

**Ministry of Power
Govt. of India**

MEMORANDUM

OF

PUBLIC INVESTMENT BOARD (PIB)

FOR

**PRE- INVESTMENT ACTIVITIES FOR
KHURJA SUPER THERMAL POWER PROJECT (U.P.)
(2x660 MW)**

THDC INDIA LTD.

May, 2015

EXECUTIVE SUMMARY

BACKGROUND

The 2X660 MW Khurja Super Thermal Power Project, District Bulandshahar, U.P. is being implemented by THDCIL. The MoU for the project was signed between THDCIL, GoUP and UP Power Corporation Ltd. on 31-12-2010. As per MoU, the State Govt. will assist in transfer of the land already acquired by Uttar Pradesh State Industrial Development Corporation (UPSIDC) in Khurja, or in case of non-availability of the said land, will assist in acquisition of required land as per the acquisition policy of the State Government.

The Khurja STPP is being set up to mitigate the power shortage of Northern Region during 13th Plan through capacity addition in Thermal. Power Purchase Agreements for entire off take of power have also been signed by THCDIL prior to 05.01.2011 with various beneficiary states of Northern region.

STATUS OF THE PROJECT

Environment Clearance: Terms of Reference for conducting EIA/ EMP Study were issued by the MoEF, Govt. of India, vide letter dated 27-10-2011. EIA/ EMP reports have been prepared and submitted to UP State Pollution Control Board for conducting public hearing.

Water Availability: Water commitment letter for providing 53 cusec water from Upper Ganga Canal has been issued by Water Resources Department, GoUP vide letter dated 12.06.2014

Clearance of Airport Authority of India (AAI): Airport Authority of India has accorded clearance for the construction of 275m high chimney vide letter dated 18-07-2011.

Detailed Project Report: Detailed Project Report for the Project has been prepared through consultant M/s NTPC. Total cost of the project is estimated to ₹ 10,498 crores at IInd Qtr, 2014 price level. The first year tariff and levelised tariff of the Project works out to 458 paisa / unit and 431 paisa / unit respectively which comparable with present tariff of similar placed plants both in Central and Private Sector. FIRR of the Project is estimated as 12.09%.

Re-routing of National highway: National Highway-91 is passing through the land identified for the project. In response to THDCIL's request, National Highway Authority of India (NHAI) vide letter dated 29.10.2013 has conveyed their in-principle approval for re-routing of NH-91 falling under area of the Project and has submitted their proposal including estimated cost of re-routing.

Coal Linkage: Application for long term coal linkage along with requisite fee has been submitted on 25.05.2011. Ministry of Power vide their letter dated 13th June 2011 requested CEA for furnishing comments on the issues related to Long Term Coal Linkage for 2x660MW Khurja STPP. Due to shortage of domestic coal, Ministry of Coal has not been granting any Linkage since 2010. Therefore, prioritization for grant of linkage will be done by CEA once production of domestic coal improves.

However, THDCIL has informed that they have applied for 3 coal blocks namely (i) Mahanadi, Machhakata (ii) Chandipada, Chandipada-II and (iii) Mara-II Mahan for allocation of coal block to the Government Companies in accordance with the provisions of Section 5 of the Coal Mines (Special Provision) Second Ordinance 2014 against the 43 notified coal blocks vide Ministry of Coal's notification dated 18.02.2015. Ministry of Power vide letter dated 11th March, 2015 has requested to Ministry of Coal to consider the request of THDCIL for allocation a suitable coal block for the project.

Rail Connectivity for transportation of Coal: Coal transportation and Railway siding study has been carried out through Consultants M/s RITES. Feasibility report has been approved and "In-Principle Approval accorded by Indian Railways vide their letter dated 11th March, 2015.

Land Acquisition / Availability: A total of 1362 acres of land shall be required to implement 2x660MW thermal power plant at Khurja, district Bulandshahar (U.P). Details of land required is duly vetted by CEA vide letter dated 28.12.2012. Total land required comprises of 1200.843 acres of land already acquired by the GoUP through Uttar Pradesh State Industrial Development Corporation (UPSIDC). Entire land acquired by UPSIDC has also been mutated in their name for industrial use. However, physical possession of the land could not be taken over by UPSIDC due to demand for higher compensation by land owners.

MoU for transfer the possession of 1200.843 acres of land to THDCIL for implementation of Khurja STPP has been signed with UPSIDC on 14.12.2013. The land shall be transferred to THDCIL after compensation/ ex-gratia is paid by UPSIDC to the erstwhile land owners.

Subsequent to the negotiation held by Bulandshahr District Authorities with affected villagers over land compensation issue, UPSIDC vide letter dated 19-09-2014 has communicated that land rate of ₹ 721 per sqm has been finalized. The enhanced amount shall be paid to the erstwhile land owners in the form of ex-gratia after adjusting of the amount already paid by UPSIDC.

In addition to above, 89 acres of land shall be required for re-routing of NH-91 to be acquired by NHAI and 123 acres of land shall be required for rail and water corridor, which shall be acquired under LARR'2013.

Acquisition of land shall help in expeditious implementation of project after investment approval of the Project.

PRESENT PROPOSAL

The present proposal seeks recommendation of PIB for incurring expenditure of ₹ 585.82 crore towards pre-investment activities covering preparation of PFR/DPR including surveys / investigations required for the project, conducting EIA study, land acquisition, re-routing of National Highway, diverting village roads and expenditure for secure possession of the land for implementation of 2x660MW Khurja Super Thermal Power Project.

Details of the estimated cost of the present proposal are as under:

Description	₹ in crore Amount
1. Preparation of PFR/DPR of the Project, including surveys/ investigations required for the project; EIA/EMP study etc.	10.00
2. Expenditure for transfer of 1200.843 acre land already acquired by UPSIDC, as intimated by UPSIDC	387.18
3. Expenditure towards land acquisition for re-routing of NH-91 covering acquisition of 89 acre land, shifting of utilities/ electric lines, compensation for structures & trees, as intimated by NHAI	110.64
4. Estimated cost of 123 acre land to be acquired for rail & water corridors, as per LARR, 2013	61.00
5. Expenditure for providing fencing, leveling, diverting village roads, administrative and establishment expenses for secure possession of the land	17.00
Total	585.82

An expenditure of Rs. 8.34 cr. has been incurred on the Project till Feb.' 2015.

