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Ministry of Power

**REPORT ON FLY ASH GENERATION AT COAL / LIGNITE  
BASED THERMAL POWER STATIONS AND ITS  
UTILIZATION IN THE COUNTRY FOR THE YEAR 2019 - 20**

**CENTRAL ELECTRICITY AUTHORITY  
THERMAL CIVIL DESIGN DIVISION  
NEW DELHI**

**NOVEMBER 2020**



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## FOREWORD

Presently, electricity generation, in the country comprises about 72% from coal/lignite based generating stations. Coal-based electricity generation is likely to remain substantial in near future also. Indian coal is of high ash content of the order of 30–45 %, generating a large quantity of fly ash at coal/lignite based Thermal Power Stations. At present, ash utilization is lower than its production on all India basis. As a result, there is a surplus ash stock, which has been increasing every year.

Management of fly ash at coal/lignite based Thermal Power Stations in the country is a challenging task in view of large quantity of ash being generated. The land for creating ash dykes for ash disposal facilities at Thermal Power Plants is becoming difficult to be acquired. Fly ash, if not managed well, may pose environmental challenges causing pollution of air and water.

To address the above concerns, Fly Ash Mission, a Technology Project of Government of India in Mission Mode was commissioned during 1994 as a joint activity of Department of Science & Technology (DST), Ministry of Power (MoP) and Ministry of Environment & Forests (MoEF) with Department of Science & Technology as nodal agency. Fly Ash Mission was set up to promote research in the area of fly ash utilization so that fly ash could be gainfully utilized instead of its disposal in ash ponds. With an aim to achieve 100% utilization in a phased manner, MoEFCC, Government of India issued 1<sup>st</sup> Notification on fly ash utilization on 14<sup>th</sup> September 1999, which was subsequently amended in 2003, 2009 and 2016 stipulating targets for fly ash utilization for Thermal Power Stations and use of fly ash by construction agencies within a prescribed radius of any Thermal Power Station.

These initiatives and policy decisions by Government of India have led to increased utilization of fly ash in various construction activities like making of fly ash based building products, manufacturing of Portland pozzolana cement, construction of roads/highways/flyovers, reclamation of low lying areas, backfilling and stowing of mines, wasteland development, construction of roller compacted concrete dams etc. Though in 2019-20, ash utilization level has reached to about 83% (187.81 MT) as compared to less than 10% (6.64 MT) during the year 1996-97, a lot more needs to be done.

I wish to express my sincere thanks to all the Power Utilities and Thermal Power stations in the country for providing data/information on fly ash generation and its utilization to CEA for bringing out this report.

New Delhi  
November, 2020

(Prakash Mhaske)



## PREFACE

Central Electricity Authority (CEA) on behalf of Ministry of Power has been monitoring fly ash generation and its utilization at coal/ lignite based Thermal Power Stations in the country since 1996. Data on fly ash generation and utilization including modes of utilization is obtained from Thermal Power Stations on a monthly basis for analysis and record. Based on these compiled and analyzed data, reports on the status of fly ash generation and its utilization in the country is prepared on yearly as well as half yearly basis.

The 'Report on Fly Ash Generation at Coal/ Lignite based Thermal Power Stations and its Utilization in the country for year 2019-20' brings out the present status of fly ash generation at 197 coal / lignite based Thermal Power Stations and its utilization in the country. It also brings out the status of the level of fly ash utilization achieved by various Thermal Power Stations in the country vis-à-vis targets prescribed in MoEF's Notification of 14<sup>th</sup> September 1999 and its subsequent amendments in 2003, 2009 & 2016. I am confident that the report will be useful to all the stakeholders involved in fly ash management in the country for planning the utilization of fly ash and having necessary tie-up with the concerned Thermal Power Station.

Data collection, its compilation, reconciliation & analysis is quite a vast task. Moreover, to provide a dependable / accurate data in desired formats is equally a major job. We acknowledge and express our gratitude to all Power Utilities and Thermal Power Stations for furnishing data in a timely manner for bringing out this report. We solicit suggestions from all concerned for further improving the presentation made in the report. All suggestions / views as well as intimations for any unintended errors observed in this document may kindly be sent to the Chief Engineer, Thermal Civil Design Division, Central Electricity Authority, 9<sup>th</sup> Floor, North Wing, Sewa Bhawan, R.K. Puram, New Delhi- 110066 (E-mail Address: tcdcea@nic.in).

I am grateful to the Chairperson, CEA / Member (Thermal), CEA for the valuable suggestions and guidance in the preparation of this report.

I would also like to place on record my appreciation of the efforts made by the officers and staff of Thermal Civil Design Division. I express my thanks to the team comprising Shri Baleshwar Thakur, Director, Shri P.S. Mohan Kumar, Deputy Director, Shri Arvind, Assistant Director-II and other officers of TCD Division, CEA in the preparation of this report.

New Delhi  
November, 2020

  
(Jani Ram Boro)  
Chief Engineer (TCD)

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**REPORT**

## 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 YEAR 2019 - 20)**

#### **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 coals which have a low ash content of the order of 2-15 %. A large quantity of ash is, thus being generated at Coal / Lignite based Thermal Power Stations in the country, which not only requires a 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) has been monitoring the fly ash generation and its utilization at coal / lignite based thermal power stations in the country since 1996. Data on fly ash generation and utilization including modes of utilization are obtained from thermal power stations on Half-Yearly as well as on 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 report is forwarded to the Ministry of Power, the Ministry of Science & Technology and the Ministry of Environment, Forests and Climate Change. It is also uploaded on the web site of CEA for bringing out the information in the public domain so that users of fly ash can have access to the information on the availability of fly ash at different thermal power stations in the country, in order to facilitate and promote the utilization of fly ash.

In order to reduce the requirement of land, for the disposal of fly ash in the ash ponds, and to address the problem of pollution caused by fly ash, the Ministry of Environment, Forests and Climate Change (MoEF & CC) has issued various Notifications on fly ash utilization. The First Notification was issued on 14<sup>th</sup> September 1999 which was subsequently amended in the years 2003, 2009 and 2016 vide Notifications dated 27<sup>th</sup> August 2003, 3<sup>rd</sup> November 2009 and 25<sup>th</sup> January 2016 respectively. The amendment Notification of year 2009 prescribes the 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. 3<sup>rd</sup> November 2009) are to achieve the target of fly ash utilization in successive 5 years; 50% in the first year ; 60% in the second year ; 75% in the third year ; 90% in the fourth year and 100% in the fifth year from the date of notification. The new Thermal Power Stations coming into operation after the MoEF's notification (i.e. 3<sup>rd</sup> November 2009) are to achieve the target of fly ash utilization as 50% in the first year, 70% in the second year, 90% in the third year and 100% in the fourth year from their date of commissioning. Ministry of Environment, Forest and Climate Change has issued an amendment to the Notification on 25<sup>th</sup> January 2016 in order to widen the scope of fly

ash utilization, besides engraining upon Power Utilities to bear the cost of the transportation.

The report on “Fly Ash Generation and its Utilization at Coal / Lignite based Thermal Power Stations” provides the information and the status of fly ash utilization in the country. It also facilitates to ascertain the level of fly ash utilization achieved by various power stations in relation to targets prescribed in MoEF’s amended notification of 3<sup>rd</sup> November, 2009 and to take corrective measures in the cases of Thermal Power Stations lagging behind in achieving the prescribed targets of fly ash utilization.

## **2.0 ASH GENERATION & UTILIZATION DURING THE YEAR 2019-20**

### **2.1 A Brief Summary**

Fly ash generation & utilization data for the Year 2019-20 (April 2019 to March 2020) has been received from **197 (One Hundred and Ninety Seven)** coal / lignite based thermal power stations of various power utilities in the country. Data received has been analysed 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 DURING**  
**THE YEAR 2019-20**

Description	Year 2019-20
• No. of Thermal Power Stations from which data was received	: <b>197</b>
• Installed capacity (MW)	: <b>200691.50</b>
• Coal consumed (Million tons)	: <b>678.68</b>
• Fly Ash Generation (Million tons)	: <b>226.13</b>
• Fly Ash Utilization (Million tons)	: <b>187.81</b>
• Percentage Utilization	: <b>83.05</b>
• Percentage Average Ash Content (%)	: <b>33.32</b>

Power Station wise fly ash generation & its utilization status including the modes of utilization for the year 2019-20 for all the 197 thermal power stations is given in the statement at Annex-I and State wise fly ash generation & its utilization status is given in Annex-II.

## **2.2 Data Provided by Thermal Power Units Commissioned during the Year 2019-20:**

During the Year 2019-20, Four (4) Thermal power plants with a total installed capacity of 3800 MW as given in Table-II below were commissioned:

**TABLE-II**

### **DATA PROVIDED BY THERMAL POWER UNITS COMMISSIONED DURING THE YEAR 2019-20**

Sl. No.	Name of Thermal Power Station	Name of Power Utility	Unit No.	Capacity (MW)	Date of Commissioning
(1)	(2)	(3)	(4)	(5)	(6)
2019 – 20					
1	BARAUNI	NTPC LTD (Bihar)	2	360.00	23.05.2019
2	LARA SUPER THERMAL POWER PROJECT	NTPC LTD. (Chhattisgarh)	1	800.00	01.10.2019
3	KHARGONE	N.T.P.C.LTD (Madhya Pradesh)	2	1320.00	29.09.2019
4	IB THERMAL POWER STATION	ODISHA POWER GENERATION CORPORATION LTD.	2	1320.00	03.07.2019
Total for 2019-20				3800.00	

## **2.3 Retirement of Thermal Power Units during the Year 2019-20:**

During the Year 2019-20, the following units with installed capacity as given in Table-III below have been decommissioned:

**TABLE-III**

**THERMAL POWER UNITS RETIRED / DECOMMISSIONED DURING THE YEAR  
2019-20**

<b>SI No.</b>	<b>Name of Thermal Power Station</b>	<b>State</b>	<b>Unit Number</b>	<b>Capacity (MW)</b>	<b>Date of Retirement</b>
(1)	(2)	(3)	(4)	(5)	(6)
<b>2019 – 20</b>					
1	Korba-II	Chhattisgarh	1,2,3,4	200	13.08.2019
2	Trombay TPS	Maharashtra	6	500	12.09.2019
3	Sabarmati (C Station)	Gujarat	15,16	60	13.09.2019
4	Rajghat TPS	Delhi	1,2	135	23.09.2019
5	Parli TPS	Maharashtra	4,5	420	23.01.2020
6	D.P.L. TPS	West Bengal	6	110	28.01.2020
7	Kothagudem TPS	Telangana	2	60	03.03.2020
8	Chandrapura (DVC) TPS	Jharkhand	3	130	19.03.2020
9	Kothagudem TPS	Telangana	5	120	30.03.2020
10	Kothagudem TPS	Telangana	1,4,7	240	31.03.2020
11	Neyveli TPS-I	Tamil Nadu	1,9	150	31.03.2020
12	Panipat TPS	Haryana	5	210	31.03.2020
		<b>Total for 2019-20</b>	<b>21</b>	<b>2335.00</b>	

**2.4 Power Utility Wise Status of Fly Ash Generation & its Utilization during the Year 2019-20:**

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

**TABLE-IV**

**POWER UTILITY WISE FLY ASH GENERATION AND UTILIZATION FOR THE  
YEAR 2019-20**

<b>Sl. No</b>	<b>Name of Power Utility</b>	<b>No. of TPS</b>	<b>Installed Capacity (MW)</b>	<b>Fly Ash Generation (Million-tonne)</b>	<b>Fly Ash Utilization (Million-tonne)</b>	<b>Percentage Utilization %</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
1	Andhra Pradesh Power Generation Corporation (APGENCO)	2	3410.00	6.3450	5.6853	89.60
2	APPDCL (Andhra Pradesh)	1	1600.00	1.3895	0.7143	51.40
3	ACB (INDIA) Ltd. (Chhattisgarh)	4	390.00	1.5622	1.5277	97.79
4	ADANI POWER (MUNDRA) LIMITED (Gujarat)	1	4620.00	0.7360	0.7420	100.82
5	APCPL (Haryana)	1	1500.00	0.8622	1.6428	190.52
6	ADANI POWER MAHARASHTRA LTD. (Maharashtra)	1	3300.00	4.8152	4.3758	90.87
7	ADANI POWER RAJASTHAN LTD. (Rajasthan)	1	1320.00	1.3676	1.5445	112.93
8	AMNEPL (Maharashtra) (No Generation)	1	246.00	0.0000	0.0000	0.00
9	ADANI ELECTRICITY MUMBAI LIMITED (Maharashtra)	1	500.00	0.4251	0.5444	128.06
10	ADHUNIK POWER & NATURAL RESOURCES LTD. (Jharkhand)	1	540.00	0.9456	0.9245	97.77
11	BEPL (UP)	5	450.00	0.1544	0.1544	100.00
12	BHARATIYA RAIL BIJLEE COMPANY LIMITED (Bihar)	1	750.00	1.1153	0.5558	49.84
13	BHARAT ALUMINIUM COMPANY LIMITED(BALCO) (Chhattisgarh)	2	1740.00	2.8690	2.8942	100.88

<b>Sl. No</b>	<b>Name of Power Utility</b>	<b>No. of TPS</b>	<b>Installed Capacity (MW)</b>	<b>Fly Ash Generation (Million-tonne)</b>	<b>Fly Ash Utilization (Million-tonne)</b>	<b>Percentage Utilization %</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
14	BHADRESHWAR VIDYUT PRIVATE LIMITED (Gujarat)	1	300.00	0.0621	0.0497	80.05
15	C.E.S.C. Ltd. (West Bengal)	3	1125.00	1.2000	1.2000	100.00
16	Chhattisgarh State Power Generation Company Ltd. (C.S.P.G.C.L.)	4	3280.00	5.6352	2.8533	50.63
17	COASTAL ENERGEN PVT. LTD (Tamil Nadu)	1	1200.00	0.0807	0.0803	99.60
18	C.G.P.L (Gujarat)	1	4150.00	0.7200	0.8000	111.11
19	CHEMPLAST SANMAR LIMITED (Tamil Nadu)	1	48.50	0.0197	0.0196	99.69
20	Damodar Valley Corporation (D.V.C.)	7	7090.00	10.7082	7.9547	74.29
21	Durgapur Projects Ltd. (D.P.L.)	1	550.00	0.6295	0.5806	92.23
22	Dhariwal Infrastructure Ltd. (Maharashtra)	1	600.00	0.7442	0.7966	107.04
23	EASTERN COALFIELDS LIMITED (West Bengal) (No Generation)	1	30.00	0.0000	0.0000	0.00
24	ESSAR POWER MP LTD. (M.P.)	1	1200.00	0.6878	0.5419	78.79
25	Gujarat Industries Power Corporation Ltd. (G.I.P.C.L.)	1	500.00	0.5708	0.5708	100.00
26	Gujarat Mineral Development Corporation Ltd. (G.M.D.C.L.)	1	250.00	0.2467	0.2988	121.10
27	G.S.E.C.L. (Gujarat)	6	4500.00	0.3537	0.5126	144.93
28	GMR Warora Energy LTD. (Maharashtra)	1	600.00	0.8824	0.9378	106.27
29	GMR Kamalanga Energy LTD. (Odisha)	1	1050.00	1.7049	1.8206	106.79

<b>Sl. No</b>	<b>Name of Power Utility</b>	<b>No. of TPS</b>	<b>Installed Capacity (MW)</b>	<b>Fly Ash Generation (Million-tonne)</b>	<b>Fly Ash Utilization (Million-tonne)</b>	<b>Percentage Utilization %</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
30	GUPTA ENERGY PRIVATE LIMITED(Maharashtra) (No Generation)	1	120.00	0.0000	0.0000	0.00
31	Haryana Power Generation Cor. Ltd. (H.P.G.C.L.)	3	2720.00	1.9157	2.8327	147.87
32	HALDIA ENERGY LIMITTED (W.B.)	1	600.00	1.0015	1.0015	100.00
33	HINDUJA NATIONAL POWER CORPORATION LIMITED (Andhra Pradesh)	1	1040.00	0.8718	0.3856	44.23
34	IPGCL (Delhi) (No Generation)	1	135.00	0.0000	0.0000	0.00
35	INDIA POWER CORPORATION Ltd. (W.B)	1	12.00	0.0000	0.0000	0.00
36	INDIAN METALS & FERRO ALLOYS LTD. (Odisha)	1	258.00	0.5150	0.5150	100.00
37	IL&FS TAMIL NADU POWER COMPANY LIMITED (Tamil Nadu)	1	1200.00	0.1632	0.1676	102.73
38	IDEAL ENERGY PROJECTS LIMITED (Maharashtra)	1	270.00	0.0000	0.0000	0.00
39	J.H.P.L (HR)	1	1320.00	1.6480	2.2566	136.93
40	J.P.L (Chhattisgarh)	2	3400.00	3.3156	3.3508	101.06
41	JAIPRAKSH POWER VENTURES LIMITED (MP)	2	1820.00	1.8519	1.9051	102.87
42	JSW Energy Ltd.	2	2060.00	0.5241	0.5265	100.44
43	JINDAL INDIA THERMAL POWER LIMITED (Odisha)	1	1200.00	1.7168	1.1338	66.04
44	JINDAL STEEL AND POWER LIMITED (CHHATTISGARH)	2	1386.00	2.0314	2.0313	100.00
45	JSW ENERGY (BARMER) LIMITED (Formerly Raj Westpower Ltd.) (Rajasthan)	1	1080.00	0.9158	0.9159	100.01

<b>Sl. No</b>	<b>Name of Power Utility</b>	<b>No. of TPS</b>	<b>Installed Capacity (MW)</b>	<b>Fly Ash Generation (Million-tonne)</b>	<b>Fly Ash Utilization (Million-tonne)</b>	<b>Percentage Utilization %</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
46	JSW STEEL LIMITED (Tamil Nadu)	1	60.00	0.0131	0.0130	99.79
47	KANTI BIJLEE UTPADAN NIGAM LTD. (BIHAR)	1	610.00	0.8240	0.6250	75.85
48	Karnataka Power Corporation Ltd. (K.P.C.L.)	2	3420.00	3.2995	2.7727	84.03
49	KSK MAHANADI POWER COMPANY LIMITED (Chhattisgarh)	1	1800.00	2.0090	2.2009	109.55
50	LANCO AMARKANTAK POWER LIMITED (Chhattisgarh )	1	600.00	0.9590	0.6550	68.30
51	LALITPUR POWER GENERATION COMPANY LIMITED (UP)	1	1980.00	1.4158	1.5116	106.76
52	LANCO ANPARA POWER LIMITED (Uttar Pradesh)	1	1200.00	1.5779	0.3583	22.71
53	MPL (Jharkhand)	1	1050.00	1.5781	1.5967	101.18
54	M.P.P.G.C.L. (M.P.)	4	5400.00	5.8973	3.4249	58.08
55	M.S.P.G.C.L. (Maharashtra)	7	8050.00	14.2720	11.5904	81.21
56	MARUTI CLEAN COAL AND POWER LIMITED (Chhattisgarh)	1	300.00	0.7670	0.7474	97.44
57	MEENAKSHI ENERGY PRIVATE LIMITED (Andhra Pradesh)	1	300.00	0.0000	0.0000	0.00
58	M/S JHABUA POWER LIMITED (MP)	1	600.00	0.8325	0.6921	83.13
59	MB POWER (MADHYA PRADESH) LIMITED (M.P.)	1	1200.00	1.5528	1.5988	102.96
60	MEJA URJA NIGAM PRIVATE LIMITED (Uttar Pradesh)	1	660.00	0.2479	0.0000	0.02
61	Neyvelli Lignite Corporation Ltd. (N.L.C.LTD) (Tamil Nadu)	5	3890.00	1.1394	1.6830	147.70

<b>Sl. No</b>	<b>Name of Power Utility</b>	<b>No. of TPS</b>	<b>Installed Capacity (MW)</b>	<b>Fly Ash Generation (Million-tonne)</b>	<b>Fly Ash Utilization (Million-tonne)</b>	<b>Percentage Utilization %</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
62	NLC LTD. (Rajasthan)	1	250.00	0.2017	0.2017	100.00
63	NLC TAMIL NADU POWER LIMITED (Tamil Nadu)	1	1000.00	0.8701	0.8701	100.00
64	NSPCL	4	814.00	1.4736	1.6794	113.97
65	NTECL (Tamil Nadu)	1	1500.00	1.7450	2.1120	121.03
66	N.T.P.C.LTD.	23	42885.00	59.5508	43.1193	72.41
67	NTPC Ltd-BSPGCL(JV) (Bihar)	1	720.00	0.0726	0.0131	18.01
68	NABHA POWER PROJECT (Punjab)	1	1400.00	1.2859	1.7963	139.69
69	NATIONAL ALUMINIUM COMPANY LIMITED (NALCO) (Odisha)	1	1200.00	2.4851	1.7774	71.52
70	O.P.G.C.L.(Odisha)	1	420.00	1.2337	0.2140	17.34
71	OPG POWER GENERATION PRIVATE LIMITED (Tamil Nadu)	1	414.00	0.0966	0.0966	100.00
72	Punjab State Power Corporation Ltd. (P.S.P.C.L.).	4	2760.00	0.8054	1.7382	215.82
73	PRAYAGRAJ POWER GENERATION COMPANY LTD. (U.P.)	1	1980.00	1.9835	1.7877	90.13
74	R.K.M. POWERGEN PVT. LTD (PGCIL) (Chhattisgarh)	1	1440.00	0.9106	0.8682	95.34
75	Rajasthan Rajya Vidyut Utpadan Nigam Ltd. (R.R.V.U.N.L.)	5	6280.00	6.3508	5.9508	93.70
76	RPSCl (UP)	1	1200.00	1.1530	1.1691	101.39
77	RATTAN INDIA POWER LTD. (Maharashtra)	1	1350.00	0.6306	0.7585	120.27
78	RAICHUR POWER CORPORATION LIMITED (Karnataka)	1	1600.00	0.0899	0.0107	11.90

