

IPC – II Division

Thermal Power Plants

1. Environmental Regulations

A: Coal Based Thermal Power Plants

(i). Standards for discharge of liquid effluents

S. No.	Source	Pollutants	Concentration
(i)	Condenser cooling water (once through cooling system)	pH	6.5-8.5
		Temperature	More than 10°C than the intake water temperature
		Free available Chlorine	0.5 mg/l
(ii)	Boiler blow down	Suspended solids	100 mg/l
		Oil and grease	20 mg/l
		Copper (total)	1.0 mg/l
		Iron (total)	1.0 mg/l
(iii)	Cooling tower blow down	Free available Chlorine	0.5 mg/l
		Zinc	1.0 mg/l
		Chromium	0.2 mg/l
		Phosphate	5.0 mg/l
		Other corrosion inhibiting materials	Limit to be established on case by case basis
(iv)	Ash pond effluent	pH	6.5-8.5
		SS	100 mg/l
		Oil & grease	20 mg/l
			No limits for heavy metals are given at present

Temperature Limit for discharge of Condenser Cooling Water from Thermal Power plant

(a). New thermal power plants commissioned after June 1, 1999.

New thermal power plants, which will be using water from rivers/lakes/reservoirs, shall install cooling towers irrespective of location and capacity. Thermal power plants which will use sea water for cooling purposes, the condition below will apply.

(b). New projects in coastal areas using sea water

The thermal power plants using sea water should adopt suitable system to reduce water temperature at the final discharge point so that the resultant rise in the temperature of receiving water does not

Rise in temperature of condenser cooling water from inlet to the outlet of condenser shall not be more than 10^o C.

(c). Guidelines for discharge point:

1. The discharge point shall preferably be located at the bottom of the water body at mid-stream for proper dispersion of thermal discharge.
2. In case of discharge of cooling water into sea, proper marine outfall shall be designed to achieve the prescribed standards. The point of discharge may be selected in consultation with concerned State Authorities/NIO.
3. No cooling water discharge shall be permitted in estuaries or near ecologically sensitive areas such as mangroves, coral reefs/spawning and breeding grounds of aquatic flora and fauna.

(ii). Standards for Water Consumption vide Notification No. S.O. 3305(E) dated 07.12.2015

1. All plants with Once Through Cooling (OTC) shall install Cooling Tower (CT) and achieve specific water consumption up to maximum of 3.5m³/MWh by 07/12/2017.
2. All existing CT-based plants reduce specific water consumption up to maximum of 3.5m³/MWh by 07/12/2017.
3. New plants to be installed after 1st January,2017 shall have to meet specific water consumption up to maximum of 2.5 m³/MWh and achieve zero waste water discharged.

(iii). (a). Existing Emission Standards

Power generation capacity (MW)	Particulate matter emission
Less than 210 MW	350 mg/Nm ³
210 MW or more	150 mg/Nm ³

Note:

Depending upon the requirement of local situations, which may warrant stricter standards as in case of protected areas the State Pollution Control Board and other implementing agencies within the provisions of the EPA, 1980 may prescribe limit of 150 mg/Nm³ irrespective of the generation capacity of the plant.

Andhra Pradesh Pollution Control Board and Delhi Pollution Control Committees have stipulated stringent standards of 115 and 50 mg/Nm³ respectively for control of particulate matter emission.

(iii). (b). New Emission Standards vide Notification No. S.O. 3305(E) dated 07.12.2015

Parameter	Standards
TPPs (units) installed before 31st December, 2003*	
Particulate Matter	100 mg/Nm ³
Sulphur Dioxide (SO ₂)	600 mg/Nm ³ (Units Smaller than 500MW capacity units)
	200 mg/Nm ³ (for units having capacity of 500MW and above)

Oxides of Nitrogen (NOx)	600 mg/Nm ³
Mercury (Hg)	0.03 mg/Nm ³ (for units having capacity of 500MW and above)
TPPs (units) installed after 1st January,2003, up to 31st December, 2016*	
Particulate Matter	50 mg/Nm ³
Sulphur Dioxide (SO ₂)	600 mg/Nm ³ (Units Smaller than 500MW capacity units)
	200 mg/Nm ³ (for units having capacity of 500MW and above)
Oxides of Nitrogen (NOx)	300 mg/Nm ³
Mercury (Hg)	0.03 mg/Nm ³
TPPs (units) to be installed from 1st January, 2017**	
Particulate Matter	30 mg/Nm ³
Sulphur Dioxide (SO ₂)	100 mg/Nm ³
Oxides of Nitrogen (NOx)	100 mg/Nm ³
Mercury (Hg)	0.03 mg/Nm ³

* TPPs (units) shall meet the limits within two years from date of publication of this notification.

** Includes all the TPPs (units) which have been accorded environmental clearance and are under construction”.

(iv). Stack Height Requirement

In order to proper dispersion of SO₂ emissions from thermal power plants, stack height criteria have been adopted in the country. However, for larger capacities of boilers (500 m and above), space provision for installing FGD system has been recommended;

Power generation capacity	Stack height (metre)
Less than 200/210 MW	H = 14(Q) 0.3 where Q is emission rate of SO ₂ in kg/hr, H = Stack height in metre
200/210 MW or less than 500 MW	220
500 MW and above	275

Note:

The power plants sanctioned by CEA earlier to July 1, 1994 may not be required to increase existing stack height as per regulation notified, vide Government of India notification no. GSR 742(E) dated August 30, 1990 subject to following conditions:

- The ambient sulphur dioxide and NO_x concentrations around the power plant is less than 1/3th prescribed ambient air quality standard for SO₂ and NO_x for the concerned area.
- For (1) the power plant shall install adequate number of air quality monitoring stations in and around the power stations. The stations should be selected in consultation with the CPCB/SPCB.

(Vide office Memorandum No B-34011/1/01/PCI-II dated January 10, 1996)

(v). Use of beneficiated coal

In order to minimize flyash generation, it was recommended to use beneficiated coal in the power plants. The Ministry of Environment & Forests, Govt. of India has promulgated Gazette Notification (G.S.R. 02(E) dated January 02, 2014) on use of beneficiated/blended coal containing ash not more than 34 percent, on quarterly average basis in the following power plants:

- a stand-alone thermal power plant (of any capacity), or a captive thermal power plant of installed capacity of 100 MW or above, located beyond 1000 kilometres from the pit-head or, in an urban area or an ecologically sensitive area or a critically polluted industrial area, irrespective of its distance from the pit-head, except a pit-head power plant, with immediate effect;
- a stand-alone thermal power plant (of any capacity), or a captive thermal power plant of installed capacity of 100 MW or above, located between 750 – 1000 kilometres from the pit-head, with effect from the 1st day of January, 2015;
- a stand-alone thermal power plant (of any capacity), or a captive thermal power plant of installed capacity of 100 MW or above, located between 500-749 kilometres from the pit-head, with effect from the 5th day of June, 2016:

The power plants using Circulating Fluidised Bed Combustion or Atmosphere Fluidised Bed Combustion or Pressurized Fluidised Bed Combustion or Integrated Gasification Combined Cycle technologies or any other clean technologies as may be notified by the Central Government in the Official Gazette are exempted to use beneficiated coal irrespective of their locations.

(vi). Utilisation of Flyash

Ministry of Environment, Forest & Climate Change (MoEF&CC) issued various notifications for better way of utilization of Fly Ash to reduce the requirement of thousands of acres of land for its disposal. First notification by MoEF&CC regarding this was issued on 14th September, 1999 and amendments were made in 2003, 2009 and 2016 vide Notifications dated 27th August, 2003, 3rd November, 2009 and 27th January, 2016 respectively.

Whereas; vide Notification No. S.O 804 (E) dated 3rd November 2009, timeline for achieving the target of 100% Fly Ash Utilization was the specified for all Coal/Lignite based Thermal Power Stations in the country in a progressive manner. The prescribed targets for the Thermal Power Stations based on their date of commissioning are as follows:

The Thermal Power Stations in operation before the date of 3rd November, 2009 Notification are to achieve the target of Fly Ash utilization in successive 5 years as: 50% in 1st year; 60% in 2nd; 75% in

3rd; 90% in 4th and 100% in 5th year from the issue of this notification. The new Thermal Power Stations coming into operation after the MoEF's notification (i.e. 3rd November, 2009) are to achieve the target of Fly Ash utilization as: 50% in the 1st year, 70% in 2nd, 90% in 3rd and 100% in 4th year from their date of commissioning.

Whereas; vide Notification No. S.O 254(E) dated 27th January 2016, for promoting the utilization of Fly Ash, MoEF&CC stipulates the provisions applicable to all construction agencies of Central / State / Local Government and private or public sector engaged in the construction of buildings within a radius of 300 km from Coal/Lignite based Thermal Power Stations to use only Fly Ash based products in every construction project.