Investment Approval for the project shall be sought from Gol after getting coal linkage for the project and accord of Environmental Clearance.

PROPOSED FUNDING PATTERN

The Cost involved under present proposal (₹ 585.82 crores), is proposed to be funded through THDCIL's internal resources. THDCIL is a profit making company since 2006-07, and no difficulty is envisaged in meeting the fund requirement of present proposal.

APPROVAL REQUIRED

Recommendation of Public Investment Board (PIB) is solicited for incurring expenditure of ₹ 585.82 crore towards pre-investment activities covering preparation of PFR/ DPR including surveys/ investigations required for the project, conducting EIA study, land acquisition, re-routing of National Highway, diverting village roads and expenditure for secure possession of the land, for implementation of 2x660MW Khurja Super Thermal Power Project.

Checklist for the EFC/PIB Memo

Particulars	Indicate Y or N
Whether proposal has been prepared in the prescribed EFC/PIB format.	Y
Whether an Executive Summary has been attached.	Y
Whether „In-principle“ approval of the Planning Commission has been taken and funding tied up.	N
Whether comments of Financial Advisor/ IFD have been attached with EFC/PIB Memo.	Y
Whether evaluation report if any has been enclosed with the EFC/PIB memo.	NA
Whether feasibility report, if any, has been appended with the EFC/PIB memo.	
Whether mandatory clearances / approvals have been obtained.	Y
Whether a soft copy of the EFC/PIB Memo has been attached.	Y

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**MEMORANDUM
FOR
PUBLIC INVESTMENT BOARD
ON
KHURJA SUPER THERMAL POWER PROJECT (2X660 MW)
(By THDC India Ltd.)**

1. *Proposal identification*

1.1 *Title of the proposal.*

KHURJA SUPER THERMAL POWER PROJECT (2X660MW)

The present proposal seeks recommendation of PIB for incurring expenditure of ₹585.82 crore towards pre-investment activities covering preparation of PFR/ DPR, including surveys/ investigations required for the project, conducting EIA study, land acquisition, re-routing of National Highway, diverting village roads and expenditure for secure possession of the land for implementation of 2x660MW Khurja Super Thermal Power Project.

1.2 *Name of the sponsoring agency (Ministry/ Department/ Autonomous Body/ Central PSE).*

The Khurja STPP is to be implemented by THDC India Limited (THDCIL), a Mini Ratna, Schedule 'A' PSU under the administrative control of Ministry of Power, Government of India. THDCIL, a joint venture of Govt. of India and Govt. of Uttar Pradesh was incorporated as a Limited Company with equity participation by Govt. of India and Govt. of Uttar Pradesh in the ratio 3:1.

THDCIL is a profit making company since 2006-07. The performance of the company during last five years is as under;

Year	Turnover	PAT	₹ in crore
			Net worth
2008-09	1,069.43	325.21	5,165.20
2009-10	1,423.91	479.95	5,450.20
2010-11	1,689.27	600.48	5,772.65
2011-12	2,055.08	703.83	6,207.14
2012-13	2,026.53	531.38	6,771.49
2013-14	2,182.38	595.32	7,331.23

After successful commissioning of the 1,000 MW Tehri Dam & Hydro Power Plant and the 400 MW Koteshwar Hydro Power Plant, THDCIL is presently having total generating capacity of 1,400 MW. Further, Hydro Power Projects of total capacity 1,444MW are under construction stage, while Hydro Power Projects having total installed capacity of approximately 6,000MW are under various stages of DPR/ development. In the Thermal sector, DPR for the 1,320 MW Khurja STPP has been prepared.

1.3 Proposed duration of the proposal/Scheme.

The Present proposal is for seeking investment approval for carrying out Pre-investment activities of 1,320 MW Khurja STPP. Investment Approval for implementation of the project shall be sought from Gol after getting coal linkage for the project and accord of Environmental Clearance. Commercial Operation Date (COD) of the first unit of Khurja STPP 660 MW is envisaged in 52 months from the date of investment approval for implementation of the Project and second unit of 660 MW at an interval of 6 months thereafter.

1.4 Total cost of the proposal over the proposed duration.

Total cost of the project is estimated as ₹ 10,498 crore at IIndQtr, 2014 price level as per DPR. However, present proposal involves expenditure of ₹ 585.82 crore towards pre-investment activities.

1.5 Nature of scheme: Central Sector/ Centrally Sponsored/Additional Central Assistance

Central Sector Project

2. Proposal Category

2.1 Please indicate which category the proposal belongs to:

(a) Continuing scheme from past Plan periods and included in current Plan period.

Not Applicable.

(b) New Plan Proposal included in the current Plan period

Not Applicable

(c) New Plan Proposal not included in the current Plan period

The 1,320MW Khurja STPP is proposed to be commissioned during the 13th Plan period.

(d) RCE proposal

Not Applicable.

2.2 If proposal pertains to category 2.1 (a), then please indicate the benefits already accrued and expenditure already incurred.

Not Applicable

2.2(a) Also for proposals belonging to category 2.1 (a), an evaluation report by an independent agency with comments of FA/IFD thereon may be provided along with following details as Annexure to EFC/PIB memo:

Commencement of Scheme & Year of Evaluation	Name of Evaluating Agency	Details of Independent Evaluation		
		Methodology	Major Findings	Main Recommendations
<ul style="list-style-type: none"> ❖ Year ❖ Month 		<ul style="list-style-type: none"> ❖ Sample Size ❖ DataSource ❖ %age of Coverage ❖ Parameters of Evaluation 		

Not Applicable

2.2(b) If there are changes proposed in the proposal belonging to category 2.1(a), please provide existing provisions and proposed changes against each component in tabular form along with financial implications due to the proposed changes:

<i>Existing Component</i>	<i>New/ Revised Component</i>	<i>Changes proposed in Existing Components</i>	<i>Reasons for changes in existing components and addition of new components</i>	<i>Financial Implication in the last Plan</i>	<i>Financial implication of addition/change to proposal</i>
<i>Component 1</i>					
<i>Component 2</i>					
<i>Component 3 and so on</i>					

Not Applicable

2.3 If the proposal pertains to category 2.1 (c), please indicate whether in-principle approval of Planning Commission has been obtained.

