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Central Electricity Authority

तापीय परियोजना नवीनीकरण एवं आधुनिकीकरण प्रभाग

Thermal Projects Renovation & Modernisation Division



R&M of Turbine of Unit-3 (210 MW) of Wanakbori TPS of GSECL

Quarterly Review Report Renovation & Modernisation of Thermal Power Stations

Quarter: April-June, 2018

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Foreword

Renovation & Modernization (R&M) has been recognized as one of the cost effective options for obtaining the additional generation and better outputs from the existing old thermal power units. The R&M of such units is very essential for performance improvement of the units as well as to comply the stricter environmental norms for improving environmental conditions. On the other hand, the Life Extension (LE) of the old thermal power units is carried out with an aim to extend their useful life 15 to 20 years beyond the original design economical life.

The Thermal Projects Renovation & Modernization (TPR&M) Division is entrusted with the responsibility of monitoring the progress of R&M/LE activities in thermal power generating units in the country under Section 73(f) of the Electricity Act, 2003. Based on the interaction and information received from various utilities, the Quarterly Review Report (QRR) is prepared highlighting the latest status of the physical progress of R&M/LE works at various thermal units.

R&M/LE works in 03 units of capacity of 443.5 MW have been completed upto 30-06-2018. At present, 5 coal based generating units with aggregate capacity of 820 MW are under shut down for carrying out the R&M/LE works.

Under the Indo-Japan Co-operation, 3rd Phase MoU between CEA and JCOAL, Japan has conducted a study on O&M enhancement of existing unit no.-1 of DTPS, DVC. Final Report has been prepared and submitted at DVC in May 2018 by JCOAL. A diagnostic study for optimal environmental measures in Dadri TPS was carried out in February 2018 and debriefing meeting was held in June 2018. One-day workshop on " Project on Efficiency and Environmental Improvement for Sustainable, Stable and Low-carbon Supply of Electricity" was held on 10th Nov 2017 at New Delhi by CEA and JCOAL. Mini-workshops were organized on 30-01-2018 at GSECL(Gujrat) and on 01-02-2018 at APGENCO (Andhra Pradesh) respectively for 2017-18 period under CEA-JCOAL Cooperation. SCR Pilot test at NTPC's Sipat TPS is being carried out to meet the NO_x level as per new environmental norms. Under Clean Coal Technology (CCT) Programme a study tour to Japan has been organised from 29th Nov, 2017 to 7th Dec, 2017. The participants from CEA, MoP, DVC NTPC and State Utilities visited the latest USC power stations at Japan.

To ensure compliance of the new Environmental Norms notified by Ministry of Environment, Forest & Climate Change (MoEF&CC) on 7th Dec. 2015, phasing plan for FGD installation/ ESP –upgradation have prepared and concerned utilities are requested to furnish the details of action taken for timely compliance of these norms.

A committee was constituted in CEA to find out the level of flexibilization required from thermal power stations and future roadmap for integration of 175 MW RES generation into Indian grid by 2022. Interim Report of the committee has been submitted in June 2018. It was found in the report that thermal units have to be operated at less than 30% load during the peak RES generation in the year 2021-22. Various measures have been suggested to improve the situation. A pilot test of 40% minimum load and 3% ramp up/ ramp down (i.e. 15 MW/ Min) has been successfully conducted in Dadri TPS and similar pilots are planned in other utilities.

Finally, I would like to express my sincere thanks and gratitude to the Utilities and other stakeholders for obeying CEA's guidelines during implementation of R&M/LE works at old thermal power plant and furnishing status of R&M. I would also like to thank for timely submission of status of installation of FGD/ upgradations of ESP to comply with new environmental norms thus helping us to prepare & publish quarterly review report.

Dated: 09-08-2018

(B.C. Mallick)
CE (TPR&M)

Highlights

1. LE/ R&M Achievements during 12th Plan (2012-17)

Sl. No.	Particulars	State Sector		Central Sector		Total (State + Central)	
		No. of units	Capacity (MW)	No. of units	Capacity (MW)	No. of units	Capacity (MW)
A)	LE works						
1.	Completed during 12 th Plan	10	1380	11	1261.76	21	2641.76
B)	R&M works						
2.	Completed during 12 th Plan	05	850	11	3710.5	16	4560.5
	TOTAL	15	2230	22	4972.26	37	7202.26

2. LE / R&M Programme during (2017 - 22)

Category	LE/R&M works identified during 2017-22 No. of units & capacity (MW)		Total (State Sector + Central Sector)
	State Sector	Central Sector	
LE	34 (7570)	--	34 (7570)
R&M	30 (7135)	07 (224)	37 (7359)
Total	64 (14705)	07 (224)	71 (14929)

3. Achievements of R&M and LE Projects during 2017-18

Sl. No.	Particulars	LE/R&M works completed No. of units & capacity (MW)		Total (State Sector + Central Sector) MW
		State Sector	Central Sector	
1	LE	02(410)	--	02(410)
2	R&M	--	33.5	33.5
	Total	02(410)	--	03(443.5)

4. Implementation of Phasing Plan for FGD installation/ ESP upgradation in respect of new Environmental Norms notified by MoEF&CC on 7th Dec. 2015.

Ministry of Environment, Forest & Climate Change (MoEF&CC) notified “Environment (Protection) Amendment Rules, 2015” for thermal power stations on 07.12.2015. As per notification existing stations were required to comply with the new Standards within 2 years (i.e. by Dec. 2017) and the new stations including all station presently under construction were required to meet the new norms by 06-12-2017.

To review the various issues arising out of new environmental norms for thermal power stations, a meeting was held on 01.09.2017 in MoEF &CC among Secretary MoEF & CC, Secretary, MoP and Chairperson, CEA and it was decided that the action plan submitted by MoP to MoEF & CC extending up- to 2024 should commence from 2018 and implemented before 2022. Further the implementation of measure to the thermal plants situated in NCR region for compliance of new environmental shall be complied by December 2019. In this regard utilities were requested to furnish the details of action taken and a report has been prepared and submitted to MoP on the status of phasing plan of FGD installation/ ESP upgradation at TPS.

5. Flexible Operation of Thermal Power Stations

A committee was constituted in CEA under the chairmanship of Chief Engineer (TPRM) to find out the level of flexibilization required from thermal power stations and future roadmap for integration of 175 MW RES generation capacity into Indian grid by 2022. The committee has come up with the findings of the quantum of flexibilization, minimum thermal load, and ramp rate required in its interim report in June 2018. It was found in the report that about 30% load operation of thermal plant is requires in June, July & August,2021 if we consider must run status of RES plant. A pilot test of 40% minimum load operation and 3% ramp up/ ramp down (i.e. 15 MW/ Min) has been successfully conducted in Dadri TPS and similar pilot studies are being planned in other utilities.

6. External Co-operation for R&M/LE of TPS

The status of activities under external co-operation for R&M/LE of TPS is furnished below:-

(A) Indo-Japan Co-operation for Project on Efficiency & Environment Improvement for Sustainable, Stable and Low Carbon Supply of Electricity of Coal Fired Stations.

The 3rd Memorandum of Understanding (MoU) on Indo – Japan Cooperation for Project on Efficiency & Environment Improvement for Sustainable, Stable and Low Carbon Supply of Electricity between CEA and JCOAL was signed on 22nd January, 2016. The objective of the MoU is to address issues and barriers in promoting sustainable, stable and low-carbon thermal power development in India. Under this MoU, JCOAL has carried out feasibility study for replacement of Badarpur TPS by new units based on SC/USC technologies. RLA study of unit-3 (210 MW), Dadari TPS has been carried out by JCOAL. The feasibility study for Singrauli STPS Stg. I & II units (5x200 MW+2x200 MW) of NTPC has been carried out during December 2016 to March 2017. An Environmental Study through Combustion Test of Indian Coal has also been carried out by JCOAL. 25 tonnes, G12 grade coal was sent to Japan from Talcher coal mine for Combustion test. The combustion test was done at Akitsu Works, MHPS, Japan and report was submitted in January 2017. Under Clean Coal Technology (CCT) Programme a study tour to Japan has been organised during current year from 29th Nov, 2017 to 7th Dec, 2017. The participants from CEA, MoP, DVC, NTPC and State Utilities visited the latest USC power stations at Japan. A study on best O&M practices of thermal power unit has been carried out by JCOAL at unit-1, DTPS, DVC in 2017-18. Final Report was submitted in May 2018 by JCOAL. Mini-workshops were organized on 30-1-2018 at GSECL(Gujrat) and on 01-02-2018 at APGENCO (Andhra Pradesh) respectively for 2017-18 period under CEA-JCOAL Cooperation. SCR Pilot test at NTPC's Sipat TPS is being carried out to meet the NO_x level in the flue gas as per new environmental norms. A diagnostic study for optimal environmental measures at Dadri TPS was conducted in February, 2018 and debriefing meeting was held in June 2018.

Quarterly Review Report on Renovation, Modernisation and Life Extension of Thermal Power Plants

1.0 Introduction

At the time of independence, the total installed capacity in the power sector was 1362 MW of which steam power plants contributed 756 MW. The installed generation capacity has since grown manifold. The total installed capacity as on 30.06.2018 was 343898.39.39 MW of which thermal power plants contributed 222692.59 MW (64.76 %). The contribution of Coal, Gas and Diesel based thermal power plants of total installed capacity is 57.27 %, 7.24 % and 0.24 % respectively.

Renovation & Modernization (R&M) is seen as a cost-effective option for additional generation from the existing thermal power stations and better asset management due to its low cost and short gestation period. Besides generation improvement and improvement in availability, other benefits achieved from R&M / LE include life extension, improved safety, reliability & environmental conditions.

Many of the thermal power plants are not operating to their full potential and large numbers of thermal units including 200/210 MW units are old and outlived their normal economical design life. The 66 LMZ units of 200/210 MW Capacity are potential target for Energy Efficiency R&M (EE R&M).

2.0 Objective of R&M Programme

The main objective of Renovation & Modernisation (R&M) of thermal generating units is to make the operating units well equipped with modified / augmented with latest technology with a view to improve their performance in terms of output, reliability, availability, reduction of outage time, ease of maintenance and minimizing inefficiencies.

3.0 Objective of Life Extension Programme

The R&M programme is primarily aimed at generation sustenance and overcoming problems. The life extension (LE) programme on the other hand focuses on plant operation beyond their original design life after carrying out specific life assessment studies of critical components with an aim to increase the life beyond the design economic life of 25 years.

4.0 Renovation and Modernisation (R&M) and Life Extension Programme (LEP) from 7th Plan onwards till 11th Plan

R&M Programme in a structured manner was initiated in 1984 as a centrally sponsored programme during 7th Plan and the programme continued during the two Annual Plans 1990-91 & 1991-92. The Plan wise details are given below: -

S. No.	Five Year Plan	Year	No. of TPS / No. of Units	Capacity (MW)	Additional Generation Achieved MU/ Annum*	Equivalent MW**
1	7 th Plan & 2 Annual Plans	85-86 to 89-90 & 90-91, 91-92	34 / 163	13570	10000	2000
2	8 th Plan (R&M) (LEP)	1992 to 1997	44 / 198 43/(194) 1/(4)	20869 (20569) (300)	5085	763
3	9 th Plan (R&M) (LEP)	1997 to 2002	37 / 152 29/ (127) 8/ (25)	18991 (17306) (1685)	14500	2200
4	10 th Plan (R&M) (LEP)	2002 to 2007	9/25 5/(14) 4/(11)	3445 (2460) (985)	2000	300
5	11 th Plan (R&M) (LEP)	2007 to 2012	21/72 15/(59) 6/(13)	16146 (14855) (1291)	5400	820
6	12 th Plan (R&M) (LEP)	2012 to 2017	18/37 8/16 10/21	7202.5 4560.50 2641.76	----	----

*Tentative figure.

** Equivalent MW has been worked out assuming PLF prevailing during that period.

5.0 R&M/ LE Programme during (2017 - 22)

The Summary of R&M/ LE Programme to be implemented during 2017-22 is given below. The status of implementation of the R&M/LE works at various units is furnished at Annexure-1.

Category	LE/R&M works identified during 2017-22 No. of units & capacity (MW)		Total (State Sector + Central Sector)
	State Sector	Central Sector	
LE	34 (7570)	--	34 (7570)
R&M	30 (7135)	07 (224)	37 (7359)
Total	64 (14705)	07 (224)	71 (14929)

The Summary of achievements of R&M/ LE Projects is given below:

As on 30.06.2018

Year	LE No. of units (MW)		R & M No. of units (MW)		Total (state + central) No. of units (MW)		Total LE and R&M No. of units (MW)
	State	Central	State	Central	State	Central	
2017-18	02(410)	--	--	01(33.5)	02(410)	01(33.5)	03(443.5)
2018-19	--	--	--	--	--	--	--
Total No. of units (MW)	02(410)	--	--	01(33.5)	02(410)	01(33.5)	03(443.5)
	02(410)		01(33.5)		03(443.5)		

5.1 Details Achievements of LE and R&M Programme during 2017-22 upto 30.06.2018.

	Name of the TPS	Unit No.	Date of S/D	Capacity (MW)	Utility	Sector	Date of Achievement
1. 2017-18							
LE	Ukai TPS	4	07-12-2016	200	GSECL	State	17.05.2017
	Wanakbori TPS	3		210	GSECL	State	27-11-2017
R&M	Kathalguri CCGT	6	--	33.5	NEEPCO	Central	31-03-2018
Sub Total		03 (unit)		443.5			
Total LE	02 (410)	State	02(unit)	410			
		Centre	--	--			
Total R&M	01 (33.5)	State	--	--			
		Centre	01(unit)	33.5			
Grand Total		03(unit)		443.5			

Details of thermal power units where the R&M/ LE Works have been completed during 2017-22 up to 30.06.2018 are given at **Annexure 2& 3**.

5.2 Details of thermal units under shut down for R&M and LE works

The following 5 units are under shut down for R&M and Life Extension works.

Sl.No.	Name of Project	Utility	State	Unit No.	Capacity (MW)
1.	Obra TPS	UPRVUNL	U.P.	7	100
2.	Barauni TPS	BSPGCL	Bihar	6	110
3.	Koradi TPS	MSPGCL	Maharashtra	6	210
4.	Obra TPS	UPRVUNL	U.P.	12	200
5.	Obra TPS	UPRVUNL	U.P.	13	200
Total					820

5.3 Status of R&M activities under Backward Region Grant Fund (BRGF) Scheme.

Under RSVY (now BRGF), Planning Commission in a meeting held on 10.05.2005 identified Barauni TPS, units 6&7 and Muzaffarpur TPS units 1&2 for carrying out Life Extension (LE) works. Subsequently, a five party agreement between the Government of India, Govt. of Bihar, BSEB, BHEL and NTPC was signed on 29.5.2006.

Planning Commission vide their letter dated 16.11.2009 approved Rs. 1053 crores including consultancy charges under the Special Plan for Bihar for LE works of Barauni TPS (Unit 6&7) and Muzaffarpur TPS (Unit 1&2) as per details given below:

Barauni TPS Unit (6&7)	:	Rs. 554.16 crores
Muzaffarpur TPS (1&2)	:	Rs. 471.80 Crores
Consultancy charges to NTPC(for Barauni TPS only):	:	Rs. 27.04 Crores

TOTAL	:	Rs. 1053.00 Crores
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Details of Funds released by Planning Commission upto 31.03.2018:

i)	BHEL	:	Rs. 725.07 crores
ii)	KBUNL	:	Rs. 180.00 crores
iii)	NTPC	:	Rs. 20.11 crores
	Total	:	Rs. 925.18 crores

The remaining amount of Rs. 127.80 Crs has been released by the Govt. of India to BSPGCL. Now BSPGCL is releasing money directly to the vendors.

Name of TPS	Unit No.	Zero Date	Contractual Completion Date	Anticipated Completion Date	Present physical status as on 31.12.2015
Barauni TPS	7	15.11.2009	15.11.20011	Completed	Unit was synchronized on 03.08.2016.
	6	15.11. 2009	15.06.2012	May 2018	Boiler: 97% work completed Turbine : 98% work completed Anticipated completion of Unit- 6 is in July 2018.
Muzaffarpur TPS	1	15.04. 2010	15.04.2012	Completed	Unit synchronised on 05.07.2013.
	2	15.04. 2010	15.08.2012	Completed	Unit synchronised on 30.09.2014.

6. Implementation of Phasing Plan for FGD installation/ ESP upgradation in respect of new Environmental Norms notified by MoEF&CC on 7th Dec. 2015.

Ministry of Environment, Forest & Climate Change (MoEF&CC) notified “Environment (Protection) Amendment Rules, 2015” for thermal power stations on 07.12.2015. All existing stations are required to comply with the new Standards within 2 years (i.e. by Dec. 2017) and the new stations including all station presently under construction are required to meet the new norms by 01-01-2017.

To review the various issues arising out of new environmental norms for thermal power stations, a meeting was held on 01.09.2017 in MoEF&CC among Secretary MoEF & CC, Secretary, MoP and Chairperson, CEA and it was decided that the action plan submitted by MoP to MoEF & CC extending up- to 2024 should commence from 2018 and implemented before 2022.

The MOEFCC gave its concurrence to the revised implementation plan for FGD installation/ESP upgradation vide letter no. F. No. Q-15017/40/2007-CPW dated 07.12.2017.

Further, it has been decided that the target date for environmental compliance in respect of thermal plant located in NCR is December,2019. The progress report of installation of measures of 10 nos. thermal power plant situated in NCR region is given separately.

The implementation plan including units commissioned up- to 31.08.2017 is enclosed at Annexure 5. The year-wise FGD Phasing Plan and ESP Upgradation Plan are given below.

i) Year wise FGD Phasing Plan

Year	Capacity (MW)	No. of Units
2018	500	1
2019	4940	8
2020	26330	53
2021	64268	174
2022	64055	178
Total	160092	414

ii) Year wise ESP Upgradation Plan

Year	Capacity (MW)	No. of Units
2018	500	1
2019	1300	2
2020	10405	27
2021	23495	97
2022	27725	93
Total	63425	220

To ensure compliance of the new Environmental Norms letters have been issued to concerned utilities for furnishing the details of action taken till date and further plan for FGD installation/ ESP –upgradation.

In view of the above CEA has started the monitoring of the implementation of the revised implementation plan.