MoEF&CC in order to make mandatory use of flyash and flyash based products notified the criteria of minimum Fly Ash content for building materials to qualify as "Fly Ash based products" category as given in table below:

Sl. No.	Building Materials or Products	Minimum % of Fly Ash by weight
1.	Fly Ash bricks, blocks, tiles, etc. made with Fly Ash, lime, gypsum, sand, stone dust, cement, etc. (without clay).	50% of total raw material.
2.	Paving blocks, paving tiles, checker tiles, mosaic tiles, roofing sheets, pre-cast elements, etc. wherein cement is used as binder.	Usage of PPC (IS-1489: Part 1) or PPC (IS-455) or 15 % of OPC (IS-269/8112/12269) content.
3.	Cement.	15% of total raw materials.
4.	Clay based building materials such as bricks, blocks, tiles, etc.	25% of total raw materials.
5.	Concrete, mortar and plaster.	Usage of PPC (IS-1489: Part 1) or PPC (IS-455) or 15 % of OPC (IS-269/8112/12269) content.

Whereas; considering to the fact that the transportation cost of carrying dry Fly Ash is considerably high, MoEF&CC notified special provisions for promoting the utilization of Fly Ash. As per Notification dated 27th January 2016, cost of transportation of ash for road construction projects or for manufacturing of ash based products or use as soil conditioner in agriculture activity within a radius of 100 km from a Coal/Lignite based Thermal Power Station shall be borne by such Coal/Lignite based Thermal Power Station and the cost of transportation beyond the radius of 100 km and up to 300 km shall be shared equally between the user and the Coal/Lignite based Thermal Power Station.

Whereas; MoEF&CC also brings transparency in field of stock of Fly Ash available with the Coal/Lignite based Thermal Power Station by issuing a new provision i.e. Every Coal/Lignite based Thermal Power Station (including Captive/Co-generating Stations) shall, within 3 Months from the date of notification, upload on their website the details of stock of each type of Ash available with them and thereafter shall update the stock position at least once a Month.

B. Gas/ Naphtha based Thermal Power Plants

(i) Emission standards for NOx

- (a) For existing units 150 ppm (v/v) at 15% excess oxygen

(b) For new units with effect from 01.06.1999.

Generation capacity of gas turbine	Limit for NO_x emission (v/v), at 15% excess oxygen)
(a) 400 MW and above	(i) 50 ppm for the units burning natural gas.
	(ii) 100 ppm for the units burning naphtha
(b) Less than 400 MW but up to 100MW	(i) 75 ppm for the units burning natural gas
	(ii) 100 ppm for the units burning naphtha
(c) Less than 100 MW	100 ppm for units burning natural gas or naphtha as fuel
(d) For the plants burning gas in a conventional boiler.	100 ppm

(ii) Stack height

H in m should be calculated using the formula:

$$H = 14 Q^{0.3},$$

where Q is the emission of SO₂ in kg/hr, subject to a minimum of 30 metres.

(iii) Liquid waste discharge limit

Parameter	Maximum limit of concentration (in mg/l except for pH and temperature)
pH	6.5 – 8.5
Temperature	As applicable for other thermal power plants
Free available chlorine	0.5
Suspended solids	100
Oil & grease	20
Copper (total)	1
Iron (total)	1
Zinc	0.2
Chromium (total)	5
Phosphate	

C: Liquid fuel based Thermal Power Plants

(i) Emission Standards for Diesel Engines (Engine Rating More Than 0.8 Mw (800 Kw) for Power Plant, Generator Set applications and other requirements

Parameter	Area	Total engine rating of the plant (includes existing as well as new generator sets)	Generator sets commissioning date		
			Before 1/7/2003	Between 1/7/2003 and 1/7/2005	On or after 1/7/2005
NO _x (as NO ₂) (at 15% O ₂), dry basis, in ppm	A	Up to 75MW	1100	970	710
	B	Up to 150MW			
	A	More than 75MW	1100	710	360
	B	More than 150MW			
NMHC (as C) (at 15% O ₂), mg/Nm ³	Both A and B		150	100	.
PM (at 15% O ₂), mg/Nm ³	Diesel Fuels - HSD & LDO	Both A and B	75	75	
	Furnace Oils - LSHS & FO	Both A and B	150	100	
CO (at 15% O ₂), mg/Nm ³	Both A and B		150	150	
Sulphur content in fuel	A		<2%		
	B		<4%		
Fuel specification	For A only	Up to 5MW	Only Diesel Fuels (HSD, LDO) shall be used.		
Stack height (for generator sets commissioned after 1/7/2003)	Stack height shall be maximum of the following, in meter: I. 14 Q 03, Q = Total SO ₂ emission from the plant in kg/hr II. Minimum 6 m above the building where generator set is installed. III. 30 Meters				

Note: 1. Acronyms used

MW: Mega (10⁶) Watt, FO: Furnace Oil, NO_x: Oxides of Nitrogen HSD: High Speed Diesel, NO₂: Nitrogen Dioxide, LDO : Light Diesel Oil, O₂ : Oxygen , LSHS : Low Sulphur Heavy Stock, NMHC : Non- Methane Hydrocarbon kPa : Kilo Pascal, C : Carbon, mm : Milli (10⁻³) metre, PM : Particulate Matter kg/hr : Kilo (10³) gram per hour, CO : Carbon Monoxide, mg/Nm³ : Milli (10⁻³) gram per Normal metre cubic, SO₂ : Sulphur Dioxide , ppmv : part per million (10⁶) by volume

2. Area categories A and B are defined as follows

Category A: Areas within the municipal limits of towns/cities having population more than 10 lakhs and also up to 5 km beyond the municipal limits of such towns/cities.

Category B: Areas not covered by category A.

3. The standards shall be regulated by the State Pollution Control Boards or Pollution Control Committees, as the case may be.

4. Individual units with engine ratings less than or equal to 800 KW are not covered by this notification.

5. Only following liquid fuels viz. High Speed Diesel, Light Diesel Oil, Low Sulphur Heavy Stock and Furnace Oil or liquid fuels with equivalent specifications shall be used in these power plants and generator sets.

6. For expansion project, stack height of new generator sets shall be as per total Sulphur Dioxide emission (including existing as well as additional load).

7. For multi engine plants, flues shall be grouped in cluster to get better plume rise and dispersion. Provision for any future expansion should be made in planning stage itself.

8. Particulate Matter, Non-Methane Hydrocarbon and percent moisture (dry basis). Carbon Monoxide results -are to be normalized to 25 0 C, 1.01 Kilo Pascal (760 mm of mercury) pressure and zero

9. Measurement shall be performed at steady load conditions of more than 85% of the rated load.

10. Continuous monitoring of Oxides of Nitrogen shall be done by the plants whose total engine capacity is more than 50 Mega Waft. However, minimum once in six-month monitoring for other parameters shall be adopted by the plants.

11. Following methods may be adopted for the measurement of emission parameters, -

Sl. No.	Emission Parameters	Measurement Methods
1	Particulates	Gravimetric
2	SO ₂	Barium Perchlorate- Thorin indicator method
3	NO _x	Chemiluminescence, Non Dispersive Infra-Red, Non Dispersive Ultra-violet (for continuous measurement),Phenol disulphonic method
4	CO	Non Dispersive Infra-Red
5	O ₂	Paramagnetic, Electrochemical sensor
6	NMHC	Gas Chromatograph - Flame ionisation Detector

2. LIST OF THERMAL POWER PLANTS IN INDIA (as on 30.06.2016)

Sl. No.	Name	State	Capacity (MW)
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1.	Ramagundem, NTPC	Andhra Pradesh	2600
2.	Vijaywada, APPGCL	AP	1760
3.	Rayalseema ,APPGCL	AP	1050
4.	Simhadri, NTPC	AP	2000
5.	Simhapuri	AP	450
6.	Thamminapatnam, Meenakshi Energy Pvt. Ltd.	AP	300
7.	Damodaran Sanjeeviah	AP	800
8.	Vizag TPP, Hinduja	AP	520
9.	Kahalgaon, NTPC	Bihar	2340
10.	Muzaffarpur, NTPC	Bihar	220
11.	Barh, NTPC	Bihar	1320
12.	Nabi Nagar	Bihar	250
13.	Korba, NTPC	Chhattisgarh	2600
14.	Korba, EAST CSPGCL	Chhattisgarh	940
15.	Korba, WEST CSPGCL	Chhattisgarh	1340
16.	Marwa , CSPGCL	Chhattisgarh	500
17.	Sipat, NTPC	Chhattisgarh	2980
18.	Jindal Power	Chhattisgarh	1000
19.	Tamnar, Jindal Power	Chhattisgarh	2400
20.	Lanco Amarkantak	Chhattisgarh	600
21.	Kasaipalli, ACB	Chhattisgarh	270
22.	D B Power	Chhattisgarh	1200
23.	Avantha Bandar, KWPCCL	Chhattisgarh	600
24.	Akaltara, Mahanadi Power	Chhattisgarh	1200
25.	Baradaraha	Chhattisgarh	600
26.	Salora	Chhattisgarh	135
27.	Uchpinda, RKM Power	Chhattisgarh	700
28.	Raikheda, GMR	Chhattisgarh	1370
29.	Maruti Clean Coal & Power Ltd	Chhattisgarh	300
30.	SV Power Pvt Ltd, Hardibazar ACB	Chhattisgarh	60
31.	SCPL Ratija	Chhattisgarh	50
32.	ACBIL Chakabura	Chhattisgarh	60
33.	Badarpur,NTPC	Delhi	705
34.	Rajghat, IPPGCL	Delhi	67.5
35.	Gandhinagar, GSPCL	Gujarat	870
36.	Ukai, GSPCL	Gujarat	1350