In-principle approval of Planning Commission is not required as per clause 2.3 of Office Memorandum No. 1(3)/PF.II/2001 dated 15th November, 2007. Government Budgetary Support (GBS) is also not required.

2.4 Please indicate in case of new Centrally Sponsored Scheme or Major change in ongoing CSS, whether States/UTs have been consulted and their consent obtained to implement the scheme with proposed sharing of funds.

Not Applicable

3. Justification for the Proposal

3.1 The justification for taking up new/ continuing the ongoing proposal may be provided in terms of:

i) Demand and supply analysis to identify gaps.

The Khurja STPP is located in the Northern Region and is envisaged to meet the power requirements of States & Union Territories of Northern Region. The Power supply position for the year 2014-15 (April'14-Feb'15), published by CEA indicates that the energy requirement of the Northern Region during the year 2014-15 (April'14-Feb'15) was 3,09,774 MU of which only 2,89,842 MU was available, leaving a shortfall of 6.4%. While the peaking requirement during the period was 51,977 MW, a peak of 47,642 MW could be met leaving a shortage of 4,335 MW (8.3%) (Copy placed at **Annexure-I**).

ii) Conformity with the Plan Priorities and National objectives

The Khurja STPP is proposed to be commissioned during 13th Plan. As per 18th Electric Power Survey, the peak demand and energy requirement during the terminal year of 13th Plan (2021-22) is expected to be 2,83,474 MW and 1,904 BU respectively. The capacity addition requirement during 13th Plan corresponding to this demand has been worked out as 79,200 MW, out of which 49,200 MW is scheduled to be met from Thermal Projects, (Source: National Electricity Plan, January 2012). The proposed Khurja STPP (1,320 MW) shall contribute in the planned capacity addition of Thermal Power.

iii) Problems to be addressed at local/regional/national levels, as the case may be, through scheme/project.

Khurja STPP is being set up to mitigate the power shortage of Northern region during 13th Plan through capacity addition of 1,320MW.

3.2 The alternatives that have been considered before firming up the design of the proposal may be stated. (This should also include alternate modes of proposal delivery, e.g. outsourcing, PPP, etc. that have been considered).

The Project is proposed to be set up on the land located in Khurja Tehsil of Bulandshahar District of U.P. 1200.843 acres of land has already been identified and acquired by GoUP through UPSIDC for setting up a Thermal Power Project.

Various alternatives for project location / layout were considered during the PFR preparation. Of the various considered options, following two alternatives were also submitted for the purpose of accord of ToR for consideration by MoEF:-

Alternative I: Locating Main Plant, Water Reservoir and Residential facilities on eastern side of the highway and rest of the installations on western side.

Alternative II: Locating only Main Plant on eastern side of the highway and rest of the installations on western side.

Brief of the alternatives considered for locating various installations of the plant is as under;

Alternative-I: The proposed site is situated on either side of the National Highway (NH-91) in between Khurja & Aligarh; therefore, the traffic interchange with grade separation was envisaged by providing flyover for the National Highway near plant location.

Main Plant & associated facilities, raw water reservoir, residential facilities & green belt were proposed to be located on eastern side of the highway and area on the western side of the highway was earmarked for ash disposal by providing green belt along the highway.

Alternative-II: Main Plant & associated facilities & green belt were proposed to be located on eastern side of the highway. Raw water reservoir, residential facilities & green belt are proposed to be located on the western side of the highway. The ash disposal area is proposed to be located on a suitable & separate land piece within a radius of about 5km from main plant.

Further, on submission of Pre-feasibility report and the layout plan based on Alternative-II, the Terms of Reference for conducting EIA / EMP study with respect to proposed location has been issued by the MoEF, Gol, vide their letter dated 27-10-2011.

As per the condition of ToR, 500m land on either side of highway has to be left vacant, thus, leaving about 370 acres land unutilized. With a view to gainfully

utilize the entire land for the project, the matter regarding re-routing of NH-91 was taken up with NHAI/MoRTH through the Ministry of Power.

National Highway Authority of India (NHAI) vide letter dated 29.10.2013 (**Annexure-II**) has conveyed their in-principle approval for re-routing of NH-91 falling under area of Proposed Khurja Super Thermal Power Project.

With the re-routing of NH 91, the acquired land will be available in single piece, thus land can be optimized by locating various plant components adjacent to each other. Further, about 76 acre land of original / present alignment of NH shall be available which shall be utilized for the project. The availability of land would also enable further expansion of the project in future.

3.3 Please state whether the proposal has objectives and coverage which overlap with projects/ schemes being implemented by the same or another agency (Ministry/ Department/ State government). In cases of overlap, please state why the proposal needs to be considered as a separate stand alone effort.

As explained under para 3.1 above, the project is envisaged to meet the power requirements of States & Union Territories of Northern Region.

4. Proposal Objectives and targets

4.1 The objectives of the proposal may be mentioned. These objectives should flow from the proposal justification.

The Khurja STPP is being set up to mitigate the power shortage of Northern Region during 13th Plan through capacity addition in Thermal.

4.2 The specific targets proposed to be achieved of the proposal may be mentioned. These targets should be necessarily measurable. These should also be monitorable, against baseline data. The baseline may be indicated. The targets should be in tabular form as shown below.

Amount ₹ in crore

Component	Year				Total	
	Year 1		Year 2		Physical	Financial
	Physical	Financial	Physical	Financial		
1. Preparation of PFR/DPR including surveys/ investigations; EIA/EMP Report		8.00		2.00		10.00
2. Transfer of land already acquired by UPSIDC.	1200.843 acre	387.18			1200.843 acre	387.18
3. Acquisition of land required for rail & water corridors.		6.00	123.00 acre	55.00	123.00 acre	61.00
4. Acquisition of land required for re-routing NH-91		19.00	89 acre	91.64	89 acre	110.64
5. Expenditure for diverting village roads, administrative & establishment expenses for secure possession of the land		7.00		10.0		17.00
Total (₹ in crore)		427.18		158.64		585.82

Expenditure of ₹8.34crore has already been incurred on the project till February'2015.

4.3 The outcomes of the proposal to be achieved should be indicated. These outcomes should be in the form of measurable indicators which can evaluate the proposal on quarterly/half yearly/annual/plan basis.