<b>Sl. No</b>	<b>Name of Power Utility</b>	<b>No. of TPS</b>	<b>Installed Capacity (MW)</b>	<b>Fly Ash Generation (Million-tonne)</b>	<b>Fly Ash Utilization (Million-tonne)</b>	<b>Percentage Utilization %</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
79	RAIPUR ENERGEN LIMITED (Formerly GMR CHHATTISGARH Energy Ltd) (Chhattisgarh)	1	1370.00	1.3081	1.3103	100.17
80	REILIANCE POWER LIMITED (Madhya Pradesh)	1	3960.00	5.2446	2.7464	52.37
81	SPECTRUM COAL & POWER LTD. (Chhattisgarh)	1	100.00	0.5726	0.5531	96.59
82	SAI LILAGARH POWER GENERATION LIMITED (Chhattisgarh) (No Generation)	1	86.00	0.0000	0.0000	0.00
83	SEMCORP ENERGY INDIA Ltd. (Formerly Thermal Powertech Corporation India Ltd) (Andhra Pradesh)	1	1320.00	1.2265	0.9710	79.17
84	SWASTIK POWER & MINERALS RESOURCES PVT. LTD (Chhattisgarh) (No Generation)	1	25.00	0.0000	0.0000	0.00
85	SKS POWER GENERATION (CHHATTISGARH) LIMITED (Chhattisgarh)	1	600.00	0.9391	0.7875	83.86
86	THE SINGARENI COLLIERIES COMPANY LIMITED (Telangana)	1	1200.00	2.2842	2.2591	98.90
87	TAQA NEYVELI POWER CO. PVT. LTD. (Tamil Nadu)	1	250.00	0.0890	0.1105	124.11
88	T.P.CO. (Jharkhand)	2	1297.50	1.0238	1.2975	126.74
89	TORRENT POWER LTD. (Gujarat)	1	362.00	0.3023	0.3023	100.00
90	T.N.G & D Corporation (Tamil Nadu)	5	4320.00	4.6034	4.4785	97.29
91	TSGENCO (Telangana)	6	2582.50	4.8502	2.7706	57.12

<b>Sl. No</b>	<b>Name of Power Utility</b>	<b>No. of TPS</b>	<b>Installed Capacity (MW)</b>	<b>Fly Ash Generation (Million-tonne)</b>	<b>Fly Ash Utilization (Million-tonne)</b>	<b>Percentage Utilization %</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
92	TRN ENERGY PRIVATE LIMITED (Chhattisgarh)	1	600.00	0.5186	0.4401	84.86
93	TENUGHAT VIDHYUT NIGAM LIMITED (Jharkhand)	1	420.00	0.6842	0.4517	66.02
94	TALWANDI SABO POWER LTD (Punjab)	1	1980.00	1.8600	2.0200	108.60
95	Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (U.P.R.V.U.N.L.)	5	5590.00	6.6504	2.1265	31.98
96	UPCL (Karnataka)	1	1200.00	0.0873	0.0881	100.92
97	VIDARBHA INDUSTRIES POWER LTD. (Maharashtra)	1	600.00	0.0000	0.1700	0.00
98	VS LIGNITE POWER PRIVATE LIMITED (Rajasthan)	1	135.00	0.1503	0.1503	100.00
99	VEDANTA LIMITED	2	3615.00	8.8380	9.4713	107.17
100	West Bengal Power Development Corporation Limited (W.B.P.D.C.L)	5	4745.00	4.2298	4.3070	101.82
101	WPCL (KSKEV Ltd.) (Maharashtra)	1	540.00	0.0436	0.0151	34.75
<b>GRAND TOTAL</b>		<b>197</b>	<b>200691.50</b>	<b>226.1339</b>	<b>187.8052</b>	<b>83.05</b>

It may be seen from the **Table-IV** above that: the data of fly ash generation and utilization for the year 2019-20 was received from 101 Power Utilities out of which 47 Power Utilities have achieved fly ash utilization level of 100% or more and 14 Power Utilities have achieved fly ash utilization level in the range of 90% to less than 100%.

## **2.5 State wise Status of Fly Ash Generation & its Utilization during the Year 2019-20:**

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

**TABLE-V**  
**STATE WISE FLY ASH GENERATION AND ITS UTILIZATION DURING THE  
YEAR 2019-20**

<b>Sl. No.</b>	<b>Name of State</b>	<b>Nos. of TPS</b>	<b>Installed Capacity (MW)</b>	<b>Fly Ash Generation (Million- tonne)</b>	<b>Fly Ash Utilization (Million- tonne)</b>	<b>Percentage Utilization %</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
1	ANDHRA PRADESH	8	12270.00	16.2880	16.6982	102.52
2	ASSAM	1	750.00	0.6998	0.3176	45.39
3	BIHAR	5	5740.00	8.9258	6.2873	70.44
4	CHATTISGARH	29	24071.00	34.8222	26.8561	77.12
5	DELHI	2	840.00	0.0000	0.0000	0.00
6	GUJARAT	12	14682.00	2.9916	3.2762	109.51
7	HARYANA	5	5540.00	4.4259	6.7321	152.11
8	JHARKHAND	7	4897.50	7.6771	7.9116	103.05
9	KARNATAKA	6	9480.00	4.5155	3.9186	86.78
10	MADHYA PRADESH	13	21060.00	25.0205	13.7598	54.99
11	MAHARASHTRA	21	21766.00	25.0177	22.1430	88.51
12	ODISHA	10	11323.00	24.9125	21.0664	84.56
13	PUNJAB	6	6140.00	3.9513	5.5544	140.57
14	RAJASTHAN	9	9065.00	8.9863	8.7633	97.52
15	TAMILNADU	18	13882.50	8.8201	9.6313	109.20
16	TELANGANA	7	3782.50	7.1344	5.0298	70.50
17	UTTAR PRADESH	20	21370.00	24.1248	13.8490	57.41
18	WEST BENGAL	18	14032.00	17.8205	16.0106	89.84
	<b>GRAND TOTAL</b>	<b>197</b>	<b>200691.50</b>	<b>226.1339</b>	<b>187.8052</b>	<b>83.05</b>

It may be seen from Table-V above that:

- (i) 7 states namely Andhra Pradesh, Chhattisgarh, Madhya Pradesh, Maharashtra, Odisha, Uttar Pradesh and West Bengal have generated more than 10 million-ton of fly ash each with Chhattisgarh highest 34.8222 million tons during the Year 2019-20.
- (ii) During the Year 2019-20, states of Andhra Pradesh, Gujarat, Haryana, Jharkhand, Punjab and Tamil Nadu have achieved fly ash utilization level of more than 100 %.

Similarly, only Rajasthan has achieved the fly ash utilization level of more than 95 % but less than 100 %.

- (iii) Assam and Union Territory of Delhi have utilized less than 50% of fly ash.

### **3.0 TARGETS FOR FLY ASH UTILIZATION AS PER MoEF'S NOTIFICATION OF 3rd NOVEMBER, 2009:**

The notification set the target for the thermal power stations which were in operation before the date of notification i.e. 3.11.2009 as well as the new thermal power stations to be commissioned after the notification i.e. 3.11.2009. The same has been brought out below:

#### **3.1 Thermal Power Station in Operation as on 3rd November, 2009:**

All Coal / Lignite based Thermal Power Stations / Expansion units in operation before the date of MoEF's notification i.e. 03.11.2009 were to achieve the target of fly ash utilization as per the **Table-VI** given below:

**TABLE-VI**

#### **TARGETS FOR FLY ASH UTILIZATION FOR THERMAL POWER STATIONS IN OPERATION BEFORE 3rd NOVEMBER 2009**

<b>Sl. No.</b>	<b>Target of Fly Ash Utilization (In Percentage)</b>	<b>Target Date</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
1	At least 50% of Fly Ash generation	One year from the date of issue of notification
2	At least 60% of Fly Ash generation	Two years from the date of issue of notification
3	At least 75% of Fly Ash generation	Three years from the date of issue of notification
4	At least 90% of Fly Ash generation	Four years from the date of issue of notification
5	100% of Fly Ash generation	Five years from the date of issue of notification

The unutilized fly ash, if any, in relation to the target during a year would be required to be utilized within next two years in addition to the targets stipulated for those years and the balance unutilized fly ash accumulated during the first five years (the difference between the generation and the utilization target) would be required to be utilized progressively over the next five years in addition to 100% utilization of current generation of fly ash.

### **3.2 Thermal Power Station Commissioned after 3rd November, 2009 :**

New Coal / Lignite based Thermal Power Stations / Expansion Units commissioned after the issue of MoEF's notification of 3rd November 2009 are to achieve the target of fly ash utilization as per Table-VII given below:

**TABLE-VII**

#### **TARGETS FOR FLY ASH UTILIZATION FOR THERMAL POWER STATION COMMISSIONED AFTER 3rd NOVEMBER, 2009**

<b>SI No.</b>	<b>Fly Ash Utilization Level</b>	<b>Target Date</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
1	At least 50% of fly ash generation	One year from the date of Commissioning
2	At least 70% of fly ash generation	Two years from the date of Commissioning
3	At least 90% of fly ash generation	Three years from the date of Commissioning
4	At least 100% of fly ash generation	Four years from the date of commissioning

The unutilized fly ash, if any, in relation to the target during a year would be required to be utilized within the next two years in addition to the targets stipulated for these years and the balance unutilized fly ash accumulated during the first four years (the difference between the generation and utilization target) would be required to be utilized progressively over next five years in addition to 100% utilization of current generation of fly ash.

### **4.0 TARGET OF FLY ASH UTILIZATION DURING 2019-20 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 year 2019-20 has been broadly analyzed to ascertain the power stations which have achieved the targets of fly ash utilization as prescribed in MoEF's notification of 3rd November 2009.

During the Year 2019-20, all those thermal power stations which were in operation on the date of issue of MoEF'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 i.e. by 3rd November 2014. All those thermal power stations which have come in operation after the date of issue of MoEF's notification (i.e. 3rd November 2009)

should have achieved the target of fly ash utilization in four years from the date of Commissioning as specified in **Table-VII** above.

#### **4.1 Status during the Year 2019-20:**

Based on the target indicated under Para 4.0 above, the status of achievement of fly ash utilization for the Year 2019-20 has been assessed and the same is given in **Table-VIII** below.

**TABLE-VIII**

#### **STATUS OF UTILIZATION OF FLY ASH AS PER MOEF'S NOTIFICATION DATED 3rd NOVEMBER 2009 FOR THE YEAR 2019-20**

<b>Sl. No.</b>	<b>Description</b>	<b>No. of TPS</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
1	No. of TPS which have achieved the Target of fly ash utilization as per MoEF's Notification of 3 <sup>rd</sup> November, 2009 (Refer <b>Table XVI</b> )	93
2	No. of TPS which have not been able to achieve the target of fly ash utilization as per MoEF's Notification of 3 <sup>rd</sup> November, 2009 (Refer <b>Table- XVII</b> )	90
3	No. of TPS which have not generated any significant fly ash or any fly ash (Refer <b>Table- XV</b> )	14
	<b>Total</b>	<b>197</b>

It may be seen from **Table-VIII** above that during the Year 2019-20, out of 197 (One Hundred and Ninety Seven) thermal power stations for which data was received, 93 (Ninety Three) power stations have achieved the targets of fly ash utilization as stipulated in MoEF's Notification of 3rd November 2009.

#### **4.2 Range of Fly Ash Utilization during 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 6 (Six) categories as noted below depending upon the range of utilization of fly ash by the stations:

**TABLE-IX****RANGE OF PERCENTAGE FLY ASH UTILIZATION DURING THE YEAR 2019-20**

<b>Sl. No.</b>	<b>Level of Fly Ash utilization</b>	<b>No. of Power Stations</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
1	100 % and more than 100 % (Refer <b>Table- X</b> )	91
2	90 % to less than 100 % (Refer <b>Table- XI</b> )	27
3	70 % to less than 90 % (Refer <b>Table- XII</b> )	21
4	50 % to less than 70 % (Refer <b>Table- XIII</b> )	16
5	Less than 50 % (Refer <b>Table- XIV</b> )	28
6	No. of TPS which have not generated any significant fly ash or any fly ash (Refer <b>Table- XV</b> )	14
<b>Total</b>		<b>197</b>

**4.3 Thermal Power Stations that have achieved Fly Ash utilization level of 100% or more during the Year 2019-20:**

The Thermal Power Stations with fly ash utilization in the range of 100% or more during the year 2019-20 is given in **Table-X** below:

**TABLE-X****THERMAL POWER STATIONS WITH FLY ASH UTILIZATION LEVEL OF 100% OR MORE DURING THE YEAR 2019 – 20**

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
1	SVPPL Renki	ACB India Limited (Chhattisgarh)	60.00	0.2385	0.2385	100.00
2	CHAKABURA TPP	ACB (INDIA) Ltd. (Chhattisgarh)	30.00	0.15000	0.15080	100.53

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>
(1)	(2)	(3)	(4)	(5)	(6)	(7)
3	CHAKABURA TPP (EXTN)	ACB (INDIA) Ltd. (Chhattisgarh)	30.00	0.16180	0.16180	100.00
4	INDIRA GANDHI	APCPL (Haryana)	1500.00	0.86225	1.64279	190.52
5	MUNDRA TPS	ADANI POWER (MUNDRA) LIMITED (Gujarat)	4620.00	0.73600	0.74200	100.82
6	KAWAI	ADANI POWER RAJASTHAN LTD. (Rajasthan)	1320.00	1.36763	1.54448	112.93
7	ADANI DAHANU	ADANI ELECTRICITY MUMBAI LIMITED (Maharashtra)	500.00	0.42508	0.54436	128.06
8	BARKHERA	BEPL (UP)	90.00	0.02867	0.02867	100.00
9	KHAMBER KHERA	BEPL (UP)	90.00	0.02529	0.02529	100.00
10	KUNDARKI	BEPL (UP)	90.00	0.03539	0.03539	100.00
11	MAQSOODAPUR	BEPL (UP)	90.00	0.03173	0.03173	100.00
12	UTRAULA	BEPL (UP)	90.00	0.03331	0.03331	100.00
13	BALCO CPP-II	BHARAT ALUMINIUM COMPANY LIMITED(BALCO) (Chhattisgarh)	540.00	0.98464	0.98851	100.39
14	BALCO TPP-III	BHARAT ALUMINIUM COMPANY LIMITED(BALCO) (Chhattisgarh)	1200.00	1.88437	1.90569	101.13
15	B.B.G.S.	C.E.S.C. (West Bengal)	750.00	1.1300	1.1300	100.00
16	S.G.S.	C.E.S.C. (West Bengal)	135.00	0.0700	0.0700	100.00
17	MUNDRA UMPP	CGPL (Gujarat)	4150.00	0.7200	0.8000	111.11
18	BOKARO 'B'	D.V.C. (Jharkhand)	710.00	0.6681	1.0464	156.61
19	DHARIWAL INFRASTRUCTURE Ltd.	DHARIWAL INFRASTRUCTURE LIMITED (Maharashtra)	600.00	0.7442	0.7966	107.04
20	SURAT LIGNITE	G.I.P.C.L. (Gujarat)	500.00	0.5708	0.5708	100.00

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>
(1)	(2)	(3)	(4)	(5)	(6)	(7)
21	AKRIMOTA	G.M.D.C.L. (Gujarat)	250.00	0.2467	0.2988	121.10
22	GANDHINAGAR	G.S.E.C.L. (Gujarat)	630.00	0.0399	0.1814	454.64
23	KUTCH LIGNITE	G.S.E.C.L. (Gujarat)	290.00	0.0358	0.0358	100.00
24	SIKKA	G.S.E.C.L. (Gujarat)	600.00	0.0096	0.0315	328.13
25	WANAKBORI	G.S.E.C.L. (Gujarat)	1470.00	0.1248	0.1410	112.98
26	GMR WARORA ENERGY Ltd.	GMR WARORA ENERGY LTD. (Maharashtra)	600.00	0.8824	0.9378	106.27
27	GMR KAMALANGA TPP	GMR KAMALANGA ENERGY LTD. (Odisha)	1050.00	1.7049	1.8206	106.79
28	RAJIV GANDHI (HISAR)	H.P.G.C.L.(Haryana)	1200.00	0.6371	0.6814	106.96
29	YAMUNANAGAR	H.P.G.C.L.(Haryana)	600.00	0.7840	0.9600	122.45
30	PANIPAT	H.P.G.C.L.(Haryana)	920.00	0.4946	1.1913	240.85
31	HALDIA ENERGY LIMITED	HALDIA ENERGY LIMITED (W.B)	600.00	1.0015	1.0015	100.00
32	INDIAN METALS & FERRO ALLOYS LTD.	INDIAN METALS & FERRO ALLOYS Ltd. (Odisha)	258.00	0.5150	0.5150	100.00
33	IL&FS TAMIL NADU POWER COMPANY Ltd.	IL&FS TAMIL NADU POWER COMPANY LIMITED (Tamil Nadu)	1200.00	0.1632	0.1676	102.73
34	MAHATMA GANDHI	JHPL (Haryana)	1320.00	1.6480	2.2566	136.93
35	O.P. Jindal Super TPP (Stage-I)	JPL (Chhattisgarh.)	1000.00	0.8205	0.8303	101.19
36	O.P. Jindal Super TPP (Stage-II)	JPL (Chhattisgarh.)	2400.00	2.4951	2.5204	101.02
37	JAYPEE NIGRIE SUPER TPP	JAIPRAKSH POWER VENTURES LIMITED (MP)	1320.00	1.2016	1.3166	109.57
38	VIJAYANAGAR	JSW ENERGY LIMITED (Karnataka)	860.00	0.1458	0.1500	102.92

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>
(1)	(2)	(3)	(4)	(5)	(6)	(7)
39	ANGUL CAPTIVE POWER PLANT	JINDAL STEEL AND POWER LIMITED (Chhattisgarh)	810.00	1.1223	1.1223	100.00
40	JALIPA KAPURDI	JSW ENERGY (BARMER) LIMITED (Formerly Raj Westpower Ltd.) (Rajasthan)	1080.00	0.9158	0.9159	100.01
41	KMPCL (AKALTARA)	KSK MAHANADI POWER COMPANY LIMITED (Chhattisgarh)	1800.00	2.0090	2.2009	109.55
42	LALITPUR	LALITPUR POWER GENERATION COMPANY LIMITED (UP)	1980.00	1.4158	1.5116	106.76
43	MAITHON RBTTP	MPL (Jharkhand)	1050.00	1.5781	1.5967	101.18
44	AMARKANTAK	M.P.P.G.C.L. (M.P.)	210.00	0.3147	0.3164	100.55
45	BHUSA WAL	M.S.P.G.C.L. (Maharashtra)	1210.00	1.6212	1.6970	104.67
46	NASHIK	M.S.P.G.C.L. (Maharashtra)	630.00	0.7354	1.4798	201.23
47	PARLI	M.S.P.G.C.L. (Maharashtra)	750.00	0.8392	3.8735	461.55
48	PARAS	M.S.P.G.C.L. (Maharashtra)	500.00	0.7681	0.8618	112.19
49	ANUPPUR TPS	MB POWER (MADHYA PRADESH) LIMITED (M.P.)	1200.00	1.5528	1.5988	102.96
50	NEYVELI -I EXPN	NLC LTD. (Tamil Nadu)	420.00	0.1746	0.1746	100.00
51	NEYVELI - II	NLC LTD. (Tamil Nadu)	1470.00	0.6739	1.2862	190.86
52	NEYVELI - II EXPN	NLC LTD. (Tamil Nadu)	500.00	0.0968	0.0968	100.00
53	BARSINGSAR LIGNITE	NLC LTD. (Rajasthan)	250.00	0.2017	0.2017	100.00
54	NLC TAMILNADU POWER Ltd	NLC TAMIL NADU POWER LIMITED (Tamil Nadu)	1000.00	0.8701	0.8701	100.00
55	BHILLAI TPS (BHILLAI PP-III)	NSPCL (Chhattisgarh)	500.00	0.7070	0.7077	100.10

