allocation letter. The relevant clauses in the allocation letter are reproduced below:

‘The coal produced from these mines would be exclusively used in the Sasan UMPP’- Clause (i).

‘The modalities of disposal of surplus coal/middlings/rejects, if any, would be as per the prevailing policy/instructions of the Government at the relevant point in time and could also include handing over such surplus coal/middlings/rejects to the local CIL subsidiary or to any person designated by it at a transfer price to be determined by the Government’.- Clause (vi).

‘No coal shall be sold, delivered or disposed of except for the stated captive mining purposes except with the previous approval of the Central Government.’- Clause (xii).

A normal understanding of reading these three clauses would imply the meaning that they are restrictive and designed to ensure non-diversion of coal.

- This seems to have been the conclusion that even NTPC came to as they did not factor into their bid the possibility of using the surplus coal from the captive mines of Sasan UMPP.
- M/s. Tata Power Company Limited, which was also a bidder for the Sasan UMPP has also contested the post-bid permission of surplus coal diversion facility to RPL as that was not their understanding either, from a reading of the pre-bid conditions. A special leave petition filed (May 2009) by Tata Power Limited against permission to RPL to use surplus coal from captive coal mines of Sasan UMPP is pending in the Hon'ble Supreme Court of India.
- The Inter Ministerial Group (IMG), while deliberating on the safeguards issue against misuse of coal mine, noted in September 2007 that the allocation of coal mine had an explicit condition that its coal should be used solely for the purpose of the Sasan UMPP or else the lease was liable to be cancelled. This

IMG was constituted in August 2007 by the MOP on the recommendation of EGOM to review the Standard Bidding Documents for UMPPs.

- Since fuel cost is an important aspect of commercial consideration in arriving at the tariff, any relaxation of condition subsequent to bidding would vitiate the bidding process. As explicit mention of usage of surplus coal in other projects was not unambiguously transparent in the coal block allocation letters, the bidders who lost out did not have equal opportunity to bid under the relaxed condition.

To sum up, the conclusion that can be drawn is:

- (i) The advice of MOP in October 2006 that Sasan UMPP would require an additional coal block was based on insufficient data as mining plan of Moher and Moher-Amlohri Extension was not available.
- (ii) The condition purportedly permitting diversion of surplus coal was not explicitly stated in the bid document.
- (iii) The EGOM evidently was not provided accurate information about adequacy or otherwise of coal availability in the two blocks initially allocated to Sasan UMPP leading to their decision permitting usage of surplus coal.
- (iv) Permission to utilize surplus coal for projects with tariff based competitive bidding has been violated since tariff for Chitrangi Project, for which such permission was granted, was already fixed before the permission was granted.

Government need to generate confidence among bidders of future UMPPs of its equity and fairness. Audit would recommend that to ensure fair play, a level playground and transparency of the bidding process for future Developers to derive comfort in Government action, the allocation of the third coal block (Chhatrasal) be appropriately reviewed. Since the Developer had committed that he would be able to source 20 million tonne from the two blocks (Moher and Moher-Amlohri Extension) there would be adequate coal to feed the Sasan UMPP.

5.2 Financial Impact

Audit has attempted to quantify the post-bid concession extended to RPL in Sasan UMPP on an estimated basis and these figures are only indicative in nature.

The Sasan UMPP was awarded three coal blocks namely Moher, Moher-Amlohri Extension and Chhatrasal. As per the mining plan submitted by RPL, Moher and Moher-Amlohri Extension would produce 20 million tonne of coal per annum while Chhatrasal would produce 5 million tonne of coal per annum against a requirement of 16 million tonne of coal per annum for Sasan UMPP. As a result, surplus coal amounting to 9 million tonne per annum would be available to RPL for utilizing in its other power project, i.e. Chitrangi. The surplus coal would create additional electricity generation capacity¹⁸ of 461 MW in the 1st year, 2075 MW every year from 2nd to 16th year and 1383 MW, 1153 MW, 1153 MW and 922 MW in the 17th, 18th, 19th and 20th year respectively as per RPL's own stated plan to MOC.