The main Milestone of present proposal is completion of all Pre-investment activities and taking possession of 1200.843 acres of land already acquired by UPSIDC after payment to the Land owners on the basis of rates finalized by District Administration/ UPSIDC with land owners. The present proposal also envisages payment to NHA for land acquisition including expenditure towards shifting of utilities/ electric lines, compensation for structures & trees for re-routing of NH9; and acquisition of land for water and rail corridors.

4.4 Briefly explain the objectives of the other programmes/ projects undertaken by Ministry/Dept which are in convergence with the objectives of proposed proposal.

Not applicable

4.5 Please indicate whether the proposal is for current Plan only or will continue in next Plan also.

The present proposal of expenditure towards Pre-Investment activities shall be part of current 12th Plan. However, the Khurja STPP to be implemented on the proposed land shall be commissioned during 13th Plan.

5. Gender Analysis of the Proposal

5.1 Briefly explain the specific objectives of the proposal relating only to women.

Not applicable.

5.2 In case the proposal has gender components, please provide the following information in tabular form as shown below.

<i>Gender Component</i>	<i>% of total expenditure on this component</i>
-------------------------	-------------------------------------------------

Not applicable

6. Proposal design

6.1 Briefly explain the proposal Design. This should include all components of the proposal including:

- i. Scope of the project**
- ii. Assumptions used**
- iii. Technology**
- iv. Size/ Specifications/ Layout Plan**
- v. Plant & Machinery**
- vi. Others (Please specify)**

The components of the project should be carved out from the Feasibility Report/Project report. The study/ investigations on which project parameters are based should be clearly indicated.

The present proposal is regarding expenditure towards pre-investment activities for implementation of the Khurja STPP. The brief details of the Khurja STPP are as under:

Installed capacity Khurja STPP is 1,320 MW comprising two units of 660 MW capacity each, using coal as fuel.

The plan has been developed taking into consideration the various aspects like land availability, ground features & contours, corridors for outgoing transmission lines, road / rail approaches, prevailing wind direction, location of raw water intake and associated pipe corridors.

The units shall be based on Supercritical Technology for improved efficiency and reduction of Green House Gas (CO₂, NO_x, Sox) and Particulate emissions.

The General layout Plan for the Project as prepared by NTPC, consultants is placed at **Annexure-III**.

Salient features of the Project are placed at **Annexure-IV**.

6.2 In case the proposal is specific to any location, area and segment of population please state the basis for selection. Details regarding special physical features, technology, etc., may be given.

The Memorandum of Understanding to set up 2X660 MW coal based Super Thermal Power Plant was signed amongst THDCIL, Energy Department, Government of UP and Uttar Pradesh Power Corporation Limited (UPPCL) on 31st December 2010. As per the MoU, the plant is to be set up at Khurja, District Bulandshahar in the State of Uttar Pradesh (**Annexure-V**). Accordingly, the Plant is envisaged to be set up on land located in the villages DushharaKherli, Rukanpur, Jahanpur and UnchaGaon of Khurja Tehsil in Bulandshahar district of U.P.

Subsequent to the signing of the MoU with Energy Department, Government of U.P. and Uttar Pradesh Power Corporation Limited (UPPCL), Power Purchase Agreements have already been signed by THCDIL with the following beneficiaries;

BENEFICIARY STATES (AGENCY/DISCOM WITH WHOM PPA SIGNED)	DATE OF SIGNING PPA	POWER DEMANDED (MW)
Delhi (BSES Rajdhani Power Limited)	05.01.2011	125
Uttar Pradesh(Uttar Pradesh Power Corporation Limited)	31.12.2010	792
Uttarakhand(Uttarakhand Power Corporation Limited)	04.01.2011	328
Rajasthan(Jaipur VidyutVitran Nigam Limited, Ajmer VidyutVitran Nigam Limited, Jodhpur VidyutVitran Nigam Limited)	04.01.2011	328
Himachal Pradesh(Himachal Pradesh State Electricity Board Limited)	03.01.2011	200
	TOTAL	1,773

The present identified location to set up the Plant offers the following advantages:

- i) 1200.843 acres of land has already been acquired by the Government of Uttar Pradesh through Uttar Pradesh State Industrial Development Corporation for industrial use and the same has already been mutated in their name; therefore, time required for the land acquisition process shall be saved. An MoU for transfer the possession of already acquired 1200.843 acres of land to THDCIL for implementation of Khurja STPP has also been signed with Uttar Pradesh Industrial Development Corporation on 14th Dec, 2013 in the presence of Hon'ble Chief Minister of Uttar Pradesh (**Annexure-VI**).
- ii) Upper Ganga Canal has been identified as an adequate source of water to meet the water requirement of the plant. The Canal is passing through a distance of about 7.5 kms from the proposed location, therefore, cost of water pipe line to be laid for water transportation upto the plant would be less; also recurring expenditure on supply of water and R&M on pipe line would be less. Water commitment letter for providing 53 cusec water from Upper Ganga Canal has been issued by Water Resources Department, Govt. of Uttar Pradesh on dated 12.06.2014 (**Annexure-VII**).
- iii) The railway line is passing through a distance of about 3 kms from the proposed location therefore, length of dedicated railway track to be laid for coal transportation upto the plant would be short. Coal transportation and Railway siding studies has been carried out through Consultants M/s RITES. Feasibility report has been approved and "In-Principle Approval accorded by Indian Railways vide their letter dated 11th March, 2015.

- iv) Clearance for the construction of 275m high chimney for Khurja STPP has been obtained from Airport Authority of India vide their letter dated 18-07-2011 (**Annexure-VIII**).
- v) The proposed site is located on National Highway, which makes it easily accessible and therefore convenient for road transportation of heavy equipments and machinery.
- vi) Ministry of Environment and Forest, Gol vide letter dated 27.10.2011 has issued the Terms of Reference for conducting EIA/ EMP study to implement the Project on proposed location vide letter dated 27-10-2011 (**Annexure-IX**). EIA/ EMP reports have been prepared and submitted to Uttar Pradesh State Pollution Control Board for conducting public hearing. In the absence of coal linkage/ coal block allocation for the Project required for Environment Clearance.
- vii) In order to get long term coal linkage for the project, Ministry of Coal, Government of India has been requested vide THDC letter dated 05.01.2011 for including Khurja STPP in the list of Thermal projects for coal linkage. Formal application for coal linkage has also been submitted on 25.05.2011 along with requisite fee (**Annexure-X**). Ministry of Power vide their letter dated 13th June 2011 requested CEA for furnishing comments on the issues related to Long Term Coal Linkage for 2x660MW Khurja STPP(**Annexure-XI**). Due to shortage of domestic coal, Ministry of Coal has not been granting any Linkage since 2010. Therefore, prioritization for grant of linkage will be done by CEA once production of domestic coal improves.