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>
(1)	(2)	(3)	(4)	(5)	(6)	(7)
56	BHILLAI TPS (BHILLAI PP-II)	NSPCL (Chhattisgarh)	74.00	0.1690	0.1699	100.52
57	DURGAPUR CPP	NSPCL (Odisha)	120.00	0.2252	0.2292	101.78
58	ROURKELA CPP	NSPCL (West Bengal)	120.00	0.3724	0.5727	153.78
59	VALLUR	NTPC TAMILNADU ENERGY COMPANY LTD {(NTECL) (Tamil Nadu)}	1500.00	1.7450	2.1120	121.03
60	TANDA	NTPC LTD. (U.P.)	440.00	0.9692	1.5237	157.21
61	RAMAGUNDAM	NTPC LTD. (Andhra Pradesh).	2600.00	3.8163	4.5118	118.23
62	SIMHADRI	NTPC LTD. (Andhra Pradesh).	2000.00	2.6389	4.4302	167.88
63	FARAKKA	NTPC LTD. (W.B.)	2100.00	3.1810	4.0912	128.61
64	TALCHAR(TPS)	NTPC LTD. (Odisha).	460.00	1.1845	1.1895	100.42
65	MOUDA TPS	NTPC LTD. (Maharashtra)	2320.00	2.3297	2.3439	100.61
66	SOLAPUR	NTPC LTD. (Maharashtra)	1320.00	0.1516	0.1768	116.57
67	KUDGI	NTPC LTD. (Karnataka)	2400.00	0.8930	0.8970	100.45
68	RAJPURA TPS	NABHA POWER PROJECT (Punjab)	1400.00	1.2859	1.7963	139.69
69	OPG POWER GENERATION PRIVATE LIMITED	OPG POWER GENERATION PRIVATE LIMITED (Tamil Nadu)	414.00	0.0966	0.0966	100.00
70	LEHRA MOHABAT	P.S.P.C.L. (Punjab)	920.00	0.2476	0.2619	105.79
71	ROPAR	P.S.P.C.L. (Punjab)	705.00	0.2522	1.0781	427.53
72	SURATGARH	RRVUNL (Rajasthan)	1500.00	1.0528	1.7570	166.88
73	KALISINDH	RRVUNL (Rajasthan)	1200.00	0.9690	1.2012	123.97
74	ROSA PHASE-I	RPSCL (U.P)	1200.00	1.1530	1.1691	101.39
75	AMRAVATI TPS	RATTANINDIA POWER LTD. (Maharashtra)	1350.00	0.6306	0.7585	120.27

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>
(1)	(2)	(3)	(4)	(5)	(6)	(7)
76	GMR Chhattisgarh	RAIPUR ENERGEN LIMITED (Formerly GMR Chhattisgarh Energy Ltd) (Chhattisgarh)	1370.00	1.3081	1.3103	100.17
77	CUDDALORE	TAQA NEYVELLY POWER CO.PVT. LTD. (Tamil Nadu)	250.00	0.0890	0.1105	124.11
78	JOJOBERA	T.P.CO. (Jharkhand)	547.50	0.9674	1.2416	128.35
79	SABARMATI	TORRENT POWER LTD.(Gujarat)	362.00	0.3023	0.3023	100.00
80	METTUR-I	T.N.G & D Corporation (Tamil Nadu)	840.00	0.8951	0.9315	104.07
81	NORTH CHENNAI-I	T.N.G & D Corporation (Tamil Nadu)	630.00	0.8230	1.0003	121.55
82	RAMAGUNDAM' B'	TSPGCL (Telangana)	62.50	0.1166	0.1850	158.67
83	M/s TALWANDI SABO POWER LTD	TALWANDI SABO POWER LTD (Punjab)	1980.00	1.8600	2.0200	108.60
84	PARICHHA	U.P.R.V.U.N.L. (U.P.)	1140.00	1.0768	1.0823	100.51
85	UDUPI	UDUPI POWER CORPORATION LIMITED (Karnataka)	1200.00	0.0873	0.0881	100.92
86	VS LIGNITE POWER PRIVATE LTD	VS LIGNITE POWER PRIVATE LIMITED (Rajasthan)	135.00	0.1503	0.1503	100.00
87	VEDANTA LTD TPP	VEDANTA LIMITED (Odisha)	2400.00	3.0095	3.2431	107.76
88	VEDANTA LTD CPP	VEDANTA LIMITED (Odisha)	1215.00	5.8285	6.2282	106.86
89	KOLAGHAT	W.B.P.D.C.L. (W.B.)	1260.00	1.0999	1.8077	164.35
90	BANDEL	W.B.P.D.C.L (W.B.)	335.00	0.3095	0.3151	101.83
91	NEYVELI NEW THERMAL POWER STATION	N.L.C. India Limited, NEYVELI	1000.00	0.0158	0.0158	100.00

It may be seen from the Table-X above that during the Year 2019-20, 91 Thermal Power Stations have achieved a fly ash utilization of 100% or more. More than 100% fly ash

utilization means utilization of ash generated during the current year and utilization of un-utilized accumulated ash before the current year.

#### **4.4 Thermal Power Stations with Fly Ash Utilization in the Range of 90 % to less than 100 % during the Year 2019-20:**

The Thermal Power Stations with fly ash utilization in the range of 90% to less than 100% during the year 2019-20 are given in **Table-XI** below:

**TABLE-XI**

**THERMAL POWER STATIONS WITH FLY ASH UTILIZATION IN THE RANGE OF 90% TO LESS THAN 100% DURING THE YEAR 2019 – 20**

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
1	Dr. N.T.R (Vijawada)	APGENCO (Andhra Pradesh)	1760.00	4.1481	4.0905	98.61
2	KASAIPALI	ACB (INDIA) Ltd. (Chhattisgarh)	270.00	1.0119	0.9766	96.51
3	TIRODA	ADANI POWER MAHARASHTRA LTD. (Maharashtra)	3300.00	4.8152	4.3758	90.87
4	ADHUNIK PNR LTD. (MAHADEV PRASAD STPP)	ADHUNIK POWER & NATURAL RESOURCES LTD. (Jharkhand)	540.00	0.9456	0.9245	97.77
5	MUTIARA	COASTAL ENERGEN PVT. LTD (Tamil Nadu)	1200.00	0.0807	0.0803	99.60
6	CHEMPLAST LIMITED TPS	CHEMPLAST SANMAR LIMITED (Tamil Nadu)	48.50	0.0197	0.0196	99.69
7	CHANDRAPURA	D.V.C. (Jharkhand)	630.00	1.0207	0.9976	97.74
8	KODERMA	D.V.C. (Jharkhand)	1000.00	1.8131	1.6531	91.18
9	D.P.P.S.	D.P.L (West Bengal)	550.00	0.6295	0.5806	92.23
10	JAYPEE BINA TPP	JAIPRAKSH POWER VENTURES LIMITED (MP)	500.00	0.6503	0.5885	90.49

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
11	RATNAGIRI	JSW ENERGY LIMITED (Maharashtra)	1200.00	0.3784	0.3764	99.49
12	DONGAMAHUA CAPTIVE POWER PLANT	JINDAL STEEL AND POWER LIMITED (CHHATTISGARH)	576.00	0.90T1	0.9090	99.99
13	JSW STEEL LIMITED CPP-II	JSW STEEL LIMITED (Tamil Nadu)	60.00	0.0131	0.0130	99.79
14	BELLARI	K.P.C.L (Karnataka)	1700.00	0.9117	0.8224	90.21
5	SANJAY GANDHI	M.P.P.G.C.L. (M.P.)	1340.00	1.7499	1.7427	99.59
16	MCCPL BANDHAKHAR	MARUTI CLEAN COAL AND POWER LIMITED (Chhattisgarh)	300.00	0.7670	0.7474	97.44
17	FEROZE GANDHI UNCHAHAR	NTPC LTD.(U.P.)	1050.00	2.1654	1.9569	90.37
18	PRAYAGRAJ TPS	PRAYAGRAJ POWER GENERATION COMPANY LTD. (U.P.)	1980.00	1.9835	1.7877	90.13
19	UCCHPINDA	R.K.M. POWERGEN PVT. LTD (PGCIL) (Chhattisgarh)	1440.00	0.9106	0.8682	95.34
20	RATIZA TPS	SPECTRUM COAL & POWER LTD.(Chhattisgarh)	100.00	0.5726	0.5531	96.59
21	SINGARENI TPP	THE SINGARENI COLLIERIES COMPANY LIMITED (Telangana)	1200.00	2.2842	2.2591	98.90
22	TROMBAY	T.P.CO.(Maharashtra)	750.00	0.0564	0.0559	99.11
23	METTUR-II	T.N.G & D Corporation (Tamil Nadu)	600.00	0.4182	0.3906	93.40
24	NORTH CHENNAI-II	T.N.G & D Corporation (Tamil Nadu)	1200.00	1.4103	1.3941	98.85
25	KAKATIA (Stage-I)	T.S.G.E.N.C.O. (Telangana)	500.00	0.6273	0.5897	94.01
26	KAKATIA (Stage-II)	T.S.G.E.N.C.O. (Telangana)	600.00	0.8205	0.8045	98.05
27	HARDUAGANJ	U.P.R.V.U.N.L. (U.P.)	610.00	0.8345	0.8167	97.87

It may be seen from the **Table-XI** above that 27 thermal power stations, during the year 2019-20, have achieved a fly ash utilization level in the range of 90% to less than 100%.

#### **4.5 Thermal Power Stations with Fly Ash Utilization in the Range of 70% to less than 90% during the Year 2019-20**

The Thermal Power Stations with fly ash utilization in the range of 70% to less than 90% during the year 2019-20 are given in **Table-XII** below:

**TABLE-XII**

#### **THERMAL POWER STATIONS WITH FLY ASH UTILIZATION IN THE RANGE OF 70% TO LESS THAN 90% DURING THE YEAR 2019 – 20**

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
1	RAYALSEEMA	APGENCO (Andhra Pradesh)	1650.00	2.1968	1.5948	72.60
2	BHADRESHWAR VIDYUT PRIVATE LTD TPS	BHADRESHWAR VIDYUT PRIVATE LIMITED (Gujarat)	300.00	0.0621	0.0497	80.05
3	MEJIA	D.V.C. (West Bengal)	2340.00	3.9282	2.7533	70.09
4	DURGAPUR STEEL	D.V.C. (West Bengal)	1000.00	1.7262	1.3135	76.09
5	MAHAN	ESSAR POWER MP LTD.(M.P.)	1200.00	0.6878	0.5419	78.79
6	UKAI	G.S.E.C.L. (Gujarat)	1110.00	0.1353	0.1157	85.51
7	BHAVNAGAR LIGNITE	G.S.E.C.L. (Gujarat)	500.00	0.0083	0.0072	86.75
8	RAICHUR	K.P.C.L. (Karnataka)	1720.00	2.3879	1.9502	81.67
9	MUZAFFARPUR TPS	KANTI BIJLEE UTPADAN NIGAM LTD. (BIHAR)	610.00	0.8240	0.6250	75.85
10	JHABUA POWER LIMITED (SEIONI TPP) (AVANTHA BHANDAR TPP)	M/S JHABUA POWER LIMITED (MP)	600.00	0.8325	0.6921	83.13
11	KAHALGAON	NTPC LTD.(Bihar)	2340.00	4.8504	3.7101	76.49

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
12	NALCO, CPP AUNGAL	NATIONAL ALUMINIUM COMPANY LIMITED (NALCO) (Odisha)	1200.00	2.4851	1.7774	71.52
13	GVK POWER (GOINDWALSAHIB) LTD., GOINDWAL SAHIB	PSPCL (Punjab)	540.00	0.3056	0.2434	79.65
14	CHHABRA	RRVUNL (Rajasthan)	1000.00	1.3005	1.0573	81.30
15	SEMCORP ENERGY INDIA Ltd. (PAINAMPURAM TPP) (SGPL-TPP)	SEMCORP ENERGY INDIA Ltd. (Formerly Thermal Powertech Corporation India Ltd) (Andhra Pradesh)	1320.00	1.2265	0.9710	79.17
16	SKS POWER GENERATION(CC) LTD (Binjkote TPP)	SKS POWER GENERATION(CHH ATTISGARH) LIMITED (Chhattisgarh)	600.00	0.9391	0.7875	83.86
17	TUTICORIN	T.N.G & D Corporation (Tamil Nadu)	1000.00	1.0569	0.7620	72.10
18	RAIGARH TPP (NAWAPARA TPP)	TRN ENERGY PRIVATE LIMITED (Chhattisgarh)	600.00	0.5186	0.4401	84.86
19	SAGARDIGHI	W.B.P.D.C.L(W.B.)	1600.00	1.4938	1.1082	74.19
20	BAKRESWAR	W.B.P.D.C.L(W.B.)	1050.00	1.2171	1.0197	83.78
21	KOTA SUPER THERMAL POWER STATION	RRVUNL, KOTA(Rajasthan)	1240.00	1.8013	1.5243	84.62

It may be seen from the Table-XII above, that 21 thermal power stations, during the year 2019-20, have achieved a fly ash utilization level in the range of 70 % to less than 90%.

#### **4.6 Thermal Power Stations with Fly Ash Utilization in the range 50% to less than 70% during the Year 2019-20:**

The Thermal Power Stations with fly ash utilization in the range of 50% to less than 70% during the year 2019-20 are given in **Table-XIII**:

**TABLE-XIII**  
**THERMAL POWER STATIONS WITH FLY ASH UTILIZATION IN THE RANGE OF  
 50% TO LESS THAN 70% DURING THE YEAR 2019-20**

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (MT)	Fly ash Utilization (MT)	% age
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	SRI DAMODARAM SANJEEVAIAH	APPDCL (Andhra Pradesh)	1600.00	1.3895	0.7143	51.40
2	MARWA TENDUBHATA	C.S.P.G.C.L (Chhattisgarh)	1000.00	1.3626	0.8067	59.20
3	KORBA (WEST)	C.S.P.G.C.L (Chhattisgarh)	1340.00	2.6890	1.3640	50.73
4	KORBA (EAST)	C.S.P.G.C.L (Chhattisgarh)	440.00	0.4679	0.3032	64.80
5	DERANG TPP	JINDAL INDIA THERMAL POWER LIMITED (Odisha)	1200.00	1.7168	1.1338	66.04
6	AMARKANTAK TPS (PATHADI TPP)	LANCO AMARKANTAK POWER LIMITED (Chhattisgarh)	600.00	0.9590	0.6550	68.30
7	SATPURA	M.P.P.G.C.L. (M.P)	1330.00	1.4685	0.9358	63.72
8	KHAPARKHEDA	M.S.P.G.C.L. (Maharashtra)	1340.00	2.5174	1.4087	55.96
9	NEYVELI - I	NLC LTD. (Tamil Nadu)	500.00	0.1783	0.1095	61.41
10	KORBA	NTPC (Chhattisgarh).	2600.00	4.9976	3.3487	67.01
11	BARH SUPER TPS	NTPC LTD (Bihar)	1320.00	2.0636	1.3833	67.04
12	TALCHAR(KAN)	NTPC LTD. (Odisha).	3000.00	7.0092	4.7156	67.28
13	SASAN UMPP	REILIANCE POWER LIMITED (Madhya Pradesh)	3960.00	5.2446	2.7464	52.37
14	KOTHAGUDEM-VI	TSPGCL (Telangana)	500.00	0.8261	0.5601	67.80
15	TENUGHAT TPS	TENUGHAT VIDHYUT NIGAM	420.00	0.6842	0.4517	66.02

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
		LIMITED (Jharkhand)				
16	SANTALDIH	W.B.P.D.C.L (W.B.)	500.00	0.1095	0.0562	51.32

It may be seen from the Table-XIII above that, 16 thermal power stations during the year 2019-20 have achieved a fly ash utilization level in the range of 50% to less than 70%.

#### **4.7 Thermal Power Stations with Fly Ash Utilization below 50% during the Year 2019-20:**

The Thermal Power Stations with fly ash utilization less than 50% during the year 2019-20 are given in Table-XIV :

**TABLE-XIV**  
**THERMAL POWER STATIONS WITH FLY ASH UTILIZATION BELOW 50%**  
**DURING THE YEAR 2019-20**

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
1	NABINAGAR	BHARATIYA RAIL BIJLEE COMPANY LIMITED (Bihar)	750.00	1.1153	0.5558	49.84
2	DSPM	C.S.P.G.C.L. (Chhattisgarh)	500.00	1.1157	0.3794	34.01
3	DURGAPUR	D.V.C. (West Bengal)	210.00	0.1875	0.0149	7.95
4	RAGHUNATHPUR	D.V.C. (West Bengal)	1200.00	1.3644	0.1759	12.89
5	Vizag TPS	HINDUJA NATIONAL POWER CORPORATION LIMITED (Andhra Pradesh)	1040.00	0.8718	0.3856	44.23
6	ANPARA-C TPS	LANCO ANPARA POWER LIMITED (Uttar Pradesh)	1200.00	1.5779	0.3583	22.71
7	SHREE SINGAJI TPS	M.P.P.G.C.L. (M.P.)	210.00	2.3642	0.4300	18.19

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
8	CHANDRAPUR	M.S.P.G.C.L. (Maharashtra)	2340.00	4.9035	1.0538	21.49
9	KORADI	M.S.P.G.C.L. (Maharashtra)	1280.00	2.8872	1.2159	42.11
10	MEJA TPP	MEJA URJA NIGAM PRIVATE LIMITED (Uttar Pradesh)	660.00	0.2479	0.0000	0.02
11	DADRI	NTPC LTD. (U.P.)	1820.00	0.6998	0.3176	45.39
12	SINGRAULI	NTPC LTD. (U.P.)	2000.00	3.2060	1.2581	39.24
13	RIHAND	NTPC LTD. (U.P.)	3000.00	3.9015	1.6849	43.19
14	VINDHYACHAL	NTPC LTD. (M.P.)	4760.00	8.8569	2.8409	32.08
15	SIPAT	NTPC LTD. (Chhattisgarh).	2980.00	4.9052	2.4084	49.10
16	BONGAIGAON	NTPC LTD. (Assam)	750.00	0.6998	0.3176	45.39
17	GADARWARA	NTPC LTD. (Madhya Pradesh)	800.00	0.2886	0.0015	0.54
18	BARAUNI	NTPC Ltd-BSPGCL (JV) (Bihar)	720.00	0.0726	0.0131	18.01
19	IB VALLEY	O.P.G.C.L. (Odisha)	420.00	1.2337	0.2140	17.34
20	YERAMARUS TPS	RAICHUR POWER CORPORATION LIMITED (Karnataka)	1600.00	0.0899	0.0107	11.95
21	KOTHAGUDEM-V	TSPGCL (Telangana)	500.00	1.4096	0.2698	19.14
22	KOTHAGUDEM (Stage I to IV)	T.S.P.G.C.L (Telangana)	420.00	1.0502	0.3616	34.43
23	ANPARA 'A' & 'B'	U.P.R.V.U.N.L. (U.P.)	2630.00	3.6249	0.1414	3.90
24	OBRA	U.P.R.V.U.N.L. (U.P.)	1000.00	1.1142	0.0861	7.73
25	SAI WARDHA POWER Ltd., WARORA	WPCL (Maharashtra)	540.00	0.0436	0.0151	34.75
26	LARA SUPER THERMAL POWER PROJECT	N.T.P.C.LTD (Chhattisgarh)	800.00	0.6459	0.0017	0.26
27	CHHABRA SUPER CRITICAL TPP	RRVUNL (Rajasthan)	1340.00	1.2272	0.4110	33.49

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (MT)	Fly ash Utilization (MT)	% age
(1)	(2)	(3)	(4)	(5)	(6)	(7)
28	KHARGONE SUPER THERMAL POWER STATION	N.T.P.C.LTD (Madhya Pradesh)	1320.00	0.0968	0.0098	10.13

It may be seen from the **Table-XIV** above, that 28 Thermal Power Stations have achieved a fly ash utilization level in the range of less than 50% during the year 2019-20.

#### **4.8 THERMAL POWER STATIONS WITH NO ASH GENERATION DURING THE YEAR 2019-20:**

The Thermal Power Stations with NO FLY ASH generation during the year 2019-20 are given in **Table-XV**

**TABLE-XV**

#### **LIST OF THERMAL POWER STATIONS WITH NO ASH GENERATION DURING THE YEAR 2019-20**

Sl. No.	Name of TPS	Power Utility	Date of Commissioning	Installed Capacity (MW)
1	2	3	4	5
1	MIHAN	AMNEPL (Maharashtra) (No Generation)	05.01.2011	246.00
2	T.G.S.	C.E.S.C. (West Bengal) (No Generation)	05.03.1983	240.00
3	CHINAKURI	EASTERN COALFIELDS LIMITED (West Bengal) (No Generation)	01.04.1991 / Shutdown 21.11.2011	30.00
4	GEPL TPP	GUPTA ENERGY PRIVATE LIMITED( <u>Maharashtra</u> ) (No Generation)	19.07.2012	120.00
5	RAJGHAT	IPGCL (Delhi) (No Generation)	10.03.1989	135.00
6	DISHERGARH POWER STATION	INDIA POWER CORPORATION Ltd. (West Bengal) (No Generation)	25.09.2012	12.00
7	BELA TPS	IDEAL ENERGY PROJECTS LIMITED (Maharashtra)	18.07.2013	270.00

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Date of Commissioning</b>	<b>Installed Capacity (MW)</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
		(No Generation)		
8	THAMMINAPATNAM TPS	MEENAKSHI ENERGY PRIVATE LIMITED (Andhra Pradesh) (No Generation)	07.10.2012	300.00
9	BADARPUR	NTPC LTD (Delhi) (No Generation)	01.11.1973	705.00
10	BATHINDA	P.S.P.C.L. (Punjab) (No Generation)	22.09.1974	460.00
11	SAI LILAGARH POWER GENERATION Ltd.	SAI LILAGARH POWER GENERATION LIMITED (Chhattisgarh) (No Generation)	2007	86.00
12	SWASTIK POWER & MINERALS RESOURCES PVT. LTD.	SWASTIK POWER & MINERALS RESOURCES PVT. LTD (Chhattisgarh) (No Generation)	02.05.2015	25.00
13	PANKI	U.P.R.V.U.N.L. (Uttar Pradesh) (No Generation)	10.11.1976	210.00
14	BUTIBORI	VIDARBHA INDUSTRIES POWER LTD. (Maharashtra) (No Generation)	04.04.2013	600.00

It may be seen from the Table-XV above, that 14 Thermal power stations during the year 2019-20 have not generated any fly ash.