6.1 Summary of Current Status of Implementation of phasing plan for FGD Installation

Sl	Description	Capacity (MW)	No. of Units
	Total Capacity Where FGD to be installed	153817	401
A	Central Sector		
	Total Capacity	46905	122
1	FGD Commissioned	0	0
2	Bid Awarded	3320	9
3	NIT issued	10905	21
4	Tender Specification finalized	8610	19
5	Feasibility Study completed	17530	56
6	Feasibility Study started	6540	17
B	State Sector		
	Total Capacity	49585	158
1	FGD Commissioned	0	0
2	Bid Awarded	0	0
3	NIT issued	1630	6
4	Tender Specification finalized	5420	14
5	Feasibility Study completed	16230	46
6	Feasibility Study started	24455	85
•	Complies with norms as per developer	1650	6
•	Not Possible as per developer	200	1
C	Private Sector		
	Total Capacity	57327	121
1	FGD Commissioned	1820	3
2	Bids Awarded	0	0
3	NIT issued	13930	27
4	Tender Specification finalized	13730	25
5	Feasibility Study completed	13040	25
6	Feasibility Study started	13967	38
•	Complies with norms as per developer	840	3

6.2 FGD- ESP Phasing Plan of Thermal Power Plants located in Delhi NCR

Sl. No.	Name of Thermal Power Station	Unit No.	Capacity (MW)	Timeline for FGD	Current Status
1	Dadri (NCTPP), U.P		1820		
	Dadri (NCTPP), U.P	1	210	31.12.2019	FGD: Under retendering Process DE-Nox: No action required as statutory limits being complied. ESP: Statutory limits being complied.
	Dadri (NCTPP), U.P	2	210	31.12.2019	FGD: Under retendering Process DE-Nox: No action required as statutory limits being complied. ESP: Statutory limits being complied.
	Dadri (NCTPP), U.P	3	210	31.12.2019	FGD: Under retendering Process DE-Nox: No action required as statutory limits being complied. ESP: Statutory limits being complied.
	Dadri (NCTPP), U.P	4	210	31.12.2019	FGD: Under retendering Process DE-Nox: No action required as statutory limits being complied. ESP: Statutory limits being complied.
	Dadri (NCTPP), U.P	5	490	31.12.2019	FGD: Wet type FGD Package awarded to M/s BHEL. Work in Progress DE-Nox: Equipment is under procurement. NIT published. Bid opened on 23.05.2018. Under award Approval. ESP: Statutory limits being complied.
	Dadri (NCTPP), U.P	6	490	31.12.2019	FGD: Wet type FGD Package awarded to M/s BHEL. Work in Progress DE-Nox: Equipment is under procurement. NIT published. Bid opened on 23.05.2018. Under award Approval. ESP: Statutory limits being complied.
2	GHTP (Lehra Mohabbat), Punjab		920		
	GHTP (Lehra Mohabbat), Punjab	1	210	31.12.2019	FGD: Board of Directors, PSPCL have approved the agenda for issuing global tender for taking Consultancy Services for FGD. The tender shall be issued shortly. ESP: Case regarding ESP Upgradation will be initiated after finalizing feasibility report to install FGD.
	GHTP (Lehra Mohabbat), Punjab	2	210	31.12.2019	FGD: Board of Directors, PSPCL have approved the agenda for issuing global tender for taking Consultancy Services for FGD. The tender shall be issued shortly. ESP: Case regarding ESP Upgradation will be initiated after finalizing feasibility report to install FGD.
	GHTP (Lehra Mohabbat), Punjab	3	250	31.12.2019	FGD: Board of Directors, PSPCL have approved the agenda for issuing global tender for taking Consultancy Services for FGD. The tender shall be issued shortly. ESP: Case regarding ESP Upgradation will be initiated after finalizing feasibility report to install FGD.
	GHTP (Lehra Mohabbat), Punjab	4	250	31.12.2019	FGD: Board of Directors, PSPCL have approved the agenda for issuing global tender

					for taking Consultancy Services for FGD. The tender shall be issued shortly. ESP: Case regarding ESP Upgradation will be initiated after finalizing feasibility report to install FGD.
3	Harduaganj, U.P		665		
	Harduaganj, U.P	8	250	31.12.2019	FGD: Offer of Pre-Award Consultancy for FGD Installation has been obtained from M/s NTPC. Administrative approval is under process. ESP: Offer of Pre-award consultancy for retrofitting of ESP is awaited from M/s NTPC.
	Harduaganj, U.P	9	250	31.12.2019	FGD: Offer of Pre-Award Consultancy for FGD Installation has been obtained from M/s NTPC. Administrative approval is under process. ESP: Offer of Pre-award consultancy for retrofitting of ESP is awaited from M/s NTPC.
4	Indira Gandhi STPP, Haryana		1500		
	Indira Gandhi STPP, Haryana	1	500	31.12.2019	FGD: Bid Awarded on 30 Jan'18. Implementation schedule is 18 to 24 months DE-Nox: NIT is planned in April 2018 for combustion modification. Scheduled Implementation is before Dec 2019. ESP: Already designed to meet the environmental norms.
	Indira Gandhi STPP, Haryana	2	500	31.12.2019	FGD: Bid Awarded on 30 Jan'18. Implementation schedule is 18 to 24 months DE-Nox: NIT is planned in April 2018 for combustion modification. Scheduled Implementation is before Dec 2019. ESP: Already designed to meet the environmental norms.
	Indira Gandhi STPP, Haryana	3	500	31.12.2019	FGD: Bid Awarded on 30 Jan'18. Implementation schedule is 18 to 24 months DE-Nox: NIT is planned in April 2018 for combustion modification. Scheduled Implementation is before Dec 2019. ESP: Already designed to meet the environmental norms.
5	Mahatma Gandhi TPP, Haryana		1320		
	Mahatma Gandhi TPP, Haryana	1	660	31.12.2019	FGD: FGD Installed and is Under Renovation ESP: Statutory limits being complied. DE-Nox: Combination of low Nox burner and secondary over fired damper already installed. A third party has been engaged to control NOX emission through combustion optimisation technique.
	Mahatma Gandhi TPP, Haryana	2	660	31.12.2019	FGD: FGD Installed and is Under Renovation ESP: Statutory limits being complied. DE-Nox: Combination of low Nox burner and secondary over fired damper already installed. A third party has been engaged to control NOX emission through combustion

					optimisation technique.
6	Panipat TPS, Haryana		920		
	Panipat TPS, Haryana	6	210	31.12.2019	FGD: Matter has been taken up with MOEF&CC of unit from compliance of new norms keeping in view the low PLF during last 3 years and less remaining life of this unit ESP: SPM values are within limits.
	Panipat TPS, Haryana	7	250	31.12.2019	FGD: NTPC has been engaged as consultant for pre-bid and post-bid activities for installation of FGD. ESP: Overhauling of ESP fields carried out and now all the ESP fields are in working order. After the overhauling of ESP, the value of SPM is within the norms
	Panipat TPS, Haryana	8	250	31.12.2019	FGD: NTPC has been engaged as consultant for pre-bid and post-bid activities for installation of FGD. ESP: Overhauling of ESP fields carried out and now all the ESP fields are in working order. After the overhauling of ESP, the value of SPM is within the norms
7	Rajiv Gandhi TPS, Hisar, Haryana		1200		
	Rajiv Gandhi TPS, Hisar, Haryana	1	600	31.12.2019	FGD: NTPC has already carried out the Feasibility Study for installation of FGD. NTPC has been engaged as consultant for pre-bid and post-bid activities for installation of FGD. ESP: 2 nos. ESP fields in respect of Unit-1 are not in service. For rectification of these fields NIT is in process and fields will get repaired during forthcoming overhaul of unit.
	Rajiv Gandhi TPS, Hisar, Haryana	2	600	31.12.2019	FGD: NTPC has already carried out the Feasibility Study for installation of FGD. NTPC has been engaged as consultant for pre-bid and post-bid activities for installation of FGD. ESP: The overhauling of ESP in respect of Unit-2 has already been carried out and all the ESP fields are in working order.
8	Yamunanagar (DCTPS), Haryana		600		
	Yamunanagar (DCTPS), Haryana	1	300	31.12.2019	FGD: NTPC has already carried out the Feasibility Study for installation of FGD. NTPC has been engaged as consultant for pre-bid and post-bid activities for installation of FGD. ESP: The work for revival of ESP fields of Unit1&2 has been awarded to M/s GE Power India Ltd. The work of unit-1 has already been completed on 05.05.2018 and SPM are within the limits.
	Yamunanagar (DCTPS), Haryana	2	300	31.12.2019	FGD: NTPC has already carried out the Feasibility Study for installation of FGD. NTPC has been engaged as consultant for pre-bid and post-bid activities for installation of FGD. ESP: The work for revival of ESP fields of

					Unit1&2 has been awarded to M/s GE Power India Ltd. The complete material for unit-2 received at site and work shall be executed during forthcoming overhauling.
9	Talwandi Sabo TPS, Mansa, Punjab		1980		
	Talwandi Sabo TPS, Mansa, Punjab	1	660	31.12.2019	FGD: Feasibility Study Carried Out. NIT Issued. PPA issues pending with regulator. ESP: Talwandi Sabo Power Ltd. Has already installed Hybrid ESP (ESP+Fabric Filter) to meet up the SPM emission limit as per the new environmental norms.
	Talwandi Sabo TPS, Mansa, Punjab	2	660	31.12.2019	FGD: Feasibility Study Carried Out. NIT Issued. PPA issues pending with regulator. ESP: Talwandi Sabo Power Ltd. Has already installed Hybrid ESP (ESP+Fabric Filter) to meet up the SPM emission limit as per the new environmental norms.
	Talwandi Sabo TPS, Mansa, Punjab	3	660	31.12.2019	FGD: Feasibility Study Carried Out. NIT Issued. PPA issues pending with regulator. ESP: Talwandi Sabo Power Ltd. Has already installed Hybrid ESP (ESP+Fabric Filter) to meet up the SPM emission limit as per the new environmental norms.
10	Nabha Power Ltd, Rajpura, Punjab		1400		
	Nabha Power Ltd, Rajpura, Punjab	1	700	31.12.2019	FGD: Feasibility Study Carried Out and technology finalised as Wet Limestone based FGD and submitted to PSPCL. Bid documents for Wet limestone based FGD completed. Regulatory approval under process. ESP: Statutory limits being complied. De-Nox: Combustion tuning done. SCNR to be installed. Discussion with proven technology supplier under progress.
	Nabha Power Ltd, Rajpura, Punjab	2	700	31.12.2019	FGD: Feasibility Study Carried Out and technology finalised as Wet Limestone based FGD and submitted to PSPCL. Bid documents for Wet limestone based FGD completed. Regulatory approval under process. ESP: Statutory limits being complied. De-Nox: Combustion tuning done. SCNR to be installed. Discussion with proven technology supplier under progress.

7.0 Flexible Operation of Thermal Power Stations

India's Intended Nationally Determined Contributions (INDCs) include a reduction in the emissions intensity of its GDP by 33 to 35 percent by 2030 from 2005 level, and to create an additional carbon sink of 2.5 to 3 billion tonnes of CO₂ equivalent. Generating power from renewable sources of energy is of cardinal importance if India is to meet its INDC targets. With the aim to ensure future security & reliability of power supply and stability of electricity grids while maximizing generation from renewables flexibilization of existing coal-fired power plants is an important measure.

A committee was constituted in CEA to find out the level of flexibilization required from thermal power stations and future roadmap for integration of 175 MW RES generation into Indian grid by 2022. The committee has come up with the findings of the quantum of flexibilization, minimum thermal load, and ramp rate required in its interim report in June 2018. A presentation on Interim Report of the committee was arranged in MoP & CEA on 17-07-2018 and 25-07-2018 respectively. A pilot test of 40% minimum load and 3% ramp up/ ramp down (i.e. 15 MW/ Min) has been successfully conducted in Dadri TPS and similar pilots are planned in other utilities.

8.1 “Coal-Fired Generation Rehabilitation Project-India” funded by World Bank.

The World Bank has financed the “Coal-Fired Generation Rehabilitation Project-India” for demonstrating Energy Efficiency Rehabilitation & Modernization (EE R&M) at coal fired generating units through rehabilitation of 640 MW of capacity across three States-West Bengal, Haryana and Maharashtra. The above project has two components: -

Component-1. Energy Efficiency R&M at Pilot Projects

This component would fund implementation of Energy Efficient R&M of 640 MW capacity comprising Bandel TPS Unit-5(210 MW) of WBPDC, Koradi TPS Unit-6(210 MW) of Mahagenco and Panipat TPS Unit-3&4 (2x110 MW) of HPGCL. The World Bank has earmarked US \$ 180 million of IBRD loan and US \$ 37.9 million of GEF grants for the Component-1.

Component-2. Technical Assistance to CEA and Utilities

The Technical Assistance component of the project is aimed at providing support in implementation of EE R&M pilots, developing a pipeline of EE R&M interventions, addressing barriers to EE R&M projects and strengthening institutional capacities of implementing agencies for improved operation and maintenance practices. The World Bank has earmarked US \$ 7.5 million GEF grant for the Component-2.

8.1.1 World Bank Funded Energy Efficiency Pilot R&M Projects

(A) Bandel TPS (Unit-5, 210 MW)

The total estimated cost of R&M project is around US \$ 107.38 Million comprising of loan of around US \$ 59, GEF Grant of around US \$ 12.45 million. In addition to above, Technical Assistance of US \$ 1.3 million under GEF Grant has been provided for consultancy. Further, additional US\$ 22.21 million comprising of IBRD loan of US\$ 18.01 million and GEF grant of US\$ 4.2 million due to restructuring of funds as a result of cancellation of R&M works in Panipat TPS have also been provided for Bandel TPS.

Status of Physical Progress

The unit- 5 was taken under S/D for R&M/LE works in November.2013 and the unit synchronized on coal on 21st September, 2015. The unit attained a load of 215 MW on 24th November, 2015.

(B) Koradi TPS (Unit-6, 210 MW)

Background

The total estimated cost of the project is around US\$ 110.5 Million and the fund allocation for the Koradi TPS is loan of around US \$ 59 million (Loan)), grant of around US \$ 12.45 million. In addition to above Technical Assistance of US \$ 3.3 million under GEF Grant has been provided for 10 consultancy studies.

The Commercial Operation Date of the unit is 30.03.1982 & the unit is about 34 years old. The estimated cost of the R&M project based on award of contract is Rs. 486 Crore. The zero date for R&M project is 3rd March, 2014. The unit is under shutdown since 20th July, 2015 and targeted synchronization date is 18-02-2018.

Status of Physical Progress

- i) BTG Package:** i) Mahagenco issued that the Letter of Award to BHEL on May 31, 2013. The contract was signed on December 18, 2013. Overall 98% work of BTG package completed. Approximately 96% of the material (on Amount basis) is supplied by BHEL at site & further supply is in progress. 100% civil work and 95% electrical work of new ESP Control Room building at new location are completed. Turbine Mill overhauling work is 60 % completed. Coal Mill erection of 5 out of 6 are completed. All 3 FD fan replaced. Erection of BFP is 100% completed. Turbine is on barring since dated 10-01-2018. Overhauling of CW/CEP pumps are 100% completed. Generator package electrical is 80% completed and GTR erection is 99% completed.

- ii) Electrical Package:** Mahagenco issued the Letter of Award to M/s ABB Ltd on March 19, 2012 and the final contract was signed on May 25, 2012. Later on the package price escalation issue was resolved & M/s ABB restarted the work at site from 07.10.2015. Overall 78.79% work of Electrical package completed. Approximately 87% of the material (on Amount basis) is supplied by M/s ABB at site & further supply is in progress. Breaker ON/OFF time test completed. Retrofitting of HT breakers completed. HT/LT Motors overhaul are 70% and 75% completed respectively. LT Motor Erection and Testing is 25% completed. Unit Aux. Transformer (UAT) placed in position. FBT panel erection work is 40% completed. HT switchgear work 100% completed.

- iii) BOP Package:** Letter of Award (LOA) for Cooling Tower Plant Package, Ash Handling Plant package and Fire Detection, Protection & Inert Gas System Package are issued and contract is signed on 23.09.2016, 26.10.2016 & 05.11.2016 respectively. DM Plant & Pre-Treatment System Package has been cancelled. The need based work of DM Plant & Pre-Treatment System shall be carried out separately by O&M section. Under Cooling Tower Plant Package overall 70.47% work completed. 99% of overall material has been supplied at site & 85% of the dismantling work has been completed. 71% installation & civil works completed. Design Engg. work is in progress of Ash Handling Plant. 100% material supplied at site, Installation & Civil works completed and commissioning balance for Fire Detection, Protection & Inert Gas System Package.

Various Revised Milestones for R&M work at Unit-6, Koradi TPS are as under:

S.No.	Milestone	Target Date	Revised Target Date	Actual Date
1.	Zero date R&M Project	03-03-2014	--	03-03-2014
2.	Date of Shut Down for R&M	25-08-2015	--	20-07-2015
3.	Synchronization	20-04-2016	July 2018	--
4.	Trial Run or Reliability Run	20-05-2016	--	--
5.	P.G. Test	18-08-2016	--	--

In view of synchronization, full speed rolling of the TG was carried out on 11.03.2018. Full speed of the turbine was achieved and Generator dynamic testing was completed. Synchronization could not be achieved as turbine tripped without any alarm/indication and with high horizontal shaft vibrations. After Inspection all TG Bearings and after carrying out necessary rectifications rolling activity was again taken up on 25.03.2018. However, TG speed could not be raised beyond 1450 rpm due to high shaft vibrations (@ 412 microns) and high pedestal vibration (@ 90 microns) at Bearing No.1. Internal inspection of HP rotor is carried out- HP rotor sent to BHEL-Haridwar for rectification and full speed balancing. After rectification, all above components of TG are received at site on 22-05-2018. Re-assembly of TG is in progress. Re-assembly will be completed by 26-06-2018. Tentative date of synchronisation

C) Panipat TPS (Unit-3&4, 2x110 MW)

The unit 3 &4 of Panipat TPS was initially identified for R&M under World Bank Programme. A loan of 448.36 Crores was assigned under R&M of Unit 3&4, PTPS, Panipat. As per the final TAR of consultant R&M cost was 561.27 Crores which was not found financial viable due to high sensitivity of returns to Station Heat Rate and exceeding of estimated cost against available funds. Therefore, HPGCL requested World Bank for foreclosure of the Loan Agreement.

8.2 Japan-India Co-operation for Study on Efficiency and Environmental Improvement of Coal Fired Stations

A MOU between Central Electricity Authority and Japan Coal Energy Centre (JCOAL) for preliminary study of Efficiency and Environment improvement study in coal fired power plants was signed on 30.4.2010 to carryout necessary diagnostic activities in few coal-fired power plants pertaining to Energy Efficient Renovation & Modernisation works and suggest measures to overcome barriers for promoting R&M, measurement for environmental improvement of coal-fired power plants in India. Accordingly, generating units are selected from Ukai and Wanakbori TPS (GSECL), Ramagundem STPS (NTPC) and Vijaywada TPS (APGENCO) for pre – primary studies. After Pre-Primary Studies, JCOAL finalized 3 units viz., Vijaywada TPS Unit-1 (210MW) of APGENCO, Wanakbori TPS Unit-1 (200 MW) of GSECL and Kahelgaon STPS Unit-2 (210 MW) of NTPC for full-fledged diagnosis. The final report had been submitted in December 2012.

The 2nd Phase MOU between CEA and JCOAL was signed on 11.06.2012 for carrying out detail diagnostic study for energy efficiency oriented R&M activities in three nos. of units. Durgapur

TPS unit no.4 (210 MW LMZ Unit) of DVC and one unit each from Badarpur TPS and Unchahar TPS of NTPC were selected for studies during the 2nd phase. JCOAL team visited these stations during December, 2012. The final study report for energy efficiency oriented R&M activities was submitted on 15th April, 2013.

The 3rd Memorandum of Understanding (MoU) on India – Japan Cooperation for Project on Efficiency & Environment Improvement for Sustainable, Stable and Low Carbon Supply of Electricity was signed on 22nd January, 2016.

Under Clean Coal Technology (CCT) Programme a study tour to Japan has been organised during current year from 29th Nov, 2017 to 7th Dec, 2017. The participants from CEA, MoP, DVC, NTPC and State Utilities visited the latest USC power stations at Japan. The total 89 officers from MoP, CEA and different power utilities were participated in the study tour under CCT Training Programme.

Under CEA- JCOAL Co-operation a study on replacement of old units of Badarpur TPS by highly efficient super critical units of higher size has been carried out. JCOAL team has carried out three site surveys and investigations in the month of Nov, 2015, Jan, 2016 and in March, 2016. The report on the study has been submitted in June, 2016 by JCOAL.

JCOAL has also carried out feasibility study on replacement of Singrauli STPS Stg. I & II units (5x200 MW+2x200 MW) of NTPC between December, 2016 to March, 2017.

Unit-3 of Dadri TPS of NTPC was identified for implementation of full-fledged diagnosis study i.e. Residual Life Assessment (RLA) study. JCOAL team has conducted RLA/Diagnostic Study at Unit-3 Dadri TPS of NTPC from 30th November, 2015 to 10th of December, 2015. The report on RLA/CA study of Unit-3 of Dadri TPS has been submitted by JCOAL. The objective of the RLA Study is to identify the remaining life and the current condition of Unit -3, to constitute the base for formulation of the plan of R&M implementation that is tentatively scheduled in 2018.

One-day workshop on " Project on Efficiency and Environmental Improvement for Sustainable, Stable and Low-carbon Supply of Electricity" was held on 11th Nov, 2016 and 10th Nov 2017 at New Delhi by CEA and JCOAL. Various stake holders from Central/State/Private in power sector participated in the workshop.