37.	Wanakbori, GSPCL	Gujarat	1470
38.	Sabarmati, AEC	Gujarat	422
39.	Sikka, GSPCL	Gujarat	740
40.	Kutch Lignite, GSPCL	Gujarat	290
41.	Surat Lignite	Gujarat	500
42.	Adani, Mundra	Gujarat	4620
43.	Mundra, Tata Power, Coastal	Gujarat	4150
44.	ESSAR Power, Hazira	Gujarat	270
45.	Akrimota, GMDC	Gujarat	250
46.	Panipat, HPGCL	Haryana	1368
47.	Rajeev Gandhi, Hissar	Haryana	1200
48.	Indira Gandhi, Jhajhar	Haryana	1500
49.	Mahatma Gandhi, CLP Jhajhar	Haryana	1320
50.	Yamunanagar, HPGCL	Haryana	600
51.	Bokaro, B, DVC	Jharkhand	338
52.	Tenughat,	Jharkhand	420
53.	Patratu, JhSEB	Jharkhand	770
54.	Chandrapura, DVC	Jharkhand	890
55.	Koderma,	Jharkhand	1000
56.	Mathon, DVC	Jharkhand	1050
57.	Mahadeo Prasad STPP, Adhunik Power	Jharkhand	540
58.	JOJOBERA T.P.CO.	Jharkhand	547.5
59.	Bokaro A Expn	Jharkhand	500
60.	Raichur, KPCL	Karnataka	1720
61.	Bellari, KPCL	Karnataka	1700
62.	Torangullu-1 & 2 JSW	Karnataka	860
63.	Udipi, Adani	Karnataka	1200
64.	Amarkantak, MPPGCL	Madhya Pradesh	210
65.	Birsingpur, MPPGCL	Madhya Pradesh	1340
66.	Satpura, MPPGCL	Madhya Pradesh	1330
67.	Vindhyachal, NTPC	Madhya Pradesh	4760
68.	Sasan, RPL	Madhya Pradesh	3960
69.	Mahan, Essar Power	Madhya Pradesh	1200
70.	Bina, J P Power	Madhya Pradesh	500
71.	SHREE SINGAJI MPPGCL	Madhya Pradesh	1200
72.	Nigrie, J P Associates	Madhya Pradesh	660
73.	Seioni	Madhya Pradesh	600

74.	Annupur	Madhya Pradesh	600
75.	Trombay, Tata Power	Maharashtra	750
76.	Khaperkheda, Mahagenco	Maharashtra	1340
77.	Nasik, Mahagenco	Maharashtra	630
78.	Koradi ,Mahagenco	Maharashtra	620
79.	Bhusawal, Mahagenco	Maharashtra	1420
80.	Chandrapur, Mahagenco	Maharashtra	2340
81.	Paras, Mahagenco	Maharashtra	500
82.	Parli, Mahagenco	Maharashtra	1130
83.	Dahanu,REL	Maharashtra	500
84.	Sai Wardha, Warora	Maharashtra	540
85.	JSW Ratnagiri, Nandiwade	Maharashtra	1200
86.	Salaya,ESSAR	Maharashtra	600
87.	Mihan, Abhijeet	Maharashtra	246
88.	Mouda, NTPC	Maharashtra	1000
89.	Bela, Purti Grpoup	Maharashtra	270
90.	Amarawati, IndiaBulls Power	Maharashtra	1350
91.	Nashik, Indiabulls Realtech	Maharashtra	270
92.	EMCO Warora, GMR	Maharashtra	600
93.	Butibori, Vidarbha Ind. Power	Maharashtra	600
94.	Tirora, Adani Power	Maharashtra	3300
95.	Dhariwal, Dhariwal Infrast. Ltd	Maharashtra	600
96.	GEPL TPP Gupta Energy Pvt. Ltd	Maharashtra	120
97.	Sesa Sterlite, Jharsuguda	Orisaa	2400
98.	Kamalanga, GMR	Orisaa	1050
99.	Talcher,Kaniha,NTPC	Orissa	3000
100.	Talcher, NTPC	Orissa	460
101.	IB Valley, Jharsuguda	Orissa	420
102.	Derang , JIPL	Orissa	1800
103.	Ind Bharath	Orissa	350
104.	Bhatinda, PPCL	Punjab	460
105.	Ropar PPCL	Punjab	1260
106.	Lehra Mohabbat,PPCL	Punjab	920
107.	Rajpura	Punjab	1400
108.	Talwandi sabo	Punjab	1980
109.	Goindwal Sahib	Punjab	540
110.	Kota, RRVUNL	Rajasthan	1240

111.	Suratgarh, RRVUNL	Rajasthan	1500
112.	Chhabra, RRVUNL	Rajasthan	1000
113.	Barsingh sagar lignite, NLC	Rajasthan	250
114.	Giral	Rajasthan	250
115.	Jalippa-Kapurdi, Raj West Power	Rajasthan	1080
116.	Kalisindh TPP, RRVUNL	Rajasthan	1200
117.	Kawai, Adani power	Rajasthan	1320
118.	Ennore, Tangedco	Tamilnadu	340
119.	Tuticorin , Tangedco	Tamilnadu	1050
120.	North-Chennai, Tangedco	Tamilnadu	1830
121.	Mettur, Tangedco	Tamilnadu	840
122.	Mettur Extn. Tangedco	Tamilnadu	600
123.	Neyveli Lignite, NLC	Tamilnadu	2490
124.	Vallur, NTPC	Tamilnadu	1500
125.	TAQA Neyveli (ST-CMS)	Tamilnadu	250
126.	Mutiara, Coastal Energy	Tamilnadu	1200
127.	Ind Bharath Thermal Power Ltd, Tuticorin	Tamilnadu	300
128.	Rammagundam B, TSGENCO	Telangana	62.5
129.	Kothagudem, TSGENCO	Telangana	1720
130.	Kakatiya. TSGENCO	Telangana	1100
131.	Singrauli, NTPC	Uttar Pradesh	2000
132.	Anpara, UPVUNL	Uttar Pradesh	2630
133.	NCTPS, Dadri, NTPC	Uttar Pradesh	1820
134.	Rihand, NTPC	Uttar Pradesh	3000
135.	Unchahar, NTPC	Uttar Pradesh	1050
136.	Tanda, NTPC	Uttar Pradesh	440
137.	Paricha, UPVUNL	Uttar Pradesh	1140
138.	Obra A&B, UPVUNL	Uttar Pradesh	1288
139.	Harduaganj, UPVUNL	Uttar Pradesh	665
140.	Panki, UPVUNL	Uttar Pradesh	210
141.	Rosa, RPL	Uttar Pradesh	1200
142.	Barkhera, Piliphit, Bajaj Energy	Uttar Pradesh	90
143.	Khambarkhera, Lakhimpur, Bajaj Energy	Uttar Pradesh	90
144.	Kundakki, Bajaj Energy	Uttar Pradesh	90
145.	Utraula, Balarampur, Bajaj Energy	Uttar Pradesh	90

146.	Maqsoodpur, Shahjahnpur, Bajaj Energy	Uttar Pradesh	90
147.	Anpara C, Lanco power	Uttar Pradesh	1200
148.	Lalitpur, Bajaj Energy	Uttar Pradesh	660
149.	Anpara D	Uttar Pradesh	500
150.	Farakka, NTPC	West Bengal	2100
151.	Budge-Budge, CESCL	West Bengal	750
152.	Mezia, DVC	West Bengal	2340
153.	Southern, CESCL	West Bengal	135
154.	Barkeshwar, WBPDCCL	West Bengal	1050
155.	Durgapur, DVC	West Bengal	350
156.	Titagarh, CESCL	West Bengal	240
157.	Santalidih, WBPDCCL	West Bengal	980
158.	Sagardighi, WBPDCCL	West Bengal	600
159.	Durgapur Projects Ltd.	West Bengal	690
160.	Kolaghat, WBPDCCL	West Bengal	1260
161.	Bandel, WBPDCCL	West Bengal	450
162.	Rughunathpur, DVC	West Bengal	1200
163.	Haldia, Coastal Energen	West Bengal	600