## **5.0 FLY ASH UTILIZATION STATUS AS PER NOTIFICATION OF 3RD NOVEMBER, 2009 DURING THE YEAR 2019-20 (TARGET ACHIEVED AND NOT ACHIEVED):**

As per the targets mandated by the MoEF & CC's notification dated 3rd November 2009 for fly ash utilization by the power stations, a total of 93 stations achieved their target and as many as 90 Nos. could not reach the targets. The details are given at Table-XVI and Table-XVII respectively. However, the date of achieving the 100% ash utilization target is now extended to 31st December 2017 as per the new amendment notification dated 25th January 2016.

**TABLE-XVI**

**FLY ASH UTILIZATION STATUS AS PER NOTIFICATION OF 3RD NOVEMBER,  
2009 DURING THE YEAR 2019-20 (TARGET ACHIEVED)**

<b>Sl. No</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Date of Commissioning</b>	<b>Installed Capacity (MW) (5)</b>	<b>Fly ash Generation (MT) (6)</b>	<b>Fly ash Utilization (MT) (7)</b>	<b>% age (8)</b>	<b>Target in %age (9)</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>	<b>(8)</b>	<b>(9)</b>
1	SVPL Renki	ACB India Limited (Chhattisgarh)	12.10.2011	60.00	0.2385	0.2385	100.00	100
2	CHAKABURA TPP	ACB (INDIA) Ltd. (Chhattisgarh)	27.02.2007	30.00	0.1500	0.1508	100.53	100
3	CHAKABURA TPP (EXTN)	ACB (INDIA) Ltd. (Chhattisgarh)	28.03.2014	30.00	0.1618	0.1618	100.00	100
4	INDIRA GANDHI	APCPL (Haryana)	31.10.2010	1500.00	0.8622	1.6428	190.52	100
5	MUNDRA TPS	ADANI POWER (MUNDRA) LIMITED (Gujarat)	04.08.2009	4620.00	0.7360	0.7420	100.82	100
6	KAWAI	ADANI POWER RAJASTHAN LTD. (Rajasthan)	31.05.2013	1320.00	1.3676	1.5445	112.93	100
7	ADANI DAHANU	ADANI ELECTRICITY MUMBAI LIMITED (Maharashtra)	01.07.1995	500.00	0.4251	0.5444	128.06	100
8	BARKHERA	BEPL (UP)	29.10.2011	90.00	0.0287	0.0287	100.00	100
9	KHAMBER KHERA	BEPL (UP)	30.09.2011	90.00	0.0253	0.0253	100.00	100
10	KUNDARKI	BEPL (UP)	03.01.2012	90.00	0.0354	0.0354	100.00	100
11	MAQSOODA PUR	BEPL (UP)	27.10.2011	90.00	0.0317	0.0317	100.00	100
12	UTRAULA	BEPL (UP)	30.01.2012	90.00	0.0333	0.0333	100.00	100
13	BALCO CPP-II	BHARAT ALUMINIUM COMPANY LIMITED(BALCO (Chhattisgarh)	June 2005	540.00	0.9846	0.9885	100.39	100
14	BALCO TPP-III	BHARAT ALUMINIUM COMPANY LIMITED(BALCO (Chhattisgarh)	August 2015	1200.00	1.8844	1.9057	101.13	100

<b>Sl. No</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Date of Commissioning</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>	<b>Target in %age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>	<b>(8)</b>	<b>(9)</b>
15	B.B.G.S.	C.E.S.C. (West Bengal)	16.09.1997	750.00	1.1300	1.1300	100.00	100
16	S.G.S.	C.E.S.C. (West Bengal)	12.08.1990	135.00	0.0700	0.0700	100.00	100
17	MUNDRA UMPP	CGPL (Gujarat)	07.03.2012	4150.00	0.7200	0.8000	111.11	100
18	BOKARO 'B'	D.V.C. (Jharkhand)	31.03.1993	710.00	0.6681	1.0464	156.61	100
19	DHARIWAL INFRASTRUCTURE Ltd.	DHARIWAL INFRASTRUCTURE LIMITED (Maharashtra)	11.2.2014	600.00	0.7442	0.7966	107.04	100
20	SURAT LIGNITE	G.I.P.C.L. (Gujarat)	15.02.2000	500.00	0.5708	0.5708	100.00	100
21	AKRIMOTA	G.M.D.C.L. (Gujarat)	31.03.2005	250.00	0.2467	0.2988	121.10	100
22	GANDHINAGAR	G.S.E.C.L. (Gujarat)	20.03.1990	630.00	0.0399	0.1814	454.64	100
23	KUTCH LIGNITE	G.S.E.C.L. (Gujarat)	09.01.1990	290.00	0.0358	0.0358	100.00	100
24	SIKKA	G.S.E.C.L. (Gujarat)	14.09.2015	500.00	0.0096	0.0315	328.13	100
25	WANAKBORI	G.S.E.C.L. (Gujarat)	23.03.1982	1470.00	0.1248	0.1410	112.98	100
26	GMR WARORA ENERGY Ltd.	GMR WARORA ENERGY LTD. (Maharashtra)	19.03.2013	600.00	0.8824	0.9378	106.27	100
27	GMR KAMALANGA TPP	GMR KAMALANGA ENERGY LTD. (Odisha)	30.04.2013	1050.00	1.7049	1.8206	106.79	100
28	RAJIV GANDHI (HISAR)	H.P.G.C.L. (Haryana)	24.08.2010	1200.00	0.6371	0.6814	106.96	100
29	YAMUNANagar	H.P.G.C.L. (Haryana)	14.04.2008	600.00	0.7840	0.9600	122.45	100
30	PANIPAT	H.P.G.C.L. (Haryana)	28.03.1989	920.00	0.4946	1.1913	240.85	100
31	HALDIA ENERGY LIMITED	HALDIA ENERGY LIMITED (W.B)	28.01.2015	600.00	1.0015	1.0015	100.00	100
32	INDIAN METALS & FERRO ALLOYS LTD.	INDIAN METALS & FERRO ALLOYS Ltd. (Odisha)	Feb, 1989	258.00	0.5150	0.5150	100.00	100
33	IL&FS TAMIL NADU POWER	IL&FS TAMIL NADU POWER	29.09.2015	1200.00	0.1632	0.1676	102.73	100

<b>Sl. No</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Date of Commissioning</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>	<b>Target in %age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>	<b>(8)</b>	<b>(9)</b>
	COMPANY Ltd.	COMPANY LIMITED (Tamil Nadu)						
34	MAHATMA GANDHI	JHPL (Haryana)	29.03.2012	1320.00	1.6480	2.2566	136.93	100
35	O.P. Jindal Super TPP (Stage-I)	JPL (Chhattisgarh)	08.12.2007	1000.00	0.8205	0.8303	101.19	100
36	O.P. Jindal Super TPP(Stage-II)	JPL (Chhattisgarh)	14.03.2014	2400.00	2.4951	2.5204	101.02	100
37	JAYPEE NIGRIE SUPER TPP	JAIPRAKSH POWER VENTURES LIMITED (MP)	03.09.2014	1320.00	1.2016	1.3166	109.57	100
38	VIJAYANAGAR	JSW ENERGY LIMITED (Karnataka)	18.01.2000	860.00	0.1458	0.1500	102.92	100
39	ANGUL CAPTIVE POWER PLANT	JINDAL STEEL AND POWER LIMITED (Chhattisgarh)	13.05.2011	810.00	1.1223	1.1223	100.00	100
40	JALIPA KAPURDI	JSW ENERGY (BARMER) LIMITED (Formerly Raj Westpower Ltd.) (Rajasthan)	26.11.2009	1080.00	0.9158	0.9159	100.01	100
41	KMPCL (AKALTARA)	KSK MAHANADI POWER COMPANY LIMITED (Chhattisgarh)	Sept,2013	1800.00	2.0090	2.2009	109.55	100
42	LALITPUR	LALITPUR POWER GENERATION COMPANY LIMITED (UP)	08.01.2016	1980.00	1.4158	1.5116	106.76	100
43	MAITHON RBTTP	MPL (Jharkhand)	01.09.2011	1050.00	1.5781	1.5967	101.18	100
44	AMARKANTA K	M.P.P.G.C.L. (M.P.)	10.09.2009	210.00	0.3147	0.3164	100.55	100
45	BHUSA WAL	M.S.P.G.C.L.(Maharashtra)	18.09.1982	1210.00	1.6212	1.6970	104.67	100
46	NASHIK	M.S.P.G.C.L.(Maharashtra)	26.04.1979	630.00	0.7354	1.4798	201.23	100
47	PARLI	M.S.P.G.C.L.(Maharashtra)	01.11.2007	750.00	0.8392	3.8735	461.55	100

<b>Sl. No</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Date of Commissioning</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>	<b>Target in %age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>	<b>(8)</b>	<b>(9)</b>
48	PARAS	M.S.P.G.C.L.(Maharashtra)	31.03.2008	500.00	0.7681	0.8618	112.19	100
49	ANUPPUR TPS	MB POWER (MADHYA PRADESH) LIMITED (M.P.)	20.05.2015	1200.00	1.5528	1.5988	102.96	100
50	NEYVELI - I EXPN	NLC LTD. (Tamil Nadu)	21.10.2002	420.00	0.1746	0.1746	100.00	100
51	NEYVELI - II	NLC LTD. (Tamil Nadu)	29.03.1986	1470.00	0.6739	1.2862	190.86	100
52	NEYVELI - II EXPN	NLC LTD. (Tamil Nadu)	18.05.2011	500.00	0.0968	0.0968	100.00	100
53	BARSINGSA R LIGNITE	NLC LTD. (Rajasthan)	27.10.2009	250.00	0.2017	0.2017	100.00	100
54	NLC TAMILNADU POWER Ltd	NLC TAMIL NADU POWER LIMITED (Tamil Nadu)	08.03.2015	1000.00	0.8701	0.8701	100.00	100
55	BHILLAI TPS (BHILLAI PP-III)	NSPCL (Chhattisgarh)	05.01.2009	500.00	0.7070	0.7077	100.10	100
56	BHILLAI TPS (BHILLAI PP-II)	NSPCL (Chhattisgarh)	25.08.1982	74.00	0.1690	0.1699	100.52	100
57	DURGAPUR CPP	NSPCL (Odisha)	17.02.1987	120.00	0.2252	0.2292	101.78	100
58	ROURKELA CPP	NSPCL (West Bengal)	01.03.2001	120.00	0.3724	0.5727	153.78	100
59	VALLUR	NTPC TAMILNADU ENERGY COMPANY LTD {(NTECL) (Tamil Nadu)}	09.03.2012	1500.00	1.7450	2.1120	121.03	100
60	TANDA	NTPC LTD. (U.P.)	01-01-2000	440.00	0.9692	1.5237	157.21	100
61	RAMAGUNDAM	NTPC LTD. (Andhra Pradesh).	01-11-1983	2600.00	3.8163	4.5118	118.23	100
62	SIMHADRI	NTPC LTD. (Andhra Pradesh).	01-02-2002	2000.00	2.6389	4.4302	167.88	100
63	FARAKKA	NTPC LTD. (W.B.)	01-01-1986	2100.00	3.1810	4.0912	128.61	100
64	TALCHER(TPS)	NTPC LTD (Odisha).	03.06.1995	460.00	1.1845	1.1895	100.42	100
65	MOUDA TPS	NTPC LTD. (Maharashtra)	01-04-2012	2320.00	2.3297	2.3439	100.61	100

<b>Sl. No</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Date of Commissioning</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>	<b>Target in %age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>	<b>(8)</b>	<b>(9)</b>
66	SOLAPUR	NTPC LTD. (Maharashtra)	01.04.2017	1320.00	0.1516	0.1768	116.57	70
67	KUDGI	NTPC LTD. (Karnataka)	01-12-2016	2400.00	0.8930	0.8970	100.45	90
68	RAJPURA TPS	NABHA POWER PROJECT (Punjab)	24.01.2014	1400.00	1.2859	1.7963	139.69	100
69	OPG POWER GENERATION PRIVATE LIMITED	OPG POWER GENERATION PRIVATE LIMITED (Tamil Nadu)	01.08.2010	414.00	0.0966	0.0966	100.00	100
70	LEHRA MOHABAT	P.S.P.C.L. (Punjab)	25.5.1998	920.00	0.2476	0.2619	105.79	100
71	ROPAR	P.S.P.C.L. (Punjab)	31.03.1988	840.00	0.2522	1.0781	427.53	100
72	SURATGARH	RRVUNL (Rajasthan)	31.10.1998	1500.00	1.0528	1.7570	166.88	100
73	KALISINDH	RRVUNL (Rajasthan)	07.05.2014	1200.00	0.9690	1.2012	123.97	100
74	ROSA PHASE-I	RPSCL (U.P)	12.03.2010	1200.00	1.1530	1.1691	101.39	100
75	AMRAVATI TPS	RATTANINDIA POWER LTD. (Maharashtra)	03.06.2013	1350.00	0.6306	0.7585	120.27	100
76	GMR Chhattisgarh	RAIPUR ENERGEN LIMITED  (Formerly GMR CHHATTISGARH Energy Ltd) (Chhattisgarh)	1.06.2015	1370.00	1.3081	1.3103	100.17	100
77	SKS POWER GENERATION(CC)LTD (Binjkote TPP)	SKS POWER GENERATION(C HHATTISGARH) LIMITED (Chhattisgarh)	06.10.2017	600.00	0.9391	0.7875	83.86	70
78	SINGARENI TPP	THE SINGARENI COLLIERIES COMPANY LIMITED (Telangana)	25.09.2016	1200.00	2.2842	2.2591	98.90	90
79	CUDDALORE	TAQA NEYVELI POWER CO.PVT. LTD. (Tamil Nadu)	15.12.2002	250.00	0.0890	0.1105	124.11	100
80	JOJOBERA	T.P.C.O. (Jharkhand)	April,1996	547.50	0.9674	1.2416	128.35	100

<b>Sl. No</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Date of Commissioning</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>	<b>Target in %age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>	<b>(8)</b>	<b>(9)</b>
81	SABARMATI	TORRENT POWER LTD.(Gujarat)	12.10.1978	362.00	0.3023	0.3023	100.00	100
82	METTUR-I	T.N.G & D Corporation (Tamil Nadu)	07.01.1987	840.00	0.8951	0.9315	104.07	100
83	NORTH CHENNAI-I	T.N.G & D Corporation (Tamil Nadu)	25.10.1994	630.00	0.8230	1.0003	121.55	100
84	RAMAGUND AM'B'	TSPGCL (Telangana)	17.10.1971	62.50	0.1166	0.1850	158.67	100
85	M/s TALWANDI SABO POWER LTD	TALWANDI SABO POWER LTD (Punjab)	05.07.2014	1980.00	1.8600	2.0200	108.60	100
86	PARICHHA	U.P.R.V.U.N.L. (U.P.)	31.03.1984	1140.00	1.0768	1.0823	100.51	100
87	UDUPI	UDUPI POWER CORPORATION LIMITED (Karnataka)	11.11.2010	1200.00	0.0873	0.0881	100.92	100
88	VS LIGNITE POWER PRIVATE LTD	VS LIGNITE POWER PRIVATE LIMITED (Rajasthan)	FEB 2010	135.00	0.1503	0.1503	100.00	100
89	VEDANTA LTD TPP	VEDANTA LIMITED (Odisha)	09.11.2010	2400.00	3.0095	3.2431	107.76	100
90	VEDANTA LTD CPP	VEDANTA LIMITED (Odisha)	30.07.2008	1215.00	5.8285	6.2282	106.86	100
91	KOLAGHAT	W.B.P.D.C.L. (W.B.)	16.08.1990	1260.00	1.0999	1.8077	164.35	100
92	BANDEL	W.B.P.D.C.L (W.B.)	04.09.1965	335.00	0.3095	0.3151	101.83	100
93	NEYVELI NEW THERMAL POWER STATION	N.L.C. India Limited, NEYVELI	28.12.2019	1000.00	0.0158	0.0158	100.00	50 (*)

**Note: Target of fly ash utilization as per MoEF & CC Notification 3rd NOVEMBER, 2009:**

**(1) At least 50% of fly ash generation – One year from the date of Commissioning**

**At least 70% of fly ash generation - Two years from the date of Commissioning**

**At least 90% of fly ash generation - Three years from the date of Commissioning**

**At least 100% of fly ash generation - Four years from the date of Commissioning**

**(2)\*(Less than 50% for Thermal Power Stations commissioned within one year from the date of commissioning)**

**(3) Cut-off Date for utilization target is 31.03.2020**

**TABLE-XVII**

**FLY ASH UTILIZATION STATUS AS PER NOTIFICATION OF 3RD NOVEMBER, 2009 DURING THE YEAR 2019-20 (THERMAL POWER STATIONS WHO HAVE NOT MET THEIR TARGET)**

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Date of Commissioning</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>	<b>Target in %age</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
1	Dr. N.T.R (Vijawada)	APGENCO (Andhra Pradesh)	01.11.1979	1760.00	4.1481	4.0905	98.61	100
2	RAYALSEEMA	APGENCO (Andhra Pradesh)	16.11.1994	1650.00	2.1968	1.5948	72.60	100
3	SRI DAMODARAM SANJEEVAIAH	APPDCL (Andhra Pradesh)	05.02.2015	1600.00	1.3895	0.7143	51.40	100
4	KASAIPALI	ACB (INDIA) Ltd. (Chhattisgarh)	13.12.2011	270.00	1.0119	0.9766	96.51	100
5	TIRODA	ADANI POWER MAHARASHTRA LTD. (Maharashtra)	23.09.2012	3300.00	4.8152	4.3758	90.87	100
6	ADHUNIK PNR LTD. (MAHADEV PRASAD STPP)	ADHUNIK POWER & NATURAL RESOURCES LTD. (Jharkhand)	21.01.2013	540.00	0.9456	0.9245	97.77	100
7	NABINAGAR	BHARATIYA RAIL BIJLEE COMPANY LIMITED (Bihar)	16.01.2017	750.00	1.1153	0.5558	49.84	90
8	BHADRESHWAR VIDYUT PRIVATE LTD TPS	BHADRESHWAR VIDYUT PRIVATE LIMITED (Gujarat)	04.01.2015	300.00	0.0621	0.0497	80.05	100
9	MARWA TENDUBHATA	C.S.P.G.C.L (Chhattisgarh)	31.03.2016	1000.00	1.3626	0.8067	59.20	100
10	DSPM	C.S.P.G.C.L (Chhattisgarh)	21.10.2007	500.00	1.1157	0.3794	34.01	100

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Date of Commissioning</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>	<b>Target in %age</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
11	KORBA (WEST)	C.S.P.G.C.L (Chhattisgarh)	21.03.1983	1340.00	2.6890	1.3640	50.73	100
12	KORBA (EAST)	C.S.P.G.C.L (Chhattisgarh)	01.10.1966	440.00	0.4679	0.3032	64.80	100
13	MUTIARA	COASTAL ENERGEN PVT. LTD (Tamil Nadu)	23.12.2014	1200.00	0.0807	0.0803	99.60	100
14	CHEMPLAST LIMITED TPS	CHEMPLAST SANMAR LIMITED (Tamil Nadu)	2009	48.50	0.0197	0.0196	99.69	100
15	CHANDRAPUR A	D.V.C.(Jharkhand)	07.07.1968	630.00	1.0207	0.9976	97.74	100
16	DURGAPUR	D.V.C. (West Bengal)	Sep,1982	210.00	0.1875	0.0149	7.95	100
17	MEJIA	D.V.C. (West Bengal)	01.12.1997	2340.00	3.9282	2.7533	70.09	100
18	DURGAPUR STEEL	D.V.C. (West Bengal)	15.05.2012	1000.00	1.7262	1.3135	76.09	100
19	KODERMA	D.V.C. (Jharkhand)	18.07.2013	1000.00	1.8131	1.6531	91.18	100
20	RAGHUNATHPUR	D.V.C. (West Bengal)	31.03.2016	1200.00	1.3644	0.1759	12.89	70
21	D.P.P.S.	D.P.L (West Bengal)	30.04.2008	550.00	0.6295	0.5806	92.23	100
22	MAHAN	ESSAR POWER MP LTD.(M.P.)	29.04.2013	1200.00	0.6878	0.5419	78.79	100
23	UKAI	G.S.E.C.L. (Gujarat)	21.01.1979	1110.00	0.1353	0.1157	85.51	100
24	BHAVNAGAR LIGNITE	G.S.E.C.L. (Gujarat)	16.05.2016	500.00	0.0083	0.0072	86.75	90
25	Vizag TPS	HINDUJA NATIONAL POWER CORPORATION LIMITED (Andhra Pradesh)	11.01.2016	1040.00	0.8718	0.3856	44.23	100
26	JAYPEE BINA TPP	JAIPRAKSH POWER VENTURES LIMITED (MP)	31.08.2012	500.00	0.6503	0.5885	90.49	100
27	RATNAGIRI	JSW ENERGY LIMITED (Maharashtra)	01.09.2010	1200.00	0.3784	0.3764	99.49	100