A Meeting on Study on O&M enhancement of existing units of DSTPS, DVC under CEA-JCOAL Cooperation was held among NEDO, JCOAL, CEA and DVC on 13th October 2017 at Kolkata in order to share O&M and safety related best practices. The expert team from Japan also visited DSTPS, DVC and collected required data for the purpose of O&M Study from 11.12.2017 to 14.12.2017.

Interim Report of the Study was submitted by JCOAL on 15th Dec 2017. Final Report has been prepared and was submitted in May 2018.

Mini-workshops were organized on 30-1-2018 at GSECL(Gujrat) and on 01-02-2018 at APGENCO (Andhra Pradesh) respectively for the year 2017-18 under CEA-JCOAL Cooperation for the project on Efficiency and Environment improvement of Coal Fired Power Stations in India.

Under CEA- JCOAL Co-operation a study is being carried out by JCOAL on adoption of available technologies to meet new environment standards and the economic viability of using such technologies in existing power plants. Combustion test of Indian Coal has been done at Japan. The Report of Combustion test of Indian Coal has been submitted. SCR Pilot test at NTPC's Sipat TPS is being carried out to meet the NO_x level in the flue gas as per new environmental norms. A diagnostic study for optimal environmental measures at Dadri TPS was conducted in February, 2018 and debriefing meeting was held in June 2018.

4th MoU to be signed between CEA and JCOAL is under process. The purpose of this MoU is to address issues and barriers in expediting sustainable, stable and low carbon thermal power

development by means of studies, training program and knowledge-sharing activities, outcomes of which are to be conducive to overall power development in India as well as to expedite relevant policy implementation by the Government of India. Following activities to be carried out under 4th MoU:

- Update on the current and future policy trend in the Indian power sector.
- Consideration of the identified issues/barriers to find out those which could be addressed through mutual collaboration.
- Identification of issues to be addressed regarding both existing and upcoming facilities, and also operation and maintenance.
- Implementation of studies with priorities, but not limited to environmental technologies for coal fired power generation such as IGCC, IGFC.
- Flexibilization measures and biomass utilization are also of high priority. Biomass study includes:
 - *Co firing of biomass pellets*
 - *Dedicated firing in Coal based plants*
 - *Dedicated biomass fired plants and*
 - *Waste to Energy Technologies*
- Study on Coal Washery and Coal GCV loss in power plant and its remedies
- Implementation of an annual workshop in India and CCT Training Programme in Japan
- Hold a joint meeting

**Status of units where Life Extension/ Renovation & Modernisation works have been taken up
for implementation during 2017-22**

STATE SECTOR LE Works

(as on 30.06.2018)

S.No.	State	Name of Station	Unit No.	Year of Comm.	Cap. (MW)	Status
1.	U.P.	Obra	12	1981	200	Unit is under s/d since 01-10-2016 for R&M works. LE Works started on 01.10.2016. Boiler: Work started from 15.02.7. Nearly 95% work completed. Turbine. Work started on 03.07.2017. Nearly 95% work completed. Generator: 100% work completed. ESP foundation completed, Pass-A-95%, Pass-B-50%. Ash Handling: Nearly 40% works completed (common for both unit-12 & unit-13) Switch Yard 400 kv CB- 100% work completed. Water treatment plant- 98% work completed. Coal Handling plant- nearly 50% work over. Date of commissioning given by M/s. BHEL is 15-09-2018.
2.	U.P.	Obra	13	1982	200	Date of commissioning given by M/s. BHEL is 31-12-2018. R&M works started from 17-05-2018. Unit is under s/d from 16-05-2018
3.	U.P.	Anpara TPS	1	1986	210	LE works yet to be decided by the utility
4.	U.P.	Anpara TPS	2	1987	210	LE works yet to be decided by the utility
5.	U.P.	Anpara TPS	3	1988	210	LE works yet to be decided by the utility
6.	Gujarat	Ukai	3	1979	200	<u>ESP R&M:</u> ESP retrofitting of unit-3 has been completed and unit lit up on 26-04-2016. PG test has been carried out and guarantee parameter achieved. <u>Turbine & Boiler R&M:</u> Order for consultancy work R&M of turbine & boiler and auxiliaries considering heat rate (efficiency) improvement with ramping up/ down of the load and PG test of ESP is placed on STEAG, Noida on 30.03. 2016. After observing the satisfactory performance of Phase-I(Ukai-4) retrofitted unit, the R&M of Phase-II R&M of LMZ turbine will be implemented. <u>C&I Up-gradation :-</u> Order of awarded for C&I upgradation to BHEL on 18.06.2015. C&I upgradation of Unit-3 has been completed and unit lit up 26-04-2016. Ash slurry pump house: - LOI issued to M/s Deccan Mechanical & Chemical Industries Pvt. Ltd., Pune on 29-05-2018 at the cost of Rs. 13.87 Crs. <u>Boiler Back Pass Modification:</u> Work at unit-3 started after observing performance of unit-4.
7.	Gujarat	Ukai	4	1979	200	

						Ukai TPS Unit -4 was taken under S/D on 07-12-2016 and synchronised on 17.05.2017 and COD achieved on 24.05.2017. PG test for retrofitted ESP, Boiler after modification and retrofitted Turbine was completed on 17-06-2017, 23-08-2017 and 02-11-2017 respectively. Guaranty parameters achieved. <u>Boiler Back Pass Modification:</u> Order awarded to BHEL for availability & efficiency improvement through modification in Boiler Back Pass and replacement of APH. Work completed and unit lit up on 04-05-2017. PG test carried out and guaranty parameter achieved. <u>Ash slurry pump house:-</u> - LOI issued to M/s Deccan Mechanical & Chemical Industries Pvt. Ltd., Pune on 29-05-2018 at the cost of Rs. 13.87 Crs.
8.	Gujarat	Ukai	5	1985	200	ESP R&M: ESP retrofitting of Ukai unit-5 completed and unit lit up on 28-03-2017. PG test of ESP has been completed. Turbine &Boiler R&M Order for consultancy work R&M of turbine & boiler and auxiliaries considering heat rate (efficiency) improvement with ramping up/ down of the load and PG test of ESP is placed on STEAG, Noida of Rs. 2.24 Crs. on 30.03. 2016. After observing the satisfactory performance of Phase-I(Ukai-4) retrofitted unit, the Phase-II R&M of LMZ turbine will be implemented. The consultancy services for turbine retrofitting and modification in Boiler Back Pass with achievement of revised emission norms for Ukai unit 3 & 5 is already awarded. Based on the feasibility report for implementation of FGD &PG test results of Ukai Unit No. 4, the implementation of R&M of proposed Units shall be decided. For implementation of DeNOx system, GSECL is awaiting the results of pilot projects of NTPC. Meanwhile, Ash slurry pump house:- - LOI issued to M/s Deccan Mechanical & Chemical Industries Pvt. Ltd., Pune on 29-05-2018 at the cost of Rs. 13.87 Crs.
9.	Gujarat	Wanakbori	1	1982	210	The consultancy services for turbine retrofitting and modification in Boiler Back Pass with achievement of revised emission norms for Wanakbori unit 1&2 is already awarded. Based on the feasibility report for implementation of FGD &PG test results of Ukai Unit No. 4, the implementation of R&M of proposed Units shall be decided. For implementation of DeNOx system, GSECL is awaiting the results of pilot projects of NTPC. ESP R&M: The order for retrofitting is issued to BHEL on 18.03.2016 and Zero date started from 14-01-2016. ESP retrofitting unit-1 &2 completed and units lit up on 07-03-2017 and 08-04-2018 respectively. Turbine&Boiler R&M: Order for consultancy
10.	Gujarat	Wanakbori	2	1983	210	

					work R&M of turbine & boiler and auxiliaries considering heat rate (efficiency) improvement with ramping up/ down of the load and PG test of ESP is placed on STEAG, Noida of Rs. 2.24 Crs. on 30.03. 2016. After observing the satisfactory performance of Phase-I(Ukai-4) retrofitted unit, the Phase-II R&M of LMZ turbine will be implemented. Approx. 93% material supplied. Meanwhile, GSECL has initiated feasibility study for replacement of WTPS 2x 210 MW Units by 1x800 MW Super Critical Units. Pending work of 1 No. of Unit-2, Bus coupler will be carried out in available shutdown.
11.	Gujarat	Wanakbori	3		210 ESP Retrofitting work Shutdown of WTPS Unit No. 3 is commenced from 25.07.2017. ESP retrofitting unit -3 completed and unit lit up on 27-11-2017. PG test is planned in April 2018. Turbine R&M:- Order awarded to M/s NASL Noida on 29-04-2015 and zero date started from 10.03.2015. Turbine R&M of Wankbori Unit -3 completed and unit lit up 27-11-2017 and 72 hrs. trial run on full load completed successfully on 5-12-2017. PG test carried out on 10-03-2018 and guaranteed parameters achieved. Boiler Back Pass Modification: - Order awarded to M/s BHEL for availability & efficiency improvement through modification in Boiler back pass and replacement of APH. Boiler back pass modification and APH replacement work completed and unit lit up on 27-11.2017 and synchronized on 01.12.2017. PG test carried out on 09-03-2018 and guaranteed parameters achieved.
11.	Maharashtra	Koradi	6	1982	210 The unit is being taken up by WB funded project. The total cost of the project including IDC is 636.93 crores. The unit is under shutdown since 25th August, 2015 and expected to be synchronized on 18-02-2018. BTG Package: Mahagenco issued that the Letter of Award to BHEL on May 31, 2013. The contract was signed on December 18, 2013. Overall 98% work of BTG package completed. Approximately 96% of the material (on Amount basis) is supplied by BHEL at site & further supply is in progress. 100% civil work and 95% electrical work of new ESP Control Room building at new location are completed. Turbine Mill overhauling work is 60 % completed. Coal Mill erection of 5 out of 6 are completed. All 3 FD fan replaced. Erection of BFP is 100% completed. Turbine is on barring since dated 10-01-2018.Overhauling of CW/CEP pumps are 100% completed. Generator package electrical is 80% completed and GTR erection is 99% completed.

						Electrical Package: Mahagenco issued the Letter of Award to M/s ABB Ltd on March 19, 2012 and the final contract was signed on May 25, 2012. Later on the package price escalation issue was resolved & M/s ABB restarted the work at site from 07.10.2015. Overall 78.79% work of Electrical package completed. Approximately 87% of the material (on Amount basis) is supplied by M/s ABB at site & further supply is in progress. Breaker ON/OFF time test completed. Retrofitting of HT breakers completed. HT/LT Motors overhaul are 70% and 75% completed respectively. LT Motor Erection and Testing is 25% completed. Unit Aux. Transformer (UAT) placed in position. FBT panel erection work is 40% completed. HT switchgear work 100% completed. BOP Package: Letter of Award (LOA) for Cooling Tower Plant Package, Ash Handling Plant package and Fire Detection, Protection & Inert Gas System Package are issued and contract is signed on 23.09.2016, 26.10.2016 & 05.11.2016 respectively. DM Plant & Pre-Treatment System Package has been cancelled. The need based work of DM Plant & Pre-Treatment System shall be carried out separately by O&M section. Under Cooling Tower Plant Package overall 70.47% work completed. 99% of overall material has been supplied at site & 85% of the dismantling work has been completed. 71% installation & civil works completed. Design Engg. work is in progress of Ash Handling Plant. 100% material supplied at site, Installation & Civil works completed and commissioning balance for Fire Detection, Protection & Inert Gas System Package.
12.	Maharashtra	Koradi	7	1983	210	R&M/LE study not carried out
13.	Maharashtra	Bhusawal	2	1979	210	All studies Completed, Final DPR received from M/s Energo Engg Ltd has been approved by MSPGCL Board in May, 2016. Further, MSPGCL Board directed that no other R&M work shall be taken up without monitoring results of Koradi U-6.
14.	Maharashtra	Bhusawal	3	1982	210	RLA/ Feasibility study for EER&M has not been carried out.
15.	Maharashtra	Nashik	3	1979	210	DPR finalised, Govt. of Maharashtra has approved 20% equity. The Unit-3 was to be taken up under KfW funded project. All studies completed, and DPR has been prepared. Also Tender documents have been prepared. But Nasik Unit-3 R&M project withheld and Nasik Unit -4 R&M shall be taken up on priority. Further, MSPGCL Board directed that no other R&M work shall be taken up without monitoring results of Koradi U-6.
16.	Maharashtra	Nashik	4	1980	210	All studies Completed, Final DPR is submitted by M/s Steag. Approval of DPR is in progress. Nasik Unit -4 R&M shall be taken up on priority. Further, MSPGCL Board directed that no other R&M work shall be taken up without monitoring results of Koradi U-6.
17.	Maharashtra	Nashik	5	1981	210	R&M/LE feasibility study completed.

						MSPGCL Board directed that no other R&M work shall be taken up without monitoring results of Koradi U-6.
18.	Maharashtra	Parli	4	1985	210	R&M/LE study not carried out. Board directed that no other R&M work shall be taken up without monitoring results of Koradi U-6.
19.	Maharashtra	Parli	5	1987	210	R&M/LE study not carried out. Board directed that no other R&M work shall be taken up without monitoring results of Koradi U-6.
20.	Maharashtra	Chandrapur	3	1983	210	R&M/LE study not carried out. Board directed that no other R&M work shall be taken up without monitoring results of Koradi U-6.
21.	Maharashtra	Chandrapur	4	1984	210	R&M/LE study not carried out. Board directed that no other R&M work shall be taken up without monitoring results of Koradi U-6.
22.	Maharashtra	Chandrapur	5	1983	500	R&M/LE study not carried out. Board directed that no other R&M work shall be taken up without monitoring results of Koradi U-6.
23.	Maharashtra	Chandrapur	6	1984	500	R&M/LE study not carried out
24.	Maharashtra	Khaperkheda	1	1989	210	R&M/LE study not carried out
25.	Maharashtra	Khaperkheda	2	1990	210	R&M/LE study not carried out
26.	Bihar	Barauni	6	1983	110	Unit-6 is likely to be synchronized by the end of July 2018. Boiler: 97% work completed, Turbine: 98% work completed PG Test for both units is pending.
27.	W.Bengal	Kolaghat	1	1990	210	DPR has been prepared and accepted. After successful completion of the unit-3 work the R&M works of the Unit -1&2 will be taken up.
28.	W.Bengal	Kolaghat	2	1985	210	DPR has been prepared and accepted. After successful completion of the unit No. 3 work the R&M works of the Unit No 1&2 will be taken up.
29.	W.Bengal	Kolaghat	3	1984	210	Estimated cost of L.E.of Unit# 1,2&3: 1090 Crs U# 1, 2 & 3: There are 3 packages (ESP, AHP & BTG). ESP (1,2,3) : LOA placed on M/s KCIN. Starting date is 22.03.17. (Schedule is 35 months from LOA). ESP (unit- 3): Mechanical erection work is in progress. ESP (unit- 1): Dismantling work under progress. AHP (1,2,3): LOA placed on M/s Indure. Starting date 26/07/2017. (schedule is 29 months from LOA) Unit#3 Dismantling work is completed. BTG (1,2,3): Initial bid evaluation is completed. (Schedule is 33 months from LOA). Technical bids are submitted on 03-01-2018. Initial bid evaluation is completed.

						Boiler & Auxiliary System: - DPR is ready. Initial bid evaluation is completed. . BOP: - Clarifloculator:- Technical bids are submitted on 03-01-2018. Initial bid evaluation is completed. Electrical and Instrumentation: - Technical bids are submitted on 03-01-2018. <table border="1"><tr><td colspan="2">Electrical</td></tr><tr><td>1 GPR and 2 breaker Relay</td><td>Initial bid evaluation is completed</td></tr><tr><td colspan="2">Instrumentation</td></tr><tr><td>1 ESP</td><td>Engg. going on. C&I : No material received at site and no erection has been started.</td></tr><tr><td>2 AHP</td><td>-do-</td></tr><tr><td>3 Governing System</td><td>Initial bid evaluation is completed</td></tr><tr><td>4 Upgradation/ replacement of instrumentation system as per mechanical scope of work.</td><td>Initial bid evaluation is completed</td></tr><tr><td>5 Incorporation of ATRS</td><td>Initial bid evaluation is completed</td></tr></table> NOTE: Shutdown of ESP and AHP shall be matched. BTG package of Unit-1 and 2 shall be matched with respective ESP and AHP. BTG Package of unit-3 shall start last if situation permits. Total estimated cost of R & M/ L E works is Rs. 1090 Crs for unit-1,2 & 3. Financial progress: ESP- Payment Rs 21 crore was made for ESP up to 30-06-2018. AHP- Payment Rs. 16.32 crore was made for AHP till 30-06-2018.	Electrical		1 GPR and 2 breaker Relay	Initial bid evaluation is completed	Instrumentation		1 ESP	Engg. going on. C&I : No material received at site and no erection has been started.	2 AHP	-do-	3 Governing System	Initial bid evaluation is completed	4 Upgradation/ replacement of instrumentation system as per mechanical scope of work.	Initial bid evaluation is completed	5 Incorporation of ATRS	Initial bid evaluation is completed
Electrical																						
1 GPR and 2 breaker Relay	Initial bid evaluation is completed																					
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4 Upgradation/ replacement of instrumentation system as per mechanical scope of work.	Initial bid evaluation is completed																					
5 Incorporation of ATRS	Initial bid evaluation is completed																					
30.	W.Bengal	Kolaghat	5	1991	210	U# 4, 5 & 6 : Only 1 package for ESP ESP Package: L 1 bidder is selected. M/s Soil & Enviro Industries Pvt. Ltd. Is successful bidder.																
31.	Karnataka	Raichur	1	1985	210	Boiler C&I works completed.																
32.	Karnataka	Raichur	2	1986	210	DPR is being revised, duly incorporating additional works in the R&M/LE scope of work is put up for Head Office approval. Once the DPR is approved, same will be submitted to KERC for approval. Project cost is Rs. 1240.18 crores. However, all the efforts are being made to reduce the R&M expenditure to minimum considering essential works required for enhancing performance/ Heat Rate. KPCL has engaged a consultant to explore the technologies/ possibilities to meet the new environmental norms. Consultant has submitted feasibility reports/DPR. The same																

						has been put up to HO. After finalization of DPR, KPCL will take decision on comprehensive R&M Works of unit 1&2 according to the recommendations of DPR. Further, proposal for implementation of environmental solutions is being prepared after visiting some of the power plants who have already installed FGD system. FGD tender document preparation under progress.
33.	Karnataka	Raichur	3	1991	210	M/s Energo Engineers Projects limited., Gurgaon is appointed as consultant for conducting Feasibility studies, Preparation of DPR, Technical Specifications & Bid Document and assisting KPCL in selection of EPC contractor for R&M of 210 MW Coal fired TPS Unit-3, at RTPS. As a part of Comprehensive R&M of unit-3 consultant conducted Energy Audit during the month of Feb-17 & Condition assessment during the month of March-17, and carried out RLA studies of Boiler in month of June-2017. Awaiting for EA & RLA reports from the consultant. The reports will be submitted by the firm after completing some of the pending works of Energy Audit.
Sub Total State Sector (LE)			34		7570	