Audit noted that the tariff for Sasan is based on coal being sourced from a captive mine while the tariff of Chitrangi is based on independent fuel arrangements i.e. coal being sourced from Coal India Limited or its subsidiaries, e-auction or imports etc. However, if the coal from the Sasan UMPP coal blocks is used for Chitrangi project, the tariff originally quoted by RPL for the Chitrangi project would no longer be based on assumptions of the costlier coal¹⁹. The tariffs quoted by RPL for different projects are given below:

S.N.	PROJECT	TARIFF (in Rupees per unit)
1.	Sasan UMPP	1.196
2.	Chitrangi Project (for Madhya Pradesh - MP)	2.450
3.	Chitrangi Project (for Uttar Pradesh)	3.702

Comparing the higher tariffs for Chitrangi project to the tariff of the Sasan UMPP, it is seen that the benefit of using surplus coal would not pass on to the consumers in the next 20 years as the tariff for Chitrangi Project had already been fixed as per the bid of RPL. There would, thus, be unintended benefit accruing to RPL based on their projected capacity. The overall financial benefit to RPL due to impact of the

¹⁸ As per the proposal given by RPL to the Ministry of Coal

¹⁹ Coal from any other source would be significantly more expensive [for example e-auction price ₹ 1782 per tonne (based on CIL data for 2010-11) and landed cost of imported coal ₹ 2874 per tonne (based on NTPC data for November 2009 adjusted for calorific value of 4675 GCV)]

difference in tariff comes to ₹ 29,033 crore with a net present value of ₹ 11,852 crore. The detailed calculations are made in **Annexure 5A and Annexure 5B**.

Ministry replied (March 2012) that costs and tariff for two projects cannot be compared. Similar views were expressed by RPL citing variations in project structure such as point of delivery of electricity, comfort of clearances for Sasan UMPPs and the lack of it for Chitrangi project etc.

Audit is of the opinion that the comparison between Sasan and Chitrangi projects is not out of place since both the projects (Sasan and Chitrangi) are

- ✓ of 3960 MW capacity;
- ✓ located in the same vicinity; and
- ✓ sourcing coal from the same coal mines.

To conclude, the post-bid concessions extended to RPL in Sasan UMPP resulted in financial benefit to RPL to the tune of ₹ 29,033 crore with a net present value of ₹ 11,852 crore.



CHAPTER - 6

Conclusion

6.1 With a view to augment power generation capacity in the country, Ministry of Power identified development of 16 Ultra Mega Power Projects (UMPPs) during XI and XII Plan, each with a capacity of around 4000 MW. Power Finance Corporation Limited (PFC) was the nodal agency for development of UMPPs and Special Purpose Vehicles (SPVs) of the nature of Shell Companies were formed by PFC. So far, contracts for four UMPPs viz. Sasan, Mundra, Krishnapatnam and Tilaiya have been awarded to the Project Developers by these SPVs.

6.2 Audit observed that the process of identifying the Project Developers suffered from inadequacies as the minimum qualification criteria for prequalification of bidders like networth was on the lower side considering the size of the projects and some of the key conditions of the Standard Bidding Documents were diluted citing the need for increasing competition or providing comfort to the Developers.

6.3 The bid evaluation process was completed and Letter of Intent issued to Reliance Power Limited (RPL) in case of Sasan, Krishnapatnam and Tilaiya UMPPs without verifying admissibility of experience claimed by them. Bid Process Management Consultants M/s. E&Y as well as the various Evaluation Committees failed to perform their functions effectively.