3. Fly ash Utilisation

(i). State Wise Status of Coal Consumption & Fly Ash Utilisation During Year 2015-16

The state wise status of Fly Ash Generation & Utilization for year 2015 – 2016 on the basis of data received by the 156 Coal/Lignite based Thermal Power Stations is given in the table below:

Sl. No.	Name of State	No. of TPP's	Installed Capacity (MW)	Coal Consumed (MT)	Fly Ash Generation (MT)	Fly Ash Utilization (MT)	Percentage Utilization %
1.	Andhra Pradesh	6	7310	31.26262	10.4137	5.7488	55.20
2.	Bihar	4	4100	15.79452	6.3445	2.175	34.28
3.	Chhattisgarh	19	18690	59.21594	24.557	7.7231	31.45
4.	Delhi	2	840	1.7512	0.5258	0.6858	130.42
5.	Gujarat	11	14932	44.8467	6.4856	6.2851	96.91
6.	Haryana	5	5988	24.2924	5.1998	5.7468	110.52
7.	Jharkhand	8	5555.5	18.66032	7.7142	6.7678	87.73
8.	Karnataka	4	5480	17.99	4.8875	2.4596	50.32

9.	Madhya Pradesh	9	15920	61.55556	18.3016	5.4288	29.66
10.	Maharashtra	22	19326	63.5731	20.258	13.6399	67.33%
11.	Orissa	6	8530	38.1397	14.3938	6.4014	44.47%
12.	Punjab	4	4620	7.9076	2.7175	2.3122	85.09
13.	Rajasthan	8	7840	27.78927	7.2654	6.6768	91.90
14.	Tamilnadu	12	10400	51.55636	8.5376	7.7458	90.73
15.	Telangana	4	5482.5	20.4905	8.2484	5.5179	66.90
16.	Uttar Pradesh	18	17753	71.99883	26.5849	11.4607	43.11
17.	West Bengal	14	11527	40.08131	16.1086	15.306	95.02
	Total	156	164294 MW	596.9059 MT	186.544 MT	111.0574 MT	59.43%

(ii) Fly ash utilisation of captive power plants during year 2015-2016

Sl. No.	Name	State	Capacity (MW)	Total Ash Gen. (MT)	Total Ash Utilization (MT)	% Ash Utilization in 2015-16
1	Nava Bharat Energy India Ltd	A.P	150	0.4585	0.4585	100%
2	Jindal Steel & Power, Dongamahua	C.G	576	1.6	1.6093	101%
3	Jindal Steel & Power, Patarpali	C.G	110	0.5495	0.5495	100%
4	Ultratech Cement Ltd, Rawan	C.G	80	0.1088	0.1118	103%
5	Indian Rayon, Aditya Birla	Gujarat	34.5	0.469	0.469	100%
6	Tata Steel Ltd, West Bokaro Division	Jharkhand	20	0.137	0.137	100%
7	JK Cements, Muddapur	Karnataka	50	0.03392	0.03392	100%
8	Mysore Paper Mills Ltd	Karnataka	41	0.03095	0.03095	100%
9	Vasavdatta Cement, Birla Shakti	Karnataka	79.2	0.1521	0.1521	100%
10	Grasim Industries Ltd, Ujjain	M.P	95	0.1724	0.1724	100%
11	Bilt Graphic Paper Products Ltd	Maharashtra	60	0.0564	0.0564	100%
12	Finolex Pipes	Maharashtra	43	0.00566	0.00566	100%
13	Hindalco Industries Ltd, Hirakud	Orissa	467.5	0.897	0.512	57%
14	NALCO CPP, Angul	Orissa	1200	2.2001	1.4634	67%
15	NALCO, Damanjodi	Orissa	74	0.6036	0.5956	99%

16	JK Cements, Chittorgarh	Rajasthan	47	0.04703	0.04703	100%
17	Shriram fertilizers & Chemicals	Rajasthan	125.3	0.2614	0.2544	97%
18	Hindalco Industries Ltd, Renusagar	U.P	820	1.786	1.0356	58%
19	IFFCO Ltd, Allahabad	U.P	30.5	0.975	0.984	101%
	Overall		4103 MW	10.54436 MT	8.67856 MT	82%

4.0 Reports/guidelines

4.1 Protocol for sampling, analysis of coal and reporting of compliance in respect of implementation of the Gazette notification on use & supply of beneficiated coal in thermal power plants

This protocol presents the protocol for sampling, analysis of coal and reporting of compliance on quarterly basis with respect to ash content in coal to be supplied and used by the thermal power plants covered under the provisions of the Gazette notification GSR 02 (E) dated January 02, 2014 on supply and use of beneficiated coal in thermal power plants. The objective is to ensure compliance of the quality of coal with respect to ash content, supplied and used by thermal power plants. The data generated shall help in evaluation of compliance level of the notification.

4.2 Guidelines for loading, unloading and nuisance free transportation of all types of flyash, including bottom ash etc. generated by thermal power stations

As per the 2009 Notification on flyash utilisation, transportation of flyash should be in an environmentally sound manner. Flyash is categorised as high volume low effect waste under Hazardous Waste (Management & Handling) Rules, 2008 (S.O. 2265(E) dated September 24, 2008) and thus excluded from the category of Hazardous waste. The guidelines for transportation of flyash were prepared for minimising fugitive emissions during loading, unloading and making nuisance free transportation of all types of flyash, including bottom ash etc. generated by thermal power stations.

**List of Thermal Power Plants to whom Direction u/s 5 dated 21.07.2015
were issued w.r.t. Installation & Connectivity of OCEMS**

Sl. No.	State	Name & Address of Thermal Power Plants
1	Andhra Pradesh	Dr Narla Tata Ro Thermal Power Station, Ibrahimpatnam (V) & (M), Krishna Dist. 521456
2	Andhra Pradesh	National Thermal Power Corporation Limited, Simhadri Thermal Power Project ,Parawada ,Visakhapatnam 531019
3	Andhra Pradesh	Rayalaseema Thermal Power Plant, V.V.Reddy Nagar, Kalamala, Cuddapah Dist.- 516312 ,
4	Assam	Lakwa Thermal Power Station, Assam State Electricity Board Maibella,PO Suffry Dist -Sivasagar Assam 785640
5	Assam	Namrup Thermal Power Station, Namrup , Assam 786621
6	Bihar	Barauni thermal Power station Barauni, Begusarai
7	Bihar	Kahalgaoon Super Thermal Power Station (NTPC) Kahalgaoon ,Bhagalpur, Bihar 812001
8	Chhattisgarh	ACC Ltd (CPP) Po-Jamul Cement Works, Durg 491001
9	Chhattisgarh	Agrawal Vidut (P) Ltd, Vill- Biladi-Tilda, Raipur493111
10	Chhattisgarh	Alok Ferro Alloys(CPP), Ind Area Urla, Raipur493111
11	Chhattisgarh	Ambuja Cement Eastern Ltd(CPP) Rawan, Balodha Bazaar, Raipur-493111
12	Chhattisgarh	Sai Lilagar Power Ltd. (Arasmeta Captive Power Company Pvt Ltd), Po-Gopalnagar, Jangir-Champa 495671
13	Chhattisgarh	Aryan Coal Beneficiation Pvt Ltd Chakabuda, Korba 495450
14	Chhattisgarh	Balaji Power, Hira Ferro Alloys Ltd, Vill. Belsonda, Mahasamud, Raipur- 492003
15	Chhattisgarh	Bharat Aluminium Company Ltd, CPP-I Jamnipali, Korba 495450
16	Chhattisgarh	Bharat Aluminium Company Ltd, CPP-II Jamnipali, Korba 495450
17	Chhattisgarh	Bhilai Electric Supply Company Ltd(CPP)PP-II Ispat Bhawan, B.S.P. , Bhilai, Durg 491001
18	Chhattisgarh	Bhilai Steel Plant (CPP) PP-I Bhilai, Durg 491001
19	Chhattisgarh	Bhoram Dev Sakkar Karkhana, (CPP), Kawardha 491995
20	Chhattisgarh	Century Cement (CPP) , Baikunth, Raipur 493111
21	Chhattisgarh	H.E.G Ltd. (CPP) Ind. Growth Area, Borai, Durg-491001
22	Chhattisgarh	Hanuman Agro Industries Ltd (CPP) Vill- Paragaon, Rajim, Raipur493111
23	Chhattisgarh	Hasdeo Thermal Power Station (West) Chattisgarh State Electricity Board Korba 495450
24	Chhattisgarh	Hira Ferro Alloys (CPP), Ind Area Urla, Raipur 493111
25	Chhattisgarh	Hira Power & Ispat Ltd (CPP) Ind Area Urla, Raipur 493111
26	Chhattisgarh	Ind Power Ltd, Vill- Mahapalli, Dist-Raigarh 496107
27	Chhattisgarh	Indo Lahiri Bio Power Ltd, Vill- Jaroda, Raipur 493111
28	Chhattisgarh	Indsil Energy & Electro Chemical Ltd, (CPP) Ind Area Urla, Raipur