**STATE SECTOR
(R&M Programme)**

S.N.	State	Name of Station	Unit No.	Year of Comm.	Cap. (MW)	Status
1.	U.P.	Obra	7	1974	100	- Work is being executed by BHEL. - Zero date of the scheme is 04.12.2009. Unit was scheduled on 23 months from zero date i.e Nov 2011. The revised cost of R&M scheme for unit 7 is 144.11 crores. All mechanical works completed. Lightup of unit was withheld due to fire in 6.6 kV breaker in Nov., 2016. BHEL and Scheider experts are called to assess the extent of damage and submit list of required spares for revival of switchgear of the unit. Erection work has been completed. Boiler: 100% work completed (steam blowing done). Turbine: 100% work completed (Only rolling pending). Generator: 99% work completed (Only H₂ filling pending) BoP: 100% work completed (only mill-7A trial pending. Reserve supply required) Restoration of electrical supply in S/G room is under progress.
2.	U.P.	Anpara'B	4	1993	500	R&M works is being executed by BHEL & M/s MITSUI & Toshiba OEM, Japan. – Total cost of scheme is Rs. 691.97 cr. Total expenditure upto 30.06.2018 is 441.00 crs. Boiler: Nearly 70% work completed. TG: Nearly 70% work completed. Electrical & Instrumentation: Nearly 70% work completed. BoP: Nearly 70% work completed. - The R&M work would be carried out in AOH and are likely to be completed by 31-03-2019. Utility decided to carry out Feasibility Study to meet the environmental norms.
3.	U.P.	Anpara'B	5	1994	500	Boiler: Nearly 70% work completed. TG: Nearly 70% work completed. Electrical & Instrumentation: Nearly 70% work completed. BoP: Nearly 70% work completed. - The R&M work would be carried out in AOH and are likely to be completed by 31-03-2019. Utility decided to carry out Feasibility Study to meet the environmental norms.
4.	Punjab	Ropar	1	1984	210	Retired from 01-01-2018
5.	Punjab	Ropar	2	1985	210	
6.	Punjab	Ropar	5	1992	210	
7.	Punjab	Ropar	6	2001	210	RLA/CA Study already stands conducted. The consultant M/S NTPC had prepared the DPR on the basis of RLA/CA study & submitted it to GGSSTP, Rupnagar. Further GGSSTP has submitted the same to the erstwhile PSEB for approval of the major R&M/LE Works. Replacement of old and obsolete HP Heaters of unit 1&2 has been completed. Breakers have been fitted & commissioned in the 220KV Switch yard. Work New Replacement of steam & water analysis system have been installed & commissioned on unit 1-6. All the requisitioned valves have been retrofitted & commissioned, while on unit-2, 90% of valves has been retrofitted. The electro Mechanical Vibratory Feeders at ERH in CHP has been installed & commissioned. Upgradation of wagon Trippler No.3 in coal handling plant of GGSSTP, magnetic separators on conveyors in CHP has been installed & commissioned. Material has been supplied by BHEL for the replacement of existing APH with modified design24 Sector APH on unit 1 & 2. But due to Punjab Govt. decision to permanently close unit 1& 2 of Ropar TPS, APH would be installed on unit 6 during next overhauling in 2018-19. Phase-II Migration of WDPF System to Ovation system on

						Unit-5 completed. Replacement of minimum oil circuit breakers (MOCBs) with vacuum circuit breakers of units 3,4,5 & 6 would be carried out during the Year 2018-19. Replacement of Fire Detection & Annunciation system at various locations including cable galleries of Ropar TPS would be carried out in the year 2019-20. Replacement of ESP controllers of stage 3 would be taken up in 2019-20.
8.	Punjab	GH TPS (Leh. Moh.)	1	1997	210	NO R&M/LE activity has been planned. Proposal for availing consultancy service to meet the new environmental norms is under consideration of higher authorities of PSPCL
9.	Punjab	GH TPS (Leh. Moh.)	1	1997	210	
10.	Rajasthan	Kota	3	1988	210	Total 14 activities sanctioned for R&M. Estimated cost of R&M is Rs. 356.13 crores. Expenditure incurred till date is Rs.195 Cers. - 10 nos of works fully completed. - R&M work of CHP system is under progress. Order placed to M/s. Enrtgo Engineering Projects Ltd. (extended upto 18-10-2018 for main package & 11-02-2019 for optional package. Work being executed through M/s Elcon EPC Project, Gujarat. - Installation Vacuum pump is under progress, placed to M/s. Millenium Impex Pvt. Ltd. - 01 no. work of Air Compressor replacement has been dropped due to technical reasons. - E- Tender for VFD cancelled due to technical reasons. <u>Proposal for additional capitalisation during the year 2017-22</u> - Replacement of existing BHEL make Procontrol P-13 SG-TG sysem of unit#5. - Renovation of static excitation and AVR system of 210 MW unit#3 & 4 by digital AVR system. - Strengthening and repair of RCC & steel structure of crusher house. Structure of DM plant, RCC of acid alkali tank, SDG tank and plow feeder at KSTPS. - Strengthening and repair of RCC framed structure od IDCT Cooling Tower of unit #6. - Conversion of Relay logic contrl system of CHO into PLC based system. - Purchase of 3 nos of bulldozer. - Supply, Design, installation, testing and commissioning of online energy accounting and management system of KSTPS.
11.	Rajasthan	Kota	4	1989	210	
12.	Rajasthan	Kota	5	1994	125	
13.	Rajasthan	Suratgarh TPS	1	1998	250	
14.	Rajasthan	Suratgarh TPS	2	2000	250	- Modification in ACW system of Unit 1& 2 has been completed on 28.01.2017.
15.	Rajasthan	Suratgarh TPS	3	2001	250	- Augmentation of DMCCW system of Unit 1 & 2 completed in September, 2016
16.	Rajasthan	Suratgarh TPS	4	2002	250	- Blow down system for cooling Tower of Unit 2,3,4&5 completed in 2015. - Replacement of LR beam of ESO on Unit-1 is likely to be completed in financial year 2018-19, subject to shutdown of Unit -1 - NIT dropped & new NIT will be floated by H/Q for providing dense phase conveying system from existing intermediate silo system of ESP of unit 1,2,3,4,5& 6 . - SOx, NOx & CO Analyser for Unit 2,3 & 4 has been completed on 15.02.2017 - Upgradation of HMI system of unit 2 completed on 06.09.2016. - PO Placed Upgradation of workshop .
17.	Chhattisgarh	Korba (West)	1	1983	210	CSPGCL has taken-up need based R&M for life

18.	Chhattisgarh	Korba (West)	2	1984	210	extension on the basis of R&LA studies and also plan for compliance of new environmental norms. RLA studies done by M/s Evonik. Scope of work of Boiler, Turbine, Electrical Instrumentation, Civil and BOP is being finalised. The CSERC in its order dated 61-03-2016 has approved such scheme under capital investment plan. Order placed on BHEL Noida for Augmentation, R&M and up-gradation of ESPs to maintain emission level limit below 50mg/Nm ³ and work is under progress. LOI issued to BHEL for Augmentation of DCS/ C&I System. Tender floated and offer received, Techno commercial scrutiny is under process for Fire protection system of Transformer & Cables Vault Galleries. M/s DCPL, Kolkata is engaged to carry out feasibility study for installation of FGD. Other schemes approved by CSERC for financial year 2016-17 to 2020-21 are under tendering process.
19.	Chhattisgarh	Korba (West)	3	1985	210	
20.	Chhattisgarh	Korba (West)	4	1986	210	
21.	M.P.	Sanjay Gandhi	1	1993	210	Unit-1 –The consultant has completed RLA/CA Studies in Dec 2014 and submitted the DPR in March 2015.
22.	M.P.	Sanjay Gandhi	2	1994	210	Unit-2- The consultant have completed RLA/CA Studies in Aug 2016 and submitted the DPR in Jan 2017. Boiler: - A consultancy order has been placed on M/s Steag Energy Services(I) Pvt. Ltd., Noida for providing consultancy services to prepare bid documents, assistance in selection of executing agency & monitoring of implementation of R&M Works. The consultant has submitted draft tender specifications for R&M of BTG, Air compressor, DM & CW system, Electrical, fuel oil system, Hydrogen generation plant & Ash Handling Plant. The same were forwarded to all concerned for scrutiny. In this regard, several round of discussions held amongst all concerns to finalise specifications. Based on the discussion held on commercial part of BTG & APH specification, M/s. Steag has submitted revised draft specification & consultant also submitted draft PQR of other packages. These are being evaluated. TG:- M/s. Steag has submitted draft tender specifications. BOP :- The M/s Steag has submitted draft tender specifications. Electrical & C&I:- The M/s Steag team made site visit & discussions to freeze the detailed scope of work. M/s FICHTNER consulting Engineers (India) Ltd. appointed as consultant to carry out feasibility study and preparation of tender document for installation of FGD & other equipment in April 2018. Recommendation cum DPR submitted by consultant. Likely to be accepted by MPPGCL by August 2018. Technical and commercial specification are scheduled to be completed by September 2018. NIT will be floated by the end of September, placement of order will be done by March 2019 and installation of FGD completed by September 2021.
23.	Maharashtra	Chandrapur	7	1997	500	R&M works yet to be decided by the utility.
24.	Maharashtra	Khaperkheda	3	2000	210	R&M works yet to be decided by the utility.
25.	Maharashtra	Khaperkheda	4	2001	210	R&M works yet to be decided by the utility.
26.	Tamil Nadu	Tuticorin TPS	1	1978	210	1st and 2nd RLA already completed. Boiler: Strengthening of weak insulation of Boiler-To be carried out during 2018-19. T.G.: -Minor repair works such as attending cracks in the Strengthening of weak insulation of Boiler

						carried out during 2017-18. All diaphragm in HP, IP & LP had been renewed & work completed during 2009-10. Electrical & C&I: - Existing 3 nos. single phase GT were replaced by new one during 2012-13. BOP: -Replacement of complete ESP internals. Modification of APH sealing system by double sealing completed during 2009-10. Complete replacement of economizer coils assembly, LTSH supply tubes and straight tubes panels for super heater rear wall near economizer. Tender open on 03-11-2017. Price bid opened on 04-05-2018 and approval for placing order is under process. Administrative approval for Distributed Digital Control Monitoring and Information System (DDCMIS) accorded on 29-12-2015. Technical specification was approved by Board of TANGEDCO on 30-04-2018. Open tender floated with due date 03-08-2018 at TTPS. Administrative approval for Augmentation of ESP is under process. Budgetary offers are under scrutiny. Administrative approval accorded for Replacement of 2 nos of Primary Air Fan motors with journals bearing by new motors with antifriction bearings in units I,II&III. Purchase order issued to BHEL, Chennai on 25-05-2018 for retrofitting of 210 MW, LMW surface condenser in any one of the unit-1, 2 &3 TPS. Material to be supplied. Delivery period is 8 months. Replacement of unit auxiliary transformer in unit 1 & 2- Administrative approval proposal is under process. Tender for Installation of 10 MLD Desalination Plant consultancy services floated and opened on 11-10-2017 (common to station)
27.	Tamil Nadu	Tuticorin TPS	2	1980	210	Need based R&M works have been carried out in Boiler TG, C&I and BoP. Following works have been completed in unit-2. Boiler: - Replacement of reheater Rear Pendant Assembly-work completed in 2007-08. T.G:- All diaphragms in HPT,LPT,IPT had been renewed. All 3 rotors have been replaced with reconditioned spare rotors-during 2008. Electrical & C&I: Modernisation of DCS-work completed during 2008-09. Approval for replacement of 2 nos Primary Air Fan motors with journal bearings by New motors with antifriction bearings in units 1,2 and 3 for tender specification accorded by on 07-04-2018. Tender opened on 06-06-2018. Evaluation is under process. Purchase order issued to BHEL, Chennai on 25-05-2018 for retrofitting of 210 MW, LMW surface condenser in any one of the unit-1, 2 &3 TPS. Material to be supplied. Delivery period is 8 months. Replacement of unit auxiliary transformer in unit

						& 2- Administrative approval proposal is under process. Strengthening of weak insulation of Boiler-To be carried out during 2018-19. Purchase order issued to BHEL, Chennai on 25-05-2018 for retrofitting of 210 MW, LMW surface condenser in any one of the unit-1, 2 & 3 TPS. Material to be supplied. Delivery period is 8 months. BOP:-Refurbishment of complete bottom ash system-work completed in 2008-09. Modification of APH sealing system by Double sealing-work completed on 27.3.2017. Replacement of existing steam ejectors by Vacuum pumps-commissioned on 14.07.16. Consultancy awarded to M/s. Fitchner Consulting Engineer, Chennai on 12-02-2018 for Installation of 10 MLD Desalination Plant consultancy services. Administrative approval accorded on 07-04-2017 for retrofitting of 210 MW, LMW surface condenser in any one of the unit-I, II & III at TPS.
28.	Tamil Nadu	Tuticorin TPS	3	1982	210	1st and 2nd RLA already completed. Boiler:- Replacement of Eco. Header-work completed in 2007-08. Replacement of water wall tubes in high heat zone (20M to 40M)-Work completed during 2013-14. Strengthening of weak insulation of Boiler completed during 2017-18. T.G.:- IP Rotor, diaphragms, IP Nozzle segment, TG Bearing 5,6&7, HPT Control Valve 3&4 renewed during COH in 2011-12. Electrical & C&I:- Replacement of existing static AVR by DVR work completed during 2013. BOP:- Modification of APH by double sealing completed in 2013-14. - Approval for replacement of 2 nos Primary Air Fan motors with journal bearings by New motors with antifriction bearings in units 1,2 and 3 for tender specification accorded by on 07-04-2018. Tender opened on 06-06-2018. Evaluation is under process. Administrative approval for Augmentation of ESP is under process. Budgetary offers are under scrutiny. Replacement of unit auxiliary transformer in unit 1 & 2- Administrative approval proposal is under process. - awarded to M/s. Fitchner Consulting Engineer, Chennai on 12-02-2018 for Installation of 10 MLD Desalination Plant consultancy services. -Administrative approval accorded on 07-04-2017 for retrofitting of 210 MW, LMW surface condenser in any one of the unit-I, II & III at TPS. (common to station)
29.	Tamil Nadu	Tuticorin TPS	4	1992	210	Boiler: Replacement of Eco. Coil assembly works completed during COH 2014-15 T.G.- Minor repair works-completed during COH 2014-15 Electrical & C&I:- Generator Stator replaced with new, static AVR replaced by DVR, Upgrading of Hitachi DCS, R&M of man machine interface system during 2014-15. Replaced existing analog type static generation protection system by numerical type Gen. protection system during 2015-16. BOP:- Modification of APH sealing system by

						Double Sealing, Replacement of complete ESP internals for first two rows and controllers, renewal of flue gas duct from APH outlet to ESP inlet completed during COHof 2014-15. Administrative approval accorded on 29-05-2017 for Hot Re-heater Assembly in Unit IV Boiler. Tender opened on 11-01-2018. Proposal for price bid opening was approved by BLTC, under process at TTPS. Consultancy awarded to M/s. Fitchner Consulting Engineer, Chennai on 12-02-2018 for Installation of 10 MLD Desalination Plant consultancy services. (common to station) -Tender open and technical evaluation under process for complete replacement of Hor Reheater Assembly in unit IV Boiler.
30.	Tamil Nadu	Tuticorin TPS	5	1991	210	Ist RLA completed. Boiler:- Replacement of Eco. Coil assembly works completed during 2016-17. T.G.:- During the Capital overhaul 2015-16 CRH strainer alone renewed. Electrical & C&I:- static AVR replaced by DVR, Provision of integrated energy management system during 2015-16. Upgradation of turbine control system completed during 2016-17. Administrative approval accorded on 19-05-2017, tender specification approval accorded on 05-01-2018. Open tender floated and technical bid opened on 04-05-2018 for replacement of existing outdated Pro-control systems in FSSS, SBC, APRDS, STC, SADC and scanner system by latest DCS in Unit-V. BOP:- Modification of APH sealing system by double sealing completed in 2015-16. Replacement of ESP field internals, high voltage transformer rectifiers, electronic control panel with latest technology completed in 2015-16 Renewal of flue gas duct from APH outlet to ESP inlet during 2015-16. Consultancy awarded to M/s. Fitchner Consulting Engineer, Chennai on 12-02-2018 for Installation of 10 MLD Desalination Plant consultancy services. (common to station) Administrative approval accorded on 19-05-2017. Tender specification approved on 05-01-2018. Open tender floated with due date on 13-03-2018. Due date has been extended.
Sub Total State Sector (R&M)				30	7135	
	Total State Sector (LE+R&M)			64	14705	

CENTRAL SECTOR R&M (Gas Based)

1	NEEPCO	Kathalguri CCGT	GT-1	1995	33.50	Gt#1 (a) Order for supply of M/s MHI make MEGAC V, Diasys Netmation System for Up gradation and replacement of old controller MACTUS 620 sequencer and MEGAC III analog Governor already placed with the OEM, M/s MHI, Japan on 26.03.2015. Work completed on 15-02-2017. (b) The new vibration monitoring system procured against unit-1 had to be installed in unit-4 due to available s/d and requirement of the unit. The process for tender for procurement of another new vibration monitoring system is under progress and expected to be completed in 2018-19. (c) Order for Compressor Rotor Refurbishment (CRR) and Comprehensive Rotor Inspection (CRI) for unit#1 to unit #4 have already been placed with the OEM, M/s MHI, Japan on 28.05.2013 and unit is planned in 2019-20 as per the maintenance schedule of OEM.
2		Kathalguri CCGT	GT-2	1995	33.50	GT#2 : (a) Order for supply and commissioning of M/s MHI make MEGAC V, Diasys Netmation System for Up gradation and replacement of old controller MACTUS 620 sequencer and MEGAC III analog Governor already placed with the OEM, M/s MHI, Japan on 26.03.2015. The materials already received and commissioned on 31.07.2017. (b) The process of tender procurement of new vibration monitoring system is under progress and expected to be completed in 2018-19. (c) Order for Compressor Rotor Refurbishment (CRR) and Comprehensive Rotor Inspection (CRI) for unit#1 to unit #4 have already been placed with the OEM, M/s MHI, Japan on 28.05.2013 and this unit is planned in 2018-19 (Feb./March 2019) as per the maintenance schedule of OEM. .
3		Kathalguri CCGT	GT-3	1995	33.50	Order for Compressor Rotor Refurbishment (CRR) and Comprehensive Rotor Inspection (CRI) for unit#1 to unit #4 have already been placed with the OEM, M/s MHI, Japan on 28.05.2013 and the rotor after CRR/CRI in Japan already reached the Plant site. The above works for GT 3 executed w.e.f. 19-06-2017 and completed on 20-07-2017. The order for procurement of new vibration monitoring system is already placed and installed in July 2017 along with major overhauling of Gas Turbine planned in July 2018.
4		Kathalguri CCGT	GT-6	1996	33.5	Upgradation and replacement of Mark IV control system M/s. BHEL make Gas Tubine Unit 6 with Mark Vie Control System has been completed on 31-03-2018
5		Kathalguri CCGT	ST-1	1998	30.00	a) Upgradation of Programmer/ EPROM writer for Procontrol-13 Control System: already completed. b) Upgradation of AVR: LOI for upgradation of AVR already placed with M/s.ABB and material received. Expected to be commissioned in 2018-19. c) Upgradation of 3300-series, BENTLEY-NEVADA- make vibration system: tendering under process. Expected to be completed 2018-19. d) Upgradation of 3300-series, BENTLEY-NEVADA- make temperature monitoring system: Tendering under progress. Expected to be completed 2018-19. The OEM, M/s. BHEL has been requested to study the system and submit a comprehensive offer for upgradation of the system. Got delayed as the new available system with the OEM, M/s. BHEL is not compatible for retrofitting into the existing system. Expected execution of thes by 2019-20.
6		Kathalguri CCGT	ST-2	1998	30.00	Upgradation of 3300-series, BENTLEY-NEVADA- make vibration system: Tendering process is under progress. Expected to be completed in 2018-19.
7		Kathalguri CCGT	ST-3	1998	30.00	a) Upgradation of 3300-series, BENTLEY-NEVADA- make vibration system: Tendering process is under progress. Expected to be completed in 2018-19 b) PO placed for upgradation of AVR already placed with M/s.ABB and material received. expected to be commissioned in 2018-19.
Total Central Sector- Gas (R&M)			7		224	
Total R&M/LE (State+ Centre)			70		14929	

Details of Thermal Power Units where the Life Extension (LE) Works have been Completed During 2017-22

Sl. No.	Name of the TPS	Unit No.	Capacity MW	Utility	State/Central Sector	Date of Synchronisation after LE Works
1.	Ukai	4	200	GSECL	State Sector	17-05-2017
2.	Wanakabori	3	210	GSECL	State Sector	27-11-2017

Total (State) - 02 Units 410.00 MW

Details of Thermal Power Units where the R&M Works have been Completed During 2017-22