6.4 Subsequent to award of the Sasan Project to RPL, Empowered Group of Ministers (EGOM) on UMPPs recommended and Ministry of Coal granted permission to RPL to utilize the surplus coal from three (Moher, Moher Amlohri and Chhatrasal) captive mines of Sasan UMPP for their other project i.e. Chitrangi in Madhya Pradesh. A reading of all the clauses in the allocation letters together conveyed that these clauses were inserted in the coal allocation letter as a safeguard measure to prevent the misuse of coal by the Developer. The permission to use surplus coal in other projects of the bidder after award of the contract based on acceptance of the lowest tariff, vitiated the sanctity of the bidding process which would result in post bid concessions to the Developer having significant financial implication.

6.5 Permission for use of excess coal by RPL from the three coal blocks allocated to Sasan UMPP after its award not only vitiated the bidding process but also resulted in undue benefit to RPL.

To ensure fair play, a level playground and transparency of the bidding process for future Developers to derive comfort in Government action, the allocation of the third coal block (Chhatrasal) be appropriately reviewed. Since the Developer had committed that he would be able to source 20 million tonne from the two blocks there would be adequate coal to feed the Sasan UMPP.

6.6 Audit has estimated the financial benefit that will accrue to the Project Developer on the basis of comparison of tariff of Sasan Project (₹ 1.196 per unit) with that of Chitrangi Project (₹ 2.450 for Madhya Pradesh and ₹ 3.702 for Uttar Pradesh). The overall financial benefit to RPL due to impact of the difference in tariff works out to ₹29,033 crores with a net present value of ₹ 11,852 crore.

CHAPTER - 7

Recommendation and Way Forward

- *Taking a larger perspective and as the Government is left with the fait accompli of continuing with the bidders since the respective SPVs have already been transferred to the bidders and financial closure has been achieved in two UMPPs, there is a need to closely monitor the physical progress of the projects so as to avoid any slippage in capacity addition programme.*
- *The bid evaluation process may be streamlined to ensure strict compliance of the qualifying criteria and adequate due diligence done in the selection of appropriate bidder.*
- *To ensure fair play, a level playground and transparency of the bidding process for future Developers to derive comfort in Government action, the allocation of the third coal block (Chhatrasal) be appropriately reviewed. Since the Developer had committed that he would be able to source 20 million tonne from the two blocks there would be adequate coal to feed the Sasan UMPP.*



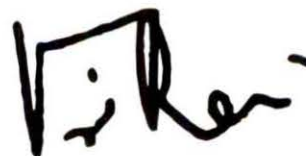
(A K PATNAIK)

Deputy Comptroller and Auditor General
and Chairman, Audit Board

New Delhi

Dated: 11th May, 2012

Countersigned



(VINOD RAI)

Comptroller and Auditor General of India

New Delhi

Dated: 11th May, 2012



ANNEXURE



Annexure 1
(Referred to in Para 3.1)

Tariffs quoted by the bidders in the four awarded UMPPs

Name the UMPP	Name of the bidder	Levelised tariff quoted ₹ per unit	Tariff Accepted ₹ per unit
Sasan (Letter of intent issued on 1 August 2007)	Globeleq-Lanco consortium	1.196*	1.196
	Reliance Power Limited	1.196 #	
	Tata Power Company Ltd.	1.412	
	Jai Prakash Associates Ltd.	1.650 #	
	Sterlite Industries Ltd.	1.743	
	Essar Power Ltd.	1.760	
	Jindal Steel and Power Ltd.	1.799	
	NTPC Ltd.	2.126 #	
	Larsen & Toubro Ltd.	2.251	
Tilaiya (Letter of intent issued on 12 February 2009)	Reliance Power Ltd.	1.770	1.770
	NTPC Ltd.	2.391	
	Jindal Steel and Power Ltd.	2.691	
	Sterlite Industries Ltd.	2.972	
Mundra (Letter of intent issued on 28 December 2006)	Tata Power Company Ltd.	2.264	2.264
	Reliance Power Limited	2.661	
	Adani Enterprises Ltd.	2.696	
	Essar Power Ltd.	2.801	
	Larsen and Tubro Ltd.	3.220	
	Sterlite Industries Ltd.	3.746	
Krishnapatnam (Letter of intent issued on 30 November 2007)	Reliance Power Ltd.	2.333	2.333
	Larsen and Tubro Ltd.	2.690	
	Sterlite Industries Ltd.	4.197	

* Globeleq-Lanco consortium was initially identified as the lowest bidder and was issued the Letter of Intent (LOI). But, the LOI was cancelled in July 2007 on grounds of misrepresentation of facts and the project was awarded to Reliance Power Limited who matched the tariff quoted by Globeleq-Lanco consortium.