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Date of Commissioning</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>	<b>Target in %age</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
28	DERANG TPP	JINDAL INDIA THERMAL POWER LIMITED (Odisha)	05.06.2014	1200.00	1.7168	1.1338	66.04	100
29	DONGAMAHU A CAPTIVE POWER PLANT	JINDAL STEEL AND POWER LIMITED (CHHATTISGARH)	04.09.2010	576.00	0.9091	0.9090	99.99	100
30	JSW STEEL LIMITED CPP-II	JSW STEEL LIMITED (Tamil Nadu)	24.07.2006	60.00	0.0131	0.0130	99.79	100
31	BELLARI	K.P.C.L (Karnataka)	25.03.2008	1700.00	0.9117	0.8224	90.21	100
32	RAICHUR	K.P.C.L.(Karnataka)	29.03.1985	1720.00	2.3879	1.9502	81.67	100
33	MUZAFFARPUR TPS	KANTI BIJLEE UTPADAN NIGAM LTD. (BIHAR)	11.2013	610.00	0.8240	0.6250	75.85	100
34	AMARKANTAK TPS (PATHADI TPP)	LANCO AMARKANTAK POWER LIMITED (Chhattisgarh )	01.05.2009	600.00	0.9590	0.6550	68.30	100
35	ANPARA-C TPS	LANCO ANPARA POWER LIMITED (Uttar Pradesh)	10.12.2011	1200.00	1.5779	0.3583	22.71	100
36	SANJAY GANDHI	M.P.P.G.C.L. (M.P.)	07.10.1993	1340.00	1.7499	1.7427	99.59	100
37	SATPURA	M.P.P.G.C.L. (M.P.)	07.01.1979	1330.00	1.4685	0.9358	63.72	100
38	SHREE SINGAJI TPS	M.P.P.G.C.L. (M.P.)	01.02.2014	2520.00	2.3642	0.4300	18.19	90
39	CHANDRAPUR	M.S.P.G.C.L.(Maharashtra)	03.05.1985	2340.00	4.9035	1.0538	21.49	100
40	KHAPARKHEDA	M.S.P.G.C.L.(Maharashtra)	26.03.1989	1340.00	2.5174	1.4087	55.96	100
41	KORADI	M.S.P.G.C.L.(Maharashtra)	30.03.1982	1280.00	2.8872	1.2159	42.11	100
42	MCCPL BANDHAKHAR	MARUTI CLEAN COAL AND POWER LIMITED (Chhattisgarh)	30.07.2015	300.00	0.7670	0.7474	97.44	100
43	JHABUA POWER LIMITED (SEIONI TPP) (AVANTHA BHANDAR TPP)	M/S JHABUA POWER LIMITED (MP)	03.05.2016	600.00	0.8325	0.6921	83.13	90

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Date of Commissioning</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>	<b>Target in %age</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
44	MEJA TPP	MEJA URJA NIGAM PRIVATE LIMITED (Uttar Pradesh)	30.04.2019	660.00	0.2479	0.0000	0.02	50
45	NEYVELI - I	NLC LTD. (Tamil Nadu)	1962	500.00	0.1783	0.1095	61.41	100
46	DADRI	NTPC LTD. (U.P.)	Oct,1991	1820.00	0.6998	0.3176	45.39	100
47	SINGRAULI	NTPC LTD. (U.P.)	February-1982	2000.00	3.2060	1.2581	39.24	100
48	RIHAND	NTPC LTD. (U.P.)	March-1988	3000.00	3.9015	1.6849	43.19	100
49	FEROZE GANDHI UNCHAHAR	NTPC LTD.(U.P.)	November-1988	1050.00	2.1654	1.9569	90.37	100
50	KORBA	NTPC (Chhattisgarh)	01-03-1983	2600.00	4.9976	3.3487	67.01	100
51	VINDHYACHA L	NTPC LTD.(M.P.)	01-10-1987	4760.00	8.8569	2.8409	32.08	100
52	SIPAT	NTPC LTD. (Chhattisgarh)	01-05-2007	2980.00	4.9052	2.4084	49.10	100
53	KAHALGAON	NTPC LTD. (Bihar)	01-03-1992	2340.00	4.8504	3.7101	76.49	100
54	BARH SUPER TPS	NTPC LTD. (Bihar)	01-11-2014	1320.00	2.0636	1.3833	67.04	100
55	TALCHER(KAN )	NTPC LTD.(Odisha).	01-02-1995	3000.00	7.0092	4.7156	67.28	100
56	BONGAIGAON	NTPC LTD. (Assam)	June,2015	750.00	0.6998	0.3176	45.39	90
57	GADARWARA	NTPC LTD. (Madhya Pradesh)	29.03.2019	800.00	0.2886	0.0015	0.54	50
58	BARAUNI	NTPC Ltd-BSPGCL(JV) (Bihar)	01.05.1983	720.00	0.0726	0.0131	18.01	100
59	NALCO, CPP ANGUL	NATIONAL ALUMINIUM COMPANY LIMITED (NALCO) (Odisha)	29.09.1986	1200.00	2.4851	1.7774	71.52	100
60	IB VALLEY	O.P.G.C.L. (Odisha)	21.12.1994	420.00	1.2337	0.2140	17.34	100
61	GVK POWER(GOIN DWALSAHIB)L TD.GOINDWA LSAHIB	PSPCL (Punjab)	2016	540.00	0.3056	0.2434	79.65	100

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Date of Commissioning</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>	<b>Target in %age</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
62	PRAYAGRAJ TPS	PRAYAGRAJ POWER GENERATION COMPANY LTD. (U.P.)	29.02.2016	1980.00	1.9835	1.7877	90.13	100
63	UCCHPINDA	R.K.M. POWERGEN PVT. LTD (PGCIL) (Chhattisgarh)	23.11.2015	1440.00	0.9106	0.8682	95.34	100
64	CHHABRA	RRVUNL (Rajasthan)	11.06.2010	1000.00	1.3005	1.0573	81.30	100
65	YERAMARUS TPS	RAICHUR POWER CORPORATION LIMITED (Karnataka)	07.03.2017	1600.00	0.0899	0.0107	11.95	70
66	SASAN UMPP	REILIANCE POWER LIMITED (Madhya Pradesh)	16.08.2013	3960.00	5.2446	2.7464	52.37	100
67	RATIZA TPS	SPECTRUM COAL & POWER LTD. (Chhattisgarh)	27.02.2013	100.00	0.5726	0.5531	96.59	100
68	SEMCORP ENERGY INDIA Ltd. (PAINAMPURAM TPP) (SGPL-TPP)	SEMCORP ENERGY INDIA Ltd. (Formerly Thermal Powertech Corporation India Ltd) (Andhra Pradesh)	01-03-2015	1320.00	1.2265	0.9710	79.17	100
69	TROMBAY	T.P.CO.(Maharashtra)	1984	750.00	0.0564	0.0559	99.11	100
70	TUTICORIN	T.N.G & D Corporation (Tamil Nadu)	09.07.1979	1050.00	1.0569	0.7620	72.10	100
71	METTUR-II	T.N.G & D Corporation (Tamil Nadu)	11.10.2012	600.00	0.4182	0.3906	93.40	100
72	NORTH CHENNAI-II	T.N.G & D Corporation (Tamil Nadu)	41334.00	1200.00	1.4103	1.3941	98.85	100
73	KOTHAGUDEM -V	TSPGCL (Telangana)	27.03.1997	500.00	1.4096	0.2698	19.14	100
74	KOTHAGUDEM -VI	TSPGCL (Telangana)	20.10.2011	500.00	0.8261	0.5601	67.80	100
75	KOTHAGUDEM (Stage I to IV)	T.S.P.G.C.L (Telangana)	04.07.1966	420.00	1.0502	0.3616	34.43	100

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Date of Commissioning</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (MT)</b>	<b>Fly ash Utilization (MT)</b>	<b>% age</b>	<b>Target in %age</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
76	KAKATIA (Stage-I)	T.S.G.E.N.C.O. (Telangana)	14.09.2010	500.00	0.6273	0.5897	94.01	100
77	KAKATIA (Stage-II)	T.S.G.E.N.C.O. (Telangana)	24.03.2016	600.00	0.8205	0.8045	98.05	100
78	RAIGARH TPP (NAWAPARA TPP)	TRN ENERGY PRIVATE LIMITED (Chhattisgarh)	14.08.2016	600.00	0.5186	0.4401	84.86	90
79	TENUGHAT TPS	TENUGHAT VIDHYUT NIGAM LIMITED (Jharkhand)	14.04.1994	420.00	0.6842	0.4517	66.02	100
80	ANPARA 'A' & 'B'	U.P.R.V.U.N.L. (U.P.)	01.01.1987	2630.00	3.6249	0.1414	3.90	100
81	HARDUAGANJ	U.P.R.V.U.N.L. (U.P.)	28.05.1978	610.00	0.8345	0.8167	97.87	100
82	OBRA	U.P.R.V.U.N.L. (U.P.)	26.01.1980	1000.00	1.1142	0.0861	7.73	100
83	SAGARDIGHI	W.B.P.D.C.L. (W.B.)	07.09.2008	1600.00	1.4938	1.1082	74.19	100
84	SANTALDIH	W.B.P.D.C.L (W.B.)	01.04.2009	500.00	0.1095	0.0562	51.32	100
85	BAKRESWAR	W.B.P.D.C.L. (W.B.)	18.07.1999	1050.00	1.2171	1.0197	83.78	100
86	SAI WARDHA POWER Ltd., WARORA	WPCL (Maharashtra)	15.04.2010	540.00	0.0436	0.0151	34.75	100
87	LARA SUPER THERMAL POWER PROJECT	N.T.P.C.LTD (Chhattisgarh)	23.03.2018	800.00	0.6459	0.0017	0.26	70
88	KOTA SUPER THERMAL POWER STATION	RRVUNL, KOTA(Rajasthan)	17.01.1983	1240.00	1.8013	1.5243	84.62	100
89	CHHABRA SUPER CRITICAL TPP	RRVUNL (Rajasthan)	NA	1340.00	1.2272	0.4110	33.49	NA
90	KHARGONE SUPER THERMAL POWER STATION	N.T.P.C.LTD (Madhya Pradesh)	29.09.2019	1320.00	0.0968	0.0098	10.13	50

**From the above table, it may be seen that 26 Thermal Power Stations have achieved a utilization target of more than 90% but had failed with very little margin for 100 % utilization.**

## **6.0 MODES OF FLY ASH UTILIZATION DURING THE YEAR 2019-20:**

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

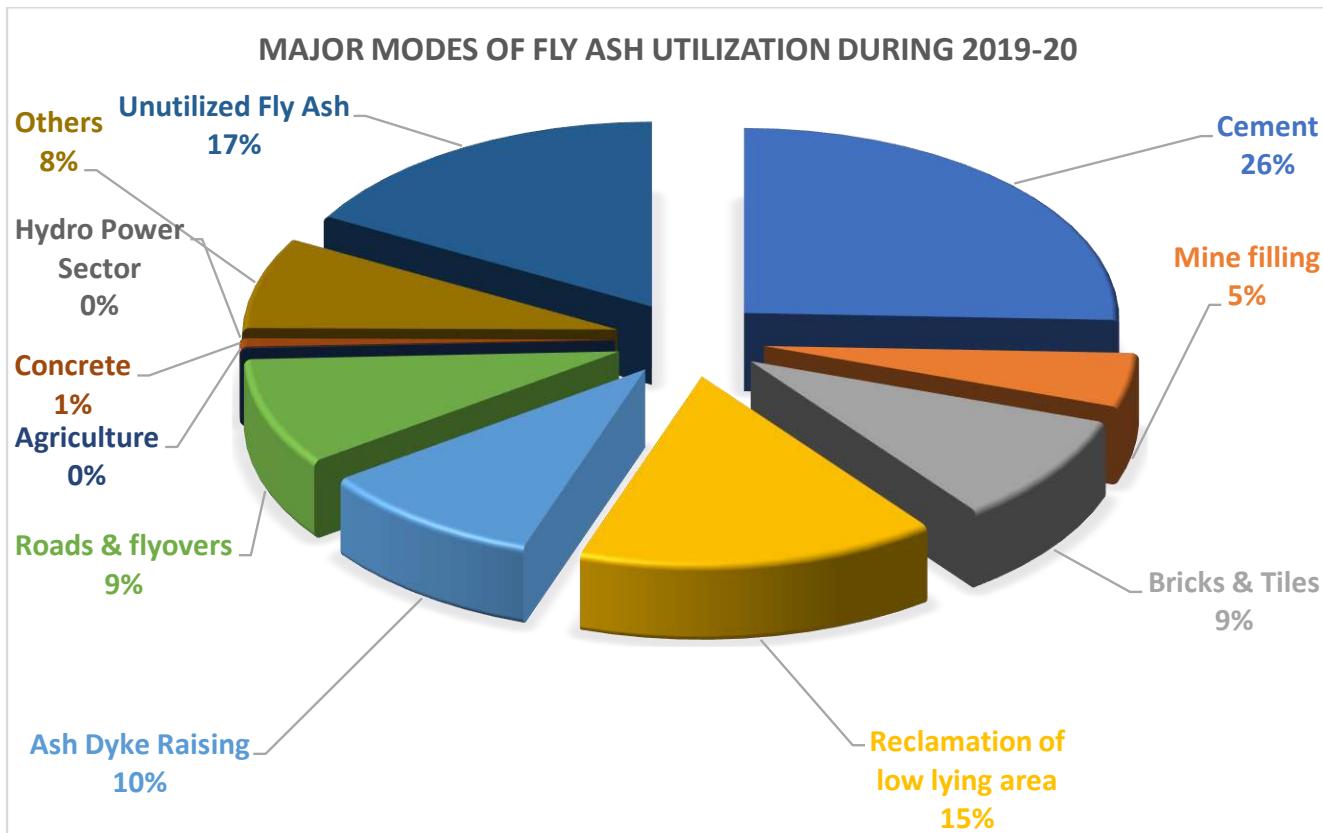
The modes in which fly ash were utilized during the year 2019-20 along with utilization in each mode are given in **Table-XVIII** below:

**TABLE- XVIII**

**MODES OF FLY ASH UTILIZATION DURING THE YEAR 2019-20**

<b>Sl. No.</b>	<b>Mode of utilization</b>	<b>Quantity of Fly Ash utilized in the mode of utilization</b>	
		<b>Million-ton (3)</b>	<b>Percentage (%) (4)</b>
<b>(1)</b>	<b>(2)</b>		
1	Cement	57.8847	25.60
2	Mine filling	10.6152	4.69
3	Bricks & Tiles	21.3888	9.46
4	Reclamation of low lying area	35.0600	15.50
5	Ash Dyke Raising	22.1688	9.80
6	Roads & flyovers	20.9667	9.27
7	Agriculture	0.1415	0.06
8	Concrete	1.6660	0.74
9	Hydro Power Sector	0.0000	0.00
10	Others	17.9136	7.92
11	Unutilized Ash	38.3287	16.96
	<b>Total</b>	<b>226.1339</b>	<b>100.00</b>

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



**FIGURE-1**

During the Year 2019-20, the maximum utilization of fly ash to the extent of 25.60 % of total fly ash generated was in the Cement sector, followed by 15.5 % in Reclamation of Low lying area, 9.80 % in Ash Dyke Raising, 9.46 % in Bricks & Tiles, 9.27 % in Roads & Flyovers, 4.69 % in Mine Filling, 0.74 % in Concrete, 0.06 % in Agriculture, 0.00 % in Hydro Power Sector, 7.92 % in Others and 16.95 % remained as unutilized fly ash.

## 7.0 PROGRESSIVE FLY ASH GENERATION & UTILIZATION DURING THE PERIOD FROM 1996-97 TO 2019-20:

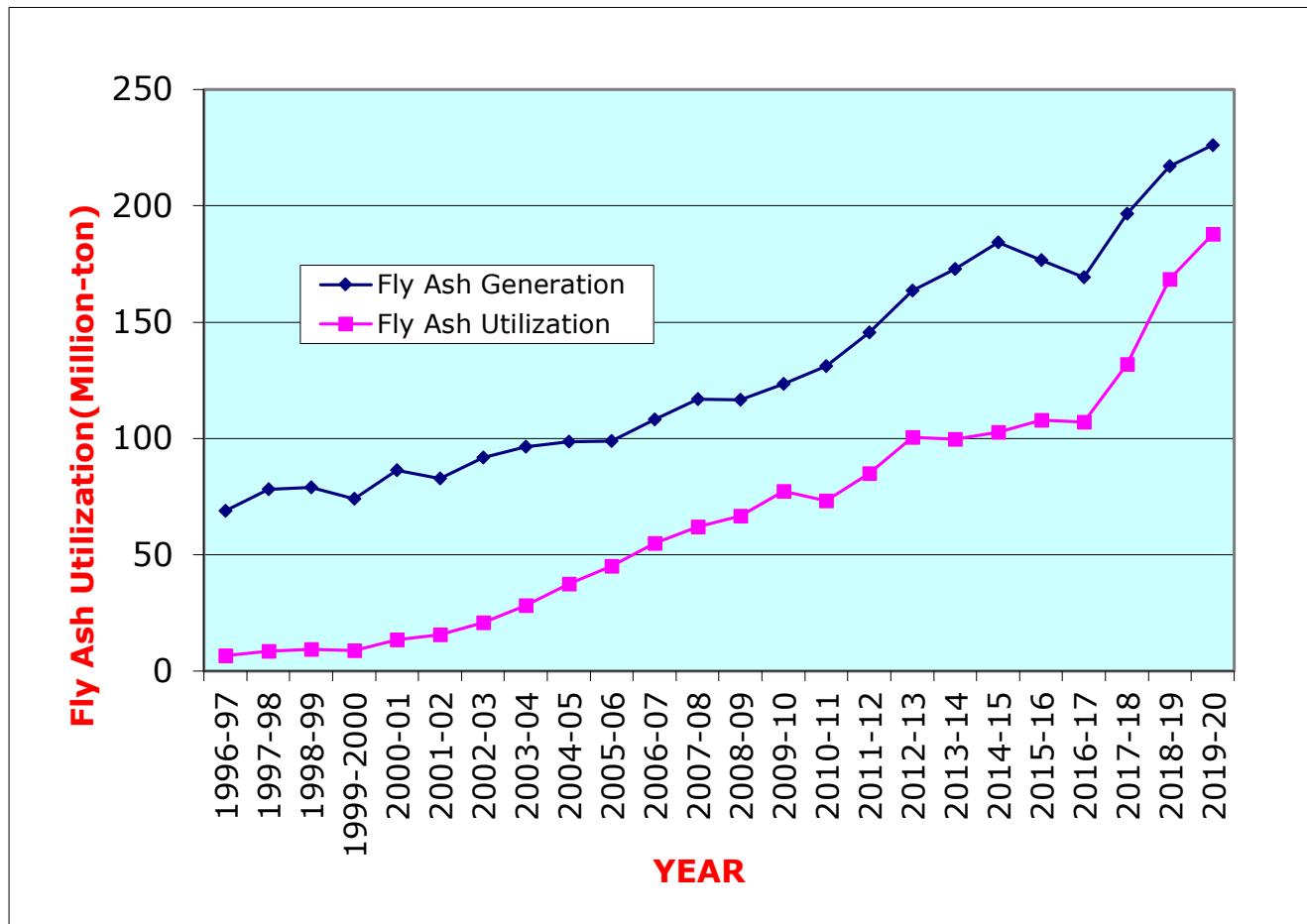
Central Electricity Authority has been monitoring since 1996-1997, the fly ash generation and its utilization at coal/lignite based thermal power stations in the country. Based on data of fly ash generation and utilization received from Thermal Power Stations / Power Utilities since 1996-97, the progressive fly ash generation and its utilization for the period from 1996-97 to 2019-20 are given in Table-XIX below:

**TABLE-XIX**  
**PROGRESSIVE FLY ASH GENERATION AND ITS UTILIZATION DURING THE PERIOD FROM 1996-97 TO 2019-20**

<b>Sl. No.</b>	<b>Year</b>	<b>Number of TPS Who provided data</b>	<b>Fly Ash Generation (MT)</b>	<b>Fly Ash Utilization (MT)</b>	<b>Fly Ash Utilization in % age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>
1	1996-97	-	68.88	6.64	9.63
2	1997-98	-	78.06	8.43	10.80
3	1998-99	-	78.99	9.22	11.68
4	1999-2000	-	74.03	8.91	12.03
5	2000-01	-	86.29	13.54	15.70
6	2001-02	-	82.81	15.57	18.80
7	2002-03	-	91.65	20.79	22.68
8	2003-04	-	96.28	28.29	29.39
9	2004-05	-	98.57	37.49	38.04
10	2005-06	-	98.97	45.22	45.69
11	2006-07	-	108.15	55.01	50.86
12	2007-08	-	116.94	61.98	53.00
13	2008-09	-	116.69	66.64	57.11
14	2009-10	-	123.54	77.33	62.60
15	2010-11	88	131.09	73.13	55.79
16	2011-12	124	145.41	85.05	58.48
17	2012-13	138	163.56	100.37	61.37
18	2013-14	143	172.87	99.62	57.63
19	2014-15	145	184.14	102.54	55.69
20	2015-16	151	176.74	107.77	60.97
21	2016-17	155	169.25	107.10	63.28
22	2017-18	167	196.44	131.87	67.13
23	2018-19	195	217.04	168.40	77.59
24	2019-20	197	226.14	187.81	83.05

A graph showing progressive fly ash generation and its utilization for the period from 1996-97 to 2019-20 is given in **Figure-2** below:

### **PROGRESSIVE GENERATION AND UTILIZATION OF FLY ASH DURING THE PERIOD FROM 1996-97 TO 2019-20**



**FIGURE-2**

It may be seen from **Table-XIX** and **Figure-2** above that:

- The fly ash generation as well as utilization has generally been increasing since 1996-97. However, the Fly ash generation has shown a slight downtrend for the year 2016-17 due to lesser coal utilization than 2015-16.
- Fly ash utilization has increased from 9.63% in 1996-97 to the highest level of 83.05 % during 2019-20.
- The fly ash generation has increased from 68.88 million-ton in 1996-97 to 226.14 million-ton in 2019-20 i.e. nearly 3.28 times.
- However, fly ash utilization has increased from 6.64 million-ton in 1996-97 to a level of 187.81 million-ton in 2019-20 i.e. nearly more than 28.28 times over the same period.
- From **Table XIX**, it is seen that quantities of fly ash generation during 2015-16, 2016-17, 2017-18, 2018-19 and 2019-20 have been 176.74, 169.25, 196.44, 217.04 and 226.14 million-ton respectively. Fly ash utilization during the said five years are 107.77, 107.10,

131.87, 168.40 and 187.81 million-ton respectively. The utilization of fly ash during 2019-20 is the highest ever so far.