However, THDCIL has informed that they have applied for 3 coal blocks namely (i) Mahanadi, Machhakata (ii) Chandipada, Chandipada-II and (iii) Mara-II Mahan for allocation of coal block to the Government Companies in accordance with the provisions of Section 5 of the Coal Mines (Special Provision) Second Ordinance 2014 against the 43 notified coal blocks vide Ministry of Coal's notification dated 18.02.2015. Ministry of Power vide letter dated 11th March, 2015 has requested to Ministry of Coal to consider the request of THDCIL for allocation a suitable coal block for the project (**Annexure-XIa**).

6.3 Please indicate whether the proposal is secured against natural/ man-made disasters like floods, cyclones, earthquakes, tsunamis, etc. If the proposal involves creation/ modification of structural and engineering assets or

change in land use plans, disaster management concerns should be assessed.

THDCIL shall identify all the possible risks and analyse the likelihood and impact from earthquakes, floods cyclones and landslides due to location of the Project sites and carry out all the mitigation measures in conformity with the statutory and other regulatory requirements during the design and construction stages. Further it shall be ensured that the implementation of the selected mitigation measures shall not create new risks. Cost of disaster management / mitigation measures shall be included in overall project cost.

6.4 In case of beneficiary oriented proposal, the mechanism for identification of the beneficiary and the linkage of beneficiary identification with UID numbers, on a voluntary / non-mandatory basis, may be indicated.

Not Applicable

6.5 Wherever possible, the mode of delivery should involve the Panchayati Raj Institutions and Urban Local Bodies. Where this is intended, the preparedness and the ability of the Panchayats for executing the proposal may be indicated. If exceptions are to be made, the reasons may be explained.

Not Applicable

6.6 Whether the land required for the proposal is in possession of the agency. In case the proposal involves land acquisition or environmental clearances, the specific requirements and the status in this regard may be indicated.

a) Land requirement: A total of 1,362 acres of land shall be required to implement 2x660MW Super Thermal Power Plant at Khurja district Bulandshahar. Details of land required duly vetted by CEA vide letter 166/GC/BO/ TPI/CEA/3578 dated 28.12.2012 is placed at (**Annexure – XII**).

Land available/ identified: The availability of land at the project site is as under:

S. No.	Description	Area in acres
Land available / identified for the Project:		
1	Land acquired by UPSIDC, MoU for transfer of land to THDCIL to implement the project has been signed with UPSIDC	1200.843
2	Land required for rail and water corridors outside the boundary of UPSIDC land	123.00
	Total	1323.843
Land required for re-routing the highway:		
1	Land required by NHAI to re-route NH-91 around UPSIDC land, intimated by NHAI	89.00

About 76 acres land under present alignment of highway shall be transferred by NHAI to THDCIL for the Project use after diversion of traffic on realigned stretch.

1200.843 acre land available with UPSIDC comprises of 969.126 acres of private land and 231.717 acres of Gram Sabha land. Land is located in the villages DushharaKherli, Rukanpur, Jahanpur and UnchaGaon of Khurja Tehsil in Bulandshahar district of U.P. The land has already been mutated in the name of UPSIDC for non-agricultural use. However, physical possession of the land could not be taken over by UPSIDC due to demand for higher compensation by land owners. Detail of the land available with UPSIDC is as under:

S.No.	Village	Area in acres
	Private Land	
1.	DushharaKherli	290.854
2.	Rukanpur	355.950
3.	Jahanpur	169.427
4.	UnchaGaon	152.895
	Total Private land	969.126
	Gram Sabha land	231.717
	Total land	1200.843

About 123 acres of land required for locating Rail, Water line corridors outside UPSIDC land shall be acquired by THDCIL through the state authorities under the provisions of LARR, 2013.

About 89 acres land required for re-routing NH-91 around plot boundary shall be acquired by NHAI and around 76 acres land under the present alignment of highway shall be transferred by NHAI to THDCIL after diversion of traffic on realigned stretch of highway. THDCIL shall bear the entire cost of re-alignment including land cost.

b) Environmental Clearances: The Terms of Reference for conducting EIA/ EMP study have been issued by the MoEF, Govt. of India. EIA/ EMP reports have been prepared and submitted to Uttar Pradesh State Pollution Control Board for conducting public hearing.

Application for accord of Environment Clearance shall be filed after conducting public hearing by UP State Government authorities and after getting coal linkage for the project.

6.7 *The legacy arrangements after the scheduled proposal duration may be mentioned. In case the proposal creates assets, arrangements for their maintenance and upkeep may be stated. (For example the proposal assets may be taken over and maintained by the State Government/ PRIs, ULBs).*

Khurja STPP is allotted to THDCIL on ownership basis. Project shall be operated and maintained by THDCIL.

6.8 *Please indicate:*

- *Inter-linkages with other schemes mainly in terms of coverage, impact, outcomes, etc.*
- *Steps taken towards convergence with other schemes to achieve the intended outcomes may also be stated.*
- *Steps taken towards convergence in flow of funds from other schemes.*

Not applicable

7. Proposal cost

7.1 *Please provide the proposal cost estimate for its scheduled duration along with a break-up of year-wise, component-wise expenses segregated into non-recurring and recurring expenses.*

Details of the estimated cost of the present proposal are as under:

₹ in crore	
Description	Amount
1. Preparation of PFR/DPR of the Project including surveys/ investigations required for the project; EIA/EMP study	10.00
2. Expenditure for transfer of 1200.843 acre land already acquired by UPSIDC, as intimated by UPSIDC	387.18
3. Expenditure towards land acquisition for re-routing of NH-91 covering acquisition of 89 acre land,shifting of utilities/ electric lines, compensation for structures & trees as intimated by NHAI	110.64
4. Estimated cost of 123 acre land to be acquired for rail & water corridors, as per LARR, 2013	61.00
5. Expenditure for providing fencing, leveling, diverting village roads, administrative and establishment expenses for secure possession of the land	17.00
Grand Total	585.82

Year wise and component wise details are provided in point no. 4.2

7.2 *In case the land is to be acquired, the details of cost of land and cost of rehabilitation/resettlement may be provided.*

Details of estimated cost have been indicated in Point 7.1 above, which includes cost of land as ₹ 538.18 cr.

