



REPORT
ON
FLY ASH GENERATION
AT
COAL / LIGNITE BASED THERMAL POWER STATIONS
AND
ITS UTILIZATION IN THE COUNTRY
FOR
1ST HALF OF THE YEAR 2019-2020
(April 2019 to September 2019)



CENTRAL ELECTRICITY AUTHORITY

NEW DELHI

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CENTRAL ELECTRICITY AUTHORITY

THERMAL CIVIL DESIGN DIVISION

FLY ASH GENERATION AT COAL / LIGNITE BASED THERMAL POWER STATIONS AND ITS UTILIZATION IN THE COUNTRY FOR THE 1ST HALF OF THE YEAR 2019-20 (APRIL 2019 TO SEPTEMBER 2019)

1.0 BACKGROUND

Coal / Lignite based Thermal Power Generation has been the backbone of power capacity addition in the country. Indian coal is of low grade with ash content of the order of 30-45 % in comparison to imported coal which has low ash content of the order of 10-15 %. Large quantity of ash is, thus being generated at coal / lignite based Thermal Power Stations in the country, which not only requires large area of precious land for its disposal but is also one of the sources of pollution of both air and water.

Central Electricity Authority (CEA) on behalf of Ministry of Power has been monitoring since 1996-97 the fly ash generation and its utilization in the country at coal / lignite based thermal power stations. Data on fly ash generation and utilization including modes of utilization is obtained from thermal power stations on half yearly as well as yearly basis. The data thus obtained is analyzed and a report bringing out the status of fly ash generation and its utilization in the country is prepared. The said report is forwarded to Ministry of Power, Ministry of Environment, Forests and Climate Change (MoEF & CC) and is also uploaded on the web site of CEA for bringing out the information in the public domain so that users of fly ash have access to the information on the availability of fly ash at different thermal power stations (TPSs) in the country.

To reduce the requirement of land for disposal of fly ash in ash ponds and to address the problem of pollution caused by fly ash, Ministry of Environment, Forests and Climate Change has issued various Notifications on fly ash utilization, first Notification was issued on 14th September, 1999 which was subsequently amended in 2003, 2009 and 2016 vide Notifications dated 27th August, 2003, 3rd November, 2009 and 25th January, 2016 respectively.

Towards the efforts in the direction of enhancing gainful utilization of fly ash, the latest MoEF & CC's Notification of 25th January, 2016 stipulates mandatory uploading of details of fly ash available on TPSs' website and updating of stock position at least once in every month; increase in mandatory jurisdiction of area of application from 100 km to 300 km; cost of transportation of fly ash to be borne entirely by TPS up to 100 km and equally shared between user and TPS for more than 100 km and up to 300 km; and mandatory use of fly ash based products in all Government schemes or programmes e.g. Pradhan Mantri Gramin Sadak Yojana, Mahatma Gandhi National Rural Employment Guarantee Act, 2005, Swachh Bharat Abhiyan, etc.

The Notification of 3rd November, 2009 prescribes targets of Fly Ash utilization in a phased manner for all Coal / Lignite based Thermal Power Stations in the country so as to achieve 100% utilization of fly ash. The Thermal Power Stations in operation before the date of the Notification (i.e. 3rd November, 2009) are to achieve the target of fly ash utilization in successive 5 years - 50% in First year; 60% in Second year; 75% in Third year; 90% in Fourth year and 100% in Fifth year. The new Thermal Power Stations coming into operation after the MoEF & CC's notification (i.e. 3rd November,

2009) are to achieve the target of fly ash utilization as 50% in the First year, 70% during Two years, 90% during Three years and 100% during Four years depending upon their date of commissioning.

The report on fly ash generation and its utilization at coal / lignite based thermal power stations provides the status of fly ash generation as well as utilization in the country. The report also contains conclusion and recommendation for increasing the present rate of utilization of the fly ash.

2.0 ASH GENERATION & UTILIZATION DURING THE 1ST HALF OF THE YEAR 2019-20

2.1 A Brief Summary :

Fly ash generation & utilization data for the 1st half of the Year 2019-20 (April 2019 to September 2019) has been received from **194** (One Hundred and Ninety Four) coal / lignite based thermal power stations of various power utilities in the country.

Data thus received has been analyzed to derive conclusions on present status of fly ash generation and its utilization in the country as a whole. A brief summary of status is given in Table-I below:

TABLE-I
SUMMARY OF FLY ASH GENERATION AND UTILIZATION

Description		1 st Half Year 2018-19	1 st Half Year 2019-20
· Nos. of Thermal Power Stations from which data was received	:	156	194
· Installed capacity (MW)	:	159623.00	195926.50
· Coal consumed (Million tons)	:	295.42	406.91
· Fly Ash Generation (Million tons)	:	93.26	129.09
· Fly Ash Utilization (Million tons)	:	64.08	100.94
· Percentage Utilization of Fly Ash (%)	:	68.72	78.19
· Percentage Average Ash Content (%)	:	31.57	31.73

It can be seen from the above table that during current half year, thermal power stations have reported Fly Ash Generation & its Utilization data. Based on this, Fly Ash Utilization percentage has increased during 1st half of the year 2019-20 in comparison to the utilization during the 1st half of previous year i.e, 2018-19 (of **156** thermal power stations).

Power Station wise fly ash generation & its utilization status including modes of utilization for the 1st half of the Year 2019-20 for all the thermal power stations is given in the statement at **Annexure-I**.

2.2 Power Utility-wise Status of Fly Ash Generation & its Utilization during the 1st Half of the Year 2019-20

The status of fly ash generation & utilization for the 1st half of the year 2019-20 for various power utilities in the country has been assessed based on data received from Thermal Power Stations and the same is given in Table-II:

TABLE-II**POWER UTILITY WISE FLY ASH GENERATION AND UTILIZATION DURING THE
1st HALF OF THE YEAR 2019-20**

Sl. No.	Name of Power Utility	No. of TPS	Installed Capacity (MW)	Fly Ash Generation (Million-tonne)	Fly Ash Utilization (Million-tonne)	Percentage Utilization %
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Andhra Pradesh Power Generation Corporation (A.P.GEN.CO)	2	3410.00	3.6045	3.0854	85.60
2	APPDCL (Andhra Pradesh)	1	1600.00	0.7990	0.3110	38.92
3	APCPL	1	1500.00	0.4011	0.5945	148.20
4	APL (Gujarat)	1	4620.00	0.3910	0.3979	101.76
5	ACB (INDIA) Ltd. (Chhattishgarh)	4	390.00	0.9159	0.9159	100.00
6	AMNEPL (Maharashtra)	1	246.00	0.0000	0.0000	0.00
7	Adani Power Ltd. (Maharashtra)	1	3300.00	2.3390	1.6703	71.41
8	Adani Power Rajasthan Ltd. (Rajasthan)	1	1320.00	0.6693	0.6264	93.59
9	ADANI ELECTRICITY MUMBAI LIMITED (Maharashtra)	1	500.00	0.2740	0.2851	104.04
10	ADHUNIK POWER & NATURAL RESOURCES LIMITED (Jharkhand)	1	540.00	0.4939	0.4939	100.00
11	BEPL (UP)	5	450.00	0.1264	0.1264	100.00
12	BHADRESHWAR VIDYUT PVT LTD (GUJRARAT)	1	300.00	0.0218	0.0180	82.68
13	BHARATIYA RAIL BIJLEE COMPANY LTD (BIHAR)	1	1000.00	0.5270	0.2347	44.54
14	BHARAT ALUMINIUM COMPANY LTD (BALCO) (CHHATTISGARH)	2	1740.00	1.4594	1.4605	100.08
15	C.E.S.C. Ltd. (WEST BENGAL)	3	1125.00	0.6880	0.6880	100.00
16	Chhattisgarh State Power Generation Company Ltd. (C.S.P.G.C.L.)	4	3280.00	4.9448	3.8335	77.53
17	C.G.P.L (Gujarat)	1	4150.00	0.3700	0.5060	136.76
18	CHEMPLAST LTD TPS (TAMIL NADU)	1	48.50	0.0116	0.0113	97.34
19	COASTAL ENERGEN PVT. LTD (Tamil Nadu)	1	1200.00	0.0298	0.0300	100.65
20	DB POWER LTD	1	1200.00	1.1340	0.8260	72.84

Sl. No.	Name of Power Utility	No. of TPS	Installed Capacity (MW)	Fly Ash Generation (Million-tonne)	Fly Ash Utilization (Million-tonne)	Percentage Utilization %
(1)	(2)	(3)	(4)	(5)	(6)	(7)
21	Damodar Valley Corporation (D.V.C.)	7	7090.00	5.8180	3.3465	57.52
22	Durgapur Projects Ltd. (D.P.L.)	1	550.00	0.3453	0.3183	92.18
23	Dhariwal Infrastructure Ltd. (Maharashtra)	1	600.00	0.3190	0.3190	100.00
24	EASTERN COALFIELDS LIMITED (West Bengal) (No Generation)	1	30.00	0.0000	0.0000	0.00
25	ESSAR POWER (MADHYA PRADESH) LTD	1	1200.00	0.3920	0.3038	77.50
26	Gujarat Industries Power Corporation Ltd. (G.I.P.C.L.)	1	500.00	0.2649	0.2649	100.00
27	Gujarat Mineral Development Corporation Ltd. (G.M.D.C.L.)	1	250.00	0.1265	0.1478	116.78
28	G.S.E.C.L. (Gujarat)	6	4500.00	1.9270	2.5764	133.70
29	Gupta Energy Pvt. Ltd.(Maharashtra)	1	120.00	0.0000	0.0000	0.00
30	GMR Kamalanga Energy Ltd (Odisha)	1	1050.00	0.8591	0.8174	95.15
31	Raipur Energy Ltd., (Formerly GMR Chhattisgarh Energy Ltd.)	1	1370.00	0.4661	0.3448	73.98
32	G.M.R. Warora Energy Ltd. (Maharashtra)	1	600.00	0.3980	0.3761	94.49
33	Haryana Power Generation Cor. Ltd. (H.P.G.C.L.)	3	2720.00	1.2064	1.3046	108.14
34	HALDIA ENERGY LIMITED (W.B.)	1	600.00	5.5300	5.5300	100.00
35	HINDUJA NATIONAL POWER COPORATION LIMITED (Andhra Pradesh)	1	1040.00	0.4245	0.1713	40.36
36	IDEAL ENERGY PROJECTS Ltd.(Maharashtra)	1	270.00	0.0000	0.0000	0.00
37	IL & FS TAMIL NADU POWER COMPANY Ltd (Tamil Nadu)	1	1200.00	0.0697	0.0778	111.63
38	INDIAN METALS & FERRO ALLOYS LTD. (Odisha)	1	258.00	0.2213	0.2213	100.00
39	INDIA POWER CORPORATION LIMITED(West Bengal)	1	12.00	0.0000	0.0000	0.00
40	Indraprastha Power Generation Company Ltd. (.I.P.G.C.L)	1	135.00	0.0000	0.0000	0.00
41	J.P.L (Chhattisgarh)	2	3400.00	1.8580	1.4499	78.03
42	JSW Energy Ltd.	2	2060.00	0.2200	0.2053	93.32
43	JSW ENERGY (BARMER) LTD (Formerly Raj Westpower Ltd)	1	1080.00	0.4813	0.4610	95.78
44	JSW STEEL LTD (TAMIL NADU)	1	90.00	0.0074	0.0073	99.00

Sl. No.	Name of Power Utility	No. of TPS	Installed Capacity (MW)	Fly Ash Generation (Million-tonne)	Fly Ash Utilization (Million-tonne)	Percentage Utilization %
(1)	(2)	(3)	(4)	(5)	(6)	(7)
45	JAIPRAKASH POWER VENTURES LIMITED (Madhya Pradesh)	2	1820.00	0.7687	0.8077	105.07
46	JINDAL INDIA THERMAL POWER LIMITED	1	1200.00	0.8135	0.5259	64.65
47	JINDAL STEEL AND POWER LIMITED (Chhattisgarh)	1	576.00	0.4297	0.4301	100.08
48	JHABUA POWER LIMITED (MP)	1	600.00	0.2990	0.1728	57.79
49	JHAJJAR POWER LIMITED(Haryana)	1	1320.00	0.8589	1.3942	162.33
50	Karnataka Power Corporation Ltd.(K.P.C.L.)	2	3420.00	1.4828	1.1592	78.18
51	KANTI BIJLEE UTPADAN NIGAM LIMITED (Bihar)	1	610.00	0.4612	0.2827	61.29
52	LALITPUR POWER GENERATION COMPANY LIMITED (UP)	1	1980.00	0.8799	0.8542	97.08
53	LANCO AMARKANTAK POWER LIMITED(Chhattisgarh)	1	600.00	0.4723	0.3892	82.39
54	LANCO ANPARA POWER LTD (UTTAR PRADESH)	1	1200.00	0.9280	0.2038	21.96
55	MARUTI CLEAN COAL & POWER LTD (CHHATTISGARH)	1	300.00	0.4030	0.4030	100.00
56	M.P.L (Jharkhand)	1	1050.00	0.7397	0.8836	119.45
57	M/s KSK MAHANADI POWER COMPANY LIMITED (Chhattisgarh)	1	1800.00	0.9938	1.0387	104.52
58	Meenakshi Energy Ltd. (A.P)	1	300.00	0.0014	0.0085	622.26
59	MB POWER (MADHYA PRADESH) LIMITED (Madhya Pradesh)	1	1200.00	0.9001	0.9026	100.28
60	MEJA URJA NIGAM PVT LTD (UTTAR PRADESH)	1	660.00	0.2496	0.0000	0.02
61	Madhya Pradesh Power Generation Corporation Ltd. (M.P.P.G.C.L.)	4	4080.00	2.9209	1.6119	55.18
62	Maharashtra State Power Generation Corporation Ltd. (M.S.P.G.C.L)	7	9750.00	6.0617	4.1229	68.02
63	NATIONAL ALUMINIUM COMPANY LIMITED (NALCO) (Odisha)	1	1200.00	1.3097	0.9292	70.95
64	Neyveli Lignite Corporation Ltd. (N.L.C.LTD)	5	3240.00	0.6633	0.6289	94.81
65	NLC TAMILNADU POWER LIMITED (Tamil Nadu)	1	1000.00	0.4241	0.4241	100.00
66	NTECL (Tamil Nadu)	1	1500.00	0.9060	1.0710	118.21
67	NSPCL (CHHATTISGARH)	2	574.00	0.4636	0.4319	93.16