		493111
29	Chhattisgarh	Isha Power (P)Ltd, Vill- Kurud, Raipur 493111
30	Chhattisgarh	Jagdamba Power & Alloys Ltd (CPP), New Siltara Ind Growth Centre, Bilaspur Road, Raipur 493111
31	Chhattisgarh	Jaiswal Neeco Ltd, (CPP) New Siltara Ind Growth Centre Bilaspur Road, Raipur 493111
32	Chhattisgarh	Jindal Power Ltd., Vill- Tamnar, The-Gharghda, Raigarh 496107
33	Chhattisgarh	Jindal Steel & Power Ltd, Vill- Patarpali, Raigad 496107
34	Chhattisgarh	K.V.K. Bio Energy Pvt Ltd Vill- Amartal, Akaltara, Jangir-Champa 495671
35	Chhattisgarh	Kalindi Power & Steel Ltd, Vill- Tunggaon, Mahasamund, Raipur 493111
36	Chhattisgarh	Korba Super Thermal Power Station, NTPC Ltd Jamnipali, Korba 495450
37	Chhattisgarh	Korba Thermal Power Station (East) Chattisgarh State Electricity Board, Korba 495450
38	Chhattisgarh	M/s SKS Ispat & Power Ltd, (CPP) Near Ind Area, Ph-2 Siltara, Raipur 493111
39	Chhattisgarh	Maa Usha Urja Ltd, (CPP) New Siltara Ind Growth Centre Bilaspur Road, Raipur 493111
40	Chhattisgarh	Madhya Bharat Paper Ltd Vill-Birgahni, PO-Champa, Jangir Champa 495671
41	Chhattisgarh	Mahendra Sponge & Power Ltd (CPP), New Siltara Ind Growth Centre, Bilaspur Road, Raipur 493111
42	Chhattisgarh	Monnet Ispat Ltd. (CPP) Chandkuri, Mandir Hasoud 493111 Raipur
43	Chhattisgarh	Niraj Power (P) Ltd, Vill- Harinbhatta, Raipur493111
44	Chhattisgarh	N.R.I. Power & Steel Pvt Ltd Vill- Rambod Sargaon, Bilaspur, Chhattisgarh
45	Chhattisgarh	Prakash Ind Ltd. Vill-Hathneura, Po-Champa, Distt- Janjgir Champa 495671
46	Chhattisgarh	Rashmi Sponge Iron Pvt Ltd, (CPP) New Siltara Ind Growth Centre Bilaspur Road, Raipur 493111
47	Chhattisgarh	Sarada Energy & Mineral Ltd, Ph-1, Siltara, Raipur493111
48	Chhattisgarh	Sipat Super Thermal Power Project, N.T.P.C. Sipat, Bilaspur 495001
49	Chhattisgarh	Vandana Global Ltd., (CPP), New Siltara Ind Growth Centre, Bilaspur Road, Raipur- 493111
50	Chhattisgarh	Vandana Vidyut Ltd Ind Area Sirgitti, Bilaspur495445
51	Chhattisgarh	Vaswani Industries ltd, (CPP) New Siltara Ind Growth Centre Bilaspur Road, Raipur 493111
52	Delhi	Badarpur Thermal Power Station Badarpur , New Delhi 110044
53	Delhi	Rajghat Power House Ring Road, ITO, New Delhi 110002
54	Goa	Reliance Infrastructure Ltd, Goa Power Station, Zuarinagar ,Sancoale-Goa- 403726
55	Gujarat	Adani Power Ltd, VILL:-Tunda & Siarcha , Tunda & Siracha, Tal :MUN, Dist :KUTCH, 370435

56	Gujarat	Akri Mota Power Plant, G.M.D.C.Ltd TALUKA LAKHPAT,CHHERNANI, Tal :LAK, Dist :Kutch, : 370 110
57	Gujarat	Essar Power Ltd, : Hazira, , Dist. Surat 394 270
58	Gujarat	G.S.E.C.L, KUTH LIGNITE THERMAL POWER STATION,PANDANDHRO, Panandhro,Tal :LAK, Dist :Kutch, 370601
59	Gujarat	GEB,At-Wanakbori, Tal-Thasara Kheda 388250
60	Gujarat	GIPCL (Natural Gas Based), Dhanora Vadodara 391346
61	Gujarat	Gujarat Industries Power Co. Ltd Nani Naroli, Tal.Mangrol, Dist.Surat 394410
62	Gujarat	Gujarat Paguthan Energy Corporation Pvt. Ltd., Paguthan, Bharuch 392 220
63	Gujarat	Gujarat State Electricity Corporation Ltd SECTOR 30, Gandhinagar 382011
64	Gujarat	Gujarat State Electricity Corporation Ltd, Utran, , Dist. Surat - 394105
65	Gujarat	Gujarat State Electricity Corporation Ltd, UKAI, (Thermal Power Station) Ukai Dam, Dist. Surat 394680
66	Gujarat	Meghmani Energy Ltd BLOCK NO: 398, CHHARODI, TA- Sanand, Dist- Ahmedabad 392130
67	Gujarat	NTPC Ltd, Jhanor., Dist Bharuch Gujarat 392215
68	Gujarat	NTPC, Kawas, Dist.Surat 394516
69	Gujarat	Sikka Thermal Power Station GSECL, Po Sikka, Dist. Jamnagar 361140
70	Gujarat	Tata Chemicals Ltd., PO. Mithapur, Dist. Jamnagar 361345
71	Gujarat	Thermal Power Plant of Ambuja Cement Ltd Ambujanagar, Tal: Kodinar Dist: Junagadh 362 715
72	Gujarat	Torrent Power Ltd (Sugen 1147.5 MW CPP) Kamrej, Surat -394155
73	Gujarat	Torrent Power Ltd, Sabarmati Ahmedabad 380005
74	Haryana	ChhotuRam Thermal Power Station, HPGCL, Yamuna Nagar Haryana 135001
75	Haryana	Jhajjar Power Ltd., Tehsil- Matanhai, Dist- Jhajjar 124106
76	Haryana	Aravalli Power Corporation (Indira Gandhi Thermal Power Plant),Vill-Jharli, Distt Jhajjar 124106
77	Haryana	National Thermal Power Station Village Mujeri, Faridabad 121005
78	Haryana	Rajiv Gandhi Thermal Power Plant Vill Khedar ,Hisar 125121
79	Haryana	Panipat Thermal Power Station, Panipat 132105
80	Jharkhand	Adhunik Power & Natural Resources Ltd, Distt. Saraikela - Kharsawan, Jharkhand - 832 402
81	Jharkhand	Bokaro Power Suply Co. Pvt Ltd, BS City, Bokaro : 827012
82	Jharkhand	Bokaro Thermal Power Station, Bokaro Thermal, Bokaro. 829107
83	Jharkhand	Chandrapura Thermal Power Station, D.V.C, Chandrapura, Bokaro. 828403
84	Jharkhand	Divine Vidhut Ltd, Jamshedpur 831009