The bidders who extended the validity of their bids and submitted revised price bids subsequent to cancellation of LOI initially issued to Globeleq-Lanco consortium.

Annexure 2
(Referred to in Para 4.2(i))

Technical experience claimed which may not conform to the qualifying requirements

(₹ in crore)

Name of project	Experience claimed by REGL	Experience which may not conform to the qualifying requirements	Reasons for non-conformation of experience claimed	Admissible experience considering available evidence	
Sasan & Mundra *	REL(Generation & T & D projects) - parent	2137.49	2137.49	There was no evidence to show that capitalizations pertained to projects commissioned during the last 10 years. M/s E&Y have stated in their factual note that these are ongoing projects.	0.00
	BSES Kerala Power Limited – Affiliate	594.15	0.00	Can be considered if indirect voting power of parent is also allowed.	594.15
	BSES Yamuna Power Limited – Affiliate	290.04	290.04	M/s E&Y have stated in their factual note that these are ongoing projects	0.00
	BSES Rajdhani Power Limited – Affiliate	348.18	348.18	M/s E&Y have stated in their factual note that these are ongoing projects.	0.00
	Western Electrical Supply Co. of Orissa Limited – Affiliate	128.39	128.39	(i) M/s E&Y have stated in their factual note that these are ongoing projects	0.00
	Northern Electrical Supply Co. of Orissa Limited – Affiliate	134.44	134.44	-ditto-	0.00
	Southern Electrical Supply Co. of Orissa Limited – Affiliate	85.34	85.34	-ditto-	0.00
	Samalkot Power Project – Parent	656.65	0.00	Eligible	656.65
	Wind Farm, Jogimati – parent	41.92	0.00	Eligible	41.92
	Total	4416.60	3123.88	Total	1292.72

Krishna-patnam	REL (Generation & T & D projects) – Parent	2137.49	2137.49	There was no evidence to show that capitalizations pertained to projects commissioned during the last 10 years.	0.00
	BSES Kerala Power Limited – Affiliate	594.15	0.00	Can be considered if indirect voting power of parent is also allowed.	594.15
	Samalkot Power Project – Parent	656.65	0.00	Eligible	656.65
	Wind Farm, Jogimati – Parent	41.92	0.00	Eligible	41.92
	Total	3430.21	2137.49	Total	1292.72
Tilaiya	REL(Generation & T & D projects) – Parent	2254.61	2254.61	There was no evidence to show that capitalizations pertained to projects commissioned during the last 10 years.	0.00
	BSES Kerala Power Limited – parent	594.15	0.00	Eligible	594.15
	Samalkot Power Project – parent	656.65	0.00	Eligible	656.65
	Total	3505.41	2254.61	Total	1250.80

* REGL (RPL) did not win the Mundra bid but was declared qualified at the RFQ stage

Annexure-3
(Referred to in Para 4.3)

Details of Excess land agreed with successful bidders in respect of SPVs

		As per CEA norms *	Land agreed	Difference
		(In acres)	(In acres)	(In acres)
(A) Coastal Gujarat Power Ltd. (For Mundra UMPP)				
A	Main Power Plant	840	1524	684
B	Ash Dyke	390	595	205
C	Other Facilities (MGR System, Intake outfall channel)	150	499	349
D	Township	150	450	300
	Total	1530	3068	1538
(B) Coastal Andhra Power Ltd. (For Krishnapatnam UMPP)				
A	Main Power Plant and colony	990	1915.90	925.90
B	Ash Pond	390	533.56	143.56
C	Other Facilities outside plant area	150	176.22	26.22
	Total	1530	2625.68	1095.68
	Grand Total			2633.68

*CEA's Report of December 2007 on the land requirement of Thermal power stations.