7.3 *Estimated expenditure on proposal administration (including expenses on consultants, monitoring, evaluation, IEC, etc.) may be separately indicated.*

Not applicable at this stage, as the same shall be applicable at project implementation stage.

7.4 *The basis of these cost estimates along with the reference dates (it should not be more than six months old) for normative costing may be provided. Please indicate the firmness of the estimates, component wise, with the extent (+ / -) of the expected variation.*

Basis of Cost Estimate of Proposal as mentioned in Point 7.1 above is as under:

Expenditure on preparation of PFR/DPR Studies: A provision of ₹10.00 cr. has been made towards preparation of PFR/DPR including surveys/investigations of all types required for the project,EIA/EMP Study,etc. The Pre- Feasibility Report and Detailed Project Report (DPR) has been prepared by consultant NTPC. Other site specific studies conducted at site are mentioned as under:

a) Topography Survey,

- b) Soil and Geotechnical investigations,
- c) Coal Transport & Railway Siding Study carried out through consultant M/s. RITES Ltd.
- d) Site Specific Seismic Study by IIT, Roorkee.
- e) Area Drainage Study by National Institute of Hydrology, Roorkee.
- f) Water Drawal Study by CWPRS, Pune.
- g) Social Economic Study by M/s Mantec Consultants Pvt Ltd.
- h) Environment Impact Assessment and Environment Management Plan study prepared by M/s Mantec Consultants Pvt Ltd.

Expenditure towards 1200.843 acre land already acquired by UPSIDC:

Process for acquisition of 1200.843 acre land by UPSIDC was initiated in 1991. In the year 1993, declaration of award for the acquired land was made by the SLAO. The entire 1200.843 acre land was mutated in the name of UPSIDC for non-agricultural use. However, physical possession of the land could not be taken over by UPSIDC, because some farmers, dissatisfied with the rate of compensation, filed petitions before Hon'ble Court of ADJ Special, Bulandshahar praying for enhanced rate of compensation.

The Hon'ble Court in its judgment dated 13-02-2009, gave relief to the farmers by awarding enhanced rates for the land. The awarded rate currently works out as ` 353.15 per sqm as on Sept, 2014 including benefits of solatium, additional compensation and interest. Despite the Court order, UPSIDC was not able to take over physical possession of the land due to continued resistance.

Pursuant to the MoU signed between THDCIL, UP Energy Department, and UPPCL to set up 2X660 MW Khurja STPP, an MoU was signed between THDCIL and UPSIDC on 14th Dec, 2013 for transfer 1200.843 acre land already acquired by UPSIDC to THDCIL for implementation of the project. The MoU provides that UPSIDC shall intimate the total amount to be paid by THDCIL to UPSIDC after final settlement of compensation / ex-gratia. Total amount shall be inclusive of land compensation, land acquisition charges and UPSIDC charges @12.5%. THDCIL will also pay bank interest on the amount already disbursed by UPSIDC to the farmers / Govt. and legal expenses, if any incurred by UPSIDC. It shall be ensured by UPSIDC that neither any claim nor any legal proceedings shall be initiated after full and final settlement to the erstwhile land owners. All the pending land reference cases shall be settled under Land Acquisition Act, 1894 and UPSIDC shall transfer litigation free land to THDCIL.

The MoU further provides that the land shall be transferred on 90 years lease as per the prevailing rules and regulations of UP Govt. immediately after the compensation/ ex-gratia is paid to the erstwhile land owners. THDCIL shall have

the option of getting the land mutated in its name as and when permitted by the State Govt.

To discuss the issue of handing over the possession of acquired land to THDCIL, a meeting was convened under the chairmanship of Additional Secretary, Power, GoI on 29-01-2014 wherein it was decided that District Magistrate, Bulandshahar shall negotiate with the farmers to take requisite steps to hand over the possession to UPSIDC/ THDCIL. Accordingly, UPSIDC would take steps to expedite transfer of the acquired land to THDCIL. A copy of minutes of meeting is enclosed at (**Annexure-XIII**).

With the active involvement of District Authorities in negotiation process, consensus has emerged on land compensation rate of ₹ 721 per sqm. The rate of ₹ 721 per sqm consists of two components i.e. ₹ 650 per sqm basic rate and ₹ 71 per sqm in lieu of 6% developed land (provision of 6% developed land is as per GoUP policy). It may be mentioned that the rate of ₹ 650 per sqm is the rate settled during 2011 through declaration of award by Commissioner, Meerut and is being paid by UPSIDC for land acquisition at village Chola, situated around 30 Kms from the proposed Khurja site.

After receiving confirmation from District Magistrate, Bulandshahr, UPSIDC vide letter dated 19-09-2014 (**Annexure-XIV**) has communicated that land rate of ₹ 721 per sqm has been finalized for private land after negotiating with land owners. The enhanced amount (over and above the amount worked out as per the rate awarded by Court) shall be paid to the private land owners in the form of ex-gratia after adjustment of the amount already paid by UPSIDC. Payment against 231.717 acre Gram Sabha land amounting to ₹ 0.44 cr. has already been made by UPSIDC to State Revenue Authorities. Total amount to be paid by THDCIL to UPSIDC against 1200.843 acre of land has been worked out as ₹ 387.18 cr. including overhead charges, as per the MoU signed between THDCIL & UPSIDC. The breakup of the cost as intimated by UPSIDC is as under:

Description	Area	Amount ₹ in cr.
Cost of private land	969.126 Acres (3921999.19 sqmtr)	282.78
Cost of Gram Sabha land	231.717 Acres	0.44
Total	1200.843 Acres	283.22

Add:		(₹ in crores)
	Land acquisition charges @ 10%	: ₹ 27.28
	Interest on payments made by UPSIDC	: ₹ 33.66
	Subtotal	: ₹ 344.16
Add:	Overhead charges of UPSIDC @ 12.50%	: ₹ 43.02
	Total amount payable to UPSIDC	: ₹ 387.18

Regarding applicability of the recently enacted LARR, 2013 (the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013) for completing the process of acquisition of 1200.843 Acre of land already mutated in the name of UPSIDC, the issue has been examined and legal opinion obtained. As per the legal opinion, the test for applicability of the Land Acquisition Act, 1894 is to be seen under Section 24 of the LARR, 2013. Since the award under Section 11 of Land Acquisition Act, 1894 has been made in October, 1993 and March, 1995 and compensation in respect of majority of the land holdings has been deposited in the account of the beneficiaries, the provisions of Land Acquisition Act, 1894 shall continue to operate with respect to the land acquired by UPSIDC in Khurja as per Section 24 of LARR Act.