Sl. No.	Name of Power Utility	No. of TPS	Installed Capacity (MW)	Fly Ash Generation (Million-tonne)	Fly Ash Utilization (Million-tonne)	Percentage Utilization %
(1)	(2)	(3)	(4)	(5)	(6)	(7)
68	NSPCL (ODISHA)	1	120.00	0.2457	0.1669	67.91
69	NSPCL (West Bengal)	1	120.00	0.0949	0.0489	51.51
70	N.T.P.C.LTD.	22	40905.00	30.6420	18.8177	61.41
71	NTPC-BSPGCL (JV) (BIHAR)	1	220.00	0.0153	0.0014	8.94
72	Orissa Power Generation Corporation Ltd. (O.P.G.C.L.)	1	420.00	0.4430	0.1937	43.73
73	OPG POWER GENERATION PVT LTD	1	414.00	0.0394	0.0394	100.00
74	Punjab State Power Corporation Ltd. (P.S.P.C.L).	4	2760.00	0.9728	1.5426	158.57
75	PRAYAGRAJ POWER GENERATION COMPANY LIMITED (Uttar Pradesh)	1	1980.00	0.8472	0.8471	99.99
76	Rajasthan Rajya Vidyut Utpadan Nigam Ltd. (R.R.V.U.N.L.)	3	3700.00	1.6945	1.8998	112.11
77	RASHTRIYA ISPAT NIGAM LTD (AP)	1	315.00	0.3664	0.6823	186.24
78	RATTAN INDIA POWER LTD	1	1350.00	0.4516	0.3644	80.68
79	RELIANCE POWER LTD (MADHYA PRADESH)	1	3960.00	2.1569	1.0135	46.99
80	RPSCL (UP)	1	1200.00	0.7733	0.5457	70.56
81	RAICHUR POWER CORPORATION LIMITED (Karnataka)	1	1600.00	0.0000	0.0000	0.00
82	RAIGARH ENERGY GENERATION LTD	1	600.00	0.0000	0.0606	0.00
83	R K M POWERGEN PRIVATE LIMITED(Chhattisgarh)	1	1440.00	0.4242	0.4242	100.00
84	SAI LILAGARH POWER GENERATION LTD (CHHATTISGARH)	1	86.00	0.0000	0.0000	0.00
85	SIMHAPURI ENERGY LIMITED (Andhra Pradesh)	1	600.00	0.0000	0.0000	0.00
86	Spectrum Coal & Power Ltd.(Chhattisgarh)	1	100.00	0.2869	0.2869	100.00
87	SEMBCORP ENERGY INDIA LIMITED (Andhra Pradesh)	1	1320.00	0.5697	0.4197	73.68
88	SWASTIK POWER & MINERALS RESOURCES PVT. LTD (Chhattisgarh) (No Generation)	1	25.00	0.0000	0.0000	0.00
89	SKS POWER GENERATION (CHHATTISGARH)	1	600.00	0.6078	0.5366	88.29
90	TENUGHAT VIDHYUT NIGAM LIMITED (Jharkhand)	1	420.00	0.3535	0.1929	54.59

Sl. No.	Name of Power Utility	No. of TPS	Installed Capacity (MW)	Fly Ash Generation (Million-tonne)	Fly Ash Utilization (Million-tonne)	Percentage Utilization %
(1)	(2)	(3)	(4)	(5)	(6)	(7)
91	TALWANDI SABO POWER LTD	1	1980.00	1.2300	1.1700	95.12
92	Taqa Neyveli Power Company Pvt. Ltd.	1	250.00	0.0416	0.0367	88.32
93	THE SINGARENI COLLIERIES COMPANY LIMITED (Telangana)	1	1200.00	1.1937	0.9461	79.25
94	Tata Power Company (T.P.CO.)	2	1297.50	0.0771	0.0793	102.84
95	Torrent Power Ltd.	1	362.00	0.1762	0.1762	100.00
96	TSGENCO (Telangana)	6	2822.50	2.5962	1.3150	50.65
97	T.N.G & D Corporation (Tamil Nadu)	5	4320.00	5.9973	5.6569	94.32
98	TRN ENERGY PRIVATE LIMITED (Chhattisgarh)	1	600.00	0.4792	0.3048	63.61
99	Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (U.P.R.V.U.N.L.)	4	5380.00	3.8187	1.1839	31.00
100	UPCL (Karnataka)	1	1200.00	0.0443	0.0478	107.90
101	VIDARBHA INDUSTRIES POWER LIMITED (Maharashtra)	1	600.00	0.0000	0.0200	0.00
102	VEDANTA LTD (ODISHA)	2	3615.00	5.7888	6.0463	104.45
103	VS LIGNITE PLOWER PVT LTD (RAJASTHAN)	1	135.00	0.0705	0.0705	100.00
104	West Bengal Power Development Corporation Limited (W.B.P.D.C.L)	5	4745.00	3.0281	2.7703	91.49
105	WPCL (KSKEV Ltd.) (Maharashtra)	1	540.00	0.0000	0.0000	0.00
	GRAND TOTAL	194	195926.50	129.0929	100.9427	78.19

It may be seen from the Table-II above that:

The data of fly ash generation and utilization for the 1st half of the year 2019-20 was received from 105 Power Utilities having 194 Thermal Power Stations out of which 39 Power Utilities have achieved 100% or more average fly ash utilization against their respective Thermal Power Stations numbering 76. Further, 15 Power Utilities have achieved average fly ash utilization in the range of 90% to less than 100% in respect of their Thermal Power Stations numbering 22.

The performance of power utilities during the 1st half of the year 2019-20 is tabulated below:

TABLE-III**POWER UTILITY-WISE RANGE OF PERCENTAGE FLY ASH UTILIZATION**

Sl. No.	Level of Fly Ash utilization	Nos. of Power Utilities
		1 st Half of the Year 2019-20
(1)	(2)	(3)
1	100% and more than 100%	39
2	Less than 100% and up to 90%	15
3	Less than 90% and up to 70%	17
4	Less than 70% and up to 50%	12
5	Less than 50%	9
6	No Generation	13
	TOTAL	105

2.3 State wise Status of Fly Ash Generation & its Utilization during the 1st half of the Year 2019-20

The state wise status of fly ash generation & utilization in the country based on data received from Thermal Power Stations / Power Utilities has also been assessed and the same is given in Table-IV :

TABLE-IV**STATE WISE FLY ASH GENERATION AND ITS UTILIZATION DURING THE 1ST HALF OF THE YEAR 2019-20**

Sl. No.	Name of State	No. of TPS	Installed Capacity (MW)	Fly Ash Generation (Million-tonne)	Fly Ash Utilization (Million-tonne)	Percentage Utilization %
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	ANDHRA PRADESH	10	13185.00	9.0634	8.4784	93.54
2	ASSAM	1	750.00	0.3360	0.1140	33.93
3	BIHAR	5	5490.00	4.6465	2.2438	48.29
4	CHHATTISGARH	30	25061.00	20.3120	15.6636	77.12
5	DELHI	2	840.00	0.0000	0.0000	0.00
6	GUJARAT	12	14682.00	3.2774	4.0872	124.71
7	HARYANA	5	5540.00	2.4664	3.2933	133.53
8	JHARKHAND	7	4897.50	3.5895	3.1687	88.28
9	KARNATAKA	6	9480.00	2.0139	1.6166	80.27
10	MADHYA PRADESH	12	18420.00	12.2636	6.0806	49.58
11	MAHARASHTRA	21	22806.00	11.4686	8.6489	75.41
12	ODISHA	10	11323.00	13.6990	11.3251	82.67
13	PUNJAB	5	4740.00	2.2028	2.7127	123.15
14	RAJASTHAN	7	6485.00	3.0142	3.1563	104.71

Sl. No.	Name of State	No. of TPS	Installed Capacity (MW)	Fly Ash Generation (Million-tonne)	Fly Ash Utilization (Million-tonne)	Percentage Utilization %
(1)	(2)	(3)	(4)	(5)	(6)	(7)
15	TAMIL NADU	17	13012.50	8.0916	7.8848	97.44
16	TELANGANA	7	4022.50	3.7899	2.2611	59.66
17	UTTAR PRADESH	19	21160.00	13.6262	7.8182	57.38
18	WEST BENGAL	18	14032.00	15.2317	12.3895	81.34
	GRAND TOTAL	194	195926.50	129.0928	100.9428	78.19

It may be seen from Table-IV above that:

- (i) 5 states namely Madhya Pradesh, Maharashtra, Odisha, Uttar Pradesh and West Bengal each have generated more than 10 million-ton of fly ash during the 1st half of the Year 2019-20. Maximum fly ash of more than 20 million-ton was generated in Chhattisgarh during the aforesaid period.
- (ii) During the 1st half of the Year 2019-20, Out of 18 states, Gujarat, Haryana, Punjab and Rajasthan have achieved the fly ash utilization level of more than 100% with Haryana reporting highest 133.53 % fly ash utilization.

3.0 PRESENT STATUS OF FLY ASH UTILIZATION AS PER MoEF & CC'S NOTIFICATION OF 3rd NOVEMBER, 2009

Fly ash generation and utilization data received from Thermal Power Stations / Power Utilities in the country for the 1st half of the year 2019-20 has been compiled to see the fly ash utilization vis-à-vis the target of fly ash utilization as prescribed in MoEF & CC's notification of 3rd November, 2009.

During the 1st half of the Year 2019-20, all those thermal power stations which were in operation on the date of issuance of MoEF & CC's notification (i.e. 3rd November, 2009) should have achieved the target of fly ash utilization of 100% within five years from the date of notification. All those thermal power stations which have come into operation after the date of issuance of MoEF & CC's notification (i.e. 3rd November, 2009) should have achieved the target of fly ash utilization of 100% within four years depending upon their date of commissioning. However, it is seen that the target set by MoEF & CC's notification has not been achieved by most of the Thermal Power Stations.

3.1 Range of Fly Ash Utilization during the 1st Half of the Year 2019-20

Based on the fly ash utilization data received from Thermal Power Stations / Power Utilities, the thermal power stations have been grouped into five categories as noted below depending upon range of utilization of fly ash by the stations.

TABLE - V**POWER STATION WISE RANGE OF PERCENTAGE FLY ASH UTILIZATION**

Sl. No.	Level of Fly Ash utilization	1 st Half of the Year 2019 - 20
(1)	(2)	(3)
1	100% and more than 100%	76
2	Less than 100% and up to 90%	22
3	Less than 90% and up to 70%	31
4	Less than 70% and up to 50%	20
5	Less than 50%	29
6	No Generation	16
	TOTAL	194

3.2 Thermal Power Stations that have achieved Fly Ash utilization level of 100% or more during the 1st half of the Year 2019-20

The following Thermal Power Stations, as given in Table – VI, have achieved the fly ash utilization level of 100% or more during the 1st half of the year 2019-20.