Annexure -4
(Referred to in Para 5.1(vii))

A chronology of the events relating to grant of permission for use of surplus coal from captive mines of Sasan UMPP for Chitrangi Project

Event	Month/Date
Issue of Request for Qualification (RFQ) for Sasan UMPP	31.3.2006
Opening of RFQ	1.6.2006
Issue of Request for Proposal (RFP) for Sasan UMPP	21.8.2006
Allocation of captive coal blocks for Sasan UMPP	Moher & Moher Amlohri extn.- 13.9.2006
Ministry of Power requested Ministry of Coal to allocate another coal block to meet the requirements of Sasan UMPP	October 2006
Ministry of Coal allocated Chhatrasal Coal block to Sasan UMPP	26.10.2006
Opening of RFP	7.12.2006
Issue of Letter of Intent (LOI) to Globeleq-Lanco consortium (the lowest bidder)	28.12.2006
Complaint against award of LOI to Globeleq-Lanco Consortium	Feb 2007
Complaint against Globeleq Lanco examined by PFC, MoP and E-GoM (constituted on 14 June 2007)	February 2007 to July 2007
Cancellation of LOI to Globeleq-Lanco consortium	26.7.2007
Issue of LOI to Reliance Power Limited (second lowest bidder who matched the bid of Globeleq-Lanco)	1.8.2007
Signing of agreements for award of Sasan UMPP to RPL	7.8.2007
Chief Minister/Madhya Pradesh's letter to Prime Minister recommending diversion of surplus coal from captive mines of Sasan UMPP to Chitrangi project of RPL	2.11.2007
RPL submits a mining plan for Moher and Moher Amlohri Extn coal blocks with annual production of coal of 12 Million Tonne	March 2008
E GoM meetings to <i>inter alia</i> discuss the issue of use of surplus coal	28.5.2008 and 14.8.2008
E GoM recommendation for use of surplus coal for other projects of RPL	14.8.2008
RPL submits revised mining plan for Moher and Moher Amlohri Extn for 20 Million Tonne per annum indicating a surplus of coal over the requirements of 16 Million Tonne per annum for Sasan UMPP	September 2008
In-principle approval of Ministry of Coal to the E GoM recommendation to use surplus coal from captive mines of Sasan UMPP in Chitrangi project of RPL	18.11.2008

Filing of Writ petition in High court by Tata Power Company Ltd against the permission to RPL to use surplus coal from Sasan UMPP to Chitrangi project	3.1.2009
Date of raising the issue first by Audit	16.3.2009
Approval of mining plan for Chhatrasal Coal block for production of 5 Million Tonne per annum.	March 2009
Rejection of petition of Tata Power Company Limited by High Court on the ground of suppression of material fact , absence of <i>locus standii</i> of Tata Power Limited to maintain the writ petition and on account of the time taken for approaching the Court for relief.	13.4.2009
Issue of Draft Performance Audit Report on 'Working of SPVs in PFC' to management	20.10.2009
Specific approval of MOC for use of surplus coal in Chitrangi project (gazette notification)	17.2.2010
Issue of Management letter by Audit to PFC	16.6.2010
Issue of Management letter by Audit to the Ministry of Power	27.8.2010
Filing of Special Leave Petition by Tata Power Ltd in Hon'ble Supreme Court.	5.5.2009
Issue of draft audit observation to Ministry of Power with financial implication	29.8.2011
Issue of follow-up Audit report to management of PFC	14.9.2011
Issue of follow-up report to Ministry of Power	12.10.2011
Reply of the Ministry of Power	14.12.2011
E GoM meeting wherein the issue of withdrawal of permission for use of surplus coal from Sasan UMPP to Chitrangi project was inter alia discussed. E-GoM directed the Ministry of Power to revert back after obtaining views of Attorney General of India	5.12.2011
Ministry of Power to revert back to EGoM after obtaining the views of Attorney General of India	March 2012