Sl. No.	Name of the TPS	Unit No.	Capacity MW	Utility	State/Central Sector	Date of completion of R&M works
1	Kathalguri CCGT	6	33.5	NEEPCO	Central	31-03-2018

Total (Central) - 01 Unit 33.50 MW

Details of Thermal Power Units where the Renovation & Modernisation (R&M)/Life Extension (LE) Works have been Completed During 12th Plan

Sl. No.	Name of the TPS	Unit No.	Capacity MW	Utility	State/Central Sector	Date of Synchronisation after LE Works
Units where Life Extension Works completed during 12 th Plan						
1.	Bathinda	3	110	PSPCL	State Sector	05.08.2012
2.	Kawas	GT-1A	106	NTPC	Central Sector	21.01.2013
3.	Parichha	2	110	UPRVUNL	State Sector	05.05.2013
4.	Muzafarpur	1	110	KBUNL	Joint venture of BSPGCL & NTPC	05.07.2013
5.	Kawas	GT-1B	106	NTPC	Central Sector	28.08. 2013
6.	Gandhar	GT – 3	131	NTPC	Central Sector	29.09. 2013
7.	Kawas	GT-2B	106	NTPC	Central Sector	05.03.2014
8.	Bathinda	4	110	PSPCL	State Sector	10.07. 2014
9.	Muzafarpur	2	110	KBUNL	Joint venture of BSPGCL & NTPC	30.09.2014
10.	Auraiya	GT-1	111.19	NTPC	Central Sector	22.06. 2014
11.	Gandhar	GT-1	131	NTPC	Central Sector	06.07.2014
12.	Kawas	GT-2A	106	NTPC	Central Sector	22.08.2014
13.	Auraiya	GT-2	111.19	NTPC	Central Sector	28.10.2014
14.	Auraiya	GT-3	111.19	NTPC	Central Sector	25.12.2014
15.	Auraiya	GT-4	111.19	NTPC	Central Sector	02.03.2014
16.	Harduaganj	7	110	UPRVUNL	State Sector	01.05. 2015
17.	Bandel	5	210	WBPDCCL	State Sector	21.09.2015
18.	Gandhar	GT-2	131	NTPC	Central Sector	15.04.2015
19.	Obra	10	200	UPRVUNL	State Sector	08.04.2016
20.	Barauni	7	110	BSPGCL	State Sector	03.08.2016
21.	Obra	11	200	UPRVUNL	State Sector	31.12.2016
Total State Sector		10 units	1380.00 MW			
Total Central Sector		11 units	1261.76 MW			
Total LE (Central +State)		21 units	2641.76 MW			
Units where Renovation & Modernisation Works completed during 12 th Plan						
1.	DPL	6	110	WBPDCCL	State Sector	07.05.2012
2.	Patratu	10	110	JSEB	State Sector	24.05.2012
3.	Anpara’A	1	210	UPRVUNL	State Sector	21.03.2013
4.	Anpara’A	2	210	UPRVUNL	State Sector	21.03.2013
5.	Anpara’A	3	210	UPRVUNL	State Sector	21.03.2013
6.	Tanda	2	110	NTPC	Central Sector	15.09.2012

7.	Kathalguri	GT-3	33.5	NTPC	Central Sector	31.03.2014
8.	Kathalguri	GT-4	33.5	NTPC	Central Sector	31.03.2014
9.	Kathalguri	GT-5	33.5	NTPC	Central Sector	31.03.2014
10.	Simhadri	1	500	NTPC	Central	31.03.2016
11.	Simhadri	2	500	NTPC	Central	31.03.2016
12.	Ramagundam	4	500	NTPC	Central	March, 2017
13.	Ramagundam	5	500	NTPC	Central	March, 2017
14.	Ramagundam	6	500	NTPC	Central	March, 2017
15.	Rihand STPS	1	500	NTPC	Central	March, 2017
16.	Rihand STPS	2	500	NTPC	Central	March, 2017
Total R&M State Sector		05 units	850.00 MW			
Total R&M Central Sector		11 units	3710.50 MW			
Total R&M (Central +State)		16 units	4560.50 MW			
Total (R&M+LE)		37 units	7202.26			

Annexure-5

Summary of implementation for phasing plan for FGD installation/ESP Upgradation

Sl. No.	Description	Capacity (MW)	Units
1.	Total Capacity Considered	196667	650
2.	Capacity retired/identified for retirement	8967	82
3.	Capacity after Retirement (1-2)	187700	568
4.	Capacity already having FGD capable of meeting new Sox norms	6130	15
5.	Capacity with CFBC Boilers	5524	48
6.	Capacity taken for analysis (3-4-5)	176046	505
7.	FGD Implementation Plan		
a)	Capacity which claims to be Sox complaint	5115	23
b)	Balance Capacity (6-7 (a))	170931	482
c)	Capacity where FGD has been planned (Annexure-6)	161552	415
d)	Capacity where FGD implementation plan available	161402	414
e)	Capacity where FGD implementation plan not submitted by developer	150	1
f)	TOTAL CAPAICTY WHICH WOULD BE FGD NON COMPLAINT f (i) + f(ii)	9379	67
(i)	Capacity where FGD installation is being explored	690	7
(ii)	Capacity where FGD cannot be installed	8689	60
8.	ESP IMPLEMENTATION PLAN		
(i)	Capacity which is SPM non- complaint	72659	273
(ii)	Capacity which would be Sox non- complaint	6344	38
(iii)	Capacity FGD installation being Explored	390	4
(iv)	Balance Capacity (i-ii-iii) where ESP upgradation considered	65925	231
(v)	Capacity where ESP Implementation plan available	64525	222
(vi)	Capacity where ESP Implementation plan not submitted by developer	1400	9

Annexure-6

FGD Planned

Sr. No.	Developer	Name of Project	Sector	State	Region	Unit No	Unit Capacity	DATE of COMMISSIONING	Feasibility Study Completed	Tender Specifications	NIT Issued (Y/N)	Bids Awarded (Y/N)	FGD Commissioned	FGD Phasing Plan for	Current Status
1	NTPC	BARH II	Central S	Bihar	ER	4	660	20-11-13	Y	Y	Y	N	N	30/09/2021	Price bid submitted on 29.06.2018.
2	NTPC	BARH II	Central S	Bihar	ER	5	660	04-03-15	Y	Y	Y	N	N	31/03/2022	Price bid submitted on 29.06.2018.
3	NTPC	KAHALGAON TPS	Central S	Bihar	ER	1	210	31-03-92	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
4	NTPC	KAHALGAON TPS	Central S	Bihar	ER	2	210	17-03-94	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
5	NTPC	KAHALGAON TPS	Central S	Bihar	ER	3	210	24-03-95	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
6	NTPC	KAHALGAON TPS	Central S	Bihar	ER	4	210	18-03-96	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
7	NTPC	KAHALGAON TPS	Central S	Bihar	ER	5	500	31-03-07	Y	Y	N	N	N	31/12/2022	NIT IN LOT-2 PLANNED IN JULY :
8	NTPC	KAHALGAON TPS	Central S	Bihar	ER	6	500	16-03-08	Y	Y	N	N	N	31/12/2022	NIT IN LOT-2 PLANNED IN JULY :
9	NTPC	KAHALGAON TPS	Central S	Bihar	ER	7	500	31-07-09	Y	Y	N	N	N	31/12/2022	NIT IN LOT-2 PLANNED IN JULY :
10	NTPC	NABI NAGAR TPP	Central S	Bihar	ER	1	250	20-03-16	Y	Y	Y	N	N	31/12/2021	Price bid submitted on 25.06.2018.
11	NTPC	NABI NAGAR TPP	Central S	Bihar	ER	2	250	04-04-17	Y	Y	Y	N	N	31/12/2022	Price bid submitted on 25.06.2018.
12	NTPC & Bihar	MUZAFFARPUR TPS	Central S	Bihar	ER	3	195	31-03-15	Y	Y	Y	N	N	31/12/2022	Price bid submitted on 29.06.2018.
13	NTPC & Bihar	MUZAFFARPUR TPS	Central S	Bihar	ER	4	195	24-03-17	Y	Y	Y	N	N	31/12/2022	Price bid submitted on 29.06.2018.
14	Adhunik Power&N	MAHADEV PRASAD STP	Private S	Jharkha	ER	1	270	19-11-12	0	0	0	0	0	30/06/2022	Complies with new Norms as per d
15	Adhunik Power&N	MAHADEV PRASAD STP	Private S	Jharkha	ER	2	270	29-03-13	0	0	0	0	0	30/06/2022	Complies with new Norms as per d
16	D.V.C	BOKARO 'A' TPS	Central S	Jharkha	ER	1	500	22-03-16	0	0	0	0	0	30/06/2022	Feasibility Study Under Progress
17	D.V.C	CHANDRAPURA(DVC)	Central S	Jharkha	ER	7	250	04-11-09	0	0	0	0	0	31/12/2022	Feasibility Study Under Progress
18	D.V.C	CHANDRAPURA(DVC)	Central S	Jharkha	ER	8	250	31-03-10	0	0	0	0	0	31/12/2022	Feasibility Study Under Progress
19	D.V.C	KODARMA TPP	Central S	Jharkha	ER	1	500	20-07-11	0	0	0	0	0	31/12/2021	Feasibility Study Under Progress
20	D.V.C	KODARMA TPP	Central S	Jharkha	ER	2	500	15-02-13	0	0	0	0	0	31/12/2021	Feasibility Study Under Progress
21	TATA Power Co.	JOJOBBERA TPS	Private S	Jharkha	ER	2	120	02-01-01	0	0	0	0	0	31/12/2020	Feasibility under process
22	TATA Power Co.	JOJOBBERA TPS	Private S	Jharkha	ER	3	120	02-01-02	0	0	0	0	0	31/12/2020	Feasibility under process
23	TATA Power Co.	MAITHON RB TPP	Private S	Jharkha	ER	1	525	01-09-11	Y	Y	Y	0	0	30/09/2021	NIT Issued
24	TATA Power Co.	MAITHON RB TPP	Private S	Jharkha	ER	2	525	24-07-12	Y	Y	Y	0	0	30/06/2022	NIT Issued
25	TenughatVN Ltd	TENUGHAT TPS	State Sec	Jharkha	ER	1	210	14-04-94	Y	0	0	0	0	31/12/2020	Feasibility Study Carried out. Prepa
26	TenughatVN Ltd	TENUGHAT TPS	State Sec	Jharkha	ER	2	210	10-10-96	Y	0	0	0	0	31/12/2020	Feasibility Study Carried out. Prepa
27	GMR	KAMALANGA TPS	Private S	Odisha	ER	1	350	29-03-13	Y	0	0	0	0	31/12/2021	Feasibility study carried out. PPA is
28	GMR	KAMALANGA TPS	Private S	Odisha	ER	2	350	28-09-13	Y	0	0	0	0	31/12/2021	Feasibility study carried out. PPA is
29	GMR	KAMALANGA TPS	Private S	Odisha	ER	3	350	21-03-14	Y	0	0	0	0	30/09/2021	Feasibility study carried out. PPA is
30	Ind barath	IND BARATH TPP	Private S	Odisha	ER	1	350	25-02-16	0	0	0	0	0	31/03/2022	Feasibility Study under process
31	JIPL	DERANG TPP	Private S	Odisha	ER	1	600	10-04-14	Y	Y	0	0	0	31/03/2021	Technical Bid evaluation
32	JIPL	DERANG TPP	Private S	Odisha	ER	2	600	24-01-15	Y	Y	0	0	0	31/03/2021	Technical Bid evaluation
33	NTPC	TALCHER STPS	Central S	Odisha	ER	1	500	19-02-95	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
34	NTPC	TALCHER STPS	Central S	Odisha	ER	2	500	27-03-96	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2

35	NTPC	TALCHER STPS	Central S	Odisha	ER	3	500	21-02-03	Y	N	N	N	N	31/12/2022	NIT IN LOT-2 PLANNED IN JULY :
36	NTPC	TALCHER STPS	Central S	Odisha	ER	4	500	25-10-03	Y	N	N	N	N	31/12/2022	NIT IN LOT-2 PLANNED IN JULY :
37	NTPC	TALCHER STPS	Central S	Odisha	ER	5	500	13-05-04	Y	Y	N	N	N	31/12/2022	NIT IN LOT-2 PLANNED IN JULY :
38	NTPC	TALCHER STPS	Central S	Odisha	ER	6	500	06-02-05	Y	Y	N	N	N	31/12/2022	NIT IN LOT-2 PLANNED IN JULY :
39	OPGCLtd	IB VALLEY TPS	State Sec	Odisha	ER	1	210	02-06-94	Y	0	0	0	0	30/09/2021	Tender specifications are under fin
40	OPGCLtd	IB VALLEY TPS	State Sec	Odisha	ER	2	210	22-10-95	Y	0	0	0	0	30/09/2021	Tender specifications are under fin
41	Sterlite Energy Ltd	STERLITE TPP	Private S	Odisha	ER	2	600	29-12-10	0	0	0	0	0	31/03/2022	Feasibility Study under process
42	C.E.S.C. Pvt.	BUDGE BUDGE TPS	Private S	West B	ER	1	250	16-09-97	0	0	0	0	0	31/12/2022	Feasibility under process
43	C.E.S.C. Pvt.	BUDGE BUDGE TPS	Private S	West B	ER	2	250	06-03-99	0	0	0	0	0	31/12/2022	Feasibility under process
44	C.E.S.C. Pvt.	BUDGE BUDGE TPS	Private S	West B	ER	3	250	29-09-09	0	0	0	0	0	31/12/2022	Feasibility under process
45	C.E.S.C. Pvt.	SOUTHERN REPL. TPS	Private S	West B	ER	1	68	10-04-91	0	0	0	0	0	31/03/2022	Feasibility under process
46	C.E.S.C. Pvt.	SOUTHERN REPL. TPS	Private S	West B	ER	2	68	12-08-90	0	0	0	0	0	31/12/2021	Feasibility under process
47	D.P.L.	D.P.L. TPS	State Sec	West B	ER	6	110	03-07-85	0	0	0	0	0	31/03/2022	Feasibility under process
48	D.P.L.	D.P.L. TPS	State Sec	West B	ER	7	300	24-11-07	0	0	0	0	0	30/06/2022	Feasibility under process
49	D.P.L.	D.P.L. TPS EXT.	State Sec	West B	ER	8	250	31-03-14	0	0	0	0	0	31/03/2022	Feasibility under process
50	D.V.C	DURGAPUR STEEL TPS	Central S	West B	ER	1	500	29-07-11	Y	Y	0	0	0	30/06/2021	Tender specification made
51	D.V.C	DURGAPUR STEEL TPS	Central S	West B	ER	2	500	23-03-12	Y	Y	0	0	0	30/06/2021	Tender specification made
52	D.V.C	MEJIA TPS	Central S	West B	ER	1	210	01-03-96	0	0	0	0	0	31/12/2022	Feasibility Study Under Progress
53	D.V.C	MEJIA TPS	Central S	West B	ER	2	210	24-03-97	0	0	0	0	0	31/12/2022	Feasibility Study Under Progress
54	D.V.C	MEJIA TPS	Central S	West B	ER	3	210	25-03-98	0	0	0	0	0	31/12/2022	Feasibility Study Under Progress
55	D.V.C	MEJIA TPS	Central S	West B	ER	4	210	12-10-04	0	0	0	0	0	31/12/2022	Feasibility Study Under Progress
56	D.V.C	MEJIA TPS	Central S	West B	ER	5	250	01-10-07	0	0	0	0	0	31/12/2022	Feasibility Study Under Progress
57	D.V.C	MEJIA TPS	Central S	West B	ER	6	250	31-03-07	0	0	0	0	0	31/12/2022	Feasibility Study Under Progress
58	D.V.C	MEJIA TPS	Central S	West B	ER	7	500	30-09-10	0	0	0	0	0	30/09/2021	Feasibility Study Under Progress
59	D.V.C	MEJIA TPS	Central S	West B	ER	8	500	26-03-11	0	0	0	0	0	30/09/2021	Feasibility Study Under Progress
60	D.V.C	RAGHUNATHPUR TPP	Central S	West B	ER	1	600	24-08-14	0	0	0	0	0	31/03/2022	Feasibility Study Under Progress
61	D.V.C	RAGHUNATHPUR TPP	Central S	West B	ER	2	600	18-01-16	0	0	0	0	0	31/03/2022	Feasibility Study Under Progress
62	M/s Haldia Energy	HALDIA TPP	Private S	West B	ER	1	300	14-01-15	0	0	0	0	0	31/12/2022	Feasibility under process
63	M/s Haldia Energy	HALDIA TPP	Private S	West B	ER	2	300	16-02-15	0	0	0	0	0	31/12/2022	Feasibility under process
64	Bishagarh Power	India Power TPP	Private S	West B	ER	1	150	07-06-17	0	0	0	0	0	0	Feasability study under progress
65	NTPC	FARAKKA STPS	Central S	West B	ER	1	200	01-01-86	Y	Y	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
66	NTPC	FARAKKA STPS	Central S	West B	ER	2	200	24-12-86	Y	Y	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
67	NTPC	FARAKKA STPS	Central S	West B	ER	3	200	06-08-87	Y	Y	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
68	NTPC	FARAKKA STPS	Central S	West B	ER	4	500	25-09-92	Y	Y	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
69	NTPC	FARAKKA STPS	Central S	West B	ER	5	500	16-02-94	Y	Y	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
70	NTPC	FARAKKA STPS	Central S	West B	ER	6	500	07-03-11	Y	Y	N	N	N	31/12/2022	NIT IN LOT-2 PLANNED IN JULY :