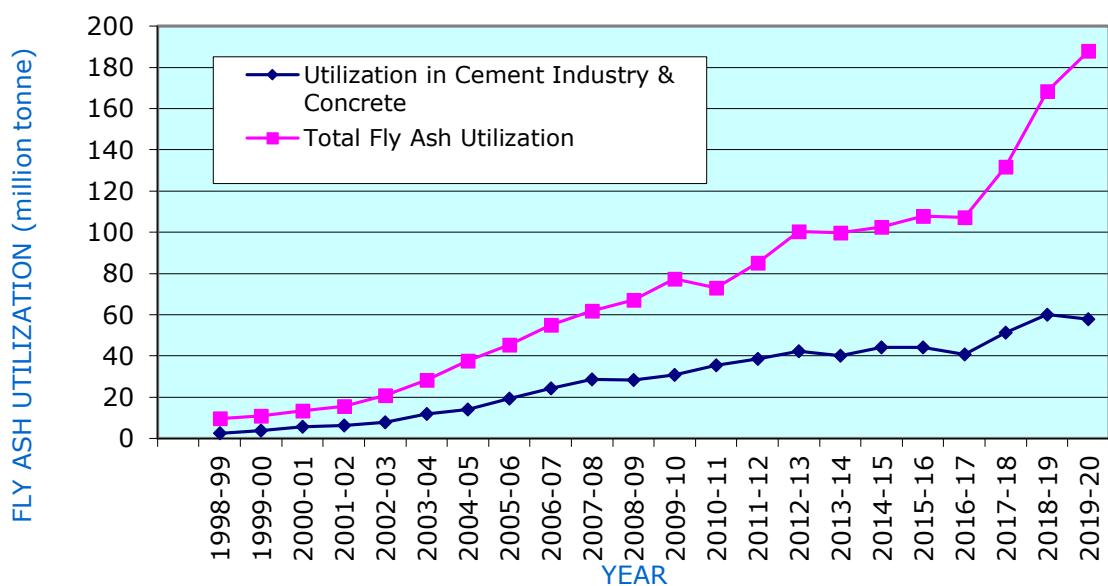
- (vi) The number of Thermal Power Stations that are providing data has been increasing during successive years.

## 8.0 PROGRESSIVE FLY ASH UTILIZATION IN VARIOUS MODES DURING THE PERIOD FROM 1998-99 TO 2019-20:

### 8.1 Cement Industry

Fly ash is being used by Cement Industry as a pozzolanic material in the manufacture of Portland Pozzolana Cement. It saves both precious Lime stone and Coal. The utilization of fly ash in the manufacture of cement is highly value-added use. A graph showing progressive utilization of fly ash by the Cement Industry for the period from 1998-99 to 2019-20 is given in Figure-3 below:

**PROGRESSIVE UTILIZATION OF FLY ASH IN CEMENT MANUFACTURING & CONCRETE DURING THE PERIOD FROM 1998-99 TO 2019-20**



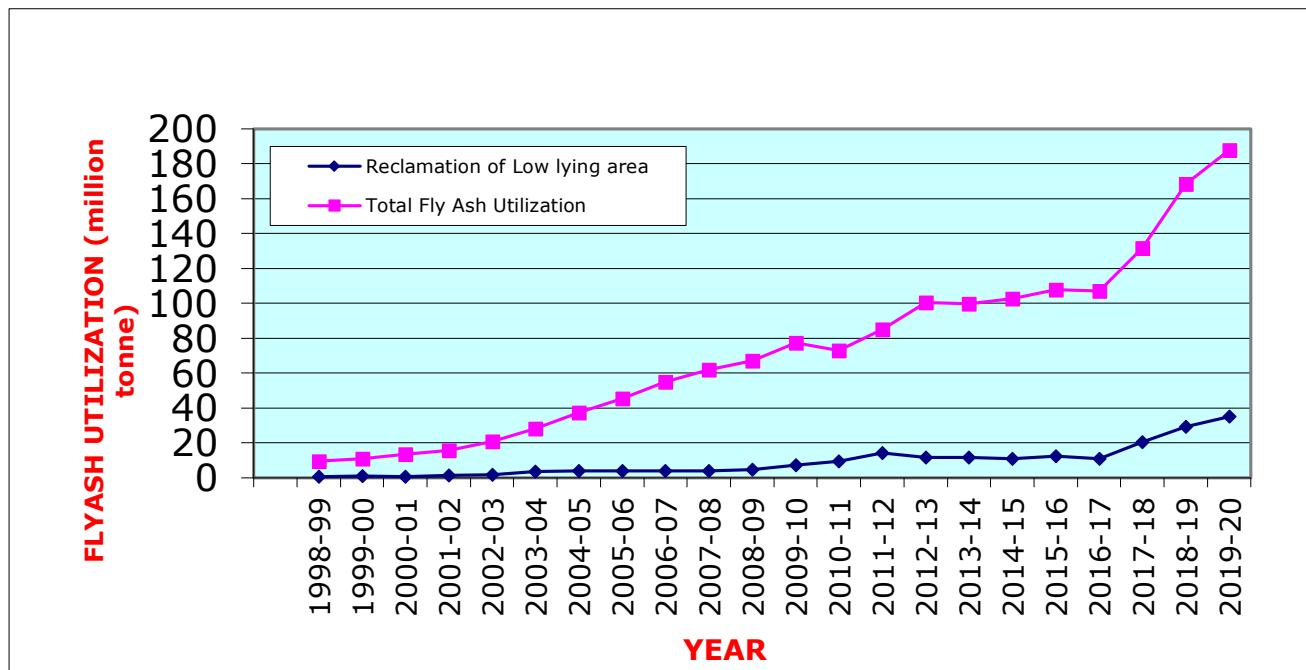
**FIGURE-3**

It may be seen from Figure-3 above that, 2.45 million-ton of fly ash was used by Cement Industry in 1998-99 which increased to 57.88 million-ton during 2019-20 and constituted about 25.60 % of total fly ash generation in the aforesaid year.

## 8.2 Reclamation of Low Lying Areas

Fly ash as a substitute for Soil / Sand is used for reclamation of low lying areas, thereby saving top soil. A graph showing the progressive utilization of fly ash in the reclamation of low lying area for the period from 1998-99 to 2019-20 is given in Figure-4.

**PROGRESSIVE UTILIZATION OF FLY ASH IN RECLAMATION OF LOW LYING AREA DURING THE PERIOD FROM 1998-99 TO 2019-20**



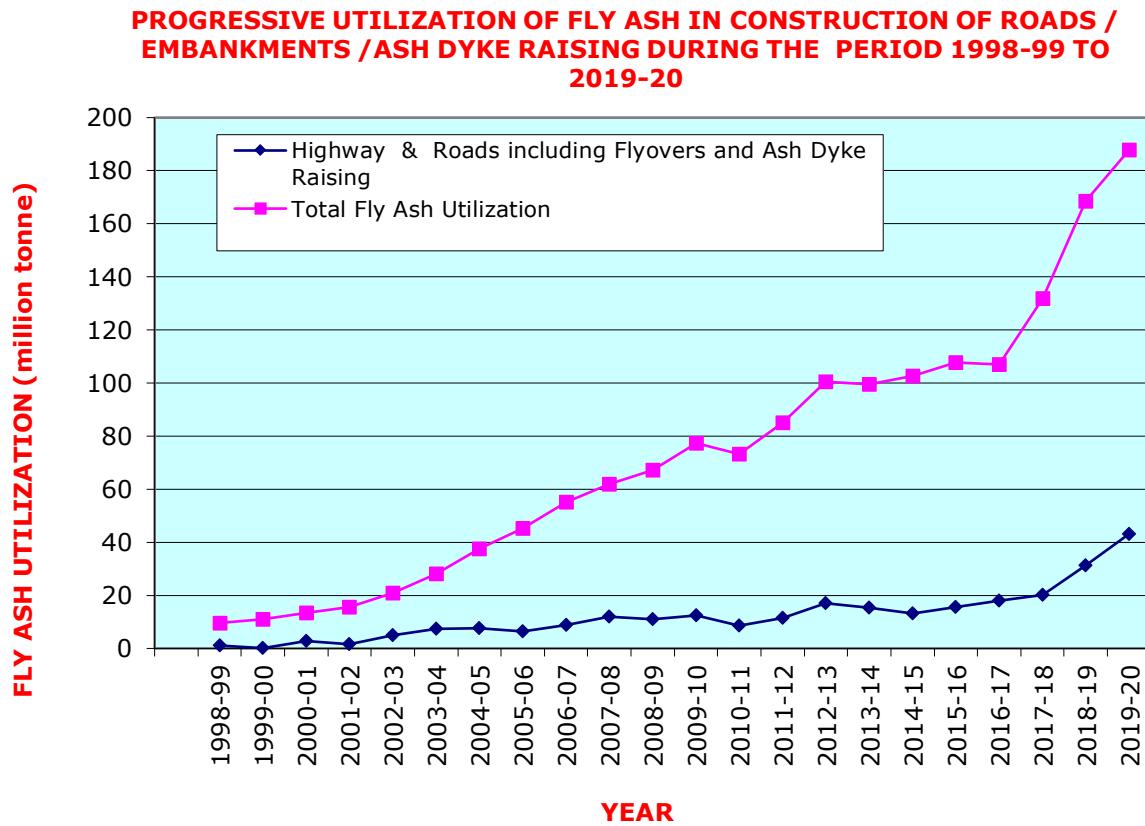
**FIGURE-4**

It may be seen from Figure-4 above, that 0.65 million-ton of fly ash was used for the reclamation of low lying area in 1998-99 which has increased to 35.06 million-ton in 2019-20 constituting about 15.50 % of total fly ash generation during the aforesaid year.

## 8.3 Construction of Roads / Embankments / Flyovers and Raising of Ash Dykes

Fly ash is being used in the construction of Roads / Embankments / Flyovers and the Raising of Ash Dykes. It has a large potential for fly ash utilization. A graph showing the progressive utilization of fly ash in the construction of roads & embankments and the raising of ash dykes for the period from 1998-99 to 2019-20 is given in Figure-5 below:

**PROGRESSIVE UTILIZATION OF FLY ASH IN CONSTRUCTION OF  
ROADS/EMBANKMENTS/ASHDYKE RAISING DURING THE PERIOD FROM  
1998-99 TO 2019-20**



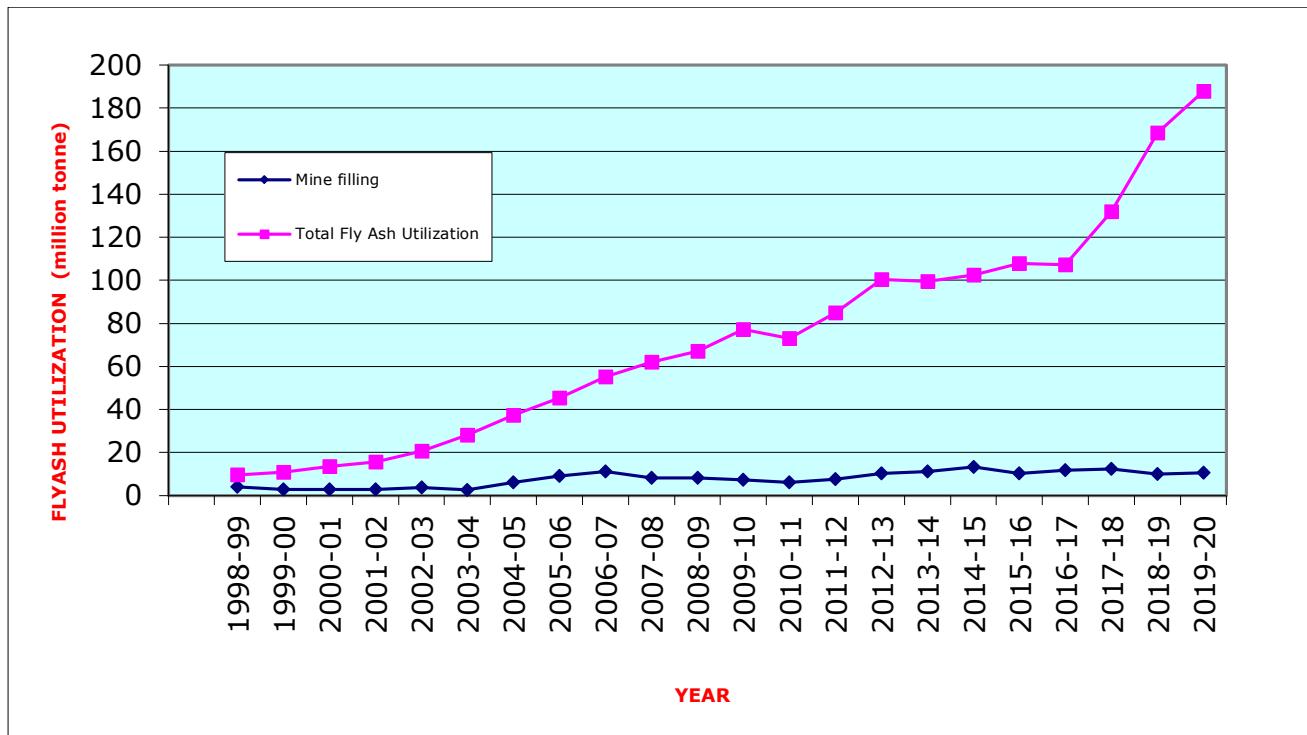
**FIGURE-5**

It may be seen from Figure-5 above that 1.055 million-ton of fly ash was used in the construction of roads /embankments / flyovers and raising of ash dykes etc. during 1998-99 which increased to 43.14 million-ton in 2019-20 and constituted about 19.08 % of total fly ash generation in the aforesaid year.

#### **8.4 Back Filling / Stowing of Mines :**

Fly ash is being used for the backfilling of open cast mines and stowing of underground mines which result in the saving of top fertile soil and precious river sand. It has a large potential for fly ash utilization especially for pit head thermal power stations. A graph showing the progressive utilization of fly ash in the backfilling / stowing of mines for the period from 1998-99 to 2019-20 is given in Figure-6:

## **PROGRESSIVE UTILIZATION OF FLY ASH IN MINE FILLING DURING THE PERIOD FROM 1998-99 TO 2019-20**



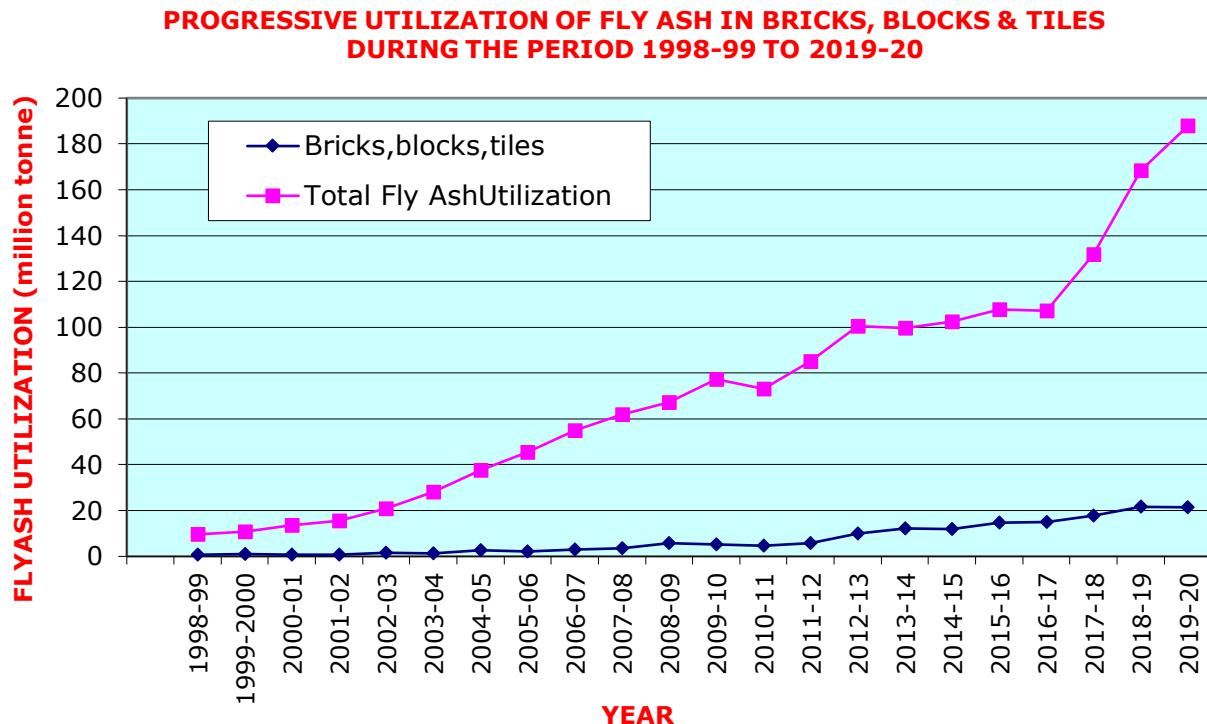
**FIGURE-6**

It may be seen from **Figure-6** above that 4.17 million-ton of fly ash was used for backfilling / stowing of open cast and underground mines during 1998-99 to 10.62 million-ton in 2019-20, constituting about 4.69 % of total fly ash generation in the aforesaid year.

### **8.5 Building Materials like Bricks, Blocks and Tiles etc.**

Fly ash is used in the manufacturing of fly ash based building products like bricks, blocks, tiles, etc. which results in the saving of fertile topsoil. Fly ash based bricks /blocks / tiles are as good as clay-based conventional building products. It has substantial potential of fly ash utilization especially for thermal power stations located near load centers. A graph showing progressive utilization of fly ash in making of fly ash based building products for the period from 1998-99 to 2019-20 is given in **Figure - 7**.

## **PROGRESSIVE UTILIZATION OF FLY ASH IN BRICKS, BLOCKS & TILES DURING THE PERIOD FROM 1998-99 TO 2019-20**



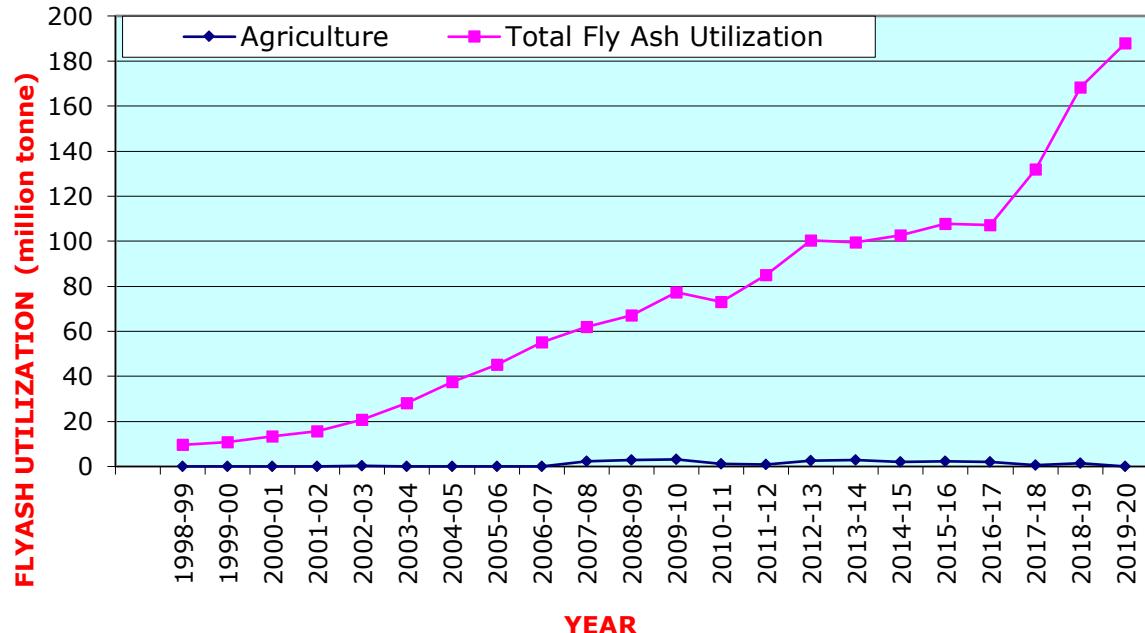
**FIGURE-7**

It may be seen from Figure-7 above that 0.70 million-ton of fly ash was used for making fly ash based bricks / blocks / tiles etc. during 1998-99 which increased to 21.39 million-ton in 2019-20 and constituted about 9.46 % of total fly ash generation in the aforesaid year.