Tariff based Comparison

Calculation References	Percentage Deducted (Note 1 and 2)		Apportionment of Capacity between the two tariff levels (1241 MW @ ₹2.45 & remaining MW @ ₹3.702) (Note 3)		
	Additional capacity because of surplus coal (Note 4)	6	7.50	Madhya Pradesh (MP) - contracted amount -1241 MW	Uttar Pradesh (UP)- After meeting MP's contracted amount
Year 1 (megawatts)	461	433.34	400.8395	400.8395	0
Year 2-16(megawatts)	2075	1950.5	1804.2125	1241.0000	563.2125
Year 17 (megawatts)	1383	1300.02	1202.5185	1202.5185	0
Year 18 (megawatts)	1153	1083.82	1002.5335	1002.5335	0
Year 19 (megawatts)	1153	1083.82	1002.5335	1002.5335	0
Year 20 (megawatts)	922	866.68	801.679	801.6790	0

Year	Units (kWh) produced with surplus coal (MP)	Units (kWh) produced with surplus coal (UP)
1	3160218618	0
2	9784044000	4440367350
3	9784044000	4440367350
4	9784044000	4440367350
5	9784044000	4440367350
6	9784044000	4440367350
7	9784044000	4440367350
8	9784044000	4440367350
9	9784044000	4440367350
10	9784044000	4440367350
11	9784044000	4440367350
12	9784044000	4440367350
13	9784044000	4440367350
14	9784044000	4440367350
15	9784044000	4440367350
16	9784044000	4440367350
17	9480655854	0
18	7903974114	0
19	7903974114	0
20	6320437236	0

Days in a year	Hours in a day	Coverision- mega to kilo watt	PLF/ Efficiency (note 5)	Total Units per MW
365	24	1000	0.9	7884000

Notes:

- 6% auxiliary consumption has been taken.
- 7.5% of power generation committed to be supplied to MP at variable cost is assumed to be supplied from 2075 MW which would be generated from the surplus coal from Sasan Project.
- 1241 MW of power committed to be supplied to MP at ₹2.45 per unit is assumed to be supplied from 2075 MW which would be generated from the surplus coal from Sasan. It is presumed that the balance power will be given to UP at ₹3.702 per unit.
- As per proposal given by RPL to MOC surplus coal would generate 461 MW in the first, 2075 MW every year thereafter upto 16th year and 1383 MW, 1153 MW, 1153 MW and 922 MW in the 17th, 18th, 19th and 20th year respectively.
- Plant Load Factor for Chitrangi has been considered as 90% as per the proposal of RPL for use of incremental coal.