71	WBPDC	KOLAGHAT TPS	State Sec	West Be	ER	1	210	16-01-93	Y	0	0	0	0	30/06/2022	Tendring Process to be initiated in
72	WBPDC	KOLAGHAT TPS	State Sec	West Be	ER	2	210	13-08-90	0	0	0	0	0	31/03/2021	Tendring Process to be initiated in
73	WBPDC	KOLAGHAT TPS	State Sec	West Be	ER	3	210	16-12-85	0	0	0	0	0	30/09/2021	Tendring Process to be initiated in
74	WBPDC	KOLAGHAT TPS	State Sec	West Be	ER	4	210	24-01-84	Y	0	0	0	0	31/03/2022	Tendring Process to be initiated in
75	WBPDC	KOLAGHAT TPS	State Sec	West Be	ER	5	210	28-12-93	0	0	0	0	0	30/06/2021	Tendring Process to be initiated in
76	WBPDC	KOLAGHAT TPS	State Sec	West Be	ER	6	210	17-03-91	0	0	0	0	0	31/12/2021	Tendring Process to be initiated in
77	WBPDC	SAGARDIGHI TPS	State Sec	West Be	ER	1	300	20-07-08	0	0	0	0	0	31/12/2020	Tendring Process to be initiated in
78	WBPDC	SAGARDIGHI TPS	State Sec	West Be	ER	2	300	21-12-07	0	0	0	0	0	31/03/2021	Tendring Process to be initiated in
79	WBPDC	SAGARDIGHI TPS	State Sec	West Be	ER	3	500	14-12-15	Y	0	0	0	0	31/03/2022	Tendring Process to be initiated in
80	WBPDC	SAGARDIGHI TPS	State Sec	West Be	ER	4	500	15-12-16	0	0	0	0	0	31/03/2020	Tendring Process to be initiated in
81	WBPDC	SANTALDIH TPS	State Sec	West Be	ER	5	250	07-11-07	0	0	0	0	0	31/03/2021	Tendring Process to be initiated in
82	WBPDC	SANTALDIH TPS	State Sec	West Be	ER	6	250	29-06-11	0	0	0	0	0	31/12/2021	Tendring Process to be initiated in
83	CHINA LIGHT PC	MAHATMA GANDHI TPS	Private S	Haryana	NR	1	660	12-01-12	Y	Y	Y	Y	Y	31/12/2019	FGD Installed and is Under Renov
84	CHINA LIGHT PC	MAHATMA GANDHI TPS	Private S	Haryana	NR	2	660	11-04-12	Y	Y	Y	Y	Y	31/12/2019	FGD Installed and is Under Renov
85	HGPCorpn	PANIPAT TPS	State Sec	Haryana	NR	6	210	31-03-01	0	0	0	0	0	31/12/2019	Developer wants exemption
86	HGPCorpn	PANIPAT TPS	State Sec	Haryana	NR	7	250	28-09-04	0	0	0	0	0	31/12/2019	Feasibility Study Under Progress
87	HGPCorpn	PANIPAT TPS	State Sec	Haryana	NR	8	250	28-01-05	0	0	0	0	0	31/12/2019	Feasibility Study Under Progress
88	HGPCorpn	RAJIV GANDHI TPS	State Sec	Haryana	NR	1	600	31-03-10	Y	0	0	0	0	31/12/2019	Feasibility Study Completed.
89	HGPCorpn	RAJIV GANDHI TPS	State Sec	Haryana	NR	2	600	01-10-10	Y	0	0	0	0	31/12/2019	Feasibility Study Completed.
90	HGPCorpn	YAMUNA NAGAR TPS	State Sec	Haryana	NR	1	300	01-11-07	Y	0	0	0	0	31/12/2019	Feasibility Study Completed.
91	HGPCorpn	YAMUNA NAGAR TPS	State Sec	Haryana	NR	2	300	29-03-08	Y	0	0	0	0	31/12/2019	Feasibility Study Completed.
92	NTPC	INDIRA GANDHI STPP	Central S	Haryana	NR	1	500	31-10-10	Y	Y	Y	Y	0	31/12/2019	Bid awarded on 30 Jan 2018
93	NTPC	INDIRA GANDHI STPP	Central S	Haryana	NR	2	500	05-11-11	Y	Y	Y	Y	0	31/12/2019	Bid awarded on 30 Jan 2018
94	NTPC	INDIRA GANDHI STPP	Central S	Haryana	NR	3	500	07-11-12	Y	Y	Y	Y	0	31/12/2019	Bid awarded on 30 Jan 2018
95	GVK Power Ltd.	GOINDWAL SAHIB	Private S	Punjab	NR	1	270	14-02-16	0	Y	Y	0	0	30/04/2020	EOI was invited vide newspaper ac
96	GVK Power Ltd.	GOINDWAL SAHIB	Private S	Punjab	NR	2	270	15-03-16	0	Y	Y	0	0	28/02/2020	EOI was invited vide newspaper ac
97	L&T Power Devel	Nabha TPP (Rajpura TPP	Private S	Punjab	NR	1	700	24-01-14	Y	Y	0	0	0	31/12/2019	Feasibility Study Carried Out. PPA i
98	L&T Power Devel	Nabha TPP (Rajpura TPP	Private S	Punjab	NR	2	700	06-07-14	Y	Y	0	0	0	31/12/2019	Feasibility Study Carried Out. PPA i
99	PSEB	GH TPS (LEH.MOH.)	State Sec	Punjab	NR	1	210	29-12-97	0	0	0	0	0	31/12/2019	Administrative approval is under pr
100	PSEB	GH TPS (LEH.MOH.)	State Sec	Punjab	NR	2	210	16-10-98	0	0	0	0	0	31/12/2019	Administrative approval is under pr
101	PSEB	GH TPS (LEH.MOH.)	State Sec	Punjab	NR	3	250	03-01-08	0	0	0	0	0	31/12/2019	Administrative approval is under pr
102	PSEB	GH TPS (LEH.MOH.)	State Sec	Punjab	NR	4	250	31-07-08	0	0	0	0	0	31/12/2019	Administrative approval is under pr
103	Talwandi Sabo P	TALWANDI SABO TPP	Private S	Punjab	NR	1	660	17-06-14	Y	0	Y	0	0	31/12/2019	Feasibility Study Carried Out. PPA i
104	Talwandi Sabo P	TALWANDI SABO TPP	Private S	Punjab	NR	2	660	25-10-15	Y	0	Y	0	0	31/12/2019	Feasibility Study Carried Out. PPA i
105	Talwandi Sabo P	TALWANDI SABO TPP	Private S	Punjab	NR	3	660	29-03-16	Y	0	Y	0	0	31/12/2019	Feasibility Study Carried Out. PPA i
106	Adani Power Ltd.	KAWAI TPS	Private S	Rajasth	NR	1	660	28-05-13	Y	Y	0	0	0	31/08/2020	NIT to be issued soon.

107	Adani Power Ltd.	KAWAI TPS	Private S	Rajasth	NR	2	660	24-12-13	Y	Y	0	0	0	30/06/2020	NIT to be issued soon.
108	RRVUNL	CHHABRA TPP	State Sec	Rajasth	NR	1	250	30-10-09	Y	0	0	0	0	31/12/2021	Feasibility Study Completed.
109	RRVUNL	CHHABRA TPP	State Sec	Rajasth	NR	2	250	04-05-10	Y	0	0	0	0	31/10/2021	Feasibility Study Completed.
110	RRVUNL	CHHABRA TPP	State Sec	Rajasth	NR	3	250	14-09-13	Y	0	0	0	0	31/08/2021	Feasibility Study Completed.
111	RRVUNL	CHHABRA TPP	State Sec	Rajasth	NR	4	250	30-06-14	Y	0	0	0	0	31/08/2021	Feasibility Study Completed.
112	RRVUNL	CHHABRA TPP	State Sec	Rajasth	NR	5	660	04-04-17	0	0	0	0	0	30/04/2020	Feasability study under progress
113	RRVUNL	KALISINDH TPS	State Sec	Rajasth	NR	1	600	02-05-14	Y	0	0	0	0	30/06/2021	Feasibility Study Completed.
114	RRVUNL	KALISINDH TPS	State Sec	Rajasth	NR	2	600	06-06-15	Y	0	0	0	0	30/04/2021	Feasibility Study Completed.
115	RRVUNL	KOTA TPS	State Sec	Rajasth	NR	5	210	26-03-94	Y	0	0	0	0	31/12/2022	Feasibility Study Completed.
116	RRVUNL	KOTA TPS	State Sec	Rajasth	NR	6	195	30-07-03	Y	0	0	0	0	31/12/2022	Feasibility Study Completed.
117	RRVUNL	KOTA TPS	State Sec	Rajasth	NR	7	195	30-08-09	Y	0	0	0	0	31/10/2022	Feasibility Study Completed.
118	RRVUNL	SURATGARH TPS	State Sec	Rajasth	NR	1	250	10-05-98	Y	0	0	0	0	31/12/2022	Feasibility Study Completed.
119	RRVUNL	SURATGARH TPS	State Sec	Rajasth	NR	2	250	28-03-00	Y	0	0	0	0	31/10/2022	Feasibility Study Completed.
120	RRVUNL	SURATGARH TPS	State Sec	Rajasth	NR	3	250	29-10-01	Y	0	0	0	0	31/08/2022	Feasibility Study Completed.
121	RRVUNL	SURATGARH TPS	State Sec	Rajasth	NR	4	250	25-03-02	Y	0	0	0	0	30/06/2022	Feasibility Study Completed.
122	RRVUNL	SURATGARH TPS	State Sec	Rajasth	NR	5	250	30-06-03	Y	0	0	0	0	30/04/2022	Feasibility Study Completed.
123	RRVUNL	SURATGARH TPS	State Sec	Rajasth	NR	6	250	29-08-09	Y	0	0	0	0	28/02/2022	Feasibility Study Completed.
124	Lalitpur Power Ge	LALITPUR TPS	Private S	Uttar Pa	NR	2	660	08-01-16	Y	0	0	0	0	28/02/2021	Petition was filed with UPERC for e
125	Lalitpur Power Ge	LALITPUR TPS	Private S	Uttar Pa	NR	3	660	01-04-16	Y	0	0	0	0	31/10/2021	Petition was filed with UPERC for e
126	Lalitpur Power Ge	LALITPUR TPS	Private S	Uttar Pa	NR	1	660	26-03-16	Y	0	0	0	0	31/12/2020	Petition was filed with UPERC for e
127	Lanko Anpara Po	ANPARA C TPS	Private S	Uttar Pa	NR	1	600	12-10-11	Y	Y	0	0	0	31/08/2022	Tender Specification made
128	Lanko Anpara Po	ANPARA C TPS	Private S	Uttar Pa	NR	2	600	18-01-12	Y	Y	0	0	0	30/06/2022	Tender Specification made
129	NTPC	DADRI (NCTPP)	Central S	Uttar Pa	NR	1	210	21-12-91	Y	Y	Y	N	N	31/12/2019	Dry Sorbent Injection (DSI) SYSTE
130	NTPC	DADRI (NCTPP)	Central S	Uttar Pa	NR	2	210	18-12-92	Y	Y	Y	N	N	31/12/2019	Dry Sorbent Injection (DSI) SYSTE
131	NTPC	DADRI (NCTPP)	Central S	Uttar Pa	NR	3	210	23-03-93	Y	Y	Y	N	N	31/12/2019	Dry Sorbent Injection (DSI) SYSTE
132	NTPC	DADRI (NCTPP)	Central S	Uttar Pa	NR	4	210	24-03-94	Y	Y	Y	N	N	31/12/2019	Dry Sorbent Injection (DSI) SYSTE
133	NTPC	DADRI (NCTPP)	Central S	Uttar Pa	NR	5	490	25-01-10	Y	Y	Y	Y	N	31/12/2019	Work in progress
134	NTPC	DADRI (NCTPP)	Central S	Uttar Pa	NR	6	490	16-07-10	Y	Y	Y	Y	N	31/12/2019	Work in progress
135	NTPC	RIHAND STPS	Central S	Uttar Pa	NR	1	500	31-03-88	Y	N	N	N	N	28/02/2022	NIT IN LOT-3 PLANNED IN OCT 2
136	NTPC	RIHAND STPS	Central S	Uttar Pa	NR	2	500	05-07-89	Y	N	N	N	N	31/12/2021	NIT IN LOT-3 PLANNED IN OCT 2
137	NTPC	RIHAND STPS	Central S	Uttar Pa	NR	3	500	31-01-05	Y	Y	Y	N	N	30/10/2021	Price bid submitted on 29.06.2018.
138	NTPC	RIHAND STPS	Central S	Uttar Pa	NR	4	500	24-09-05	Y	Y	Y	N	N	30/04/2021	Price bid submitted on 29.06.2018.
139	NTPC	RIHAND STPS	Central S	Uttar Pa	NR	5	500	25-05-12	Y	Y	Y	N	N	28/02/2021	Price bid submitted on 29.06.2018.
140	NTPC	RIHAND STPS	Central S	Uttar Pa	NR	6	500	17-10-13	Y	Y	Y	N	N	31/12/2020	Price bid submitted on 29.06.2018.
141	NTPC	SINGRAULI STPS	Central S	Uttar Pa	NR	1	200	14-02-82	Y	N	N	N	N	31/12/2021	NIT IN LOT-3 PLANNED IN OCT 2
142	NTPC	SINGRAULI STPS	Central S	Uttar Pa	NR	2	200	25-11-82	Y	N	N	N	N	31/12/2021	NIT IN LOT-3 PLANNED IN OCT 2

143	NTPC	SINGRAULI STPS	Central S	Uttar Pa	NR	3	200	28-03-83	Y	N	N	N	N	31/08/2021	NIT IN LOT-3 PLANNED IN OCT 2
144	NTPC	SINGRAULI STPS	Central S	Uttar Pa	NR	4	200	02-11-83	Y	N	N	N	N	31/08/2021	NIT IN LOT-3 PLANNED IN OCT 2
145	NTPC	SINGRAULI STPS	Central S	Uttar Pa	NR	5	200	26-02-84	Y	N	N	N	N	30/04/2021	NIT IN LOT-3 PLANNED IN OCT 2
146	NTPC	SINGRAULI STPS	Central S	Uttar Pa	NR	6	500	23-12-86	Y	N	N	N	N	28/02/2021	NIT IN LOT-3 PLANNED IN OCT 2
147	NTPC	SINGRAULI STPS	Central S	Uttar Pa	NR	7	500	24-11-87	Y	N	N	N	N	31/12/2020	NIT IN LOT-3 PLANNED IN OCT 2
148	NTPC	UNCHAHAH TPS	Central S	Uttar Pa	NR	1	210	21-11-88	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN SEP 2
149	NTPC	UNCHAHAH TPS	Central S	Uttar Pa	NR	2	210	22-03-89	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN SEP 2
150	NTPC	UNCHAHAH TPS	Central S	Uttar Pa	NR	3	210	27-01-99	Y	N	N	N	N	31/10/2022	NIT IN LOT-3 PLANNED IN SEP 2
151	NTPC	UNCHAHAH TPS	Central S	Uttar Pa	NR	4	210	22-10-99	Y	N	N	N	N	31/10/2022	NIT IN LOT-3 PLANNED IN SEP 2
152	NTPC	UNCHAHAH TPS	Central S	Uttar Pa	NR	5	210	28-09-06	Y	Y	N	N	N	30/04/2022	NIT IN LOT-2 PLANNED IN JULY
153	NTPC	UNCHAHAH TPS	Central S	Uttar Pa	NR	6	500	31-03-17	Y	Y	Y	N	N	0	Price bid submitted on 29.06.2018.
154	Prayagraj Power	PRAYAGRAJ TPP	Private S	Uttar Pa	NR	1	660	25-12-16	0	0	0	0	0	30/04/2020	Feasibility Study is under process.
155	Prayagraj Power	PRAYAGRAJ TPP	Private S	Uttar Pa	NR	2	660	06-09-15	0	0	0	0	0	30/06/2020	Feasibility Study is under process.
156	Prayagraj Power	PRAYAGRAJ TPP	Private S	Uttar Pa	NR	3	660	22-05-17	0	0	0	0	0	29/02/2020	Feasibility Study under progress
157	Rosa Power Supp	ROSA TPP Ph-I	Private S	Uttar Pa	NR	1	300	10-02-10	Y	0	0	0	0	31/12/2021	Tendering Under Process
158	Rosa Power Supp	ROSA TPP Ph-I	Private S	Uttar Pa	NR	2	300	26-06-10	Y	0	0	0	0	31/12/2021	Tendering Under Process
159	Rosa Power Supp	ROSA TPP Ph-I	Private S	Uttar Pa	NR	3	300	28-12-11	Y	0	0	0	0	31/10/2021	Tendering Under Process
160	Rosa Power Supp	ROSA TPP Ph-I	Private S	Uttar Pa	NR	4	300	28-03-12	Y	0	0	0	0	31/10/2021	Tendering Under Process
161	UPRVUNL	ANPARA TPS	State Sec	Uttar Pa	NR	1	210	24-03-86	0	0	0	0	0	31/10/2022	Administrative approval is under p
162	UPRVUNL	ANPARA TPS	State Sec	Uttar Pa	NR	2	210	28-02-87	0	0	0	0	0	31/08/2022	Feasiblity Study Under Progress
163	UPRVUNL	ANPARA TPS	State Sec	Uttar Pa	NR	3	210	12-03-88	0	0	0	0	0	30/06/2022	Feasiblity Study Under Progress
164	UPRVUNL	ANPARA TPS	State Sec	Uttar Pa	NR	4	500	19-07-93	0	0	0	0	0	30/04/2022	Administrative approval is under p
165	UPRVUNL	ANPARA TPS	State Sec	Uttar Pa	NR	5	500	04-07-94	0	0	0	0	0	28/02/2022	Administrative approval is under p
166	UPRVUNL	ANPARA TPS	State Sec	Uttar Pa	NR	6	500	08-06-15	Y	0	0	0	0	30/06/2021	Feasiblity Study Carried out
167	UPRVUNL	ANPARA TPS	State Sec	Uttar Pa	NR	7	500	06-03-16	Y	0	0	0	0	30/04/2021	Feasiblity Study Carried out
168	UPRVUNL	HARDUAGANJ TPS	State Sec	Uttar Pa	NR	8	250	27-09-11	0	0	0	0	0	31/12/2019	Administrative approval is under pr
169	UPRVUNL	HARDUAGANJ TPS	State Sec	Uttar Pa	NR	9	250	25-05-12	0	0	0	0	0	31/12/2019	Administrative approval is under p
170	UPRVUNL	OBRA TPS	State Sec	Uttar Pa	NR	9	200	26-10-80	0	0	0	0	0	31/08/2022	Feasibility Study Under Progress
171	UPRVUNL	OBRA TPS	State Sec	Uttar Pa	NR	10	200	14-01-79	0	0	0	0	0	31/10/2022	Feasibility Study Under Progress
172	UPRVUNL	OBRA TPS	State Sec	Uttar Pa	NR	11	200	31-12-77	0	0	0	0	0	31/12/2022	Feasibility Study Under Progress
173	UPRVUNL	OBRA TPS	State Sec	Uttar Pa	NR	12	200	28-03-81	0	0	0	0	0	30/06/2022	Feasibility Study Under Progress
174	UPRVUNL	OBRA TPS	State Sec	Uttar Pa	NR	13	200	21-07-82	0	0	0	0	0	30/04/2022	Feasibility Study Under Progress
175	UPRVUNL	PARICHHA TPS	State Sec	Uttar Pa	NR	3	210	29-03-06	0	0	0	0	0	30/04/2022	Administrative approval is under pr
176	UPRVUNL	PARICHHA TPS	State Sec	Uttar Pa	NR	4	210	28-12-06	0	0	0	0	0	30/04/2022	Administrative approval is under pr
177	UPRVUNL	PARICHHA TPS	State Sec	Uttar Pa	NR	5	250	24-05-12	0	0	0	0	0	28/02/2022	Administrative approval is under pr
178	UPRVUNL	PARICHHA TPS	State Sec	Uttar Pa	NR	6	250	11-03-13	0	0	0	0	0	31/12/2021	Administrative approval is under p