TABLE-VI**THERMAL POWER STATIONS WITH FLY ASH UTILIZATION LEVEL OF 100% OR MORE DURING THE 1st HALF OF THE YEAR 2019-20**

Sl No.	Name of TPS	Power Utility	Installed Capacity	Fly ash Generation	Fly ash Utilization	% age
			(Mega Watts)	(Million Tonnes)	(Million Tonnes)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Dr. NTR (Vijayawada)	APGENCO	1760	2.1179	2.1340	100.76
2	Indira Gandhi Super TPP Jhajjar	APCPL	1500.00	0.4011	0.5945	148.22
3	Kasai Pali	ACB (INDIA) LTD CHHATTISGARH	270.00	0.6136	0.6136	100.00
4	MUNDRA TPS	APL (Gujarat)	4620.00	0.3910	0.3979	101.76
5	ADANI DAHANU	ADANI ELECTRICITY MUMBAI LIMITED (Maharashtra)	500.00	0.2740	0.2851	104.04
6	CHAKABURA TPP	ACB (INDIA) Ltd. (Chhattisgarh)	30.00	0.0897	0.0897	100.00
7	CHAKABURA TPP (EXTN)	ACB (INDIA) Ltd. (Chhattisgarh)	30.00	0.0897	0.0897	100.00

SI No.	Name of TPS	Power Utility	Installed Capacity	Fly ash Generation	Fly ash Utilization	% age
			(Mega Watts)	(Million Tonnes)	(Million Tonnes)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
8	SVPPL Renki	ACB India Limited (Chhattisgarh)	60.00	0.1229	0.1229	100.00
9	ADHUNIK PNR LTD.	ADHUNIK POWER & NATURAL RESOURCES LIMITED (Jharkhand)	540.00	0.4939	0.4939	100.00
10	BARKHERA	BEPL (UP)	90.00	0.0240	0.0240	100.00
11	KHAMBER KHERA	BEPL (UP)	90.00	0.0208	0.0208	100.00
12	KUNDARKI	BEPL (UP)	90.00	0.0283	0.0283	100.00
13	MAQSOODAPUR	BEPL (UP)	90.00	0.0260	0.0260	100.00
14	UTRAULA	BEPL (UP)	90.00	0.0273	0.0273	100.00
15	BALCO CPP-II	Bharat Aluminium Company Ltd (BALCO) (Chhattisgarh)	540.00	0.4930	0.4933	100.05
16	BALCO CPP-III	Bharat Aluminium Company Ltd (BALCO) (Chhattisgarh)	1200.00	0.9664	0.9672	100.09
17	B.B.G.S.	C.E.S.C. (West Bengal)	750.00	0.6350	0.6350	100.00
18	S.G.S.	C.E.S.C. (West Bengal)	135.00	0.0530	0.0530	100.00
19	KORBA (EAST)	C.S.P.G.C.L (Chhattisgarh)	440.00	2.4526	2.5337	103.31
20	MUNDRA UMPP	CGPL (Gujarat)	4150.00	0.3700	0.5060	136.76
21	MUTIARA	COASTAL ENERGEN PVT. LTD (Tamil Nadu)	1200.00	0.0298	0.0300	100.65
22	DHARIWAL INFRASTRUCTURE Ltd.	Dhariwal Infrastructure Ltd. (Maharashtra)	600.00	0.3190	0.3190	100.00
23	SURAT LIGNITE	G.I.P.C.L. (Gujarat)	500.00	0.2649	0.2649	100.00
24	AKRIMOTA	G.M.D.C.L. (Gujarat)	250.00	0.1265	0.1478	116.78
25	GANDHINAGAR	G.S.E.C.L. (Gujarat)	630.00	0.2686	1.1118	413.92
26	KUTCH LIGNITE	G.S.E.C.L. (Gujarat)	290.00	0.1950	0.1950	100.00
27	SIKKA	G.S.E.C.L. (Gujarat)	500.00	0.0494	0.1246	252.23
28	BHAVNAGAR	G.S.E.C.L. (Gujarat)	500.00	0.0140	0.0140	100.00
29	PANIPAT	H.P.G.C.L.(Haryana)	920.00	0.3440	0.7120	206.98
30	HALDIA ENERGY LIMITED	HALDIA ENERGY LIMITED (W.B.)	600.00	5.5300	5.5300	100.00
31	IL & FS TNPC Ltd	IL & FS TAMIL NADU POWER COMPANY Ltd (Tamil Nadu)	1200.00	0.0697	0.0778	111.63

SI No.	Name of TPS	Power Utility	Installed Capacity	Fly ash Generation	Fly ash Utilization	% age
			(Mega Watts)	(Million Tonnes)	(Million Tonnes)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
32	INDIAN METALS & FERRO ALLOYS LTD.	INDIAN METALS & FERRO ALLOYS Ltd. (Odisha)	258.00	0.2213	0.2213	100.00
33	VIJAYANAGAR	JSW Energy Limited (Karnataka)	860.00	0.0628	0.0697	111.04
34	JAYPEE NIGRIE SUPER	JAIPRAKASH POWER VENTURES LIMITED (Madhya Pradesh)	1320.00	0.4900	0.5290	107.96
35	JAYPEE BINA	JAIPRAKASH POWER VENTURES LIMITED (Madhya Pradesh)	500.00	0.2787	0.2787	100.00
36	DONGAMAHUA CAPTIVE POWER PLANT	JINDAL STEEL AND POWER LIMITED (Chhattisgarh)	576.00	0.4297	0.4301	100.08
37	MAHATMA GANDHI	JHAJJAR POWER LIMITED(Haryana)	1320.00	0.8589	1.3942	162.33
38	BALLARI	K.P.C.L (Karnataka)	1700.00	0.3228	0.4032	124.90
39	MCCPL BANDHAKHAR	Maruti Clean Coal & Power Ltd (Chhattisgarh)	300.00	0.4030	0.4030	100.00
40	MAITHON RBTPP	MPL (Jharkhand)	1050.00	0.7397	0.8836	119.45
41	KMPCL-Nariyara	M/s KSK MAHANADI POWER COMPANY LIMITED (Chhattisgarh)	1800.00	0.9938	1.0387	104.52
42	THAMMINAPATNAM TPS	MEENAKSHI ENERGY Ltd.(Andhra Pradesh)	300.00	0.0014	0.0085	622.26
43	ANUPPUR	MB POWER(MADHYA PRADESH) LIMITED (Madhya Pradesh)	1200.00	0.9001	0.9026	100.28
44	NASHIK	M.S.P.G.C.L. (Maharashtra)	630.00	0.4837	0.5145	106.37
45	PARLI	M.S.P.G.C.L. (Maharashtra)	750.00	0.1503	1.3487	897.46
46	NEYVELI -I EXPN	N.L.C.LTD(Tamil Nadu)	420.00	0.0764	0.0764	100.00
47	NEYVELI - II	N.L.C.LTD(Tamil Nadu)	1470.00	0.3461	0.3462	100.02
48	NEYVELI - II EXPN	N.L.C.LTD (Tamil Nadu)	500.00	0.0498	0.0498	100.00
49	BARSINGSAR LIGNITE	N.L.C.LTD (Rajasthan)	250.00	0.0987	0.0987	100.00
50	NLC TAMILNADU POWER LTD.	NLC TAMILNADU POWER LIMITED (Tamil Nadu)	1000.00	0.4241	0.4241	100.00
51	VALLUR	NTECL (Tamil Nadu)	1500.00	0.9060	1.0710	118.21
52	FEROZE GANDHI UNCHAHR	N.T.P.C. LTD(U.P.)	1050.00	1.1580	1.1590	100.09

SI No.	Name of TPS	Power Utility	Installed Capacity	Fly ash Generation	Fly ash Utilization	% age
			(Mega Watts)	(Million Tonnes)	(Million Tonnes)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
53	TANDA	N.T.P.C.LTD (U.P.)	440.00	0.3370	0.7950	235.91
54	SIMHADRI	N.T.P.C.LTD (Andhra Pradesh)	2000.00	1.3380	1.9920	148.88
55	TALCHER(TPS)	N.T.P.C.LTD (Odisha)	460.00	0.5820	0.5884	101.10
56	BHILAI PP-III	NSPCL (Chhattisgarh)	500.00	0.3754	0.3981	106.03
57	OPG POWER GENERATION PVT LTD	OPG POWER GENERATION PVT LTD	414.00	0.0394	0.0394	100.00
58	LEHRA MOHABAT	P.S.P.C.L. (Punjab)	920.00	0.2373	0.2541	107.07
59	ROPAR	P.S.P.C.L. (Punjab)	840.00	0.2394	0.5420	226.41
60	BATHINDA	P.S.P.C.L. (Punjab)	460.00	0.2394	0.5420	226.41
61	SURATGARH TPS	RRVUNL (Rajasthan)	1500.00	0.6226	0.8594	138.03
62	KALISINDH	RRVUNL (Rajasthan)	1200.00	0.4397	0.5323	121.06
63	UCHPINDA	R K M POWERGEN PRIVATE LIMITED(Chhattisgarh)	1440.00	0.4242	0.4242	100.00
64	RINL CAPTIVE TPP, VISAKHAPATNAM	RASHTRIYA ISPAT NIGAM LTD., (AP)	315.00	0.3664	0.6823	186.24
65	RATIJA TPS	SPECTRUM COAL AND POWER LIMITED (Chhattisgarh)	100.00	0.2869	0.2869	100.00
66	JOJOBERA	T.P.CO. (Jharkhand)	547.50	0.0519	0.0598	115.20
67	SABARMATI	TORENT POWER Ltd. (Gujarat)	362.00	0.1762	0.1762	100.00
68	RAMAGUNDAM-B	TSGENCO (Telangana)	62.50	0.0646	0.0780	120.68
69	NORTH CHENNAI-II	T.N.G & D Corporation (Tamil Nadu)	1200.00	0.6176	0.6259	101.35
70	UDUPI	UPCL (Karnataka)	1200.00	0.0443	0.0478	107.90
71	VEDANTA TPP	VEDANTA LTD (ODISHA)	2400.00	2.8944	3.0231	104.45
72	VEDANTA CPP	VEDANTA LTD (ODISHA)	1215.00	2.8944	3.0231	104.45
73	BIKANER VS LIGNITE POWER PVT LTD	VS LIGNITE POWER PVT LTD (RAJASTHAN)	135.00	0.0705	0.0705	100.00
74	KOLAGHAT	W.B.P.D.C.L(W.B.)	1260.00	0.7997	0.9050	113.17
75	BANDEL	W.B.P.D.C.L (W.B.)	335.00	0.1964	0.2228	113.45
76	BAKRESWAR	W.B.P.D.C.L(W.B.)	1050.00	0.7533	0.9320	123.71

It may be seen from Table - VI above that:

During the 1st half of the Year 2019-20, **76** thermal power stations have achieved the fly ash utilization level of 100% or more, out of which 47 thermal power stations have achieved fly ash utilization level of more than 100%.

Fly ash utilization level of more than 100% indicates full utilization of fly ash generated during the period of report along with that from ash pond.

3.3 Thermal Power Stations with Fly Ash Utilization Level of 90% to less than 100% during the 1st half of the Year 2019-20

The names of Thermal Power Stations which have achieved the fly ash utilization in the range of 90% to less than 100% during the 1st half year 2019-20 along with fly ash utilization level achieved by each of these power stations are given in Table - VII below:

TABLE - VII

THERMAL POWER STATIONS WITH FLY ASH UTILIZATION LEVEL OF 90% TO LESS THAN 100% DURING THE 1st HALF OF THE YEAR 2019-20

SI No.	Name of TPS	Power Utility	Installed Capacity	Fly ash Generation	Fly ash Utilization	% age
			(Mega Watts)	(Million Tonnes)	(Million Tonnes)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	KAWAI	ADANI POWER RAJASTHAN Ltd. (Rajasthan)	1320.00	0.6693	0.6264	93.59
2	CHEMPLAST LTD TPS	CHEMPLAST SANMAR LTD (TAMIL NADU)	48.50	0.0116	0.0113	97.34
3	D.P.P.S.	D.P.L (West Bengal)	550.00	0.3453	0.3183	92.18
4	WANAKBORI	G.S.E.C.L. (Gujarat)	1470.00	0.7010	0.6490	92.58
5	JSW STEEL LTD CPP-II	JSW STEEL LTD (TAMIL NADU)	90.00	0.0074	0.0073	99.00
6	GMR KAMALANGA TPP	GMR KAMALANGA ENERGY Ltd. (Odisha)	1050.00	0.8591	0.8174	95.15
7	GMR WARORA ENERGY Ltd.	GMR WARORA ENERGY Ltd. (Maharashtra)	600.00	0.3980	0.3761	94.49
8	LALITPUR TPS	LALITPUR POWER GENERATION COMPANY LIMITED (UP)	1980.00	0.8799	0.8542	97.08
9	SANJAY GANDHI	M.P.P.G.C.L. (M.P.)	1340.00	0.9234	0.8955	96.99
10	AMARKANTAK	M.P.P.G.C.L. (M.P.)	210.00	0.1659	0.1560	94.03
11	BHUSAWAL	M.S.P.G.C.L (Maharashtra)	1210.00	0.8992	0.8648	96.17

SI No.	Name of TPS	Power Utility	Installed Capacity	Fly ash Generation	Fly ash Utilization	% age
			(Mega Watts)	(Million Tonnes)	(Million Tonnes)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
12	PARAS	M.S.P.G.C.L.(Maharashtra)	500.00	0.3382	0.3167	93.64
13	DADRI	N.T.P.C.LTD (U.P.)	1820.00	0.9770	0.9720	99.49
14	RAMAGUNDAM	N.T.P.C.LTD (Andhra Pradesh)	2600.00	1.9600	1.8081	92.25
15	MOUDA TPS	N.T.P.C.LTD (Maharashtra)	2320.00	1.3339	1.2450	93.34
16	PRAYAGRAJ	PRAYAGRAJ POWER GENERATION COMPANY LIMITED (Uttar Pradesh)	1980.00	0.8472	0.8471	99.99
17	JALIPA KAPURDI	JSW Energy (Barmer) Ltd. (Formerly Raj Westpower Ltd)	1080.00	0.4813	0.4610	95.78
18	TALWANDI SABO POWER LTD	TALWANDI SABO POWER LTD	1980.00	1.2300	1.1700	95.12
19	METTUR-I	T.N.G & D Corporation (Tamil Nadu)	840.00	0.5062	0.4651	91.89
20	METTUR-II	T.N.G & D Corporation (Tamil Nadu)	600.00	0.2279	0.2221	97.47
21	NORTH CHENNAI-I	T.N.G & D Corporation (Tamil Nadu)	630.00	4.0510	3.9292	96.99
22	PARICHHA	U.P.R.V.U.N.L. (U.P.)	1140.00	0.6578	0.6309	95.91

It may be seen from Table - VII above that **22** thermal power stations during the 1st half of the year 2019-20 have achieved fly ash utilization level in the range of 90% to less than 100%.