Financial Benefit to RPL

Discount Rate - 11.08%

MP

UP

Year	Chitrangi - Levelised tariff	Sasan - Levelised tariff	Difference	Wheeling charges and CDM	Units (kWh) produced	Undue benefit - MP (in ₹)	Chitrangi levelised tariff	Sasan - Levelised tariff	Difference	Wheeling charges and CDM	Units (kWh) produced	Undue benefit - UP (in ₹)	
	(in ₹)			-0.42			(in ₹)			-0.42			
1	2.450	1.196	1.254	0.834	3,160,218,618	2,635,622,327	3.702	1.196	2.506	2.086	0	0	
2	2.450	1.196	1.254	0.834	9,784,044,000	8,159,892,696	3.702	1.196	2.506	2.086	4,440,367,350	9,262,606,292	
3	2.450	1.196	1.254	0.834	9,784,044,000	8,159,892,696	3.702	1.196	2.506	2.086	4,440,367,350	9,262,606,292	
4	2.450	1.196	1.254	0.834	9,784,044,000	8,159,892,696	3.702	1.196	2.506	2.086	4,440,367,350	9,262,606,292	
5	2.450	1.196	1.254	0.834	9,784,044,000	8,159,892,696	3.702	1.196	2.506	2.086	4,440,367,350	9,262,606,292	
6	2.450	1.196	1.254	0.834	9,784,044,000	8,159,892,696	3.702	1.196	2.506	2.086	4,440,367,350	9,262,606,292	
7	2.450	1.196	1.254	0.834	9,784,044,000	8,159,892,696	3.702	1.196	2.506	2.086	4,440,367,350	9,262,606,292	
8	2.450	1.196	1.254	0.834	9,784,044,000	8,159,892,696	3.702	1.196	2.506	2.086	4,440,367,350	9,262,606,292	
9	2.450	1.196	1.254	0.834	9,784,044,000	8,159,892,696	3.702	1.196	2.506	2.086	4,440,367,350	9,262,606,292	
10	2.450	1.196	1.254	0.834	9,784,044,000	8,159,892,696	3.702	1.196	2.506	2.086	4,440,367,350	9,262,606,292	
11	2.450	1.196	1.254	0.834	9,784,044,000	8,159,892,696	3.702	1.196	2.506	2.086	4,440,367,350	9,262,606,292	
12	2.450	1.196	1.254	0.834	9,784,044,000	8,159,892,696	3.702	1.196	2.506	2.086	4,440,367,350	9,262,606,292	
13	2.450	1.196	1.254	0.834	9,784,044,000	8,159,892,696	3.702	1.196	2.506	2.086	4,440,367,350	9,262,606,292	
14	2.450	1.196	1.254	0.834	9,784,044,000	8,159,892,696	3.702	1.196	2.506	2.086	4,440,367,350	9,262,606,292	
15	2.450	1.196	1.254	0.834	9,784,044,000	8,159,892,696	3.702	1.196	2.506	2.086	4,440,367,350	9,262,606,292	
16	2.450	1.196	1.254	0.834	9,784,044,000	8,159,892,696	3.702	1.196	2.506	2.086	4,440,367,350	9,262,606,292	
17	2.450	1.196	1.254	0.834	9,480,655,854	7,906,866,982	3.702	1.196	2.506	2.086	0	0	
18	2.450	1.196	1.254	0.834	7,903,974,114	6,591,914,411	3.702	1.196	2.506	2.086	0	0	
19	2.450	1.196	1.254	0.834	7,903,974,114	6,591,914,411	3.702	1.196	2.506	2.086	0	0	
20	2.450	1.196	1.254	0.834	6,320,437,236	5,271,244,655	3.702	1.196	2.506	2.086	0	0	
	Undue benefit without discounting : MP					151,395,953,227		Undue benefit without discounting : UP					138,939,094,382
	NPV of Undue benefit : MP					58,823,136,932		NPV of Undue benefit : UP					59,698,493,999
	Total Undue benefit without discounting					290,335,047,608		NPV of Total Undue benefit					118,521,630,930

- Note:**
- The financial impact of wheeling charges (₹0.38/kwh) and CDM charges (₹0.04/kwh) to be incurred in Chitrangi Project has been considered while calculating the undue benefit.
 - The levelised tariff quoted by RPL for Chitrangi for MP and UP @ ₹ 2.45 and ₹ 3.702 per kWh respectively and for Sasan @ ₹ 1.196 per kWh has been taken as the annual tariff rate from year 1 to year 20.
 - Levelised tariff are based on values as on the date of bid opening for the respective cases.
 - Discount factor to calculate the NPV has been taken as the currently (April 03, 2012) prescribed CERC rate of 11.08%.
 - Escalation in costs have not been considered for Sasan as well as Chitrangi (UP and MP). As a consequence the actual gain to RPL may vary.
 - Moher, Moher-Amlahri and Chhatrasal are located at a distance of 20 km from Sasan Project and 40 km from Chitrangi Project. Since Railways' freight remains same upto a distance of 100 km the financial impact of transportation cost has not been worked out