85	Jharkhand	Estern India Power Tech. Ltd. Giddi, Hazaribagh. 829108
86	Jharkhand	Estern India Power Tech. Ltd. Rajrappa, Ramgarh.829119
87	Jharkhand	Industrial Energy Ltd, Tisco Campus, Jamshedpur 831009
88	Jharkhand	Koderma Thermal Power Station, Kodrma. 825421
89	Jharkhand	Maithan Power Ltd., Maithan, Dhanbad 828205
90	Jharkhand	PTPS, Patratu, Ramgarh 829119,
91	Jharkhand	Tata Power Ltd, (Jojobera Power Plant), Jamshedpur 831009
92	Jharkhand	Tenughat Thermal Power Station Lalpania, Bokaro 829149
93	Jharkhand	Usha Martin Ltd, Thermal Power Ltd., Tatisilwai, Ranchi 713347
94	Jharkhand	Usha Martin Ltd, (TPP) Jamshedpur 831009
95	Jharkhand	West Bokaro Colliery Power Plant, Ghatotand, Ramgarh.829119
96	Karnataka	A.C.C. Limited - Power Plant,(125 MW) Wadi Plant, P.O. Wadi-585 225 Gulbarga District.
97	Karnataka	Bellary Thermal Power Station, KPC Ltd. Kudithini village, Bellary Taluk and District. 583102
98	Karnataka	Gulbarga Power Pvt Ltd, Chattrasala Village, Chincholi, Gulbarga 530031
99	Karnataka	Himatsinghka Linens, Plot No 1, SEZ KIADB IA, Hanumantpura post, Hassan 573128
100	Karnataka	JSW Energy Limited, (2x130) (Jindal Power Company Ltd.) P.B.No.9, Toranagallu, Sandur Taluk, Bellary District. 583123
101	Karnataka	JSW Energy Limited, (2x300),(Jindal Power Company Ltd.) P.B.No.9, Toranagallu, Sandur Taluk, Bellary District. 583123
102	Karnataka	Raichur Thermal Power Co. Ltd., Shaktinagar, Raichur District. 584170
103	Karnataka	Shantha Steel & Power Ltd, Kenchanaduni & Bosahalli Village, Koppal Taluk -583238
104	Karnataka	Tata Power company ltd. Plot 1234-40 Kanburgi, industrial area , Autonagar , Belgaum-590014
105	Karnataka	Udupi Power Corporation Ltd. Yellur Village, Nandikuru Post, Udupi District -574138
106	Karnataka	Vasavdatta Cement Power Plant, Sedam, Karnataka- 585 222
107	Kerala	Brahmapuram Diesel Power Plant,Kerala State Electricity Board, Brahmapuram,Kochi-682303,ErnakulamDist
108	Kerala	BSES Kerala Power Ltd, Udyogamandal, Ernakulam Dist 683501
109	Kerala	Kasargod Power Corporation, Mylati, Uduma Panchayat ,Kasargod Dist 671121
110	Kerala	Kozhikode Diesel Power Project, Nallalam, Kozhikode, Dist 673027
111	Kerala	National Thermal Power Corporation Ltd, Chodatherur ,Karthikappally ,Alappuzha Dist 690514
112	Madhya Pradesh	ACCLtd,25MW (Unit-1),Kymore, Katni 483775
113	Madhya Pradesh	ACCLtd,25MW (Unit-2) Kymore, Katni 483775

114	Madhya Pradesh	Ajay Food Products Pvt Ltd. 15MW Agro Wasted Based Captive Power Plant, Ind Area Bargawan, Katni 483775
115	Madhya Pradesh	Amarkantak Thermal Power Station ,Chachai 473111
116	Madhya Pradesh	Captive Thermal Power Plant , Birla Corporation Ltd Satna 470002
117	Madhya Pradesh	Grasim Industries Ltd,(25MW) , Nagda 456331
118	Madhya Pradesh	Grasim Industries Ltd,(40MW) , Nagda 456331
119	Madhya Pradesh	HEGLtd (Thermal Power Plant) [30MW] Mandideep, Raisen 462046
120	Madhya Pradesh	HEGLtd (Thermal Power Plant) [32MW],Mandideep ,Raisen 462046
121	Madhya Pradesh	Kamal Sponge & Thermal Power Plant, Satna 485001
122	Madhya Pradesh	Maihar Thermal Power Station No1 ACC Maihar, Satna 485771
123	Madhya Pradesh	Maihar ThermalPowerStationNo2 ACC Maihar, Satna 485771
124	Madhya Pradesh	Ramnik Power & Alloys (P Ltd 6MW Biomass Based Captive Power Plant ,Sarandi Ind Area ,the-Waraseoni ,Balaghat 497397
125	Madhya Pradesh	RaymondLtd, 115MW Captive Power Plant, AKVN,Growth Centre Boregaon, Chhindwara 480106
126	Madhya Pradesh	Sanjay Gandhi Thermal Power Station Birsingpur,Pali, Umaria 484551
127	Madhya Pradesh	Satpura Thermal Power Station, Betul, MP 460001
128	Madhya Pradesh	Vardhman Fabrics [Captive Thermal Power Plant] Vill-Pillikarar, Sehore 466 441
129	Madhya Pradesh	Vardhman Yarn,(Power plant), IndArea-2(A-1toA-6),Satlapur ,Mandideep 462046
130	Madhya Pradesh	Vikram Cement TPP) ,PO Khor, Neemuch District 458470
131	Madhya Pradesh	Vindhyachal Super Thermal Power Project Singrauli 486885
132	Maharashtra	Abhijeet MADC Nagpur Energy Pvt. Ltd. Khairy (K), Tq. Hingna , Dist. Nagpur 440016
133	Maharashtra	Adani Power Maharashtra Private Ltd., Plot No. A - 01, Tiroda Growth Centre, MIDC Tiroda, Dist - Gondia. 441911
134	Maharashtra	Chandrapur Super Thermal Power Station, Mahagenco, Chandrapur 442404
135	Maharashtra	Finolex Industries Ltd., Ranpar-Golap, Tal. & Dist. Ratnagiri 415712
136	Maharashtra	Gupta Energy Pvt Ltd., Usgaon, Tq. Chandrapur, Distt. Chandrapur 442401

137	Maharashtra	Indorma Synthetics Ltd. A-31, MIDC, Butibori, Dist. Nagpur 441122
138	Maharashtra	Indrajeet Infrastructures Pvt. Ltd. Bhugaon Link road, Wardha, Dist. Wardha. 442001
139	Maharashtra	JSW Energy Ltd., Nandiwade, PO. Jaigad, Tal & Dist. Ratnagiri-415614
140	Maharashtra	Khaperkheda Thermal Power Station, Khaperkheda, Dist. Nagpur. 441102
141	Maharashtra	Koradi Thermal Power Station, At. Koradi, Dist. Nagpur. 441111
142	Maharashtra	Madhyadesh Paper Mill Ltd. (Co-generation plant), At. Vill. Malegaon, Tah. Saoner, Dist. Nagpur. 441104
143	Maharashtra	Maharashtra State Power Generation Co. Ltd. (Unit 2 & 3), Deepnagar, Tal. Bhusawal Dist. Jalgaon. 425201
144	Maharashtra	Maharashtra State Power Generation Co. Ltd. Paras Thermal Power Station, Paras, Tq: Balapur, Dist: Akola. 444302
145	Maharashtra	Maharashtra State Power Generation Co. Ltd., At. Deepnagar, Tal. Bhusawal, Dist. Jalgaon. (Unit 4 & 5) 425201
146	Maharashtra	Maharashtra State Power generation Co. ltd., (NTPS), Post. Eklahere, Tal. & Dist. Nashik 422105
147	Maharashtra	Malu Paper Mill Ltd., (News print/Writing printing Div. Unit-III), Co-generation power Plant 6 MW , MIDC Saoner, Tq. Saoner, Dist Nagpur. 441107
148	Maharashtra	Murli Industries Ltd. a) Co-generation Plant 3 MW b) 15 MW, At. Wadoda, Tah. Kamptee, Dist. Nagpur. 441104
149	Maharashtra	Rake Power Ltd., (C.C.P. 10 MW), S. No. 429,432, 433, Vill - Patgowari, Tq- Ramtek, Dist- Nagpur 441406
150	Maharashtra	Tata Power Company Village Mahul Road Chembur , Mumbai- 74
151	Maharashtra	Thermal Power Station, Mahagenco, Parli Tal- Parli (V.) Dist. - Beed. 431515
152	Maharashtra	Topworth Urja Power Ltd. Ukewahi , Tq. Umred, Dist. Nagpur. 441204
153	Maharashtra	Uttam Galva Steel Ltd. S.No. 39, 40, Vill. Dahivali Tal. Khalapur, Dist. Raigad 410203
154	Maharashtra	Wardha Power Company Ltd. MIDC, Warora, Dist. Chandrapur 442914
155	Meghalaya	Maithan Smelter Thermal Power Plant, Byrnihat , Ri -Bhoi- Dist.
156	Meghalaya	Meghalaya Power Ltd, Lumshnong, Jaintia Hilla Distt 793109
157	Meghalaya	Shyam Century Thermal Power Plant , Lamshnong, Meghalya 793200
158	Mizoram	20MW H.F.O based Thermal Power Plant & Electricity Department, Bairabi, Kolasib Distt, Mizoram 796081
159	Orissa	Bhusan Energy Ltd.Narendrapur, Kusupanga, Dhenkanal 759121
160	Orissa	HINDALCO Industries Ltd Sambalpur 768212
161	Orissa	IB Thermal Power Station (OPGC) Banaharpalli,Jharsuguda,768234
162	Orissa	IndianChargeChromeLimited(CPP),Kapileshwar,Choudwar,Cuttack-745071