Expenditure towards re-routing of NH-91: For re-routing the NH-91, NHAI has intimated total estimated cost of ₹110.64 crore (excluding cost of construction). The cost includes ₹ 90.00 crore as cost of 89 acres required for re-routing and ₹ 20.64 crore towards preparation of Project Report, shifting of utilities / electric lines, compensation for structures & trees as communicated by NHAI. (Copy of NHAI letter dated 27.11.2013 is enclosed at **Annexure–XV**)

Expenditure towards 123 acre land required for rail & water corridors:

About 123 acre land in the form of corridors outside the boundary of UPSIDC land for accommodating railway line for coal transport and water line shall be acquired by THDCIL. The average land compensation rate of ₹ 1,225 per sqm has been estimated as per the provisions of LARR, 2013 considering prevailing market / circle rates of the villages. Provision of ₹ 61.00 cr. has accordingly been made in the proposal towards acquisition cost of 123 acre land.

Expenditure for secure possession of land: An estimate of ₹ 17.00 cr. has been made towards expenditure by THDCIL towards fencing, leveling, diverting village roads, shifting of utilities, trees & electric lines etc. for making entire land encumbrance free. This also includes administrative and establishment expenses till investment approval of the project, for ensuring secure possession of the land.

7.5 *In case the proposal involves payout of subsidy, the year wise and component wise expected outgo, up to the last year of payout, may be indicated.*

Not Applicable

7.6 In case the proposal intends to create capital assets, employ specialised manpower or involves other activities that necessitate a Recurring Cost of Capital Expenditure (RCCE) (e.g., maintenance and upkeep costs of assets, salary costs of manpower, etc.) over the lifetime of the asset, such expenditures, on an annual basis, may be indicated in the proposal.

Not applicable under present proposal.

7.7 It may also be stated whether the agency which would be assigned this legacy responsibility has been consulted and has agreed to bear the continuing recurring expenditure. (e.g., the State governments may need to incur the maintenance and upkeep costs of assets created under Plan schemes).

Not applicable under present proposal. The project shall be operated and maintained by the Project Developer i.e. THDC India Limited and the expenses shall be met by THDCIL.

7.8 The cost towards salary/ fees/ emoluments of the proposal human resources as being proposed should be indicated (procedure for seeking approval for human resource requirements is detailed at para-9 below).

Not applicable under present proposal.

7.9 The component of the costs mentioned at 7.1-7.8, that will be shared by the state governments/PRI/User Beneficiaries may be indicated.

Total cost of the present proposal (₹ 585.82Crore), is proposed to be financed through internal resources of THDCIL.

7.10 In the event of fund transfer being made to State Govts/ local bodies or other organisations, “grants for creation of capital assets” may be indicated separately.

Not applicable

8. Proposal: Financing

8.1 The source of financing for the proposal may be indicated. In case of proposal already included in the FYP, the specific earmarking may be mentioned.

Total cost of the present proposal (₹585.82 crores) is proposed to be financed through internal resources of THDCIL.

Total estimated cost of the Project (i.e. ₹ 10,498 crores) shall be funded in the debt equity ratio of 70:30. The equity part shall be arranged by THDCIL from its internal resources. The debt portion shall be raised through commercial borrowings from Indian FIs / Banks.

8.2 Whether the funding requirements have been fully tied up with Planning Commission may be indicated. The quantum of the Plan allocation may be indicated.

Refer para 8.1 above.

8.3 If there are gaps in the financing of the proposal, the sponsoring agency may indicate how such gaps in FYP as well as the Annual Plans will be addressed.

The requisite budget provision has been proposed in the Budget proposals of THDCIL.

8.4 If external sources are intended, the sponsoring agency may indicate whether such funds have been tied up. In case firm commitment is not available, alternative plans for arranging funds may be indicated.

Refer para 8.1 above.

8.5 In case of partial allocation of funds for the proposal, then the components which may be removed/ reduced may be indicated.

Not Applicable

8.6 Please provide the following details in respect of project proposal:

- **Debt-equity ratio along with justification.**
- **In case of, funding from internal resources (IR), availability of IR may be supported by projections and their deployment on various projects.**

The Project is proposed to be implemented in the Debt Equity ratio of 70:30 as per CERC tariff regulation 2014.

The Cost involved under present proposal is proposed to be funded through internal resources. As per approved Annual Accounts of THDCIL, ending March 2014, Reserves and Surplus are ₹ 3858.15 cr. and no difficulty is envisaged in meeting the fund requirement of present proposal through internal resources.

- **Please indicate funding tie-ups for loans components both domestic and foreign, along-with terms and conditions of loan based on consent/comfort letters.**

Not Applicable

9. Proposal: Human Resources

- 9.1 In case posts (permanent or temporary) are intended to be created, a separate proposal may be sent on file to Personnel Division of Department of Expenditure. Such proposals may be sent only after the main proposal is recommended by the appropriate appraisal body (SFC, EFC, etc.).**

Not applicable in respect of present proposal.

- 9.2 In case outsourcing of services or hiring of consultants is intended, brief details of the same may be indicated. It may also be certified that the relevant GFR provisions will be followed while engaging the agency/ consultant.**

Not applicable in respect of present proposal.

9.3 In case additional manpower requirement, please indicate the phased requirement over the proposal timeline (i.e. year-wise break-up of the manpower requirement)

Not applicable in respect of present proposal.

10. Proposal viability

10.1 In case of proposals which have identified stream of financial returns, the financial internal rate of return may be calculated. The hurdle rate is considered at 12%.