3.4 Thermal Power Stations with Fly Ash Utilization Level of 70% to less than 90% during the 1st half of the Year 2019-20

The Thermal Power Stations which have achieved the fly ash utilization in the range of 70% to less than 90% during the 1st half year 2019-20 along with fly ash utilization level achieved by each of these power stations are given in Table - VIII below:

TABLE - VIII**THERMAL POWER STATIONS WITH FLY ASH UTILIZATION LEVEL OF 70% TO LESS THAN 90% DURING THE 1st HALF OF THE YEAR 2019-20**

SI No.	Name of TPS	Power Utility	Installed Capacity	Fly Ash Generation	Fly Ash Utilization	% age
			(Mega Watts)	(Million Tonnes)	(Million Tonnes)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	TIRODA	ADANI POWER Ltd. (Maharashtra)	3300.00	2.3390	1.6703	71.41
2	BHADRESHWAR VIDYUT PVT LTD	BHADRESHWAR VIDYUT PVT LTD (Gujarat)	300.00	0.0218	0.0180	82.68
3	DB POWER, BADADARHA	DB POWER LTD	1200.00	1.1340	0.8260	72.84
4	BOKARO 'B'	D.V.C.(Jharkhand)	710.00	0.3969	0.3532	88.98
5	CHANDRAPURA	D.V.C.(Jharkhand)	630.00	0.5397	0.4537	84.06
6	DURGAPUR STEEL	D.V.C. (West Bengal)	1000.00	0.9250	0.6950	75.14
7	KODERMA	D.V.C. (Jharkhand)	1000.00	1.0140	0.7316	72.15
8	MAHAN	ESSAR POWER (MP) LTD.	1200.00	0.3920	0.3038	77.50
9	RAJIV GANDHI TPP HISAR	H.P.G.C.L.(Haryana)	1200.00	0.3196	0.2626	82.18
10	GMR Chhattisgarh	Raipur Energy Ltd., (Formerly GMR Chhattisgarh Energy Ltd.)	1370.00	0.4661	0.3448	73.98
11	GVK POWER (GOINDWALASAHIB) LTD	PSPCL (PUNJAB)	540.00	0.2568	0.2046	79.67
12	O.P.Jindal Super TPP (Stage-I)	JPL (Chhattisgarh)	1000.00	0.4930	0.4059	82.33
13	O.P.Jindal Super TPP(Stage-II)	JPL (Chhattisgarh)	2400.00	1.3650	1.0440	76.48
14	RATNAGIRI	JSW Energy Ltd (Maharashtra)	1200.00	0.1573	0.1356	86.25
15	AMARKANTAK	LANCO AMARKANTAK POWER LIMITED(Chhattisgarh)	600.00	0.4723	0.3892	82.39
16	KORBA	N.T.P.C.LTD (Chhattisgarh)	2600.00	2.5070	1.7780	70.92

SI No.	Name of TPS	Power Utility	Installed Capacity	Fly Ash Generation	Fly Ash Utilization	% age
			(Mega Watts)	(Million Tonnes)	(Million Tonnes)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
17	FARAKKA	N.T.P.C.LTD (W.B.)	2100.00	1.6780	1.2260	73.06
18	SOLAPUR	N.T.P.C.LTD (Maharashtra)	660.00	0.1090	0.0910	83.49
19	KUDGI	N.T.P.C.LTD (Karnataka)	2400.00	0.4240	0.3399	80.17
20	NALCO, CPP ANGUL	NATIONAL ALUMINIUM COMPANY LIMITED (NALCO) (Odisha)	1200.00	1.3097	0.9292	70.95
21	CHHABRA	RRVUNL (Rajasthan)	1000.00	0.6322	0.5081	80.37
22	AMARAVATI TPS	RATTAN INDIA POWER LTD	1350.00	0.4516	0.3644	80.68
23	ROSA PHASE-I	RPSC(L.U.P)	1200.00	0.7733	0.5457	70.56
24	SEBPCORP ENERGY INDIA LIMITED	SEBPCORP ENERGY INDIA LIMITED (Andhra Pradesh)	1320.00	0.5697	0.4197	73.68
25	BINJKOTE TPP	SKS POWER GENERATION (CHHATTISGARH)	600.00	0.6078	0.5366	88.29
26	CUDDALORE	TAQA Neyveli Power Co. Pvt. Ltd. (Tamil Nadu)	250.00	0.0416	0.0367	88.32
27	SINGARENI	THE SINGARENI COLLIERIES COMPANY LIMITED (Telangana)	1200.00	1.1937	0.9461	79.25
28	TROMBAY	T.P.CO.(Maharashtra)	750.00	0.0252	0.0195	77.38
29	KAKATIYA (Stage-I)	TSGENCO (Telangana)	500.00	0.3654	0.3286	89.94
30	KAKATIYA (Stage-II)	TSGENCO (Telangana)	600.00	0.4528	0.4017	88.72
31	HARDUAGANJ	U.P.R.V.U.N.L. (U.P.)	610.00	0.4623	0.4035	87.29

It may be seen from Table - VIII above that **31** thermal power stations during the 1st half of the year 2019-20 have achieved fly ash utilization level in the range of 70% to less than 90%.

3.5 Thermal Power Stations with Fly Ash Utilization Level of 50% to less than 70% during the 1st half of the Year 2019-20

The Thermal Power Stations which have achieved the fly ash utilization in the range of 50% to less than 70% during the 1st half of the year 2019-20 along with fly ash utilization level achieved by each of these power stations are given in Table - IX below:

TABLE - IX

THERMAL POWER STATIONS WITH FLY ASH UTILIZATION LEVEL OF 50% TO LESS THAN 70% DURING THE 1ST HALF OF THE YEAR 2019-20.

SI No.	Name of TPS	Power Utility	Installed Capacity	Fly Ash Generation	Fly Ash Utilization	% age
			(Mega Watts)	(Million Tonnes)	(Million Tonnes)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	RAYALSEEMA	A.P.GENCO (Andhra Pradesh)	1650.00	1.4866	0.9514	64.00
2	KORBA (WEST)	C.S.P.G.C.L (Chhattisgarh)	1340.00	1.2848	0.8312	64.70
3	MARWA TENDUBHATA	C.S.P.G.C.L (Chhattisgarh)	1000.00	0.6860	0.3990	58.16
4	UKAI	G.S.E.C.L. (Gujarat)	1110.00	0.6990	0.4820	68.96
5	YAMUNANAGAR	H.P.G.C.L.(Haryana)	600.00	0.5428	0.3300	60.79
6	DERANG TPP	JINDAL INDIA THERMAL POWER LIMITED (Odisha)	1200.00	0.8135	0.5259	64.65
7	JHABUA POWER LIMITED	JHABUA POWER LIMITED (MP)	600.00	0.2990	0.1728	57.79
8	RAICHUR	K.P.C.L.(Karnataka)	1720.00	1.1600	0.7560	65.17
9	MUZAFFARPUR	KANTI BIJLEE UTPADAN NIGAM LIMITED (Bihar)	610.00	0.4612	0.2827	61.29
10	SATPURA	M.P.P.G.C.L. (M.P.)	1330.00	0.7031	0.4269	60.72
11	NEYVELI - I	N.L.C.LTD(Tamil Nadu)	600.00	0.0923	0.0578	62.63
12	DURGAPUR CAPTIVE POWER PLANT	NSPCL (West Bengal)	120.00	0.0949	0.0489	51.51
13	BARH SUPER TPS	N.T.P.C.LTD (Bihar)	1320.00	1.2570	0.6510	51.79

SI No.	Name of TPS	Power Utility	Installed Capacity	Fly Ash Generation	Fly Ash Utilization	% age
			(Mega Watts)	(Million Tonnes)	(Million Tonnes)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
14	TALCHER Super Thermal	N.T.P.C.LTD(Odisha)	3000.00	3.4360	1.8360	53.43
15	CPP-II ROURKELA	NSPCL	120.00	0.2457	0.1669	67.91
16	TENUGHAT TPS	TENUGHAT VIDHYUT NIGAM LIMITED (Jharkhand)	420.00	0.3535	0.1929	54.59
17	KOTHAGUDEM-VI	TSGENCO (Telangana))	500.00	0.3908	0.2669	68.28
18	TUTICORIN	T.N.G & D Corporation (Tamil Nadu)	1050.00	0.5948	0.4146	69.71
19	RAIGARH TPP	TRN ENERGY PRIVATE LIMITED (Chhattisgarh)	600.00	0.4792	0.3048	63.61
20	SAGARDIGHI	W.B.P.D.C.L(W.B.)	1600.00	0.7882	0.4724	59.94

It may be seen from Table - IX above that **20** thermal power stations during the 1st half year 2019-20 have achieved fly ash utilization level of 50% to less than 70%.

3.6 Power Stations with Fly Ash Utilization Level of less than 50% during the 1st half of the Year 2019-20

The Thermal Power Stations which have achieved the fly ash utilization level of less than 50% during the 1st half year 2019-20 along with fly ash utilization level achieved by each of these power stations are given in Table – X :

TABLE - X

THERMAL POWER STATIONS WITH FLY ASH UTILIZATION LEVEL OF LESS THAN 50% DURING THE 1st HALF OF THE YEAR 2019-20

SI No.	Name of TPS	Power Utility	Installed Capacity	Fly Ash Generation	Fly Ash Utilization	% age
			(Mega Watts)	(Million Tonnes)	(Million Tonnes)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	SRI DAMODARAM SANJEEVAIAH	APPDCL (Andhra Pradesh)	1600.00	0.7990	0.3110	38.92
2	NABINAGAR	BHARATIYA RAIL BIJLEE COMPANY LTD (Bihar)	1000.00	0.5270	0.2347	44.54
3	Dr. Shyama Prasad Mukherjee TPS (DSPM)	C.S.P.G.C.L (Chhattisgarh)	500.00	0.5214	0.0696	13.34

SI No.	Name of TPS	Power Utility	Installed Capacity	Fly Ash Generation	Fly Ash Utilization	% age
			(Mega Watts)	(Million Tonnes)	(Million Tonnes)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
4	DURGAPUR	D.V.C.(West Bengal)	210.00	0.1000	0.0064	6.36
5	MEJIA	D.V.C.(West Bengal)	2340.00	2.1317	1.0390	48.74
6	RAGHUNATHPUR	D.V.C. (West Bengal)	1200.00	0.7106	0.0677	9.52
7	HINDUJA NATIONAL POWER COPORATION TPP (Vizag)	HINDUJA NATIONAL POWER COPORATION LIMITED (Andhra Pradesh)	1040.00	0.4245	0.1713	40.36
8	ANPARA-C TPP	LANCO ANPARA POWER LTD (UTTAR PRADESH)	1200.00	0.9280	0.2038	21.96
9	MEJA TPP	MEJA URJA NIGAM PVT LTD (UTTAR PRADESH)	660.00	0.2496	0.0000	0.02
10	SHREE SINGAJI TPS	M.P.P.G.C.L. (M.P.)	1200.00	1.1285	0.1334	11.82
11	KHAPARKHEDA	M.S.P.G.C.L. (Maharashtra)	1340.00	1.3383	0.2785	20.81
12	KORADI	M.S.P.G.C.L. (Maharashtra)	2400.00	1.1971	0.2740	22.89
13	CHANDRAPUR SUPER TPP	M.S.P.G.C.L.(Maharashtra)	2920.00	1.6548	0.5258	31.77
14	SINGRAULI	N.T.P.C.LTD (U.P.)	2000.00	1.6710	0.5350	32.02
15	RIHAND	N.T.P.C.LTD (U.P.)	3000.00	1.8600	0.5960	32.04
16	VINDHYACHAL	N.T.P.C.LTD (M.P.)	4760.00	4.6510	1.2670	27.24
17	GADARWARA	N.T.P.C.LTD (M.P.)	800.00	0.1750	0.0013	0.77
18	SIPAT	N.T.P.C.LTD (Chhattisgarh)	2980.00	2.3870	0.7490	31.38
19	KAHALGAON	N.T.P.C.LTD(Bihar)	2340.00	2.3860	1.0740	45.01
20	BONGAIGAON	N.T.P.C.LTD (Assam)	750.00	0.3360	0.1140	33.93
21	BARAUNI	NTPC Ltd - BSPGCL (JV) (Bihar)	220.00	0.0153	0.0014	8.94
22	BHILAI PP-II	NSPCL (Chhattisgarh)	74.00	0.0882	0.0338	38.35
23	IB VALLEY	O.P.G.C.L.(Odisha)	420.00	0.4430	0.1937	43.73
24	SASAN UMPP	RELIANCE POWER LTD (Madhya Pradesh)	3960.00	2.1569	1.0135	46.99
25	KOTHAGUDEM-V	TSGENCO (Telangana)	500	0.7439	0.0621	8.35

SI No.	Name of TPS	Power Utility	Installed Capacity	Fly Ash Generation	Fly Ash Utilization	% age
			(Mega Watts)	(Million Tonnes)	(Million Tonnes)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
26	KOTHAGUDEM-I to IV	TSGENCO (Telangana)	660.00	0.5786	0.1777	30.71
27	ANPARA 'A' & 'B'	U.P.R.V.U.N.L. (U.P.)	2630.00	2.1141	0.1138	5.38
28	OBRA	U.P.R.V.U.N.L. (U.P.)	1000.00	0.5846	0.0356	6.09
29	SANTALDIH	W.B.P.D.C.L (W.B.)	500.00	0.4905	0.2381	48.54

It may be seen from Table - X above that :

During the 1st half of the year 2019-20, out of **194** thermal power stations, **29** stations achieved the level of fly ash utilization to less than 50%.