179	APGENCO	Dr. N.TATA RAO TPS	State Sec	Andhra	SR	7	500	08-10-09	0	0	0	0	0	31/12/2020	Feasibility studies are in progress th
180	APGENCO	RAYALASEEMA TPS	State Sec	Andhra	SR	1	210	31-03-94	0	0	0	0	0	31/12/2021	Complies with new Norms as per d
181	APGENCO	RAYALASEEMA TPS	State Sec	Andhra	SR	2	210	25-02-95	0	0	0	0	0	30/09/2021	Complies with new Norms as per d
182	APGENCO	RAYALASEEMA TPS	State Sec	Andhra	SR	3	210	25-01-07	0	0	0	0	0	30/09/2020	Complies with new Norms as per d
183	APGENCO	RAYALASEEMA TPS	State Sec	Andhra	SR	4	210	20-11-07	0	0	0	0	0	30/06/2021	Complies with new Norms as per d
184	APGENCO	RAYALASEEMA TPS	State Sec	Andhra	SR	5	210	31-12-10	0	0	0	0	0	30/06/2020	Complies with new Norms as per d
185	APPDCL	DAMODARAM SANJEEV	State Sec	Andhra	SR	1	800	28-08-14	0	0	0	0	0	31/12/2020	Feasibility studies are in progress th
186	APPDCL	DAMODARAM SANJEEV	State Sec	Andhra	SR	2	800	17-03-15	0	0	0	0	0	31/12/2019	Feasibility studies are in progress th
187	HNPCL	VIZAG TPP	Private S	Andhra	SR	1	520	27-12-15	Y	0	0	0	0	31/12/2022	HNPCL had appointed a consultan
188	HNPCL	VIZAG TPP	Private S	Andhra	SR	2	520	30-03-16	Y	0	0	0	0	31/12/2022	HNPCL had appointed a consultan
189	NTPC	SIMHADRI	Central S	Andhra	SR	1	500	22-02-02	Y	Y	N	N	N	31/03/2022	NIT IN LOT-2 PLANNED IN JULY :
190	NTPC	SIMHADRI	Central S	Andhra	SR	2	500	24-08-02	Y	Y	N	N	N	30/06/2022	NIT IN LOT-2 PLANNED IN JULY :
191	NTPC	SIMHADRI	Central S	Andhra	SR	3	500	29-03-11	Y	Y	Y	N	N	30/09/2022	NIT IN LOT-3 PLANNED IN OCT 2
192	NTPC	SIMHADRI	Central S	Andhra	SR	4	500	30-03-12	Y	Y	Y	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
193	Sembcorp Gayatr	Sembcorp Gayatri P.Ltd.	Private S	Andhra	SR	1	660	12-11-16	0	0	0	0	0	31/12/2021	Pilot plant trials under progress. To
194	Sembcorp Gayatr	Sembcorp Gayatri P.Ltd.	Private S	Andhra	SR	2	660	15-02-17	0	0	0	0	0	30/09/2021	Feasability study under progress
195	THERMAL POWE	PAINAMPURAM TPP	Private S	Andhra	SR	1	660	07-02-15	0	0	0	0	0	31/12/2021	Pilot plant trials under progress. To
196	THERMAL POWE	PAINAMPURAM TPP	Private S	Andhra	SR	2	660	03-09-15	0	0	0	0	0	30/09/2021	Pilot plant trials under progress. To
197	Adani Power Ltd.	UDUPI TPP	Private S	Karnata	SR	1	600	23-07-10	Y	Y	0	0	0	31/03/2022	Existing FGD to be dismantled and
198	Adani Power Ltd.	UDUPI TPP	Private S	Karnata	SR	2	600	16-04-11	Y	Y	0	0	0	30/06/2022	Existing FGD to be dismantled and
199	Jindal (Pvt Co)	TORANGALLU TPS EXT	Private S	Karnata	SR	1	300	23-04-09	Y	0	0	0	0	30/06/2022	Discussions with vendor is in progr
200	Jindal (Pvt Co)	TORANGALLU TPS EXT	Private S	Karnata	SR	2	300	24-08-09	Y	0	0	0	0	30/09/2022	Discussions with vendor is in progr
201	KPCL	BELLARY TPS	State Sec	Karnata	SR	1	500	03-12-07	Y	Y	0	0	0	31/12/2020	Tender preparation is in process
202	KPCL	BELLARY TPS	State Sec	Karnata	SR	2	500	23-03-12	Y	Y	0	0	0	30/06/2021	Tender preparation is in process
203	KPCL	BELLARY TPS	State Sec	Karnata	SR	3	700	01-03-16	Y	Y	0	0	0	31/12/2021	Tender preparation is in process
204	KPCL	RAICHUR TPS	State Sec	Karnata	SR	1	210	29-03-85	Y	Y	0	0	0	31/03/2021	Tender preparation is under proces
205	KPCL	RAICHUR TPS	State Sec	Karnata	SR	2	210	02-03-86	Y	Y	0	0	0	30/06/2021	Tender preparation is under proces
206	KPCL	RAICHUR TPS	State Sec	Karnata	SR	3	210	30-03-91	Y	Y	0	0	0	30/09/2021	Tender preparation is under proces
207	KPCL	RAICHUR TPS	State Sec	Karnata	SR	4	210	29-09-94	Y	Y	0	0	0	31/12/2021	Tender preparation is under proces
208	KPCL	RAICHUR TPS	State Sec	Karnata	SR	5	210	31-01-99	Y	Y	0	0	0	31/03/2022	Tender preparation is under proces
209	KPCL	RAICHUR TPS	State Sec	Karnata	SR	6	210	22-07-99	Y	Y	0	0	0	30/06/2022	Tender preparation is under proces
210	KPCL	RAICHUR TPS	State Sec	Karnata	SR	7	210	11-12-02	Y	Y	0	0	0	30/09/2022	Tender preparation is under proces
211	KPCL	RAICHUR TPS	State Sec	Karnata	SR	8	250	26-06-10	Y	Y	0	0	0	31/12/2022	Tender preparation is under proces
212	KPCL	YERMARUS TPP	State Sec	Karnata	SR	1	800	29-03-16	0	Y	0	0	0	31/12/2021	Feasibility study/ Tender preparatic

213	KPCL	YERMARUS TPP	State Sec	Karnata	SR	2	800	29-03-17	0	0	0	0	0	31/12/2022	Feasability study under progress
214	NTPC	KUDGI	Central S	Karnata	SR	1	800	25-12-16	Y	Y	N	N	N	30/06/2022	Price bid submitted on 25.06.2018.
215	NTPC	KUDGI	Central S	Karnata	SR	2	800	23-03-17	Y	Y	N	N	N	30/09/2022	Price bid submitted on 25.06.2018.
216	Coastal Energen	MUTHIARA TPP	Private S	Tamil N	SR	1	600	02-12-14	Y	0	0	0	0	30/09/2022	Feasiblity Study Completed
217	Coastal Energen	MUTHIARA TPP	Private S	Tamil N	SR	2	600	02-01-16	Y	0	0	0	0	31/12/2022	Feasiblity Study Completed
218	NEYVELI LIGNIT	NEYVELI (EXT) TPS	Central S	Tamil N	SR	1	210	21-10-02	Y	0	0	0	0	30/06/2021	Technical specification furnished b
219	NEYVELI LIGNIT	NEYVELI (EXT) TPS	Central S	Tamil N	SR	2	210	22-07-03	Y	0	0	0	0	31/12/2021	Technical specification furnished b
220	NEYVELI LIGNIT	NEYVELI TPS- II	Central S	Tamil N	SR	1	210	17-01-88	Y	0	0	0	0	31/12/2021	Technical specification furnished b
221	NEYVELI LIGNIT	NEYVELI TPS- II	Central S	Tamil N	SR	2	210	06-02-87	Y	0	0	0	0	30/09/2021	Technical specification furnished b
222	NEYVELI LIGNIT	NEYVELI TPS- II	Central S	Tamil N	SR	3	210	29-03-87	Y	0	0	0	0	30/06/2021	Technical specification furnished b
223	NEYVELI LIGNIT	NEYVELI TPS- II	Central S	Tamil N	SR	4	210	30-03-91	Y	0	0	0	0	31/03/2022	Technical specification furnished b
224	NEYVELI LIGNIT	NEYVELI TPS- II	Central S	Tamil N	SR	5	210	31-12-91	Y	0	0	0	0	30/06/2022	Technical specification furnished b
225	NEYVELI LIGNIT	NEYVELI TPS- II	Central S	Tamil N	SR	6	210	30-10-92	Y	0	0	0	0	30/09/2022	Technical specification furnished b
226	NEYVELI LIGNIT	NEYVELI TPS- II	Central S	Tamil N	SR	7	210	19-06-93	Y	0	0	0	0	31/12/2022	Technical specification furnished b
227	NTEC LTD.	VALLUR TPP	Central S	Tamil N	SR	1	500	28-03-12	Y	Y	0	0	0	30/06/2022	NIT is planned in July 2018
228	NTEC LTD.	VALLUR TPP	Central S	Tamil N	SR	2	500	28-02-13	Y	Y	0	0	0	30/09/2022	NIT is planned in July 2018
229	NTEC LTD.	VALLUR TPP	Central S	Tamil N	SR	3	500	28-02-14	Y	Y	0	0	0	31/12/2022	NIT is planned in July 2018
230	NLC + TANGEDCO	TUTICORIN (JV) TPP	Central S	Tamil N	SR	1	500	10-03-15	Y	0	0	0	0	31/12/2021	Feasibility Study completed. Prepa
231	NLC + TANGEDCO	TUTICORIN (JV) TPP	Central S	Tamil N	SR	2	500	09-07-15	Y	0	0	0	0	30/06/2020	Feasibility Study completed. Prepa
232	TAQA, Neyveli	TAQA, Neyveli	Private S	Tamil N	SR	2	250	21-10-02	0	0	0	0	0	30/06/2020	Feasiblity Study Under Progress
233	TANGEDCO	NORTH CHENNAI Ext. TP	State Sec	Tamil N	SR	1	600	09-03-13	0	0	0	0	0	31/12/2019	Requested for FGD implementation
234	TANGEDCO	NORTH CHENNAI Ext. TP	State Sec	Tamil N	SR	2	600	13-09-13	0	0	0	0	0	30/09/2020	Requested for FGD implementation
235	TANGEDCO	NORTH CHENNAI TPS	State Sec	Tamil N	SR	1	210	25-10-94	Y	Y	Y	0	0	31/12/2022	Budgetary offer awaited from M/s. I
236	TANGEDCO	NORTH CHENNAI TPS	State Sec	Tamil N	SR	2	210	27-03-95	Y	Y	Y	0	0	30/06/2022	Budgetary offer awaited from M/s. I
237	TANGEDCO	NORTH CHENNAI TPS	State Sec	Tamil N	SR	3	210	24-02-96	Y	Y	Y	0	0	31/03/2022	Budgetary offer awaited from M/s. I
238	NTPC	RAMAGUNDEM STPS	Central S	Telanga	SR	1	200	27-10-83	Y	N	N	N	N	31/03/2022	NIT IN LOT-3 PLANNED IN OCT 2
239	NTPC	RAMAGUNDEM STPS	Central S	Telanga	SR	2	200	29-05-84	Y	N	N	N	N	31/03/2022	NIT IN LOT-3 PLANNED IN OCT 2
240	NTPC	RAMAGUNDEM STPS	Central S	Telanga	SR	3	200	13-12-84	Y	N	N	N	N	30/06/2022	NIT IN LOT-3 PLANNED IN OCT 2
241	NTPC	RAMAGUNDEM STPS	Central S	Telanga	SR	4	500	26-06-88	Y	N	N	N	N	30/06/2022	NIT IN LOT-3 PLANNED IN OCT 2
242	NTPC	RAMAGUNDEM STPS	Central S	Telanga	SR	5	500	26-03-89	Y	N	N	N	N	30/09/2022	NIT IN LOT-3 PLANNED IN OCT 2
243	NTPC	RAMAGUNDEM STPS	Central S	Telanga	SR	6	500	16-10-89	Y	N	N	N	N	30/09/2022	NIT IN LOT-3 PLANNED IN OCT 2
244	NTPC	RAMAGUNDEM STPS	Central S	Telanga	SR	7	500	26-09-04	Y	Y	Y	N	N	31/12/2022	NIT ISUED ON 15.06.2018.
245	Singareni Collierie	SINGARENI TPP	State Sec	Telanga	SR	1	600	13-03-16	0	0	0	0	0	31/12/2019	Tender has been floated and techn
246	Singareni Collierie	SINGARENI TPP	State Sec	Telanga	SR	2	600	25-11-16	0	0	0	0	0	30/09/2019	Tender has been floated and techn
247	TSGENCO	KAKATIYA TPS	State Sec	Telanga	SR	1	500	27-05-10	0	0	0	0	0	31/03/2020	Feasibility Study Under Progress
248	TSGENCO	KAKATIYA TPS	State Sec	Telanga	SR	2	600	31-12-15	0	0	0	0	0	30/06/2020	Feasibility Study Under Progress

249	TSGENCO	KOTHAGUDEM TPS (NEV	State Sec	Telanga	SR	11	500	26-06-11	0	0	0	0	0	30/09/2019	Feasibility Study Under Progress
250	Bharat Aluminium	BALCO TPS	Private S	Chhatis	WR	1	300	04-06-15	0	0	0	0	0	30/09/2021	Feasibility Study under progress.
251	Bharat Aluminium	BALCO TPS	Private S	Chhatis	WR	2	300	24-03-16	0	0	0	0	0	30/06/2021	Feasibility Study under progress.
252	CSEB	MARWA TPS	State Sec	Chhatis	WR	1	500	30-03-14	Y	0	0	0	0	30/06/2021	Feasibility Study Carried out
253	CSEB	MARWA TPS	State Sec	Chhatis	WR	2	500	15-07-16	Y	0	0	0	0	31/03/2021	Feasibility Study Carried out
254	CSPGCL	DSPM TPS	State Sec	Chhatis	WR	1	250	30-03-07	Y	0	0	0	0	30/06/2021	Feasibility Study Carried out
255	CSPGCL	DSPM TPS	State Sec	Chhatis	WR	2	250	11-12-07	Y	0	0	0	0	30/09/2021	Feasibility Study Carried out
256	CSPGCL	KORBA-WEST Ext. TPS	State Sec	Chhatis	WR	5	500	22-03-13	Y	0	0	0	0	30/09/2021	Feasibility Study Carried out
257	DB Power	BARADARHA TPS	Private S	Chhatis	WR	1	600	23-02-14	Y	Y	Y	0	0	30/06/2021	NIT issued
258	DB Power	BARADARHA TPS	Private S	Chhatis	WR	2	600	24-03-15	Y	Y	Y	0	0	30/09/2020	NIT issued
259	GMR	RAIKHEDA TPP	Private S	Chhatis	WR	1	685	24-02-15	Y	0	0	0	0	30/06/2020	Feasibility study carried out. PPA is
260	GMR	RAIKHEDA TPP	Private S	Chhatis	WR	2	685	28-03-16	Y	0	0	0	0	30/09/2020	Feasibility study carried out. PPA is
261	KORBA-WEST T	AVANTHA BHANDAR	Private S	Chhatis	WR	1	600	31-03-14	Y	Y	0	0	0	31/03/2022	Feasibility Study carried out. Tende
262	KSK Mahanadi P	AKALTARA TPS	Private S	Chhatis	WR	1	600	13-08-13	0	0	0	0	0	30/06/2022	Feasibility Study under process
263	KSK Mahanadi P	AKALTARA TPS	Private S	Chhatis	WR	2	600	22-08-14	0	0	0	0	0	31/03/2022	Feasibility Study under process
264	M/s Lanko Amark	PATHADI TPP	Private S	Chhatis	WR	1	300	04-06-09	Y	Y	0	0	0	31/03/2021	Tender Specification made
265	M/s Lanko Amark	PATHADI TPP	Private S	Chhatis	WR	2	300	25-03-10	Y	Y	0	0	0	31/03/2021	Tender Specification made
266	M/s O.P.Jindal	OP JINDAL TPS	Private S	Chhatis	WR	1	250	02-09-07	Y	Y	Y	0	0	31/03/2022	Issuance of Bid document on Nov :
267	M/s O.P.Jindal	OP JINDAL TPS	Private S	Chhatis	WR	2	250	10-02-08	Y	Y	Y	0	0	31/03/2022	Issuance of Bid document on Nov :
268	M/s O.P.Jindal	OP JINDAL TPS	Private S	Chhatis	WR	3	250	06-03-08	Y	Y	Y	0	0	30/06/2022	Issuance of Bid document on Nov :
269	M/s O.P.Jindal	OP JINDAL TPS	Private S	Chhatis	WR	4	250	17-06-08	Y	Y	Y	0	0	30/06/2022	Issuance of Bid document on Nov :
270	M/s O.P.Jindal	TAMNAR TPP	Private S	Chhatis	WR	1	600	10-03-14	Y	Y	Y	0	0	31/03/2021	Issuance of Bid document on Nov :
271	M/s O.P.Jindal	TAMNAR TPP	Private S	Chhatis	WR	2	600	30-03-14	Y	Y	Y	0	0	31/12/2021	Issuance of Bid document on Nov :
272	M/s O.P.Jindal	TAMNAR TPP	Private S	Chhatis	WR	3	600	07-01-15	Y	Y	Y	0	0	31/03/2022	Issuance of Bid document on Nov :
273	M/s O.P.Jindal	TAMNAR TPP	Private S	Chhatis	WR	4	600	28-03-15	Y	Y	Y	0	0	30/06/2022	Issuance of Bid document on Nov :
274	NTPC	KORBA STPS	Central S	Chhatis	WR	1	200	28-02-83	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
275	NTPC	KORBA STPS	Central S	Chhatis	WR	2	200	31-10-83	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
276	NTPC	KORBA STPS	Central S	Chhatis	WR	3	200	17-03-84	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
277	NTPC	KORBA STPS	Central S	Chhatis	WR	4	500	31-05-87	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
278	NTPC	KORBA STPS	Central S	Chhatis	WR	5	500	25-03-88	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
279	NTPC	KORBA STPS	Central S	Chhatis	WR	6	500	26-02-89	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
280	NTPC	KORBA STPS	Central S	Chhatis	WR	7	500	25-11-10	Y	Y	N	N	N	31/12/2022	NIT IN LOT-2 PLANNED IN JULY :
281	NTPC	SIPAT STPS	Central S	Chhatis	WR	4	500	20-06-08	Y	Y	Y	N	N	31/12/2021	NIT ISSUED ON 15.06.2018.
282	NTPC	SIPAT STPS	Central S	Chhatis	WR	5	500	01-01-09	Y	Y	Y	N	N	31/12/2021	NIT ISSUED ON 15.06.2018.
283	NTPC	SIPAT STPS	Central S	Chhatis	WR	1	660	01-10-11	Y	Y	N	N	N	31/12/2022	NIT IN LOT-2 PLANNED IN JULY :
284	NTPC	SIPAT STPS	Central S	Chhatis	WR	2	660	25-05-12	Y	Y	N	N	N	31/12/2022	NIT IN LOT-2 PLANNED IN JULY :