### **8.6 Agriculture:**

Fly ash is being used as manure in the agricultural sector as it has many micronutrients. The progressive utilization of fly ash in the Agricultural Sector for the period from 1998-99 to 2019-20 is given in Figure-8.

## **PROGRESSIVE UTILIZATION OF FLY ASH IN AGRICULTURE / WASTE LAND DEVELOPMENT DURIOD FROM 1998-99 TO 2019-20**



**FIGURE-8**

It may be seen from Figure-8 above that 0.13 million-ton of fly ash was used in the agricultural sector during 1998-99, which increased to 0.14 million-ton in 2019-20 and constituted about 0.06 % of total fly ash generation in the aforesaid year.

### **9.0 WEB BASED MONITORING SYSTEM AND A MOBILE APPLICATION FOR UTILIZATION OF FLY ASH:**

Annual Fly ash utilization has remained 83.05 % of the fly ash generated and therefore, it has become a matter of concern because of its environmental effect. Besides, progressive accumulation may lead to a situation when ash pond may not be in a position to accommodate fly ash further.

Due to the importance of utilization of fly ash & slag for reducing the burden on the environment, NITI AAYOG convened several meetings on policy framework on utilization of fly ash and slag. In a meeting held on 17.03.2017, it was decided by NITI AAYOG that an online repository of the fly ash generated by thermal power plants indicating the following parameters should be launched by Ministry of Power by 15th April, 2017:

- Cumulative amount of fly ash available in the ash ponds as on 31.3.2017
- Quantum of fly ash generated for the respective month (Ex. For the month of April 2017)
- Number of ash ponds available and their approved capacity in metric tonne
- Cumulative stock of fly ash available in the ponds for the month as on 30th April 2017

- Total quantum of fly ash disposed to the consuming industries, which is located within the vicinity of 100 Kms., 101-300 Kms., etc. along with the details of the consumers. In this detail, it should also be indicated whether the transportation was paid by the thermal power or not. Similarly, it should also indicate whether fly ash has been given free or it has been charged. If it has been charged then the rate should also be indicated for each consumer
- Balance stock of fly ash available in the ash ponds for the month ending April,2017

Accordingly, a web-based monitoring system and a mobile application (ASH TRACK) was developed by CEA in collaboration with M/s NTPC Limited on behalf of the Ministry of Power. Login ID and password have been issued to those Power Utilities / Thermal Power Stations who had approached CEA for uploading the monthly data of fly ash generation and its utilization.

## **10.0 RECOMMENDATIONS OF THE EXPERT COMMITTEE**

NITI Aayog vide O.M. No. 25(11)/2014-Minerals dated 12.06.2018 has constituted an Expert Committee under the chairmanship of Joint Secretary, MoEF & CC and represented by various concerned Ministries for developing a focus strategy for best utilization of fly ash to manufacture end products.

Expert Committee held two meetings on 5th September and 1st October 2018 and finalized its recommendations. An inter-ministerial consultation meeting was also held on 21st January 2018 under the chairmanship of Secretary, MoEF&CC to review the recommendations of the Expert Committee for effective utilization of fly ash, wherein the recommendations of the Committee were accepted.

The expert Committee had recommended the following recommendations for implementation by all Thermal Power Plants for effective utilization of fly ash:

- i. Tender / auction for the sale of fly ash should be done by TPPs initially for end-user / industry and not for traders. If fly ash is not taken by end-user / industry, then it could be given to traders. TPPs should also consider entering into longer-term contracts with end-users.
- ii. TPPs may explore the possibility that once a tender for utilization of fly ash is allotted to a company, any unit / plant of the same company should be allowed to purchase and utilize the fly ash and TPPs can also directly raise the invoice to such Unit / Plant.
- iii. Creation of fly ash parks / hubs on public-private-partnership mode. Such parks will act as facilities for enabling quality control of fly ash made ash-made products, generate employment and act as models which will promote the use of innovative fly ash products that can be replicated at other locations.
- iv. TPPs should give incentive to entities which can (through R&D) come up with fly ash products with ash content of at least 75% and established sustainable application of those fly ash products in the industry. The incentive could be given from the money available with the TPPs from auctioning of fly ash.

- v. Ministry of Power should come up with awards/incentives for TPPs that innovate new methodology in fly ash disposal keeping all the environment and pollution norms in Consideration.

## 11.0 CONCLUSIONS & RECOMMENDATIONS

1. The fly ash generation during 2019-20 is 226.13 million tonne due to a combustion of 678.68 million tonne Coal / Lignite. During 2018-19, 217.04 million tonne of fly ash was generated due to combustion of 667.43 million-ton Coal / Lignite. However, the fly ash utilization during 2018-19 and 2019-20 are 168.4 million-ton and 187.81 million-ton respectively. It is seen that the absolute quantity of fly ash utilization has increased as compared to last year and similarly the percentage utilization of fly ash has also increased.
2. The highest level of fly ash utilization of about 83.05 % is achieved during the year 2019-20. It would require a lot of efforts to achieve the target of 100% utilization of fly ash. The stipulations of notification of 2009 and the subsequent amendments should be effectively implemented. As per this report, about 16.95 % un-utilized fly ash was dumped at the various Thermal Power Stations in the country during 2019-20.
3. 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 Stations need to include the technological advancement required to ensure the 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.
  - As per MoEF& CC's Amendment Notification dated 25.01.2016, Para 2 (14) "The coal or lignite based thermal power plants shall within a radius of three hundred kilometres bear the entire cost of transportation of ash to the site of road construction projects under Pradhan Mantri Gramin Sadak Yojana and asset creation programmes of the Government involving the construction of buildings, roads, dams, and embankments". The meaning of the words "Asset Creation Programme of the Government" may be read in the context of projects carried out under a certain plan schemes of the Government Departments. In this regard, the Ministry of Environment, Forest, and climate change (MoEF & CC) has clarified that road being constructed by NHAI as well as the State Government are covered by the Notification dated 25.01.2016 in order to fully utilize the fly ash.
  - 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 the 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 RDSO, a research organization under the Ministry of Railways.
  - Thermal Power Stations have to 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, etc.

- A large number of technologies have been developed for gainful utilization and safe management of fly ash through research projects funded by Fly Ash Mission / Fly Ash Unit under the Ministry of Science & Technology, GOI since 1994. Propagation of these technologies by establishing ‘Self-sustaining technology demonstration centers would facilitate and accelerate the fly ash utilization in the country.
- Thermal Power Stations have to 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’s notifications.
- There is a need to encourage ‘Industry Institute Interactions’ for entrepreneur development, creating awareness, and organizing training programmes and workshops.
- Induction of ‘Fly Ash’ as a subject in the academic curriculum of Engineering and Architecture is needed.

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## **12.0 Abbreviations**

<b>CEA</b>	<b>:</b>	<b>Central Electricity Authority</b>
<b>MoEF</b>	<b>:</b>	<b>Ministry of Environment &amp; Forest</b>
<b>MoEF&amp;CC</b>	<b>:</b>	<b>Ministry of Environment &amp; Forest and Climate Change</b>
<b>MW</b>	<b>:</b>	<b>Mega Watt</b>
<b>MoP</b>	<b>:</b>	<b>Ministry of Power</b>
<b>MT</b>	<b>:</b>	<b>Million Tonnes</b>
<b>TPS</b>	<b>:</b>	<b>Thermal Power Stations</b>
<b>APGENCO</b>	<b>:</b>	<b>Andhra Pradesh Power Generation Corporation Ltd.</b>
<b>APPDCL</b>	<b>:</b>	<b>Andhra Pradesh Power Distribution Company Limited</b>
<b>ACBPL</b>	<b>:</b>	<b>Aryan Coal Beneficiation Private Ltd.</b>
<b>APL</b>	<b>:</b>	<b>Adani Power Ltd.,</b>
<b>APCPL</b>	<b>:</b>	<b>Aravali Power Corporation Pvt. Ltd.</b>
<b>AMNEPL</b>	<b>:</b>	<b>Abhijet MADC Nagpur energy Pvt. Ltd.</b>
<b>BEPL</b>	<b>:</b>	<b>Bajaj Energy Pvt. Ltd.</b>
<b>BSPGC</b>	<b>:</b>	<b>Bihar State Power Generation Company</b>
<b>CESC</b>	<b>:</b>	<b>Calcutta Electric Supply Company</b>
<b>CGPL</b>	<b>:</b>	<b>Coastal Gujarat Power Ltd.</b>
<b>CSPGCL</b>	<b>:</b>	<b>Chhattisgarh State Power Generation Company Ltd.</b>
<b>DVC</b>	<b>:</b>	<b>Damodar Valley Corporation</b>
<b>DPL</b>	<b>:</b>	<b>Durgapur Project Ltd.</b>
<b>DPSC</b>	<b>:</b>	<b>Dishergarh Power Supply Company Ltd.</b>
<b>EPGL</b>	<b>:</b>	<b>Essar Power Gujarat Ltd.</b>
<b>GIPCL</b>	<b>:</b>	<b>Gujarat Industries Power Corporation Ltd.</b>
<b>GMDCL</b>	<b>:</b>	<b>Gujarat Mineral Development Corporation Ltd.</b>
<b>GSECL</b>	<b>:</b>	<b>Gujarat State Electric Corporation Ltd.</b>
<b>HPGCL</b>	<b>:</b>	<b>Haryana Power Generating company Ltd.</b>
<b>IPGCL</b>	<b>:</b>	<b>Indraprastha Power Generation Company Ltd.</b>
<b>IPCL</b>	<b>:</b>	<b>IL&amp;FS Tamil Nadu Power Company Ltd.</b>
<b>JSEB</b>	<b>:</b>	<b>Jharkhand State Electricity Board.</b>
<b>JHPL</b>	<b>:</b>	<b>Jhajjar Power Ltd.</b>
<b>JPL</b>	<b>:</b>	<b>Jindal Power Ltd.</b>
<b>JSW</b>	<b>:</b>	<b>Jindal Steel Works</b>
<b>KPCL</b>	<b>:</b>	<b>Karnataka Power Corporation Ltd.</b>

<b>KBUNL</b>	:	Kanti Bijlee Utpadan Nigam Ltd.
<b>MPPGCL</b>	:	Madhya Pradesh Power Generating Company Ltd.
<b>MPL</b>	:	Maithon Power Ltd.
<b>MSPGCL</b>	:	Maharashtra State Power Generating Company Ltd.
<b>NLC</b>	:	Neyveli Lignite Corporation
<b>NSPCL</b>	:	NTPC -SAIL Power Corporation Ltd.
<b>NTPC</b>	:	National thermal Power Corporation
<b>NTECL</b>	:	NTPC – Tamil Nadu Electric Company Ltd.
<b>OPGCL</b>	:	Odisha Power Generation Corporation Ltd.
<b>PSPCL</b>	:	Punjab State Power Corporation Ltd.
<b>RRVUNL</b>	:	Rajasthan Rajya Vidyut Utpadan Nigam Ltd.
<b>RIL</b>	:	Reliance Infrastructure Ltd.
<b>RPSCL</b>	:	Rosa Power Supply Company Ltd.
<b>RWPL</b>	:	Raj West Power Ltd.
<b>SEL</b>	:	Sterlite energy Ltd.
<b>SVPL</b>	:	Shri Vardhman Power Pvt. Ltd.
<b>ST-CMS</b>	:	ST-CMS
<b>TPCO</b>	:	Tata Power Company Ltd.
<b>TVNL</b>	:	Tenughat Vidyut Nigam Ltd.
<b>TNG&amp;D</b>	:	Tamil Nadu Generating and Distribution Corporation Ltd.
<b>UPCI</b>	:	Udupi Power Company Ltd.
<b>UPRVUNL</b>	:	Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd.
<b>VESPL</b>	:	Vandanca Energy Supply Power Ltd.
<b>WBDCL</b>	:	West Bengal Power Development Corporation Ltd.
<b>WPCL</b>	:	Wardha Power Company Ltd.
<b>GEPL</b>	:	Gupta Power Company Ltd.
<b>VIP</b>	:	Vidarbha Industries Power Ltd.
<b>EPL</b>	:	Essar Power Ltd.
<b>ACB</b>	:	Aryan Coal Beneficiary Ltd.
<b>AP</b>	:	Andhra Pradesh
<b>MP</b>	:	Madhya Pradesh
<b>TN</b>	:	Tamil Nadu
<b>UP</b>	:	Uttar Pradesh
<b>WB</b>	:	West Bengal

(POWER UTILITY WISE) (YEAR 2019 - 2020) (APRIL - MARCH TO MARCH - 2019)

## FLY ASH GENERATION AND ITS UTILIZATION AT COAL / LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2019 - 20 (APRIL - 2019 TO MARCH - 2020) (POWER UTILITY WISE)

S.No.	Name of TPS	Power Utility & state	Inrated Capacity (MW)	Coal Consumed (MT)	Ash Content of coal (% by weight) (5'x 100)	Fly Ash Generation (MT)	Fly Ash Utilization (MT)	% age (6) / (7) x 100	In making of Fly Ash based Bricks Blocks Tiles etc.	In manufacture of portions concrete cement	(MT)	(MT)	In rehabilitation of existing Areas	(MT)	(MT)	(MT)	Total utilization (MT)	Date of Commission to (19)	Date of first up data	Ash stock available as on 31.3.2020		
33	CHEMPLAST LIMITED TPS	CHEMPLAST SANMAR LIMITED (Tamil Nadu) D.V.C.(Jharkhand)	48.50	0.2637	7.47	0.0197	0.0196	99.59	0.0156							0.0196	2009	1	0.0006	0.0000		
34	BOKARO 'B'	D.V.C.(Jharkhand)	710.00	1.5813	42.25	0.6681	1.0464	156.61	0.0444	0.1478						1.0464	31.03.1993	1	0.0441	0.0119		
35	CHANDRAPURA	D.V.C.(Jharkhand)	630.00	2.1206	48.13	1.0207	0.9976	97.74	0.0011	0.2529	0.5057					0.9976	07.07.1968	1	0.0409	0.0161		
36	DURGADPUR	D.V.C.(West Bengal)	210.00	0.3682	50.33	0.1875	0.0149	7.95	0.0049							0.0149	Sep.1982	1	0.0023	0.0006		
37	MEJIA	D.V.C.(West Bengal)	2340.00	8.3845	46.85	3.9282	2.7533	70.09	0.1246							2.7533	01.12.1997	1	0.1163	0.0000		
38	DURGADPUR STEEL	D.V.C. (West Bengal)	1000.00	3.9993	43.16	1.7262	1.3135	76.09	0.1368	0.0001						0.3765		1.3135	15.05.2012	1		
39	KODERIA	D.V.C. (Jharkhand)	1000.00	3.9334	46.09	1.8131	1.6531	91.18	0.0029	0.6848						0.6848	0.3291	0.6364		1.6531		
40	RAGHUNATHPUR	D.V.C. (West Bengal)	1200.00	3.2154	42.43	1.3644	1.1759	12.89	0.0043	0.1716						0.1716	31.03.2016	1	0.0540	0.0165		
41	D.P.B.S.	D.P.L (West Bengal)	550.00	1.5283	41.19	0.6295	0.5806	92.23	0.0203	0.4761						0.0842	30.04.2008	1	0.0341	0.0147		
42	DHARAWAL INFRASTRUCTURE LIMITED (Maharashtra)	EASTERN COALFIELDS LIMITED (West Bengal) (No Generation)	600.00	2.2030	33.78	0.7442	0.7966	107.04	0.0920	0.6220	0.0096	0.0440	0.0290			0.0440	21.11.2011	1	0.0000	0.0000		
43	CHINAKURI		30.00			0.00	0.0000		0.00										0.0000	0.0000		
44	MAHAN	ESSAR POWER MP LTD (MP.)	1200.00	2.2109	31.11	0.6878	0.5419	78.79	0.0043	0.3815	0.0028	0.0510	0.0000	0.0000	0.0000	0.1023	29.04.2013	1	0.0000	0.0000		
45	SURAT LIGNITE	G.I.P.C.L. (Gujarat)	500.00	3.5652	16.01	0.5708	0.5708	100.00	0.2814							0.2894	15.02.2000	1	0.0000	0.0000		
46	AKRUMOTA	G.M.D.C.L (Gujarat)	250.00	0.9271	26.61	0.2467	0.2988	121.10								0.2988	31.03.2005	1	0.00153	0.0003		
47	GANDHINagar	G.S.E.C.L (Gujarat)	630.00	0.1165	34.75	0.0399	0.1814	454.64	0.0349	0.0431	0.0082					0.0363	20.03.1990	1	0.0000	0.0000		
48	KUTCH LIGNITE	G.S.E.C.L (Gujarat)	290.00	0.1235	28.99	0.0358	0.0358	100.00	0.0052							0.0366	09.01.1990	1	0.0000	0.0000		
49	SUKKA	G.S.E.C.L (Gujarat)	500.00	0.1303	7.37	0.0096	0.0315	328.13	0.0174	0.0141						0.0315	14.09.2015	1	0.0000	0.0000		
50	UKAI	G.S.E.C.L (Gujarat)	1110.00	0.3498	36.10	0.1353	0.1157	85.51	0.0509	0.0370						0.0064	0.0214	0.1157	21.01.1979	1		
51	WANAKBORI	G.S.E.C.L (Gujarat)	1470.00	0.3566	35.00	0.1248	0.1410	112.98	0.0214	0.0743						0.0022	0.0166	0.0265	0.1410	23.03.1982		
52	BHAVNAGAR LIGNITE	G.S.E.C.L (Gujarat)	500.00	0.0748	11.10	0.0083	0.0072	86.75	0.0031	0.0000						0.0041	0.0041	0.0072	16.05.2016	1		
53	GMR WARORA ENERGY ENERGY Ltd. (Maharashtra)	GMR WARORA ENERGY LTD. (Maharashtra)	600.00	2.6273	33.59	0.8824	0.9378	106.27	0.1725	0.5012	0.2433					0.0207		0.9378	19.03.2013	1		
54	GMR KAMALANGA TPP	GMR KATAALANGA ENERGY LTD. (Odisha)	1050.00	4.3381	39.30	1.7049	1.8206	106.79	0.7718	0.9115	0.9423					0.0194	0.0756	0.0000	1.8206	30.04.2013		
55	GEPL TPP	GUPTI ENERGY PRIVATE LIMITED (Maharashtra) (No Generation)	120.00	0.00		0.00			0.00								0.0000	19.07.2012	1	0.0000	0.00474	
56	RADY GANDHI (HSAR)	H.P.G.C.L (Haryana)	1200.00	1.6179	39.38	0.6371	0.6814	106.96	0.0726	0.2665	0.0054						0.6814	24.08.2010	1	0	0.042	
57	YAMININAGAR	H.P.G.C.L (Haryana)	600.00	1.7794	44.06	0.7840	0.9600	122.45	0.0177	0.8608	0.0000						0.4815	0.9600	14.04.2008	1	0.0000	0.0000
58	PANIPAT	H.P.G.C.L (Haryana)	920.00	1.2868	38.43	0.4946	1.1913	240.85	0.0563	0.8601	0.0000						0.2124	0.0625	1.1913	26.03.1989	1	
59	HALDIA ENERGY LIMITED (WB)	HALDIA ENERGY LIMITED (WB)	600.00	2.9748	33.67	1.0015	1.0015	100.00	0.0269	0.9025						0.0000	0.0721	1.0015	28.01.2015	1		
60	Vizag TPS	HINDUD NATIONAL POWER CORPORATION LIMITED (Andhra Pradesh)	1040.00	2.2557	38.55	0.8718	0.3856	44.23	0.1747	0.0000						0.0473	0.3856	11.01.2016	1	0.0000	0.0000	
61	RAIGHAT	IPCL (Delhi) (No Generation)	135.00	0.0000	0.00	0.0000	0.0000	0.00									0.0000	10.03.1989	1	0.0000	0.0000	
62	DISIBERGARH POWER STATION	INDIA POWER CORPORATION Ltd. (WB)	12.00	0.0000	0.00	0.0000	0.0000	0.00								0.0000	0.0000	0.0000	0.0000	0.0000		
63	INDIAN METALS & FERRO ALLOYS LTD.	INDIAN METALS & FERRO ALLOYS Ltd. (Odisha)	258.00	1.0901	47.24	0.5150	0.5150	100.00	0.2421	0.0682	0.0000					0.2014		0.0033	0.5150	2.1989		
64	IL&FS ANIL NADU POWER COMPANY Ltd.	IL&FS ANIL NADU POWER COMPANY Ltd. (Tamil Nadu)	1200.00	3.5249	4.63	0.1632	0.1676	102.73	0.0000	0.1676						0.1676	29.09.2015	1	0.0000	0.0006		
65	BEATPS	IDEAL ENERGY PROJECTS LIMITED (Maharashtra)	270.00	0.0000	0.00	0.0000	0.0000	0.00								0.0000		0.0000	18.07.2013	1		
66	MARATHWA GANDHI	JHPL (Haryana)	1320.00	4.1308	39.30	1.6480	2.2566	136.93	0.0220	1.4766	0.7118						0.0462	2.2556	29.03.2012	1	0.0000	0.0000
67	O.P.Jindal Super TPP	JPL (Chhattisgarh) (Stage-I)	1000.00	1.8311	44.81	0.8205	0.8203	101.19								0.5380	0.1908	0.1015	0.8303	08.12.2007		
68	O.P.Jindal Super TPP(Stage-II)	JPL (Chhattisgarh) (Stage-II)	2400.00	5.5371	45.22	2.4951	2.5204	101.02	0.0199							1.7750	0.7256	2.5204	14.03.2014	1	0.0000	0.0000