3.7 Power Stations with no fly ash Generation during the 1st half of the Year 2019-20

The Thermal Power Stations, which have no fly ash generation during the 1st half year 2019-20 along with the details of these power stations are given in Table – XI :

TABLE - XI

LIST OF THERMAL POWER STATIONS WITH NO FLY ASH GENERATION DURING THE 1st HALF OF THE YEAR 2019-20

SI. No.	Name of TPS	Power Utility	Installed Capacity	Fly Ash Generation	Fly Ash Utilization	% age
			(Mega Watts)	(Million Tonnes)	(Million Tonnes)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	MIHAN	AMNEPL (Maharashtra) (No Generation)	246.00	TPS is under shut down condition since 5.11.2013		
2	T.G.S.	C.E.S.C. (West Bengal) (No Generation)	240.00	TPS is under shut down condition since 9.1.2016		
3	CHINAKURI	EASTERN COALFIELDS LIMITED (West Bengal) (No Generation)	30.00	TPS is not operational since October 2011		
4	GEPL TPP	GUPTA ENERGY Pvt. Ltd. (Maharashtra) (No Generation)	120.00	TPP is under shutdown since June 2013		

Sl. No.	Name of TPS	Power Utility	Installed Capacity	Fly Ash Generation	Fly Ash Utilization	% age
			(Mega Watts)	(Million Tonnes)	(Million Tonnes)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
5	RAJGHAT	IPGCL (Delhi) (No Generation)	135.00	TPS is not operational since 21.5.2015		
6	DISHERGARH TPS	INDIA POWER CORPORATION LIMITED(West Bengal)	12.00	TPS is not operational		
7	BELA TPS	IDEAL ENERGY PROJECTS Ltd.(Maharashtra)	270.00	TPS is not operational		
8	BADARPUR	N.T.P.C.LTD (Delhi)	705.00	TPS is not operational		
9	Lara Super TPP	N.T.P.C LTD	800.00	TPS is not operational		
10	YERAMARUS TPS	RAICHUR POWER CORPORATION LIMITED (Karnataka)	1600.00	TPS is not operational		
11	KORBA TPS	RAIGARH ENERGY GENERATION LTD	600.00	TPS is not operational		
12	SAI LILAGARH POWER GENERATION LTD	SAI LILAGARH POWER GENERATION LTD (Chhattisgarh)	86.00	TPS is not operational		
13	SIMHAPURI	SIMHAPURI ENERGY LIMITED (Andhra Pradesh)	600.00	TPS is not operational		
14	SWASTIK POWER & MINERALS RESOURCES PVT. LTD.	SWASTIK POWER & MINERALS RESOURCES PVT. LTD (Chhattisgarh) (No Generation)	25.00	TPS is not operational		
15	BUTIBORI	VIDARBHA INDUSTRIES POWER LIMITED (Maharashtra)	600.00	TPS is not operational		
16	SAI WARDHA POWER Ltd. WARORA	WPCL (Maharashtra)	540.00	TPS is not operational		

4.0 MODES OF FLY ASH UTILIZATION DURING THE 1st HALF OF THE YEAR 2019-20

The data on fly ash utilization received from Thermal Power Stations / Power Utilities for the 1st half of the year 2019-20 has been compiled to ascertain the modes in which fly ash was utilized and the quantity utilized in each mode.

The modes in which fly ash were utilized during the 1st half year 2019-20 along with utilization in each mode are given in Table – XII :

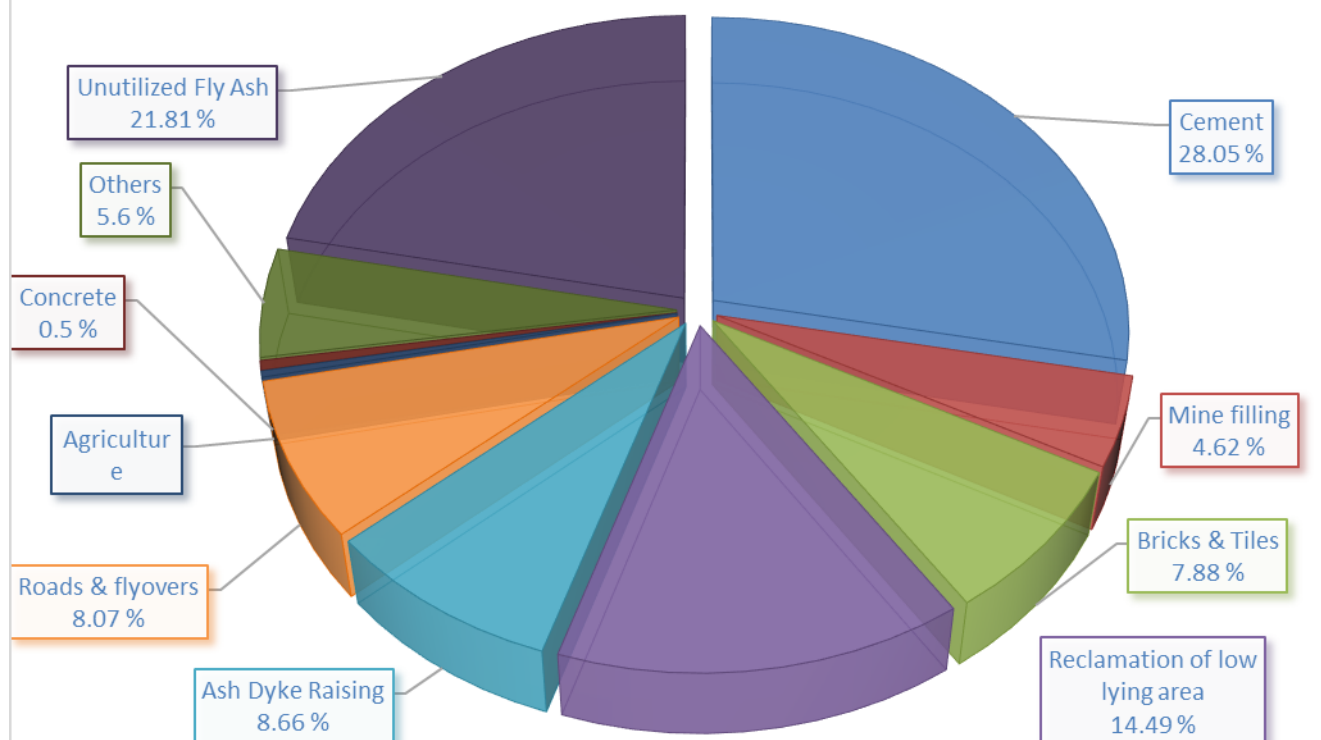
TABLE - XII

MODES OF FLY ASH UTILIZATION DURING THE 1st HALF OF THE YEAR 2019-20

Sl. No.	Mode of utilization	Quantity of Fly Ash utilized in the mode of utilization	
		Million Tonnes	Percentage (%)
(1)	(2)	(3)	(4)
1	Cement	36.2076	28.05
2	Mine filling	5.9697	4.62
3	Bricks & Tiles	10.1767	7.88
4	Reclamation of low lying area	18.6902	14.48
5	Ash Dyke Raising	11.1752	8.66
6	Roads & flyovers	10.4229	8.07
7	Agriculture	0.4151	0.32
8	Concrete	0.6502	0.50
9	Hydro Power Sector	0.0000	0.00
10	Others	7.2350	5.60
11	Unutilized Fly Ash	28.1502	21.81
	Total	129.0929	100.00

The pie diagram showing the modes of utilization of fly ash during the 1st half of the Year 2019-20 is given in Figure-1 below:

MAJOR MODES OF FLY ASH UTILIZATION DURING 1ST HALF OF THE YEAR 2019-20



It may be seen from Table - XII and Figure -1 above that :

During the 1st half of the Year 2019-20, the maximum utilization of fly ash to the extent of 28.05 % of total fly ash utilized was in the Cement sector, followed by 14.48 % in reclamation of low lying area, 8.66 % in ash dyke raising, 8.07 % in roads & embankments, 7.88 % in Bricks & Tiles, 5.6 % in others, 4.62 in Mine Filling etc., and 21.81 % Fly Ash remain Unutilized.

5.0 CONCLUSIONS & RECOMMENDATIONS

1. The highest level of fly ash utilization of about 78.19 % is achieved in the current 1st Half year 2019-20 and it was about 68.72 % in the 1st Half year of 2018-19, 60.38% in the 1st half year of 2017-18, 57.93% in the 1st half year 2016-17, 56.04 % in the 1st half year 2015-16 and 53.01 % in the 1st half year 2014-15.
2. The utilization of fly ash is in the range of 7 to 28 % in making fly ash based building products, in mine filling it is less than 5 %, in the construction of roads & flyover it is around 8 %. These areas have large potential of fly ash utilization which needs to be explored for increasing the overall utilization of fly ash in the country.

3. A Web page has been developed for Fly Ash Generation & its Utilization and Mobile App 'ASH TRACK' has been launched by Ministry of Power as an interface between TPS and potential users.
4. A few strategies which need to be adopted to further increase the utilization level of fly ash are given below:
 - Renovation and modernization of coal / lignite based Thermal Power Station needs to include the technological advancement required to ensure development of dry fly ash collection, storage and disposal facilities so that fly ash in dry form could be made available to its users. Renovation and modernization should also include a marketing strategy for the development of fly ash based industries and making available fly ash and fly ash based building products in the nearby markets.
 - The states and districts where thermal power stations are located need to be sensitized to the need for utilization of fly ash and fly ash based building products and take necessary measures to promote them in the construction of buildings, highways / roads / flyovers and other infrastructure projects. Measures can include policy intervention, planning strategies, fiscal incentives, recognizing specific efforts etc.
 - Use of fly ash based building products like fly ash based bricks, blocks, tiles etc. by both Govt. and Public & Private Construction agencies at Central and State levels is required to be ensured especially in construction works within a radius of 300 km of any coal / lignite based thermal power station as mandated in MoEF & CC's Notification of 25th January, 2016. The government agencies responsible for approval of building plans may have to ensure stipulation of a condition in their approval to the effect that only fly ash based building products like bricks / blocks / tiles etc shall be used in the construction of buildings as prescribed in MoEF & CC's Notification of 25th January, 2016 within a prescribed distance from any thermal power station especially in the construction of large office / commercial buildings and housing projects being developed both in government and private sectors.

- Use of fly ash in the construction of roads, road embankments and flyovers is well established and is slowly picking up. However, its potential is yet to be fully utilized. The use of fly ash in these projects within a radius of 300 km of any thermal power station as mandated in MoEF & CC's Notification of 25th January, 2016 has to be ensured right from project formulation stage and included in tender documents by having a prior tie up with the concerned thermal power station for their requirement. There is a need to sensitize National Highway Authority of India, CPWD, State PWDs and other agencies both at Central and State levels that are involved in the construction of highways, roads, flyovers etc. in this regard.
- Use of fly ash in backfilling / stowing of closed / abandoned / running open cast and underground mines has large potential for utilization of fly ash, especially for pit head thermal power stations which otherwise have limited avenues for fly ash utilization. However, its potential is yet to be fully utilized. The use of fly ash in back filling/stowing of open cast and underground mines within a radius of 50 km of any thermal power station as mandated in MoEF & CC's Notification of 3rd November, 2009 has to be ensured right from initial stage of preparation of mine development plan. Inclusion of fly ash and bottom ash as backfill materials in the guidelines for preparation of mine closure plan is required for which Ministry of Coal and other concerned Ministries / Authorities have to take necessary action. There are environmental and safety concerns for use of fly ash along with overburden (OB) material for back filling of operating open cast mines. These concerns need to be addressed.
- Use of fly ash in the construction of embankments for laying railway lines has also significant potential for large scale utilization of fly ash. There are safety concerns in use of fly ash in the construction of railway embankments having passenger traffic. There is a need to address these concerns by carrying out necessary studies by organizations like Railway Design & Standards Organization (RDSO), a research organization under the Ministry of Railways.
- Thermal Power Stations may ensure the utilization of fly ash and fly ash based building products within the thermal power station for the development of infrastructure like construction of buildings & roads, reclamation of low lying areas, the raising of ash dyke etc.
- The use of fly ash in Agriculture and waste land development has large potential but the utilization is below expectation. This may be attributed mainly to reservations in various

quarters for use of fly ash in agriculture because of presence of heavy metals and radioactive elements in fly ash however, findings of research projects funded by Fly Ash Unit under Ministry of Science & Technology and studies carried out by other organizations indicate that there are no adverse effects in using fly ash in agriculture. Therefore, these concerns are required to be addressed for increasing the fly ash utilization.

- Thermal Power Stations may explore and promote all possible modes of fly ash utilization at their respective thermal power station for increasing the fly ash utilization in the country in line with MoEF & CC's notifications of 3rd November, 2009 and 25th January 2016.
- There is a need to encourage 'Industry–Institute Interactions' for entrepreneur development, creating awareness and organizing training programmes and workshops.
- New emerging areas such as Light Weight Aggregates and Geo-polymers, Coal Beneficiation-Blending and Washing, etc. needs to focus for higher utilization of fly ash in the country.
- In view of large quantity of fly ash generation, utilization of fly ash may be introduced as construction material in academic curriculum of Engineering, Architecture, Mining, Agriculture etc.