285	NTPC	SIPAT STPS	Central S	Chhatis	WR	3	660	08-01-12	Y	Y	Y	N	N	31/12/2021	NIT IN LOT-2 PLANNED IN JULY :
286	NTPC & Sail	BHILAI TPS	Central S	Chhatis	WR	1	250	20-04-08	Y	0	0	0	0	31/12/2022	Finalisation of specifications(FSC)
287	NTPC & Sail	BHILAI TPS	Central S	Chhatis	WR	2	250	12-07-09	Y	0	0	0	0	31/12/2022	Finalisation of specifications(FSC)
288	RKM Powergen P	UCHPINDA TPP	Private S	Chhatis	WR	1	360	28-10-15	0	0	0	0	0	31/03/2022	Technical discussion with various v
289	RKM Powergen P	UCHPINDA TPP	Private S	Chhatis	WR	3	360	28-01-16	0	0	0	0	0	31/12/2021	Technical discussion with various v
290	SKS Power Gen.	Binjkote TPP	Private S	Chhatis	WR	1	300	25-04-17	0	0	0	0	0	30/09/2020	Feasability study under progress
291	TRN Energy Priv	NAWAPARA TPP	Private S	Chhatis	WR	2	300	18-04-17	0	0	0	0	0	30/09/2020	Already meeting the environmental
292	Adani Power Ltd.	MUNDRA TPS	Private S	Gujarat	WR	1	330	04-08-09	Y	Y	0	0	0	31/12/2022	NIT is to be issued soon.
293	Adani Power Ltd.	MUNDRA TPS	Private S	Gujarat	WR	2	330	17-03-10	Y	Y	0	0	0	31/12/2022	NIT is to be issued soon.
294	Adani Power Ltd.	MUNDRA TPS	Private S	Gujarat	WR	3	330	02-08-10	Y	Y	0	0	0	30/09/2022	NIT is to be issued soon.
295	Adani Power Ltd.	MUNDRA TPS	Private S	Gujarat	WR	4	330	20-12-10	Y	Y	0	0	0	30/09/2022	NIT is to be issued soon.
296	Adani Power Ltd.	MUNDRA TPS	Private S	Gujarat	WR	5	660	26-12-10	Y	Y	0	0	0	30/06/2022	NIT is to be issued soon.
297	Adani Power Ltd.	MUNDRA TPS	Private S	Gujarat	WR	6	660	20-07-11	Y	Y	0	0	0	31/03/2022	NIT is to be issued soon.
298	Essar Gujarat	SALAYA TPP	Private S	Gujarat	WR	1	600	04-01-12	0	0	0	0	0	30/06/2021	Feasibility study under process
299	Essar Gujarat	SALAYA TPP	Private S	Gujarat	WR	2	600	15-06-12	0	0	0	0	0	31/03/2021	Feasibility study under process
300	GSECL	GANDHI NAGAR TPS	State Sec	Gujarat	WR	3	210	20-03-90	0	0	0	0	0	31/12/2021	Feasiblity Study Under Progress
301	GSECL	GANDHI NAGAR TPS	State Sec	Gujarat	WR	4	210	20-07-91	0	0	0	0	0	31/12/2021	Feasiblity Study Under Progress
302	GSECL	GANDHI NAGAR TPS	State Sec	Gujarat	WR	5	210	17-03-98	0	0	0	0	0	31/12/2021	Feasiblity Study Under Progress
303	GSECL	KUTCH LIG. TPS	State Sec	Gujarat	WR	1	70	29-03-90	0	0	0	0	0	31/12/2021	Feasibility Study under progress.
304	GSECL	KUTCH LIG. TPS	State Sec	Gujarat	WR	2	70	25-03-91	0	0	0	0	0	31/12/2021	Feasibility Study under progress.
305	GSECL	KUTCH LIG. TPS	State Sec	Gujarat	WR	3	75	31-03-97	0	0	0	0	0	31/12/2021	Feasibility Study under progress.
306	GSECL	SIKKA REP. TPS	State Sec	Gujarat	WR	3	250	29-03-15	Y	Y	Y	0	0	31/01/2022	Bidding Under Progresse
307	GSECL	SIKKA REP. TPS	State Sec	Gujarat	WR	4	250	25-09-15	Y	Y	Y	0	0	31/01/2022	Bidding Under Progresse
308	GSECL	UKAI TPS	State Sec	Gujarat	WR	3	200	21-01-79	0	0	0	0	0	31/12/2021	Not Feasible as per Developer. Un
309	GSECL	UKAI TPS	State Sec	Gujarat	WR	4	200	28-03-79	0	0	0	0	0	31/12/2021	Feasiblity Study Under Progress
310	GSECL	UKAI TPS	State Sec	Gujarat	WR	5	210	30-01-85	0	0	0	0	0	31/12/2021	Feasiblity Study Under Progress
311	GSECL	UKAI TPS	State Sec	Gujarat	WR	6	500	05-03-13	Y	Y	Y	0	0	31/03/2022	e-tender for EPC floated & technic
312	GSECL	WANAKBORI TPS	State Sec	Gujarat	WR	1	210	23-03-82	0	0	0	0	0	31/12/2021	Feasiblity Study Under Progress
313	GSECL	WANAKBORI TPS	State Sec	Gujarat	WR	2	210	15-01-83	0	0	0	0	0	31/12/2021	Feasiblity Study Under Progress
314	GSECL	WANAKBORI TPS	State Sec	Gujarat	WR	3	210	15-03-84	0	0	0	0	0	31/12/2021	Feasiblity Study Under Progress
315	GSECL	WANAKBORI TPS	State Sec	Gujarat	WR	4	210	09-03-86	0	0	0	0	0	31/12/2021	Feasiblity Study Under Progress
316	GSECL	WANAKBORI TPS	State Sec	Gujarat	WR	5	210	23-09-86	0	0	0	0	0	31/12/2021	Feasiblity Study Under Progress
317	GSECL	WANAKBORI TPS	State Sec	Gujarat	WR	6	210	18-11-87	0	0	0	0	0	31/12/2021	Feasiblity Study Under Progress
318	GSECL	WANAKBORI TPS	State Sec	Gujarat	WR	7	210	31-12-98	0	0	0	0	0	31/12/2021	Feasiblity Study Under Progress
319	Tata Power (CGP	MUNDRA UMTTP	Private S	Gujarat	WR	1	800	07-03-12	Y	0	0	0	0	30/06/2020	Feasibility Study Carried Out
320	Tata Power (CGP	MUNDRA UMTTP	Private S	Gujarat	WR	2	800	30-07-12	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out

321	Tata Power (CGP)	MUNDRA UMTTP	Private S	Gujarat	WR	3	800	27-10-12	Y	0	0	0	0	30/06/2021	Feasibility Study Carried Out
322	Tata Power (CGP)	MUNDRA UMTTP	Private S	Gujarat	WR	4	800	21-01-13	Y	0	0	0	0	31/03/2022	Feasibility Study Carried Out
323	Tata Power (CGP)	MUNDRA UMTTP	Private S	Gujarat	WR	5	800	22-03-13	Y	0	0	0	0	31/03/2022	Feasibility Study Carried Out
324	Torrent Power Ge	SABARMATI	Private S	Gujarat	WR	1	120	12-10-78	0	0	0	0	0	31/12/2022	Feasibility Study under process
325	Torrent Power Ge	SABARMATI	Private S	Gujarat	WR	2	121	31-12-84	0	0	0	0	0	31/12/2022	Feasibility Study under process
326	Torrent Power Ge	SABARMATI	Private S	Gujarat	WR	3	121	28-09-88	0	0	0	0	0	31/12/2022	Feasibility Study under process
327	ESSAR power	MAHAN TPP	Private S	Madhya	WR	1	600	24-02-13	0	0	0	0	0	31/12/2020	Feasibility study under process
328	Jaiprakash Power	NIGRI TPP	Private S	Madhya	WR	1	660	29-08-14	0	0	0	0	0	30/06/2020	Feasibility Study is under process.
329	Jaiprakash Power	NIGRI TPP	Private S	Madhya	WR	2	660	27-02-15	0	0	0	0	0	30/09/2020	Feasibility Study is under process.
330	Jhabua Power Ltd	SEIONI TPP	Private S	Madhya	WR	1	600	22-03-16	0	0	0	0	0	31/03/2020	Feasibility Study under progress.
331	MB Power	ANUPPUR TPP	Private S	Madhya	WR	1	600	20-04-15	Y	Y	Y	0	0	31/03/2022	Technical Bid under evaluation
332	MB Power	ANUPPUR TPP	Private S	Madhya	WR	2	600	30-03-16	Y	Y	Y	0	0	30/06/2022	Technical Bid under evaluation
333	MPPGCL	AMARKANTAK EXT TPS	State Sec	Madhya	WR	5	210	15-06-08	0	0	0	0	0	31/03/2021	Feasibility Study Under Progress
334	MPPGCL	SANJAY GANDHI TPS	State Sec	Madhya	WR	1	210	26-03-93	0	0	0	0	0	31/03/2021	Feasibility Study Under Progress
335	MPPGCL	SANJAY GANDHI TPS	State Sec	Madhya	WR	2	210	27-03-93	0	0	0	0	0	31/03/2021	Feasibility Study Under Progress
336	MPPGCL	SANJAY GANDHI TPS	State Sec	Madhya	WR	3	210	28-02-99	0	0	0	0	0	30/06/2021	Feasibility Study Under Progress
337	MPPGCL	SANJAY GANDHI TPS	State Sec	Madhya	WR	4	210	23-11-99	0	0	0	0	0	30/06/2021	Feasibility Study Under Progress
338	MPPGCL	SANJAY GANDHI TPS	State Sec	Madhya	WR	5	500	18-06-07	0	0	0	0	0	31/03/2021	Feasibility Study Under Progress
339	MPPGCL	SATPURA TPS	State Sec	Madhya	WR	10	250	22-03-13	0	0	0	0	0	31/03/2021	Feasibility Study Under Progress
340	MPPGCL	SATPURA TPS	State Sec	Madhya	WR	11	250	25-12-13	0	0	0	0	0	31/03/2021	Feasibility Study Under Progress
341	MPPGCL	SHRI SINGHAJI TPP	State Sec	Madhya	WR	1	600	18-11-13	Y	Y	0	0	0	31/03/2021	NIT to be floated in May 2018
342	MPPGCL	SHRI SINGHAJI TPP	State Sec	Madhya	WR	2	600	15-10-14	Y	Y	0	0	0	31/03/2021	NIT to be floated in May 2018
343	NTPC	VINDHYACHAL STPS	Central S	Madhya	WR	1	210	10-10-87	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
344	NTPC	VINDHYACHAL STPS	Central S	Madhya	WR	2	210	23-07-88	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
345	NTPC	VINDHYACHAL STPS	Central S	Madhya	WR	3	210	03-02-89	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
346	NTPC	VINDHYACHAL STPS	Central S	Madhya	WR	4	210	26-12-89	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
347	NTPC	VINDHYACHAL STPS	Central S	Madhya	WR	5	210	31-03-90	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
348	NTPC	VINDHYACHAL STPS	Central S	Madhya	WR	6	210	01-02-91	Y	N	N	N	N	31/12/2022	NIT IN LOT-3 PLANNED IN OCT 2
349	NTPC	VINDHYACHAL STPS	Central S	Madhya	WR	7	500	03-03-99	Y	N	N	N	N	30/06/2021	NIT IN LOT-3 PLANNED IN OCT 2
350	NTPC	VINDHYACHAL STPS	Central S	Madhya	WR	8	500	26-02-00	Y	N	N	N	N	30/06/2021	NIT IN LOT-3 PLANNED IN OCT 2
351	NTPC	VINDHYACHAL STPS	Central S	Madhya	WR	9	500	27-07-06	Y	Y	Y	N	N	30/09/2021	Price bid submitted on 29.06.2018.
352	NTPC	VINDHYACHAL STPS	Central S	Madhya	WR	10	500	08-03-07	Y	Y	Y	N	N	30/09/2021	Price bid submitted on 29.06.2018.
353	NTPC	VINDHYACHAL STPS	Central S	Madhya	WR	11	500	14-06-12	Y	Y	Y	N	N	31/12/2021	Price bid submitted on 29.06.2018.
354	NTPC	VINDHYACHAL STPS	Central S	Madhya	WR	12	500	22-03-13	Y	Y	Y	N	N	31/12/2021	Price bid submitted on 29.06.2018.
355	Reliance Power L	SASAN UMTTP	Private S	Madhya	WR	1	660	30-05-13	Y	Y	Y	0	0	30/09/2021	Tender Floated
356	Reliance Power L	SASAN UMTTP	Private S	Madhya	WR	2	660	18-12-13	Y	Y	Y	0	0	30/06/2021	Tender Floated

357	Reliance Power L	SASAN UMTTP	Private S	Madhya	WR	3	660	21-05-14	Y	Y	Y	0	0	31/03/2022	Tender Floated
358	Reliance Power L	SASAN UMTTP	Private S	Madhya	WR	4	660	25-03-14	Y	Y	Y	0	0	31/03/2022	Tender Floated
359	Reliance Power L	SASAN UMTTP	Private S	Madhya	WR	5	660	24-08-14	Y	Y	Y	0	0	31/12/2021	Tender Floated
360	Reliance Power L	SASAN UMTTP	Private S	Madhya	WR	6	660	19-03-15	Y	Y	Y	0	0	30/09/2021	Tender Floated
361	Adani Power Mah	TIRORA TPS	Private S	Mahara	WR	1	660	11-09-12	Y	Y	0	0	0	31/03/2022	NIT to be issued soon.
362	Adani Power Mah	TIRORA TPS	Private S	Mahara	WR	2	660	25-03-13	Y	Y	0	0	0	31/12/2021	NIT to be issued soon.
363	Adani Power Mah	TIRORA TPS	Private S	Mahara	WR	3	660	10-06-13	Y	Y	0	0	0	31/09/2021	NIT to be issued soon.
364	Adani Power Mah	TIRORA TPS	Private S	Mahara	WR	4	660	23-03-14	Y	Y	0	0	0	31/06/2021	NIT to be issued soon.
365	Adani Power Mah	TIRORA TPS	Private S	Mahara	WR	5	660	25-09-14	Y	Y	0	0	0	31/03/2021	NIT to be issued soon.
366	Dhariwal Infrastru	DHARIWAL TPP	Private S	Mahara	WR	1	300	03-11-13	0	0	0	0	0	31/03/2022	Feasibility Study under process
367	Dhariwal Infrastru	DHARIWAL TPP	Private S	Mahara	WR	2	300	28-05-14	0	0	0	0	0	31/03/2022	Feasibility Study under process
368	GMR emco ENER	EMCO WARORA TPS	Private S	Mahara	WR	1	300	07-02-13	Y	0	0	0	0	31/03/2022	Feasibility Study Under Progress. F
369	GMR emco ENER	EMCO WARORA TPS	Private S	Mahara	WR	2	300	27-08-13	Y	0	0	0	0	31/03/2022	Feasibility Study Under Progress. F
370	MAHAGENCO	BHUSAWAL TPS	State Sec	Mahara	WR	3	210	18-09-82	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
371	MAHAGENCO	BHUSAWAL TPS	State Sec	Mahara	WR	4	500	07-03-12	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
372	MAHAGENCO	BHUSAWAL TPS	State Sec	Mahara	WR	5	500	30-03-12	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
373	MAHAGENCO	CHANDRAPUR STPS	State Sec	Mahara	WR	3	210	03-05-85	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
374	MAHAGENCO	CHANDRAPUR STPS	State Sec	Mahara	WR	4	210	08-03-86	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
375	MAHAGENCO	CHANDRAPUR STPS	State Sec	Mahara	WR	5	500	22-03-91	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
376	MAHAGENCO	CHANDRAPUR STPS	State Sec	Mahara	WR	6	500	11-03-92	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
377	MAHAGENCO	CHANDRAPUR STPS	State Sec	Mahara	WR	7	500	01-10-97	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
378	MAHAGENCO	CHANDRAPUR STPS	State Sec	Mahara	WR	8	500	29-03-15	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
379	MAHAGENCO	CHANDRAPUR STPS	State Sec	Mahara	WR	9	500	21-03-16	Y	0	0	0	0	31/03/2020	Feasibility Study Carried Out
380	MAHAGENCO	KHAPARKHEDA TPS	State Sec	Mahara	WR	1	210	26-03-89	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
381	MAHAGENCO	KHAPARKHEDA TPS	State Sec	Mahara	WR	2	210	08-01-90	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
382	MAHAGENCO	KHAPARKHEDA TPS	State Sec	Mahara	WR	3	210	31-05-00	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
383	MAHAGENCO	KHAPARKHEDA TPS	State Sec	Mahara	WR	4	210	07-01-01	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
384	MAHAGENCO	KHAPARKHEDA TPS	State Sec	Mahara	WR	5	500	05-08-11	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
385	MAHAGENCO	KORADI TPS	State Sec	Mahara	WR	6	210	30-03-82	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
386	MAHAGENCO	KORADI TPS	State Sec	Mahara	WR	7	210	13-01-83	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
387	MAHAGENCO	KORADI TPS	State Sec	Mahara	WR	8	660	30-03-15	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
388	MAHAGENCO	KORADI TPS	State Sec	Mahara	WR	9	660	15-03-16	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
389	MAHAGENCO	KORADI TPS	State Sec	Mahara	WR	10	660	28-12-16	Y	0	0	0	0	31/12/2020	Feasibility Study Carried Out
390	MAHAGENCO	NASIK TPS	State Sec	Mahara	WR	3	210	26-04-79	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
391	MAHAGENCO	NASIK TPS	State Sec	Mahara	WR	4	210	10-07-80	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
392	MAHAGENCO	NASIK TPS	State Sec	Mahara	WR	5	210	30-01-81	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out

393	MAHAGENCO	PARLI TPS	State Sec	Mahara	WR	4	210	26-03-85	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
394	MAHAGENCO	PARLI TPS	State Sec	Mahara	WR	5	210	31-12-87	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
395	MAHAGENCO	PARLI TPS	State Sec	Mahara	WR	6	250	16-02-07	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
396	MAHAGENCO	PARLI TPS	State Sec	Mahara	WR	7	250	10-02-10	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
397	MAHAGENCO	PARLI TPS	State Sec	Mahara	WR	8	250	30-03-16	Y	0	0	0	0	31/03/2021	Feasibility Study Carried Out
398	NTPC	MOUDA TPS	Central S	Mahara	WR	1	500	19-04-12	Y	Y	Y	N	N	31/12/2022	Price bid submitted on 25.06.2018.
399	NTPC	MOUDA TPS	Central S	Mahara	WR	2	500	29-03-13	Y	Y	Y	N	N	31/12/2022	Price bid submitted on 25.06.2018.
400	NTPC	MOUDA TPS	Central S	Mahara	WR	3	660	28-03-16	Y	Y	Y	N	N	31/12/2022	Price bid submitted on 29.06.2018.
401	NTPC	MOUDA TPS	Central S	Mahara	WR	4	660	18-03-17	Y	Y	Y	N	N	31/12/2020	Price bid submitted on 29.06.2018.
402	NTPC	SOLAPUR	Central S	Mahara	WR	1	660	07-04-17	Y	Y	Y	N	N	31/12/2020	Price bid submitted on 25.06.2018.
403	Ratan Power	NASIK (P) TPS	Private S	Mahara	WR	1	270	25-02-14	Y	Y	0	0	0	31/03/2021	Bids under Evaluation
404	Ratan Power	NASIK (P) TPS	Private S	Mahara	WR	2	270	15-02-17	0	0	0	0	0	31/03/2021	Feasibility study under progress
405	Ratan Power	NASIK (P) TPS	Private S	Mahara	WR	3	270	14-04-17	0	0	0	0	0	31/12/2022	Feasibility study under progress
406	Ratan Power	NASIK (P) TPS	Private S	Mahara	WR	4	270	19-05-17	0	0	0	0	0	31/12/2022	Feasibility study under progress
407	Ratan Power	NASIK (P) TPS	Private S	Mahara	WR	5	270	30-05-17	0	0	0	0	0	31/12/2022	Feasibility study under progress
408	TATA Power Co.	TROMBAY TPS	Private S	Mahara	WR	5	500	25-01-84	Y	Y	Y	Y	Y	31/03/2018	Sea water FGD is installed at Unit#
409	Vidarbha Industries	BUTIBORI TPP	Private S	Mahara	WR	1	300	17-08-12	Y	Y	Y	0	0	30/06/2021	Reliance Power has floated the Int
410	Vidarbha Industries	BUTIBORI TPP	Private S	Mahara	WR	2	300	19-03-13	Y	Y	Y	0	0	31/03/2021	Reliance Power has floated the Int
411	Wardha P C P L	WARDHA WARORA TPP	Private S	Mahara	WR	1	135	05-06-10	0	0	0	0	0	30/09/2021	Feasibility Study under process
412	Wardha P C P L	WARDHA WARORA TPP	Private S	Mahara	WR	2	135	10-10-10	0	0	0	0	0	30/09/2021	Feasibility Study under process
413	Wardha P C P L	WARDHA WARORA TPP	Private S	Mahara	WR	3	135	21-01-11	0	0	0	0	0	31/12/2021	Feasibility Study under process
414	Wardha P C P L	WARDHA WARORA TPP	Private S	Mahara	WR	4	135	30-04-11	0	0	0	0	0	31/12/2021	Feasibility Study under process
415	NTPC	KUDGI	Central S	Karnat	SR	3	800	12-03-18	Y	Y	Y	N	N	31/12/2022	Price bid submitted on 25.06.2018.
416	NTPC	Lara STPP	Central S	Chhatti	WR	1	800	23-03-18	Y	Y	Y	N	N	0	Price bid submitted on 25.06.2018.
417	NTPC	Meja STPP	Central S	UP	NR	1	660	30-03-18	Y	Y	0	0	0		FGD will award in LOT-1A of NTPC
418	APGENCO	Rayalaseema TPP St-IV	State Sec	AP	SR	6	600	12-03-18	0	0	0	0	0		Commitment yet to received
419	BSEB	Barauni TPS Extn.	State Sec	Bihar	ER	8	250	11-01-18	0	0	0	0	0		Feasibility examining under pr
420	BSEB	Barauni TPS Extn.	State Sec	Bihar	ER	9	250	31-03-18	0	0	0	0	0		Feasibility examining under pr
421	KSK Mahandi Power	Akaltara TPP (Naiyara)	Private S	Chhatt	WR	3	600	18-01-18	0	0	0	0	0		Feasibility study under progres
422	SKS Power Gen.	Binjkote TPP	Private S	Chhatti	WR	2	300	28-03-18	0	0	0	0	0	30/09/2020	Feasibility study under progres
423	RKM Powergen	Uchpinda TPP	Private S	Chhatt	WR	3	360	12-09-17	0	0	0	0	0	Mar-22	Feasibility study under progres
424	Shirpur Power Pl	Shirpur TPP	Private S	Mahar	WR	1	150	28-09-17	0	0	0	0	0		Feasibility study under progres
425	India Power Co	India Power TPP	Private S	WB	ER	2	150	31-12-17	0	0	0	0	0		Feasibility study under progres