163	Orissa	National Aluminium Company(CPP) Angul Talcher 759145
164	Orissa	Navavarat Ventures Ferro AlloyLtd, CPP Khargaprasad, Meramandali,Dhenkanal-759121
165	Orissa	NTPC-SAIL Coop LTD, CPPII ,Rourkela, Sundergarh 769010
166	Orissa	SAIL Rourkela steel Plant CPPI-Rourkela, Sundergarh 769010
167	Orissa	Sterlite Energy Pvt Ltd, Bhurkamunda , Jharsuguda 768201
168	Orissa	Talcher Super Thermal Power Plant (TSTPP) Deepshikha, Kaniha, Angul 759117
169	Orissa	Talcher Thermal Power Plant(NTPC) Talcher, Angul 759145
170	Punjab	Guru Gobind Singh Super Thermal Plant Ghanauli , Ropar140113
171	Punjab	Guru Hargobind Thermal Plant, Lehra Mohabbat , Bhatinda 151001
172	Punjab	Guru NanakDev Thermal Power Plant,Bhatinda 151001
173	Punjab	GVK Power (Gonidval Sahib) 2*270MW coal based Thermal power plant, Goindwal Sahib, Taran Taran 143422
174	Punjab	PeeIron & Steel Co Pvt Ltd, Bhankarpur, DeraBassi 140201
175	Punjab	Talwandi Sabo Power ltd, Vill Banawala, Dist - Mansa 51302
176	Punjab	Usha Auto cast Ltd ,Mubarakpur ,Dera Bassi 140201
177	Puducherry	Puducherry Power Corporation Ltd., Polagam, T.R.Pattinam, Karaikal 609 602
178	Rajasthan	Amrit Environment Technologies Pvt Ltd (Bio-mass),SP-3-5, RIICO Keshawana, Kotputli, Jaipur 303108
179	Rajasthan	Banswara Syntex Ltd, Banswara 327001
180	Rajasthan	Binani Cement Ltd, Binanigram, Amla, District-Sirohi 307022
181	Rajasthan	Birla Cement Works , Madhav Nagar, Chanderia, Chittorgarh 312622
182	Rajasthan	Chhabra Thermal Power project, Chhabra, Bara, Jhalawar, Kota 325205
183	Rajasthan	Grasim Industries Kharia, Jodhpur 342606
184	Rajasthan	Gujrat Ambuja Cement Ltd, Rabriawas ,District-Pali 306709
185	Rajasthan	HindustanCopperLtd,Khetri,JhunjhunuDist-333504
186	Rajasthan	JKLaxmi Cement, JayKay Puram, Sirohi 306902
187	Rajasthan	JKPower, Chittorgarh 312001
188	Rajasthan	Kalptaru Power Energy Bara, Kota 380028
189	Rajasthan	Kalptaru Power Energy Venture, Panchhar, Kota 324001
190	Rajasthan	Kalptaru Power Transmission Ltd,Shri Ganganagar,Jodhpur 335001
191	Rajasthan	KalptaruPowerTransmission(P)Ltd, NearvillageKhatoli,TehsilUnaria, District-Tonk 304001
192	Rajasthan	Kawai thermal Power station, Adani power , NH 90,Atru Road Village Kawai, Taluka Atru Baran 325 219 Rajasthan, India
193	Rajasthan	Kota Thermal Power Plant (Ph-II), Shaktipura, Kota 324009
194	Rajasthan	Kota Thermal Power Plant ,Ph-I, RSEB, Kota 324009
195	Rajasthan	Kota Thermal Power Station, Stage-III Shaktipura, Kota 324009
196	Rajasthan	Kota Thermal Power Station, Stage-IV, Shaktipura,Kota 324009

197	Rajasthan	Maharaja ShriUmmed Mills, Pali 306401
198	Rajasthan	Mangalam Cement, Morak, Kota 326520
199	Rajasthan	Nitin spinners, Bhilwara, Chittorgarh311025
200	Rajasthan	NTPC, Anta Bara, Kota 325202
201	Rajasthan	Orient Green Power Company, Vill- Bhanwargarh, Block& Teh-Kishanganj, Distt- Baran 325202
202	Rajasthan	Raj West Power Plant Jalipura, Jodhpur 342003
203	Rajasthan	Rajasthan Rajya Vidyut Vitaran Nigam Ltd ,Lignite Thermal Power Station,Barmer 344001
204	Rajasthan	Rajasthan Rajya Vidyut Vitaran Nigam Ltd, Dholpur Thermal Power Plant, Dholpur 328022
205	Rajasthan	Rajasthan Rajya Vidyut Vitran Nigam Ltd ,Kolayat, Bikaner 334302
206	Rajasthan	Rajasthan Textile & Weaving mills, Bhawani Mandi, Jhalawar Kota 326502
207	Rajasthan	Ramgarh Gas turbine Power Plant Ramgarh, Jaisalmer 345022
208	Rajasthan	Sambhav Energy Ltd NawaKheda, Sirohi, Jodhpur 307510
209	Rajasthan	Sanjog Sugar & Eco Power Ltd., SP-I, RIICO Ind Area, Ph II, Ratanpura By-Pass, Sangeria, Hanumangarh 335063
210	Rajasthan	Satyam Power Pvt Ltd., Nagaur 341026
211	Rajasthan	Shree Cement Ltd , RAS Bhimgarh Tehsil, Jaitaran, District-Pali 306101
212	Rajasthan	Shri Ram Fertilizer & Chemicals, Kota 324004
213	Rajasthan	SRFLtd, Jhiwana, Alwar- 301 019
214	Rajasthan	Suratgarh Thermal Power Plant, Unit-III Suratgarh, Distt Sriganganagar 335805
215	Rajasthan	SuratgarhThermalPowerPlant,Unit-IISuratgarh,DisttSriganganagar 335805
216	Rajasthan	SuratgarhThermalPowerPlant,Unit-IVSuratgarh,DisttSriganganagar 335805
217	Rajasthan	SuratgarhThermalPowerPlant,UnitSuratgarh,DisttSriganganagar 335805
218	Rajasthan	SuratgarhThermalPowerPlant,Unit-VISuratgarh,DisttSriganganagar 335805
219	Rajasthan	SuratgarhThermalPowerPlant,Unit-VSuratgarh,DisttSriganganagar 335805
220	Rajasthan	Surya Power Chambal Rangpur ,Kota 324001
221	Rajasthan	VS Lignite Pvt Ltd village-. Gurha, Kolayat, Bikaner 334302
222	Rajasthan	Wonder Cement, Chittorgarh 312622
223	Tamilnadu	Arkay Energy (Rameswaram) Ltd. Power Plant, Valuthoor Village, Valanthuravai Post, Ramnad District - 623 536
224	Tamilnadu	Auro Energy Limited Kottur Village, Thuhili, Thiruvidaimaruthur Taluk, Thanjavur District..614 601
225	Tamilnadu	Auro Mira Bio Energy Madurai Ltd Kadanery Village, Nallamaram Village Peraiyur Tk Madurai District 625703
226	Tamilnadu	Aurobindo Agro Energy Pvt. Ltd Viragadi Kadambangulam Village

		Sivagangai District 630551 .
227	Tamilnadu	Auromira Biopower India Pvt Ltd, Mela, Maruthapuram, Thirunelveli Distt 627109
228	Tamilnadu	Coromandel Electric Company Ltd. Natural Gas Based Power Plant Valanthuravai, Ramanathapuram Taluk & District. 623536
229	Tamilnadu	Ennore Thermal Power Station Ernavoor Village, Ambattur Taluk, Tiruvallur District 600091
230	Tamilnadu	ETA Powergen Pvt. Ltd. Periyampatti, Sattur Taluk, Virudhunagar District. 626203
231	Tamilnadu	Global Powertech Equipments Ltd Biomass Power Plant ,Yalavadi village, Vandavasi 604408
232	Tamilnadu	Ind-Bharat Cogen Power Plant, Keelavelayuthapuram village, Ottapidaram Taluk 628401
233	Tamilnadu	Kavery Gas Power ltd Maruthur Mayiladuthurai Nagapattinam 609001
234	Tamilnadu	Kuthalam Gas Turbine Power project (TNEB) Maruthur Mayiladuthurai Taluk Nagapattinam 609001
235	Tamilnadu	LANCO Tanjor Power Company Ltd, Karuppur Village,Pandanallur, Thiruvidadainmaruthur, Tanjavur Distt 609807
236	Tamilnadu	M/s.ST CMS Electric Company Private Limited, Uthangal Village, Virudhachalam Taluk. 639 112
237	Tamilnadu	Madurai Power Corporation Pvt. Ltd Paravai Village Madurai North TK Madurai District 625009
238	Tamilnadu	Mettur Thermal Power Station, Mettur 636402
239	Tamilnadu	MMS Steel & power Pvt Ltd Nallur Village Mannargudi Taluk Thiruvarur 614 717
240	Tamilnadu	MMS Steel & power Pvt Ltd Narimanam Nagapattinam 611002
241	Tamilnadu	NLC Limited, TPS-I, Expansion, Neyveli., Cuddalore Distt 607805
242	Tamilnadu	NLC Limited, TPS-I, Neyveli., Station 1, Panruti Taluk, Cuddalore Distt 607805
243	Tamilnadu	NLC Limited, TPS-II, Ammeri, Kunalukuruchi Village, Neyveli., Cuddalore Distt 607805
244	Tamilnadu	North Chennai Thermal Power Station SFNO 44 & 45, Puzhuthivakkam Village, Ponneri taluk, Tiruvallur District. 600091
245	Tamilnadu	NTPC Tamilnadu Energy Company Ltd, Vallur village, Ponneri Taluk, Tiruvallur 600091
246	Tamilnadu	O.P.G. Metals Pvt Ltd, Power Div, Maruthur Village, Mayiladuhruai, Nagapattinam 609001
247	Tamilnadu	OPG Energy pvt Ltd, Maruthur Mayiladuthurai Nagapattinam 609001
248	Tamilnadu	OPG Power Generation Limited, Pappankuppam, Chinna Obullapuram and Peria Obullapuram Villages, Gummidipoondi to