* * *

ABBREVIATIONS

1. CEA : Central Electricity Authority
2. MoEF & CC : Ministry of Environment, Forest & Climate Change
3. MW : Mega Watt
4. MoP : Ministry of Power
5. MT : Million-Ton
6. TPS : Thermal Power Stations
7. APGENCO : Andhra Pradesh generation Corporation Ltd.
8. ACBPL : Aryan Coal Beneficiation Private Ltd.
9. APL : Adani Power Ltd.,
10. APCPL : Aravali Power Corporation Pvt.Ltd.
11. AMNEPL : Abhijeet MADC Nagpur energy Pvt. Ltd.
12. BEPL : Bajaj Energy Pvt. Ltd.
13. BSEB : Bihar State Electricity Supply Company
14. BRBCL : Bhartiya Rail Bijlee Company Limited
15. CESC : Calcutta Electric Supply Company
16. CGPL : Coastal Gujarat Power Ltd.
17. CSPGCL : Chhattisgarh State Power Generation Company Ltd.
18. DVC : Damodar Valley Corporation
19. DPL : Durgapur Project Ltd.
20. DPSC : Dishengardh Power Supply Company Ltd.
21. EPGL : Essar Power Gujarat Ltd.
22. GIPCL : Gujarat Industries Power Corporation Ltd.
23. GMDCL : Gujarat Mineral Development Corporation Ltd.
24. GSECL : Gujarat State Electric Corporation Ltd.

25. HPGCL : Haryana Power Generation Company Ltd.
26. IPGCL : Indraprastha Power Generation Company Ltd.
27. JSEB : Jharkhand State Electricity Board.
28. JHPL : Jhajjar Power Ltd.
29. JPL : Jindal Power Ltd.
30. JSW : Jindal Steel Works
31. KPCL : Karnataka Power Corporation Ltd.
32. KBUNL : Kanti Bijlee Utpadan Nigam Ltd.
33. MPPGCL : Madhya Pradesh Power Generating Company Ltd.
34. MPL : Maithon Power Ltd.
35. MSPGCL : Maharashtra State Power Generating Company Ltd.
36. NLC : Neyveli Lignite Corporation
37. NSPCL : NTPC -SAIL Power Corporation Ltd.
38. NTPC : National thermal Power Corporation
39. NTECL : NTPC – Tamilnadu Electric Company Ltd.
40. OPGCL : Odisha Power Generation Corporation Ltd.
41. PSPCL : Punjab State Power Corporation Ltd.
42. RRVUNL : Rajasthan Rajya Vidyut Utpadan Nigam Ltd.
43. RIL : Reliance Infrastructure Ltd.
44. RPSCL : Rosa Power Supply Company Ltd.
45. RWPL : Raj West Power Ltd.
46. SEL : Sterlite energy Ltd.
47. SVPPL : Shri Vardhman Power Pvt. Ltd.
48. ST-CMS : ST-CMS
49. TPCO : Tata Power Company Ltd.

50. TUNL	:	Tenunghat Vidyut Nigam Ltd.
51. TNG&D	:	Tamil Nadu Generating and Distribution Corporation Ltd.
52. UPCL	:	Udupi Power Company Ltd.
53. UPRVUNL	:	Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd.
54. VESPL	:	Vandana Energy Supply Power Ltd.
55. WBPDC	:	West Bengal Power Development Corporation Ltd.
56. WPCL	:	Wardha Power Company Ltd.
57. GEPL	:	Gupta Power Company Ltd.
58. VIP	:	Vidharbha Industries Power Ltd.
59. EPL	:	Essar Power Ltd.
60. ACB	:	Aryan Coal Beneficiary Ltd.
61. AP	:	Andhra Pradesh
62. MP	:	Madhya Pradesh
63. TN	:	Tamil Nadu
64. UP	:	Uttar Pradesh
65. WB	:	West Bengal
66. OB	:	Overburden
67. RDSO	:	Research Designs & Standards Organization

FLY ASH GENERATION AND ITS UTILIZATION AT COAL / LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE 1ST HALF YEAR 2019-20 (APRIL-2019 TO SEPTEMBER - 2019)(POWER UTILITY WISE)

SI No.	Name of TPS	Power Utility & State	Installed Capacity	Coal Consumed	Ash Content of coal	Fly Ash Generation	Fly Ash Utilization	Percentage Utilization	In making of Fly Ash based/Brick/Blocks/Tiles etc.	In manufacture of portland pozzolana cement	In construction of Highways & Roads including flyovers	Part replacement of cement in concrete	In Hydro power sector in RCC Dam construction	In Ash Dyke raising	In reclamation of low lying Area	In Mining filling	In agriculture /waste land Development	Others	Total Utilization
			(MW)	(MT)	%age (7)/(5)x100	(MT)	(MT)	%age (8)/(7)x100	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1	Dr. N.T.R (Vijawada)	A.P.GENCO (Andhra Pradesh)	1760	4.6216	45.83	2.1179	2.1340	100.76	1.1985	0.6121	0.1699	0.0498	0.0000		0.0303			0.0732	2.1340
2	RAYALSEEMA	A.P.GENCO (Andhra Pradesh)	1650	3.2741	45.47	1.4866	0.9514	64.00	0.2194	0.7321									0.9514
3	SRI DAMODARAM SANJEEVAIAH	APPDCL (Andhra Pradesh)	1600	2.7030	29.56	0.7990	0.3110	38.92	0.0995	0.2047				0.0068					0.3110
4	INDIRA GANDHI SUPER TPP, JHAJJAR	APCPL	1500	1.2675	31.65	0.4011	0.5945	148.20	0.2829	0.3116									0.5945
5	KASAI PALI	ACB (INDIA) LTD CHHATTISGARH	270	1.0667	57.52	0.6136	0.6136	100.00	0.0432	0.0014					0.5680			0.0010	0.6136
6	MUNDRA TPS	APL (Gujarat)	4620	8.4590	4.62	0.3910	0.3979	101.76	0.0000	0.2090	0.0000				0.0840			0.1049	0.3979
7	TIRODA	ADANI POWER Ltd. (Maharashtra)	3300	7.3280	31.92	2.3390	1.6703	71.41	0.0211	0.0123	0.0195			0.0403	0.4066	0.0007	0.0043	1.1655	1.6703
8	KAWAI	ADANI POWER RAJASTHAN Ltd. (Rajasthan)	1320	2.1929	30.52	0.6693	0.6264	93.59	0.0057	0.5276					0.0931				0.6264
9	ADANI DAHANU	ADANI ELECTRICITY MUMBAI LIMITED (Maharashtra)	500	1.0340	26.50	0.2740	0.2851	104.04	0.0001			0.1420		0.0350				0.1080	0.2851
10	MIHAN	AMNEPL (Maharashtra) (No Generation)	246	0.0000	0.00	0.0000	0.0000	#DIV/0!											0.0000
11	CHAKABURA TPP	ACB (INDIA) Ltd. (Chhattisgarh)	30	0.1631	55.00	0.0897	0.0897	100.00	0.0066						0.0831				0.0897
12	CHAKABURA TPP (EXTN)	ACB (INDIA) Ltd. (Chhattisgarh)	30	0.1631	55.00	0.0897	0.0897	100.00	0.0066						0.0831				0.0897
13	SVPPL Renki	ACB India Limited (Chhattisgarh)	60	0.2118	58.00	0.1229	0.1229	100.00	0.0000					0.0000	0.1229				0.1229
14	ADHUNIK PNR LTD.	ADHUNIK POWER & NATURAL RESOURCES LIMITED (Jharkhand)	540	1.1321	43.63	0.4939	0.4939	100.00	0.0340	0.1255				0.0000	0.3345				0.4939
15	BARKHERA	BEPL (UP)	90	0.0613	39.08	0.0240	0.0240	100.00	0.0014	0.0000					0.0226				0.0240
16	KHAMBER KHERA	BEPL (UP)	90	0.0522	39.80	0.0208	0.0208	100.00	0.0019	0.0103					0.0086				0.0208
17	KUNDARKI	BEPL (UP)	90	0.0726	38.95	0.0283	0.0283	100.00	0.0014	0.0175					0.0094				0.0283
18	MAQSOODAPUR	BEPL (UP)	90	0.0681	38.20	0.0260	0.0260	100.00	0.0010	0.0000					0.0250				0.0260
19	UTRAULA	BEPL (UP)	90	0.0751	36.39	0.0273	0.0273	100.00	0.0016	0.0151					0.0106				0.0273
20	BHADRESHWAR VIDYUT PVT LTD	BHADRESHWAR VIDYUT PVT LTD (Gujarat)	300	0.5337	4.09	0.0218	0.0180	82.68										0.0180	0.0180
21	NABINAGAR	BHARATIYA RAIL BIJLEE COMPANY LTD (Bihar)	1000	1.4529	36.27	0.5270	0.2347	44.54	0.0050	0.1543								0.0754	0.2347
22	BALCO CPP-II	Bharat Aluminium Company Ltd (BALCO) (Chhattisgarh)	540	1.2744	38.69	0.4930	0.4933	100.05	0.0048						0.1331	0.0201		0.3353	0.4933
23	BALCO CPP-III	Bharat Aluminium Company Ltd (BALCO) (Chhattisgarh)	1200	2.6215	36.86	0.9664	0.9672	100.09	0.0071					0.0095	0.6505	0.0167		0.2833	0.9672
24	B.B.G.S.	C.E.S.C. (West Bengal)	750	1.8710	33.94	0.6350	0.6350	100.00	0.0230	0.5300	0.0040	0.0000		0.0000	0.0780				0.6350
25	S.G.S.	C.E.S.C. (West Bengal)	135	0.1730	30.64	0.0530	0.0530	100.00	0.0120	0.0340	0.0000	0.0000			0.0070				0.0530

FLY ASH GENERATION AND ITS UTILIZATION AT COAL / LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE 1ST HALF YEAR 2019-20 (APRIL-2019 TO SEPTEMBER - 2019)(POWER UTILITY WISE)

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			(MW)	(MT)	%age (7)/(5)x100	(MT)	(MT)	%age (8)/(7)x100	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
51	UKAI	G.S.E.C.L. (Gujarat)	1110	1.8850	37.08	0.6990	0.4820	68.96	0.2400	0.1740	0.0000	0.0000						0.0680	0.4820
52	WANAKBORI	G.S.E.C.L. (Gujarat)	1470	2.0170	34.75	0.7010	0.6490	92.58	0.1000	0.3970			0.0140					0.1380	0.6490
53	BHAVNAGAR	G.S.E.C.L. (Gujarat)	500	0.1170	11.97	0.0140	0.0140	100.00	0.0100							0.0040			0.0140
54	GEPL TPP	GUPTA ENERGY Pvt. Ltd. (Maharashtra) (No Generation)	120	0.0000	#DIV/0!	0.0000	0.0000	#DIV/0!											0.0000
55	RAJIV GANDHI TPP HISAR	H.P.G.C.L.(Haryana)	1200	0.8197	38.99	0.3196	0.2626	82.18	0.0370	0.1158	0.1079	0.0019							0.2626
56	JSW STEEL LTD CPP-II	JSW STEEL LTD (TAMIL NADU)	90	0.0667	11.13	0.0074	0.0073	99.00	0.0073										0.0073
57	GMR Chhattisgarh	Raipur Energy Ltd., (Formerly GMR Chhattisgarh Energy Ltd.)	1370	1.6312	28.57	0.4661	0.3448	73.98	0.0382	0.3054	0.0012					0.0000			0.3448
58	GMR KAMALANGA TPP	GMR KAMALANGA ENERGY Ltd. (Odisha)	1050	2.1748	39.50	0.8591	0.8174	95.15	0.3369	0.0115	0.3797			0.0756			0.0137		0.8174
59	GMR WARORA ENERGY Ltd.	GMR WARORA ENERGY Ltd. (Maharashtra)	600	1.3287	29.96	0.3980	0.3761	94.49	0.0308	0.1673	0.1780								0.3761
60	GVK POWER (GOINDWALASAHIB) LTD	PSPCL (PUNJAB)	540	0.7584	33.86	0.2568	0.2046	79.67		0.2046									0.2046
61	YAMUNANAGAR	H.P.G.C.L.(Haryana)	600	1.3660	39.74	0.5428	0.3300	60.79	0.1715	0.1585									0.3300
62	PANIPAT	H.P.G.C.L.(Haryana)	920	0.9000	38.22	0.3440	0.7120	206.98	0.0450	0.5170	0.0220			0.0950				0.0330	0.7120
63	HINDUJA NATIONAL POWER COPORATION TPP (Vizag)	HINDUJA NATIONAL POWER COPORATION LIMITED (Andhra Pradesh)	1040	1.1567	36.70	0.4245	0.1713	40.36	0.0685	0.0834	0.0000							0.0195	0.1713
64	HALDIA ENERGY LIMITED	HALDIA ENERGY LIMITED (W.B.)	600	16.3700	33.78	5.5300	5.5300	100.00	0.1000	5.0300	0.0000							0.4000000	5.5300
65	RAJGHAT	IPGCL (Delhi) (No Generation)	135	0.0000	0.00	0.0000	0.0000	#DIV/0!	0.0000	0.0000	0.0000								0.0000
66	IL & FS TNPC Ltd	IL & FS TAMIL NADU POWER COMPANY Ltd (Tamil Nadu)	1200	1.526	4.57	0.0697	0.0778	111.63		0.0778									0.0778
67	DISHERGARH TPS	INDIA POWER CORPORATION LIMITED(West Bengal)	12	0.0000	#DIV/0!	0.0000	0.0000	#DIV/0!								0.0000			0.0000
68	INDIAN METALS & FERRO ALLOYS LTD.	INDIAN METALS & FERRO ALLOYS Ltd. (Odisha)	258	0.4752	46.56	0.2213	0.2213	100.00	0.1183	0.0218	0.0000			0.0796				0.0016	0.2213
69	BELA TPS	IDEAL ENERGY PROJECTS Ltd.(Maharashtra)	270	0.0000	#DIV/0!	0.0000	0.0000	#DIV/0!											0.0000
70	O.P.Jindal Super TPP (Stage-I)	JPL (Chhattisgarh)	1000	1.0890	45.27	0.4930	0.4059	82.33					0.2580	0.0739	0.0740				0.4059
71	O.P.Jindal Super TPP(Stage-II)	JPL (Chhattisgarh)	2400	3.0340	44.99	1.3650	1.0440	76.48	0.0090				0.6250		0.4100				1.0440
72	RATNAGIRI	JSW Energy Ltd (Maharashtra)	1200	1.9359	8.12	0.1573	0.1356	86.25	0.0020	0.0249		0.1087							0.1356
73	VIJAYANAGAR	JSW Energy Limited (Karnataka)	860	0.6005	10.45	0.0628	0.0697	111.04	0.0135	0.0521				0.0005				0.0036	0.0697