The first year tariff and levelised tariff of the Project based on the Cost Estimate as per DPR works out to 458 paisa / unit and 431 paisa / unit respectively and is comparable with the present tariff of similar placed plants both in Central and Private sector. A comparison of tariff and cost per MW is enclosed at (Annexure-XVI).

FIRR of the Project has been calculated on the basis of estimated cost as per DPR and works out to 12.09%.

10.2 In case of proposals where financial returns are not readily quantifiable (typically social development proposals), the measurable benefits/outcomes may be indicated.

Refer point 10.1 above

11. Proposal implementation and monitoring

11.1 Implementing agency (s) may be indicated.

The project shall be implemented by THDCIL.

11.2 The administrative structure for implementing the proposal may be stated. Usually new structures/ entities, etc. are, by and large, to be avoided. In case new structures are intended to be created for administering the scheme, the details of such structures and specific justification for the same may be provided. Such new structure should be proposed only if it

has been established after due analysis, that existing structures cannot be levered for the proposed/additional work.

The project shall be implemented by THDCIL.

11.3 The completion schedule of the proposal indicating timelines of activities should be provided in PERT/Bar Chart along with critical milestones.

Bar Chart of activities involved in present proposal is enclosed at (**Annexure-XVII**).

11.4 Mode of implementation: Departmental/ Contract/ Turnkey contract/ EPC/ PPP, etc. with justification may be given.

The present proposal involves carrying out Pre-investment activities including acquisition of land for implementation of Khurja STPP(1,320 MW). DPR of the Project has been prepared through NTPC.

11.5 Nodal officer identified / appointed for being directly in charge and overseeing progress of the proposal may be indicated. Details about his status, past experience in executing similar proposals and balance tenure left for steering the proposal may also be mentioned. He/ She should normally be appointed for entire duration of the proposal.

General Manager / Additional General Manager (Incharge – Khurja)), THDCIL shall be nodal officer for implementing the Present Proposal of Land Acquisition. Project in-charge for the Project implementation shall be nominated at the implementation stage.

11.6 The monitoring framework preferably on MIS for the proposal may be indicated. The arrangements for audit/social audit of the proposal may also be stated.

THDCIL utilizes Primavera as Project monitoring tool. The same shall be used for planning, monitoring and reporting of the progress of the work during implementation stage of the project.

THDCIL is subject to audit through Internal Auditors, Statutory Auditors and Government Auditors. The existing arrangements shall be applicable for the proposed Khurja STPP.

12. Proposal sensitivities/uncertainties

12.1 Any foreseeable constraints/ uncertainties which can affect the technical design, costing and implementation of the proposal may be indicated.

No constraints / uncertainties are envisaged at present.

12.2 The likely impact of these constraints/uncertainties on the proposal parameters may be stated. In particular, the sensitivity of the proposal cost, proposal schedule and proposal viability towards the possible constraints/ uncertainties may be mentioned.

Not applicable in view of 11.1 above.

13. Mandatory approvals / clearances:

The details regarding the requirement of mandatory approvals / clearances of various local, state and national bodies and their availability may be indicated in a tabular form

S.No.	Approvals / Clearances	Agency concerned	Availability (Y/N)
1.	TOR for conduction EIA / EMP studies	Ministry of Environment and Forest	Y
2	Construction of 275 m high Chimney	Airport Authority of India	Y
3.	Water Availability	Water Resource Deptt. of State Govt.	Y

14. Consultations with the Public, State Governments, External Research Agencies, Think Tanks, etc.

14.1 To the extent possible and practicable, such consultations may be done by the Administrative Ministries. The draft Proposals may be placed on the web site of the sponsoring Ministries and comments invited from the general public. The

draft proposals may be formulated / finalized taking into account such comments. Details in this regard may be indicated in the EFC / PIB memo.

PIB memo is being placed on the website of Ministry of Power for comments from the public.

15. Concurrence of Financial Advisor

15.1 Comments/Concurrence of Financial Adviser may be indicated along with reply of the Administrative Ministry.

Compliance on the comments of IFD, Ministry of Power and response thereto are enclosed as (Annexure-XVIII)

16. Approvals:

16.1 Please indicate the specific points on which approval of EFC / PIB is sought.

Recommendation of Public Investment Board (PIB) is solicited for incurring expenditure of ₹ 585.82 crore towards pre-investment activities covering preparation of PFR/ DPR, including surveys/ investigations required for the project, conducting EIA study, land acquisition, re-routing of National Highway, diverting village roads and expenditure for secure possession of the land for implementation of 2x660MW Khurja Super Thermal Power Project.

Anil Kumar Singh 7/5/15

(Anil Kumar Singh)

Joint Secretary to the Government of India

Tel : 2371-4842

LIST OF ANNEXURES

Annexure	Description
I	Load Generation Balance Report for the year 2014-15, published by CEA
II	Copy of letter dated 29.10.2013 issued by NHAI conveying in-principle approval for re-routing NH-91 around land boundary
III	Copy of general layout of the plant
IV	Salient features of project components
V	Copy of MoU signed with Govt. of UP for implementation of the project
VI	Copy of MoU signed with UPSIDC for transfer of 1200.843 acre land to THDCIL
VII	Copy of water commitment letter dated 12.06.2014 issued by GoUP for supply of 53 cusec water
VIII	Copy of clearance obtained from Airport Authority of India
IX	Copy of letter dated 27.10.2011 issued by MoEF for issuance of TOR for EIA/ EMP
X	Copy of application for long term coal linkage
XI	Copy of MoP letter dated 13 th June, 2011 addressed to CEA regarding long term coal linkage for Khurja STPP.
XIa	Copy of MoP letter dated 11 th March, 2015 addressed to Ministry of Coal, recommending THDCIL's case for allocation of coal block.
XII	Copy of CEA letter dated 28.12.2012 issued by CEA regarding land required for 2x660 MW Khurja STPP
XIII	Copy of minutes of the meeting taken by Additional Secretary,

	MoP regarding taking over possession of land by UPSIDC and transferring the same to THDCIL
XIV	Copy of letter dated 19-09-2014 issued by UPSIDC conveying cost estimate for 1200.843 acre land
XV	Copy of letter dated 27.11.2013 issued by NHAJ conveying cost estimate for the work of re-routing NH-91
XVI	Comparison for tariff and cost per MW
XVII	Bar Chart of Activities
XVIII	Compliance on the comments of IFD, MOP