		Madharpakkam Road,Gummidipoondi - 601201.
249	Tamilnadu	Pioneer Power Ltd, Valantharai Village, Valuthur, Ramnad Distt 623707
250	Tamilnadu	PPN Power Generating Company Pvt Ltd Pillaiperumalnallur Tharangambadi Taluk Nagapattinam District 609303
251	Tamilnadu	Raghurama Renewable Energy Ltd. 18 MW Biomass Power Plant, Pamboor Vilklage, Paramakudi Taluk, Ramnad District. 623707
252	Tamilnadu	Saheli Exports Pvt ltd Komal west villageMayiladuthurai Nagapattinam 609001
253	Tamilnadu	Sai Regency Power Corporation Private Limited, 58 MW, Combined Cycle Power Plant Kalugooani Village, Ramanathapuram District - 623 536
254	Tamilnadu	Samalpatti Power Company Private Limited, SIPCOT Industrial Complex, Parandapalli village, Pochampalli Tk. Krishnagiri District.635206
255	Tamilnadu	Shriram Non-Conventional Energy Ltd., Bio Mas Power Plant, Seethambalpuram Aranthangi Road, Pattukottai Taluk Thanjavur District.. 614 601
256	Tamilnadu	Shriram Power Gen Ltd., (Bio Mass Power Plant) Seevalsaragu village, Athoor Taluk, Dindigul District. 624616
257	Tamilnadu	Southern Energy Development Corporation Ltd Nallur Mannargudi Thiruvarur 614 717
258	Tamilnadu	Synergy Shakthi Renewable Energy Limited, Plot No. B-1, SIPCOT Industrial Complex, Olaipatti village, Pochampalli Tk. Krishnagiri District. 635206
259	Tamilnadu	T.C.P.Limited, New Gummidipoondi Village, Thandalacheri Road, Gummidipoondi - 601201.
260	Tamilnadu	Terra Energy Limited Thirumandangudi Village, Papanasam Taluk, Thanjavur District.614 601
261	Tamilnadu	Thirumakotai (k) Gas Turbine Power Project, Thirumakottai Village ,Mannargudi Taluk ,Thiruvarur
262	Tamilnadu	TNPL CPP, Kagiithapuram, Kaur Distt 639136
263	Tamilnadu	Tuticorin Thermal Power Plant, Thoothukudi - 4, Thoothukudi Taluk 628002
264	Tamilnadu	Valuthur Gas Turbine Power Station Valuthur, Perungulam Post, Ramanathapuram - 623 536
265	Telangana	T.S. GENCO Ltd. 62.5 MW B-Station, Ramagundam, Karimnagar district 505209
266	Telangana	TSGENCO, Kakatiya TPP Chelpur (V), Ghanpur M), Warangal District 506345
267	Telangana	Kesoram 15 MW Captive Power Plant, Basantnagar, Ramagundam Karimnagar district 505209,
268	Telangana	KTPS, Old Station,Paloncha, Khammam Dist. 507115

269	Telangana	KTPS, Vth Stage, Paloncha, Khammam Dist. 507115
270	Telangana	M/s S.C.CO.Ltd, 'B' Power House,Kothagudem, Khammam Dist. 507115
271	Telangana	M/s. Singareni Collieries Co. Ltd. 18 MW Power House, Godavarikhani, Karimnagar district 505209
272	Telangana	NTPC Ltd. Jyotinagar, Ramagundam, Karimnagar district 505209
273	Tripura	104MW Gas based Combined Cycle Power Project Monarchak, Sonamura , Power Deptt, Govt. of Tripura 799181
274	Tripura	1082.4 MW Combined Cycle Gas Turbine Thermal Power Project Palatana, Udaipur, Tripura(S) 799105
275	Tripura	16MW Gas Based Thermal Power Project (Phase- II) Rokhia., Power Department, Govt. of Tripura 799102
276	Tripura	16MW Gas Based Thermal Power Project (Phase- III) Rokhia., Power Department, Govt. of Tripura 799102
277	Tripura	21MW Gas Based Thermal Power Project , Baramura. Power Department, Govt. of Tripura 799205
278	Tripura	21MW Gas Based Thermal Power Project(Extn.)at Rokhia. Power Department, Govt. of Tripura 799102
279	Tripura	21MW Gas Based Thermal Power Project, Baramura. Power Department, Govt. of Tripura 799205
280	Tripura	21MW Gas Thermal Power Plant, Unit-8, Rokhia. Power Department, Govt. of Tripura 799102
281	Tripura	52MW Gas Turbine Plant, combined cycle extension Project, NEEPCO Ltd. Ramchandranagar 799008
282	Tripura	84MW Gas Based Power Project, NEEPCO Ltd., Ramchandranagar. 799008
283	UP	Aditya Birla Chemicals (India) Ltd. Renukoot, Sonebhadra 231217
284	UP	Anpara Thermal Power Station A&B Anpara,Sonebhadra 231225
285	UP	Bajaj Energy Pvt Ltd, Berkhera, Pilibhit 262201
286	UP	Bajaj Energy Pvt Ltd, Etai, Maida, Utraula 271607
287	UP	Harduaganj Thermal Power Station, Kasimpur, Distt.- Aligarh 202127
288	UP	Hindalco industries Ltd.Renusagar Power Division ,Renusagar, Sonbhadra 231225
289	UP	Lanco Anpara Power Ltd. Anpara,Sonebhadra 231225
290	UP	N.T.P.C Unchahar Raebareli 256 012
291	UP	N.T.P.C. Tanda, Ambedkarnagar 224238
292	UP	N.T.P.C., Vidut Nagar, Dadri, Gautam Budh Nagar 203207
293	UP	Narora Atomic Power Station Narora, Bulandshahar 202389
294	UP	NTPC Ltd, Dibiyapur Auraiya. 206244
295	UP	NTPC, Rihand, Sonebhadra 231223
296	UP	NTPC, Shaktinagar, Sonebhadra 231222
297	UP	Obra Thermal Power Station unit-A, Obra Sonebhadra 231219
298	UP	Obra Thermal Power Station Unit-B, Obra Sonebhadra 231219

299	UP	Panki Thermal Power House, Panki 208020
300	UP	Parichha Thermal Power Project, Parichha, Jhansi 284305
301	UP	Rosa Power Supply Co. Ltd. Rosa Shahjahanpur 242001
302	UP	Rosa Power Supply Co. Ltd. Rosa stage-2 Shahjahanpur 242001
303	West Bengal	Bakreswar Thermal Power Station, PO, B.T.P. Birbhum 731104
304	West Bengal	CESC Ltd. New Cossipore Generation Station 28, Jheel Road 700002
305	West Bengal	CESC Ltd. Southern Generation Station 28, Garden Reach Road 700024
306	West Bengal	CESC Ltd. Titagarh Generation Station, B.T. Road Titagarh 700119
307	West Bengal	CESC Ltd., Budge budge Generation Station, Po. Punjli, Budge Budge , 24 -Parganas- South 700070
308	West Bengal	D.V.C. Durgapur Thermal power Station. Po. Durgapur 713207
309	West Bengal	D.V.C., Mejia Thermal power Station, PO. Mecheda 722 143
310	West Bengal	Dishergharh Power Supply Co.Ltd. (Chinakuri Unit) PO. Sundarchak 713360
311	West Bengal	Kolaghat Thermal Power Station, PO. Mecheda 721137
312	West Bengal	M/s Bandel Thermal power Station PO. Tribeni, Hoogly 712503
313	West Bengal	M/s Dishergharh Power Supply Co.Ltd. (Dishergharh Unit), PO. Sitarampur 713333.
314	West Bengal	M/s The Durgapur Projects Ltd., Durgapur. 713207
315	West Bengal	NSPCL, Sail Power Supply Co.Ltd., CPP-II, Burdwan. 713 341
316	West Bengal	NTPC, Farakka Super Thermal Power Station, P.O. Nabarun, Murshidabad-742 236
317	West Bengal	Sagardighi Thermal power Station , Monigram, Sagardighi, Murshidabad 742226
318	West Bengal	Santaldihi Thermal Power Station, P.O. & P.S. Santaldihi, Purulia-723 146