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			(MW)	(MT)	%age (7)/(5)x100	(MT)	(MT)	%age (8)/(7)x100	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
74	JAYPEE NIGRIE SUPER	JAIPRAKASH POWER VENTURES LIMITED (Madhya Pradesh)	1320	1.7800	27.53	0.4900	0.5290	107.96	0.0090	0.5200								0.0000	0.5290
75	JAYPEE BINA	JAIPRAKASH POWER VENTURES LIMITED (Madhya Pradesh)	500	0.9088	30.67	0.2787	0.2787	100.00	0.0140	0.1838					0.0809				0.2787
76	DONGAMAHUA CAPTIVE POWER PLANT	JINDAL STEEL AND POWER LIMITED (Chhattisgarh)	576	0.9240	46.50	0.4297	0.4301	100.08	0.0003							0.4298			0.4301
77	DERANG TPP	JINDAL INDIA THERMAL POWER LIMITED (Odisha)	1200	1.9841	41.00	0.8135	0.5259	64.65	0.0446	0.0000	0.0000	0.0000	0.0000	0.3480	0.1322	0.0000	0.0011	0.0000	0.5259
78	JHABUA POWER LIMITED	JHABUA POWER LIMITED (MP)	600	0.9235	32.38	0.2990	0.1728	57.79	0.0141	0.1454	0.0133							0.0000	0.1728
79	MAHATMA GANDHI	JHAJJAR POWER LIMITED (Haryana)	1320	2.1247	40.42	0.8589	1.3942	162.33	0.0000	0.7416	0.5974	0.0062						0.0490	1.3942
80	BALLARI	K.P.C.L (Karnataka)	1700	1.0422	30.98	0.3228	0.4032	124.90	0.0139	0.3893									0.4032
81	RAICHUR	K.P.C.L.(Karnataka)	1720	3.1220	37.16	1.1600	0.7560	65.17	0.1287	0.6080	0.0010			0.0183					0.7560
82	MUZAFFARPUR	KANTI BIJLEE UTPADAN NIGAM LIMITED (Bihar)	610	1.1780	39.15	0.4612	0.2827	61.29	0.0095	0.0040					0.2692			0.0000	0.2827
83	LALITPUR TPS	LALITPUR POWER GENERATION COMPANY LIMITED (UP)	1980	2.6517	33.18	0.8799	0.8542	97.08	0.0218	0.4437					0.3887				0.8542
84	AMARKANTAK	LANCO AMARKANTAK POWER LIMITED(Chhattisgarh)	600	1.1963	39.48	0.4723	0.3892	82.39	0.0020	0.1511	0.0001			0.0830	0.1530				0.3892
85	ANPARA-C TPP	LANCO ANPARA POWER LTD (UTTAR PRADESH)	1200	2.6876	34.53	0.9280	0.2038	21.96		0.2038									0.2038
86	MCCPL BANDHAKHAR	Maruti Clean Coal & Power Ltd (Chhattisgarh)	300	0.8955	45.00	0.4030	0.4030	100.00	0.0280		0.2126				0.1624				0.4030
87	MAITHON RBTPP	MPL (Jharkhand)	1050	1.8057	40.97	0.7397	0.8836	119.45	0.0522	0.1709						0.6605			0.8836
88	KMPCL-Nariyara	M/s KSK MAHANADI POWER COMPANY LIMITED (Chhattisgarh)	1800	3.1510	31.54	0.9938	1.0387	104.52	0.0020	0.4521	0.0004				0.00028	0.5839			1.0387
89	THAMMINAPATNAM TPS	MEENAKSHI ENERGY Ltd.(Andhra Pradesh)	300	0.0275	4.97	0.0014	0.0085	622.26	0.0016					0.0069					0.0085
90	ANUPPUR	MB POWER(MADHYA PRADESH) LIMITED (Madhya Pradesh)	1200	2.7086	33.23	0.9001	0.9026	100.28	0.0045	0.7360	0.0008	0.0000		0.0000	0.1483			0.0130	0.9026
91	MEJA TPP	MEJA URJA NIGAM PVT LTD (UTTAR PRADESH)	660	0.6162	40.50	0.2496	0.0000	0.02	0.0000										0.0000
92	SANJAY GANDHI	M.P.P.G.C.L. (M.P.)	1340	2.3725	38.92	0.9234	0.8955	96.99	0.0152	0.4834	0.0040				0.3929				0.8955
93	SATPURA	M.P.P.G.C.L. (M.P.)	1330	1.8158	38.72	0.7031	0.4269	60.72	0.1808	0.2089		0.0104		0.0000		0.0269			0.4269
94	AMARKANTAK	M.P.P.G.C.L. (M.P.)	210	0.5003	33.15	0.1659	0.1560	94.03	0.0185	0.0788	0.0040			0.0547					0.1560

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			(MW)	(MT)	%age (7)/(5)x100	(MT)	(MT)	%age (8)/(7)x100	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
95	SHREE SINGAJI TPS	M.P.P.G.C.L. (M.P.)	1200	2.9261	38.57	1.1285	0.1334	11.82	0.0035	0.0145				0.0000				0.1154	0.1334
96	BHUSAWAL	M.S.P.G.C.L (Maharashtra)	1210	2.3529	38.22	0.8992	0.8648	96.17	0.0824	0.4294				0.2768			0.0167	0.0595	0.8648
97	KHAPARKHEDA	M.S.P.G.C.L. (Maharashtra)	1340	3.1536	42.44	1.3383	0.2785	20.81	0.1553					0.1232			0.0000		0.2785
98	NASHIK	M.S.P.G.C.L. (Maharashtra)	630	1.2798	37.80	0.4837	0.5145	106.37	0.3572	0.1573									0.5145
99	PARLI	M.S.P.G.C.L. (Maharashtra)	750	0.3473	43.27	0.1503	1.3487	897.46	0.0996	0.0226	0.0000	0.0506		1.1676			0.0023	0.0060	1.3487
100	KORADI	M.S.P.G.C.L. (Maharashtra)	2400	3.0917	38.72	1.1971	0.2740	22.89	0.0280	0.0000	0.2460								0.2740
101	PARAS	M.S.P.G.C.L.(Maharashtra)	500	1.2214	27.69	0.3382	0.3167	93.64	0.2787	0.0379									0.3167
102	CHANDRAPUR SUPER TPP	M.S.P.G.C.L.(Maharashtra)	2920	6.2486	26.48	1.6548	0.5258	31.77	0.0124	0.5134									0.5258
103	NEYVELI - I	N.L.C.LTD(Tamil Nadu)	600	22.1700	0.42	0.0923	0.0578	62.63	0.0100	0.0464								0.0014	0.0578
104	NEYVELI -I EXPN	N.L.C.LTD(Tamil Nadu)	420	1.6311	4.69	0.0764	0.0764	100.00	0.0099	0.0524						0.0140	0.0000	0.0001	0.0764
105	NEYVELI - II	N.L.C.LTD(Tamil Nadu)	1470	5.4907	6.30	0.3461	0.3462	100.02	0.1003	0.1659						0.0800			0.3462
106	NEYVELI - II EXPN	N.L.C.LTD (Tamil Nadu)	500	0.7886	6.32	0.0498	0.0498	100.00	0.0409							0.0000		0.0089	0.0498
107	BARSINGSAR LIGNITE	N.L.C.LTD (Rajasthan)	250	0.5979	16.50	0.0987	0.0987	100.00	0.0152	0.0686						0.0149			0.0987
108	NLC TAMILNADU POWER LTD.	NLC TAMILNADU POWER LIMITED (Tamil Nadu)	1000	1.2976	32.68	0.4241	0.4241	100.00	0.0558	0.3103	0.0102							0.0477	0.4241
109	DURGAPUR CAPTIVE POWER PLANT	NSPCL (West Bengal)	120	0.3388	28.02	0.0949	0.0489	51.51		0.0489									0.0489
110	VALLUR	NTECL (Tamil Nadu)	1500	2.1720	41.71	0.9060	1.0710	118.21	0.1200	0.1310		0.1310			0.0000			0.6890	1.0710
111	BADARPUR	N.T.P.C.LTD (Delhi)	705	0.0000	#DIV/0!	0.0000	0.0000	#DIV/0!	0.0000	0.0000	0.0000								0.0000
112	DADRI	N.T.P.C.LTD (U.P.)	1820	2.8900	33.81	0.9770	0.9720	99.49	0.1490	0.6440	0.1290							0.0500	0.9720
113	SINGRAULI	N.T.P.C.LTD (U.P.)	2000	5.0250	33.25	1.6710	0.5350	32.02	0.0010	0.0020				0.1590	0.3730				0.5350
114	RIHAND	N.T.P.C.LTD (U.P.)	3000	6.6610	27.92	1.8600	0.5960	32.04	0.0510	0.0090	0.0000	0.0000	0.0000	0.0370	0.4740			0.0250	0.5960
115	FEROZE GANDHI UNCHAHAR	N.T.P.C. LTD(U.P.)	1050	3.0690	37.73	1.1580	1.1590	100.09	0.0140	0.4510	0.4920	0.0000	0.0000	0.1750	0.0270	0.0000	0.0000		1.1590
116	TANDA	N.T.P.C.LTD (U.P.)	440	0.9930	33.94	0.3370	0.7950	235.91	0.0020	0.1730	0.5260				0.0940				0.7950
117	KORBA	N.T.P.C.LTD (Chhattisgarh)	2600	6.8530	36.58	2.5070	1.7780	70.92	0.0130					1.2060	0.0510	0.0720		0.4360	1.7780
118	VINDHYACHAL	N.T.P.C.LTD(M.P.)	4760	12.7660	36.43	4.6510	1.2670	27.24	0.0360	0.0270				1.0120	0.1250			0.0670	1.2670
119	GADARWARA	N.T.P.C.LTD(M.P.)	800	0.4192	41.75	0.1750	0.0013	0.77	0.0003						0.0010				0.0013
120	SIPAT	N.T.P.C.LTD (Chhattisgarh)	2980	6.9760	34.22	2.3870	0.7490	31.38	0.1860	0.2820	0.0360			0.1180	0.0130		0.0000	0.1140	0.7490

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
121	RAMAGUNDAM	N.T.P.C.LTD (Andhra Pradesh)	2600	5.5000	35.64	1.9600	1.8081	92.25	0.5960	0.3600	0.0001			0.2970	0.2030	0.3520		0.0000	1.8081
122	SIMHADRI	N.T.P.C.LTD (Andhra Pradesh)	2000	3.8070	35.15	1.3380	1.9920	148.88	0.2140	0.1480	1.1710			0.4590	0.0000			0.0000	1.9920
123	FARAKKA	N.T.P.C.LTD (W.B.)	2100	4.9400	33.97	1.6780	1.2260	73.06	0.0380	0.0960	0.6600			0.0580	0.1980			0.1760	1.2260
124	KAHALGAON	N.T.P.C.LTD(Bihar)	2340	6.5550	36.40	2.3860	1.0740	45.01	0.2552	0.2943	0.1050			0.0200	0.1665			0.2330	1.0740
125	BARH SUPER TPS	N.T.P.C.LTD (Bihar)	1320	3.3080	38.00	1.2570	0.6510	51.79	0.1110	0.1710	0.3690			0.0000					0.6510
126	TALCHER(TPS)	N.T.P.C.LTD (Odisha)	460	1.4940	38.96	0.5820	0.5884	101.10	0.0044					0.0010	0.0040	0.5790			0.5884
127	TALCHER Super Thermal	N.T.P.C.LTD(Odisha)	3000	7.6420	44.96	3.4360	1.8360	53.43	0.0430	0.0120	0.2880			1.4800	0.0130				1.8360
128	MOUDA TPS	N.T.P.C.LTD (Maharashtra)	2320	3.9390	33.86	1.3339	1.2450	93.34	0.2750	0.1730	0.5660			0.0810	0.1500			0.0000	1.2450
129	BONGAIGAON	N.T.P.C.LTD (Assam)	750	1.1210	29.97	0.3360	0.1140	33.93	0.0260	0.0880									0.1140
130	SOLAPUR	N.T.P.C.LTD (Maharashtra)	660	0.3370	32.34	0.1090	0.0910	83.49	0.0140	0.0760				0.0010				0.0000	0.0910
131	KUDGI	N.T.P.C.LTD (Karnataka)	2400	1.2850	33.00	0.4240	0.3399	80.17	0.0029	0.3110								0.0260	0.3399
132	Lara Super TPP	N.T.P.C LTD	800	0.2440	32.44	0.0791	0.0000	0.00											0.0000
133	BARAUNI	NTPC Ltd - BSPGCL (JV) (Bihar)	220	0.0364	42.00	0.0153	0.0014	8.94			0.0014								0.0014
134	NALCO, CPP ANGUL	NATIONAL ALUMINIUM COMPANY LIMITED (NALCO) (Odisha)	1200	2.9277	44.73	1.3097	0.9292	70.95	0.2018	0.0004	0.1800			0.5400	0.0070				0.9292
135	BHILAI PP-III	NSPCL (Chhattisgarh)	500	0.9708	38.67	0.3754	0.3981	106.03	0.0344	0.3573	0.0059				0.0004				0.3981
136	BHILAI PP-II	NSPCL (Chhattisgarh)	74	0.2143	41.16	0.0882	0.0338	38.35	0.0096	0.0238					0.0004				0.0338
137	CPP-II ROURKELA	NSPCL	120	0.4240	57.96	0.2457	0.1669	67.91	0.0139	0.0433	0.1046				0.0052				0.1669
138	IB VALLEY	O.P.G.C.L.(Odisha)	420	1.1246	39.39	0.4430	0.1937	43.73	0.0053	0.0078	0.0027				0.1779		0.00000	0.00004	0.1937
139	OPG POWER GENERATION PVT LTD	OPG POWER GENERATION PVT LTD	414	0.9250	4.26	0.0394	0.0394	100.00	0.0099	0.0296									0.0394
140	LEHRA MOHABAT	P.S.P.C.L. (Punjab)	920	0.6191	38.33	0.2373	0.2541	107.07	0.0082	0.1636	0.0000				0.0823				0.2541
141	ROPAR	P.S.P.C.L. (Punjab)	840	0.6916	34.61	0.2394	0.5420	226.41	0.0180	0.4051	0.0834	0.0006			0.0343		0.0005		0.5420
142	BATHINDA	P.S.P.C.L. (Punjab)	460	0.6916	34.61	0.2394	0.5420	226.41	0.0180	0.4051	0.0834	0.0006			0.0343		0.0005		0.5420
143	PRAYAGRAJ	PRAYAGRAJ POWER GENERATION COMPANY LIMITED (Uttar Pradesh)	1980	3.0522	27.76	0.8472	0.8471	99.99		0.5133				0.2165		0.0774		0.0399	0.8471
144	SASAN UMPP	RELIANCE POWER LTD (Madhya Pradesh)	3960	9.1527	23.57	2.1569	1.0135	46.99	0.0007	0.0325		0.0005			0.9798				1.0135

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			(MW)	(MT)	%age (7)/(5)x100	(MT)	(MT)	%age (8)/(7)x100	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
145	CHHABRA	RRVUNL (Rajasthan)	1000	1.9739	32.03	0.6322	0.5081	80.37	0.1054	0.3351	0.0000		0.0000		0.0000			0.0676	0.5081
146	SURATGARH TPS	RRVUNL (Rajasthan)	1500	1.8138	34.32	0.6226	0.8594	138.03	0.0703	0.3391								0.4500	0.8594
147	KALISINDH	RRVUNL (Rajasthan)	1200	1.4807	29.70	0.4397	0.5323	121.06	0.0351	0.3119	0.0786			0.0033	0.0013			0.1021	0.5323
148	AMARAVATI TPS	RATTAN INDIA POWER LTD	1350	1.4102	32.02	0.4516	0.3644	80.68	0.2703			0.0110		0.0239	0.0593				0.3644
149	JALIPA KAPURDI	JSW Energy (Barmer) Ltd. (Formerly Raj Westpower Ltd)	1080	2.7058	17.79	0.4813	0.4610	95.78	0.0724	0.2969						0.0917			0.4610
150	ROSA PHASE-I	RPSCL(U.P)	1200	2.4339	31.77	0.7733	0.5457	70.56	0.0176	0.4424		0.0009		0.0000	0.0847		0.0000	0.0001	0.5457
151	YERAMARUS TPS	RAICHUR POWER CORPORATION LIMITED (Karnataka)	1600	0.0000	#DIV/0!	0.0000	0.0000	#DIV/0!	0.0000	0.0000									0.0000
152	KORBA TPS	RAIGARH ENERGY GENERATION LTD	600	0.0000	#DIV/0!	0.0000	0.0606							0.0461	0.0145				0.0606
153	UCHPINDA	R K M POWERGEN PRIVATE LIMITED(Chhattisgarh)	1440	0.9557	44.39	0.4242	0.4242	100.00		0.0018	0.0898			0.2190	0.1137			0.0000	0.4242
154	RINL CAPTIVE TPP, VISAKHAPATNAM	RASHTRIYA ISPAT NIGAM LTD., (AP)	315	0.8712	42.05	0.3664	0.6823	186.24		0.0471					0.6353				0.6823
155	SAI LILAGARH POWER GENERATION LTD	SAI LILAGARH POWER GENERATION LTD (Chhattisgarh)	86	0.0000	#DIV/0!	0.0000	0.0000	#DIV/0!											0.0000
156	SIMHAPURI	SIMHAPURI ENERGY LIMITED (Andhra Pradesh)	600	0.0000	#DIV/0!	0.0000	0.0000	#DIV/0!	0.0000										0.0000
157	RATIJA TPS	SPECTRUM COAL AND POWER LIMITED (Chhattisgarh)	100	0.4750	60.40	0.2869	0.2869	100.00	0.0083						0.0000		0.2787		0.2869
158	SEMBCORP ENERGY INDIA LIMITED	SEMBCORP ENERGY INDIA LIMITED (Andhra Pradesh)	1320	2.8636	19.89	0.5697	0.4197	73.68	0.0126	0.4033		0.0039							0.4197
159	SWASTIK POWER & MINERALS RESOURCES PVT. LTD.	SWASTIK POWER & MINERALS RESOURCES PVT. LTD (Chhattisgarh) (No Generation)	25		#DIV/0!			#DIV/0!											0.0000
160	BINJNOTE TPP	SKS POWER GENERATION (CHHATTISGARH)	600	1.2898	47.12	0.6078	0.5366	88.29	0.0028	0.2651	0.0246				0.0848	0.1593			0.5366
161	TENUGHAT TPS	TENUGHAT VIDHYUT NIGAM LIMITED (Jharkhand)	420	0.8836	40.00	0.3535	0.1929	54.59						0.0000	0.1929				0.1929
162	TALWANDI SABO POWER LTD	TALWANDI SABO POWER LTD	1980	3.5800	34.36	1.2300	1.1700	95.12	0.1300	0.7500	0.2500				0.0400				1.1700
163	CUDDALORE	TAQA Neyveli Power Co. Pvt. Ltd. (Tamil Nadu)	250	0.6342	6.56	0.0416	0.0367	88.32	0.0058	0.0274				0.0000		0.0008		0.0027	0.0367
164	SINGARENI	THE SINGARENI COLLIERIES COMPANY LIMITED (Telengana)	1200	3.0445	39.21	1.1937	0.9461	79.25	0.1444	0.3594					0.0684	0.2820		0.0918	0.9461
165	JOJOBERA	T.P.CO. (Jharkhand)	547.5	0.1389	37.36	0.0519	0.0598	115.20	0.0000	0.0224		0.0050			0.0323				0.0598

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			(MW)	(MT)	%age (7)/(5)x100	(MT)	(MT)	%age (8)/(7)x100	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
166	TROMBAY	T.P.CO.(Maharashtra)	750	1.1560	2.18	0.0252	0.0195	77.38	0.0034			0.0158				0.0003			0.0195
167	SABARMATI	TORENT POWER Ltd. (Gujarat)	362	0.8038	21.92	0.1762	0.1762	100.00		0.1473				-0.0684			0.0973		0.1762
168	KOTHAGUDEM-V	TSGENCO (Telangana)	500	1.5287	48.67	0.7439	0.0621	8.35	0.0290	0.0331								0.0000	0.0621
169	KOTHAGUDEM-VI	TSGENCO (Telangana)	500	0.9437	41.41	0.3908	0.2669	68.28	0.0233	0.2286								0.0150	0.2669
170	KOTHAGUDEM-I to IV	TSGENCO (Telangana)	660	1.1839	48.88	0.5786	0.1777	30.71	0.1162	0.0615				0.0000				0.00002	0.1777
171	KAKATIYA (Stage-I)	TSGENCO (Telangana)	500	0.9668	37.79	0.3654	0.3286	89.94	0.0002	0.2574				0.0236	0.0474			0.00000	0.3286
172	KAKATIYA (Stage-II)	TSGENCO (Telangana)	600	1.2130	37.33	0.4528	0.4017	88.72	0.0003	0.3152				0.0264	0.0598			0.00001	0.4017
173	RAMAGUNDAM-B	TSGENCO (Telangana)	62.5	0.1604	40.28	0.0646	0.0780	120.68	0.0780									0.0000	0.0780
174	METTUR-I	T.N.G & D Corporation (Tamil Nadu)	840.0	1.8943	26.72	0.5062	0.4651	91.89	0.0931	0.1288								0.2432	0.4651
175	METTUR-II	T.N.G & D Corporation (Tamil Nadu)	600	0.9424	24.18	0.2279	0.2221	97.47	0.0183	0.1861				0.0065				0.0111	0.2221
176	TUTICORIN	T.N.G & D Corporation (Tamil Nadu)	1050	2.2862	26.02	0.5948	0.4146	69.71	0.0708	0.3425					0.0013	0.0000			0.4146
177	NORTH CHENNAI-I	T.N.G & D Corporation (Tamil Nadu)	630	12.3939	32.69	4.0510	3.9292	96.99	0.2523	1.4875	2.1894								3.9292
178	NORTH CHENNAI-II	T.N.G & D Corporation (Tamil Nadu)	1200	1.9458	31.74	0.6176	0.6259	101.35	0.1063	0.3847	0.1348								0.6259
179	RAIGARH TPP	TRN ENERGY PRIVATE LIMITED (Chhattisgarh)	600	1.1029	43.45	0.4792	0.3048	63.61	0.0087						0.2961				0.3048
180	ANPARA 'A' & 'B'	U.P.R.V.U.N.L. (U.P.)	2630	6.2442	33.86	2.1141	0.1138	5.38	0.0010	0.1078					0.0049			0.0002	0.1138
181	HARDUAGANJ	U.P.R.V.U.N.L. (U.P.)	610	1.1347	40.74	0.4623	0.4035	87.29	0.0313	0.1569					0.2154				0.4035
182	OBRA	U.P.R.V.U.N.L. (U.P.)	1000	1.4762	39.60	0.5846	0.0356	6.09	0.0005	0.0351	0.0000				0.0000				0.0356
183	PARICHHA	U.P.R.V.U.N.L. (U.P.)	1140	1.6071	40.93	0.6578	0.6309	95.91	0.0546	0.3210	0.1833			0.0000	0.0720000				0.6309
184	UDUPI	UPCL (Karnataka)	1200	0.6810	6.51	0.0443	0.0478	107.90	0.0105	0.0230		0.0136						0.0007	0.0478
185	BUTIBORI	VIDARBHA INDUSTRIES POWER LIMITED (Maharashtra)	600	0.0000	#DIV/0!	0.0000	0.0200	#DIV/0!	0.0000	0.0000	0.0200	0.0000							0.0200
186	VEDANTA TPP	VEDANTA LTD (ODISHA)	2400	7.3800	39.22	2.8944	3.0231	104.45	0.0343	0.0651				0.6187	1.9630			0.3419	3.0231
187	VEDANTA CPP	VEDANTA LTD (ODISHA)	1215	7.3800	39.22	2.8944	3.0231	104.45	0.0343	0.0651				0.6187	1.9630			0.3419	3.0231
188	BIKANER VS LIGNITE POWER PVT LTD	VS LIGNITE POWER PVT LTD (RAJASTHAN)	135	0.3120	22.59	0.0705	0.0705	100.00	0.0025									0.0680	0.0705
189	KOLAGHAT	W.B.P.D.C.L(W.B.)	1260	1.8427	43.40	0.7997	0.9050	113.17	0.0379	0.2259					0.6412				0.9050
190	SAGARDIGHI	W.B.P.D.C.L(W.B.)	1600	2.1081	37.39	0.7882	0.4724	59.94	0.0219	0.1384	0.1570				0.1551				0.4724

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			(MW)	(MT)	%age (7)/(5)x100	(MT)	(MT)	%age (8)/(7)x100	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
191	BANDEL	W.B.P.D.C.L (W.B.)	335	0.4738	41.45	0.1964	0.2228	113.45	0.0101	0.1006					0.1121				0.2228
192	SANTALDIH	W.B.P.D.C.L (W.B.)	500	1.1883	41.28	0.4905	0.2381	48.54	0.0130	0.2251					0.0000			0.0000	0.2381
193	BAKRESWAR	W.B.P.D.C.L(W.B.)	1050	2.0498	36.75	0.7533	0.9320	123.71	0.0209	0.5006					0.4104				0.9320
194	SAI WARDHA POWER Ltd. WARORA	WPCL (Maharashtra)	540	0.0000	#DIV/0!	0.0000	0.0000	#DIV/0!	0.0000	0.0000	0.0000			0.0000		0.0000			0.0000
		Grand Total	195927	406.9077	31.73	129.0929	100.9427	78.19	10.1767	36.2076	10.4229	0.6502	0.0000	11.1752	18.6902	5.9697	0.4151	7.2350	100.9427