## FLY ASH GENERATION AND ITS UTILIZATION AT COAL / LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2019 - 20 (APRIL - MARCH - 2020) (POWER UTILITY WISE)

S.No.	Name of TPS	Power Utility & state	Inrated Capacity (MW)	Coal Consumed (MT)	Ash Content of coal (%)	Fly Ash Generation (MT)	Fly Ash Utilization (MT)	% age (7) / (5) x 100	Stage utilization (%)	In making of Fly Ash based Bricks Blocks Tiles etc. (MT)	In manufacture of portions concrete cement (MT)	In construction of Highways Roads levelling etc. (MT)	In construction of part replacement of concrete in RCC construction (MT)	In mining mining development (MT)	Total Utilization (MT)	Date Of Commission to (19)	Total flame up data	Ash stock available as on 31.3.2020					
69	JAYPEE BINA TPP	JAI PRakash POWER VENTURES LIMITED (MP)	500.00	1,7181	37.55	0.6503	0.5855	90.49	0.0269	0.393					0.5885	31.06.2012	1	0.0000	0.0000				
70	JAYPEE NIGRI SUPER JAI PRakash POWER VENTURES LIMITED (MP)	1320.00	3,6652	32.78	1,2016	1,3166	109.57	0.0201	1,0246						1,3166	03.09.2014	1	0.0000	0.0000				
71	RATHNAGIRI TPP	JSW ENERGY LIMITED (Maharashtra)	1200.00	3,4376	11.01	0.3784	0.3764	99.49	0.0806	0.0858	0.2100				0.3764	01.09.2010	1	NIL	0				
72	VIJAYAWAGAR TPP	JSW ENERGY LIMITED (Karnataka)	860.00	1,1583	12.59	0.1458	0.1500	102.92	0.0246	0.090					0.0100	0.1750	18.01.2000	1	0.0000	0.0000			
73	DERANG TPP	JINDAL INDIA THERMAL POWER LIMITED (Odisha)	1200.00	4,1974	41.00	1,7168	1,1338	66.04	0.1188						0.0000	1,1338	05.06.2014	1	2,9020	0.9280			
74	DONGA MAHARIA CAPTIVE POWER PLANT	JINDAL STEEL AND POWER LIMITED (CHHATTISGARH)	576.00	1,9130	47.52	0.9091	0.9090	99.99	0.0004	0.0002					0.0004	0.0004	04.09.2010	1	0.0009	0.0006			
75	ANGUL CAPTIVE POWER PLANT	JINDAL STEEL AND POWER LIMITED (Chhattisgarh)	810.00	2,3555	47.65	1,1223	1,1223	100.00	0.0314	0.2769					0.0000	1,1223	13.05.2011	1	0.0000	0.0000			
76	JALPA KAPURDI TPP	JEN ENERGY (BHEDGAON) LIMITED (for New Bas West power Ltd.) (Rajasthan)	1680.00	5,5218	16.59	0.9158	0.9159	100.01	0.1587	0.5889					0.0000	1,683	0.9159	26.11.2009	1	0.0000	0.0000		
77	JSW STEEL LIMITED CPH-II	JSW STEEL LIMITED (Tamil Nadu)	60.00	0.1308	9.99	0.0131	0.0130	99.79	0.0130						0.0130	24.07.2006	1	0.0001	0.0000				
78	BELLARI K.P.C.L (Karnataka)	1700.00	2,8070	32.48	0.9117	0.8224	90.21	0.0730	0.7494	0.0000					0.8224	25.05.2008	1	0.0000	0.0000				
79	RATCHUR K.P.C.L (Karnataka)	1720.00	6,1443	38.66	2,3879	1,9582	81.67	0.6044	1,2552	0.026	0.0160				1,9502	29.03.1985	1	0.0000	0.0000				
80	MUZAFFARPUR TPP	KANTI BUILLE UTPADAN KUSAM LTD. (BIHAR)	610.00	2,1039	39.18	0.8240	0.6250	75.85	0.0287		0.0433				0.3680	0.6250	11.20.13	1	0.0000	0.0000			
81	KWPCL (AKALTARA)	KSH MAHANANDI POWER COMPANY LIMITED (Chhattisgarh)	1800.00	6,5114	30.25	2,0090	2,2069	109.55	0.0415	0.7392	0.0060				0.1476	1,2666	2,2009	Sept.2013	1	0.0000	0.9443		
82	ANHARGANKATK POWER LIMITED (PATTHADI TPP)	LANKO ANARKANTAK POWER LIMITED (Chhattisgarh)	600.00	2,4190	39.64	0.9590	0.6550	68.30	0.0051	0.3322	0.0001				0.1065	0.2110		0.6550	01.05.2009	1	0.0030	0.0000	
83	LALITPUR VAUTIUL POWER GENERATION COMPANY LIMITED (UP)	1980.00	4,2656	33.19	1,4158	1,5116	106.76	0.0295	0.7894						0.0000	0.6927		1,5116	06.01.2016	1	0.0000	0.0000	
84	ANPARA-C TPP	LANKO ANPRA POWER LIMITED (Uttar Pradesh)	1200.00	4,6998	33.57	1,5779	0.3583	22.71	0.3583						0.3583	10.12.2011	1	0.0020	0.0000	0.000012			
85	MATHION RBT TPP	MPCL (Haryana)	1050.00	3,8710	40.77	1,5781	1,5967	101.18	0.1094	0.2504					0.0270	1,2098		1,5667	01.09.2011	1	0.0000	0.0000	
86	SANJAY GANDHI M.P.G.C.L (M.P.)	1340.00	4,6259	37.53	1,7499	1,7427	99.59	0.0337	0.3984	0.0083					0.3823	0.71.10.1993	1	0.0000	0.0000	16.4511			
87	SATTURKA M.P.P.G.C.L (M.P.)	1330.00	3,8191	38.45	1,4685	0.9358	63.72	0.4735	0.3682						0.0136	0.0338		0.9358	07.01.1979	1	0.0000	0.0000	
88	ANARKANTAK M.P.G.C.L (M.P.)	210.00	0.9888	31.82	0.3147	0.3164	100.55	0.0465	0.1492	0.0088					0.0000	0.1118		0.3164	10.09.2009	1	0.0000	0.0000	
89	SHREE SINGHATI TPP	M.P.P.G.C.L (M.P.)	2520.00	6,0905	38.82	2,3642	0.4300	18.19	0.0118	0.2183					0.2000	0.4300	01.02.2014	1	0.0000	0.0000			
90	BHUASVAL M.S.P.G.C.L (Maharashtra)	1210.00	4,0728	39.81	1,6212	1,6970	104.67	0.1427	0.2766	0.0667					0.2768	0.0215	0.4127	1,6970	18.09.1982	1	0.0000	0.0000	
91	CHANDRAPUR M.S.P.G.C.L (Maharashtra)	2340.00	12,6323	38.82	4,9035	1,0538	21.49	0.0640	0.8986	0.00018					0.000195			1,0538	03.05.1985	1	2,3930	1,4090	
92	KHATPATKHEDA M.S.P.G.C.L (Maharashtra)	1340.00	6,1479	40.95	2,5174	1,4087	55.96	0.3753							0.2636			1,4087	26.03.1989	1	0.0000	0.0000	
93	KORADI M.S.P.G.C.L (Maharashtra)	1280.00	7,1004	40.66	2,8872	1,2159	42.11	0.3097	0.0119	0.4663					0.4279			1,2159	30.03.1982	1	0.0000	0.0000	
94	NASHIK M.S.P.G.C.L (Maharashtra)	630.00	1,9163	38.38	0.7354	1,4798	201.23	1,1967	0.2827	0.0004					1,4798	26.04.1979	1	0.0000	0.0000	14.3190			
95	PARLI M.S.P.G.C.L (Maharashtra)	750.00	1,8229	44.34	0.8392	3,8135	461.55	0.0578	0.1185	0.2595					0.2952	0.0073	3,1291	3,8735	01.11.2007	1	0.0000	0.0000	
96	PARS M.S.P.G.C.L (Maharashtra)	500.00	2,0071	36.90	0.7681	0.6618	112.19	0.3344	0.0599						0.0000			0.3674	0.6168	31.01.2008	1	0.0000	0.0000
97	MCCPL BANDHAKHAR MARUTI CLEAN COAL AND POWER LIMITED (Chhattisgarh)	300.00	1,7045	45.00	0.7670	0.7474	97.44	0.0567		0.2420					0.0000	0.4487		0.7474	30.07.2015	1	0.0000	0.0000	
98	THARMINPATNAM MEENAKSHI ENERGY PRIVATE LIMITED (Andhra Pradesh)	300.00	0.0000	0.00	0.0000	0.0000	0.00	0.0000							0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
99	INABUL POWER LTD (MP)	M/S. INABA POWER LIMITED (MP)	600.00	2,0813	40.00	0.8325	0.6921	83.13	0.0381	0.4554	0.0321				0.1665	0.6921	03.05.2016	1	0.556	0.0252	0		
100	ANUPUR TPP	M.B POWER (MADHYA PRADESH) LIMITED (M.P.)	1200.00	4,6633	33.30	1,5528	1,5988	102.96	0.0086	1,3950	0.0011				0.0000	0.2700	0.0141	1,5988	20.05.2015	1	0.0000	0.0000	
101	MEJORA NIGAM PRIVATE LIMITED (Uttar Pradesh)	660.00	6,1688	40.07	0.2479	0.0000	0.0098	0.0000							0.0000	0.0000	0.0000	0.0000	0.0000	30.04.2019	1	0.0000	0.0000

## FLY ASH GENERATION AND ITS UTILIZATION AT COAL / LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2019 - 20 (APRIL - MARCH - 2020) (POWER UTILITY WISE)

S.No.	Name of TPS	Power Utility & state	Inrated Capacity (MW)	Coal Consumed (MT)	Ash Content of coal (%)	Fly Ash Generation (MT)	Fly Ash Utilization (MT)	% age (6) / (7) x 100	Total utilization (MT)	In construction of Fly Ash based Blocks etc.	In manufacture of portions of concrete cement	In construction of Highways Roads having flyers	Part replacement of concrete in RCC Dam construction	In Ash Dyke rehabilitation or levelling Areas	In mining rehabilitation of existing areas	In agriculture waste land Development	Total utilization (MT)	Date of Commission to (19)	Date of first up data	Ash stock available as on 31.3.2020					
102	NEYVELI - I	NLC LTD.(Tamil Nadu)	500.00	4,1192	4.33	0,1783	0,1095	61.41	0,0198	0,0877						0,0020	0,0004	0,1095	1962	1	0,0000	0,0000			
103	NEYVELI - I EXPN	NLC LTD.(Tamil Nadu)	420.00	3,3779	5.17	0,1746	0,1746	100.00	0,0240	0,1192						0,0276	0,0034	0,1746	21.10.2002	1	0,0000	0,0000			
104	NEYVELI - II	NLC LTD.(Tamil Nadu)	1470.00	11,4278	5.90	0,6739	1,2862	190.86	0,1925	0,3127	0,5993					0,0048	0,1640	0,0330	1,2862	29.03.1966	1	0	0,0000		
105	NEYVELI - II EXPN	NLC LTD.(Tamil Nadu)	500.00	1,5760	6.14	0,0968	0,0968	100.00	0,0791						0,0021	0,0000	0,0156	0,0668	18.05.2011	1	0,0000	0,0000			
106	BARSINGAR LIGNE	NLC LTD. (Rajasthan)	250.00	1,3417	15.03	0,2017	100.00	0,0364	0,1340						0,0313	0,0000	0,2017	27.10.2009	1	0,0000	0,0000				
107	NLC TAMILNADU	NLC TAMIL NADU POWER LIMITED (Tamil Nadu)	1000.00	3,0468	28.56	0,8701	0,8701	100.00	0,1340	0,2229	0,0161					0,0971	0,8701	0,0320	0,2015	1	0,0000	0,0000			
108	BHILAI TPS	BHILAI NSPCL (Chhattisgarh) PP-II	500.00	1,7795	39.73	0,7070	0,7077	100.10	0,0758	0,5767	0,0469					0,0000	0,0033		0,7077	05.01.2009	1	0,0000	0,0000		
109	BHILAI TPS	BHILAI NSPCL (Chhattisgarh) PP-II	74.00	0,4133	40.88	0,1690	0,1699	100.52	0,0310	0,0463	0,0463					0,0922	0,0004	0,1699	25.08.1982	1	0,0000	0,0000			
110	DURGAPUR CPP	NSPCL (Odisha)	120.00	0,6810	33.08	0,2252	0,2292	101.78	0,0990	0,0000	0,0000					0,0000	0,1302		0,2929	17.02.1987	1	0,0000	0,0000		
111	ROURKELA CPP	NSPCL (West Bengal)	120.00	0,8758	42.52	0,3724	0,5727	153.78	0,3438	0,0499	0,4005					0,0000	0,0441		0,5727	01.03.2001	1	0,02000	0,00000		
112	VALLUR	NTPC TAMILNADU ENERGY COMPANY LTD. {INTEL} (Tamil Nadu)	1500.00	4,2530	41.03	1,7450	2,1120	121.03	0,2320	0,2940	0,2940					1,2920	2,1120	09.03.2012	1	0,0000	0,0000	5,1000			
113	BADRABUR	NTPC LTD (Delhi)	705.00	0,0000	0.00	0,0000	0,0000	#DIV/0!	0,0000	0,0000	0,0000					0,0000	0,111973	1	0,0035	0,0000	0,0000	4,1083			
114	DADRI	NTPC LTD. (UP.)	1820.00	2,3361	30.08	0,6998	0,3176	45.39	0,0559	0,0000	0,2617					0,0000	0,3176	Oct.1991	1	0,0185	0,0000	0,0000			
115	SINGRAULI	NTPC LTD. (UP.)	2000.00	9,8728	32.47	3,2060	1,2581	39.24	0,0046	0,0021	0,7000					0,5514		1,2581	Feb.82	1	0,0006	0,0000	73,6200		
116	RIHAND	NTPC LTD. (UP.)	3000.00	13,9003	28.07	3,9015	1,6849	43.19	0,1190	0,0205	0,2350					1,1912	0,1202	1,6849	Mar.88	1	0,0030	0,0000	36,7400		
117	FEROZE GANDHI UNCHIAR	NTPC LTD.(UP.)	1050.00	5,8686	36.90	2,1654	1,9569	90.37	0,0364	0,6555	0,1810					0,0000	0,1550	1,9569	Nov.88	1	0,0020	0,0000	8,5100		
118	TANDA	NTPC LTD. (UP.)	440.00	2,8192	34.38	0,9692	1,5237	157.21	0,0038	0,3449	1,0007					0,1723		1,5237	Jan-00	1	0,0015	0,0000	4,7100		
119	KORBA	NTPC (Chhattisgarh)	2600.00	13,7466	36.35	4,9976	3,4367	67.01	0,0444	0,0000	2,0911					0,1585	0,1567	0,0000	0,8960	3,3487	Mar-83	1	0,0007	0,0000	52,3600
120	VINDHYA CHHAL	NTPC LTD. (MP.)	4760.00	24,8779	35.64	8,8569	2,8409	32.08	0,1181	0,0458	2,1930					0,3370		0,1470	2,8409	Oct-87	1	0,0040	0,0000	74,7100	
121	SIPAT	NTPC LTD. (Chhattisgarh)	2980.00	14,3164	34.16	4,9052	2,4084	49.10	0,3738	0,5070	0,3105					1,0459	0,0119	0,0000	0,1544	2,0484	May-07	1	0,0060	0,0000	35,0500
122	RAMGANGUNDAM	NTPC LTD. (Andhra Pradesh)	2600.00	10,5725	36.10	3,8163	4,5118	118.23	0,0996	0,5996	0,5276					0,3120	0,9378	0,0000	4,5118	Nov-83	1	0,0050	0,0000	69,6500	
123	SIMHAJARI	NTPC LTD. (Andhra Pradesh)	2000.00	7,4995	35.19	2,6389	4,4302	167.88	0,4039	0,3060	2,8119					0,8741	0,0343	0,0000	4,4302	Feb-02	1	0,0051	0,0000	17,9500	
124	FARRAKA	NTPC LTD. (WB.)	2100.00	9,3040	34.19	3,1810	4,0912	128.61	0,0654	0,2833	2,9192					0,0585	0,4525	0,3113	4,9012	Jan-86	1	0,0270	0,0000	40,0000	
125	KAHLAJADON	NTPC LTD. (Bihar)	2340.00	13,4484	36.07	4,8504	3,7101	76.49	0,5231	0,6404	1,0000					0,4525	1,3701	0,0037	1,3701	Mar-82	1	0,0000	0,0000	65,5000	
126	BARH SUPER TPS	NTPC LTD. (Bihar)	1320.00	5,4304	38.00	2,0636	1,3833	67.04	0,2168	0,3174	0,6306					0,2455	1,3833	0,0035	1,3833	Nov-14	1	0,0000	0,0000	6,3700	
127	TALCHER(TPS)	NTPC LTD.(Odisha)	460.00	3,0371	39.00	1,1845	1,1895	100.42	0,0100	0,0012	0,0040					1,1722		1,1895	0,016,1995	1	0,0002	0,0000	2,4700		
128	TALCHER(KAN)	NTPC LTD. (Odisha)	3000.00	15,8018	44.13	7,0092	4,7156	67.28	0,1185	0,2023	0,8950					3,5360	0,1458	4,7156	Feb-95	1	0,0018	0,0000	73,7700		
129	MUDODA TPS	NTPC LTD. (Maharashtra)	2320.00	6,8770	33.68	2,3297	2,3299	100.61	0,5244	0,7098	1,1532					0,1162	0,1722	0,2349	Ap-12	1	0,0040	0,0000	1,5300		
130	BONGAIGON	NTPC LTD. (Assam)	750.00	2,3261	30.08	0,6998	0,3176	45.39	0,0559	0,0000	0,2167					0,0000	0,1716	June.2015	1	0,0150	0,0000	1,1500			
131	SOLARIR	NTPC LTD. (Maharashtra)	1320.00	0,4906	30.91	0,1516	0,1768	116.57	0,0716	0,0403	0,0008					0,0000	0,1768	01.04.2017	1	0,0010	0,0000	0,0400			
132	KUDGI	NTPC LTD. (Karnataka)	2400.00	2,6626	33.54	0,8930	0,8970	100.45	0,1519	0,1933					0,0258	0,8970	0,0258	0,8970	Dec-16	1	0,0025	0,0000	0,8200		
133	GODAWARA	NTPC LTD. (Madhya Pradesh)	600.00	0,7372	39.14	0,2886	0,0015	0.54	0,0015						0,0115	0,2913	0,0015	29.03.2019	1	0,0014	0,0000	0,0940			
134	BAROTNI	NTPC Ltd-BSPGCL(V)	720.00	0,1744	41.60	0,0726	0,0131	18.01	0,0014	0,0111					0,0006		0,0131	01.05.1983	1	0	0,059				
135	RAJPIRA TPS	NABHA POWER PROJECT (Punjab)	1400.00	4,3648	29.46	1,2859	1,7963	136.69	0,0635	0,8794	0,0000	0,0346				0,1684	0,6453	1,7963	24.01.2014	1	0,0029	0,0000	0,0657		
136	NALCO CPP AUNGAL COMPANY LIMITED (NALCO) (Orissa)	NATIONAL ALUMINUM COMPANY LIMITED (NALCO) (Orissa)	1200.00	5,5181	45.04	2,4851	1,7774	71.52	0,5048	0,4015	0,8398					0,0313		1,7774	25.09.1986	1	0,005	0	37,78		
137	IB VALLEY	O.P.G.C.L.(Odisha)	420.00	2,9065	42.45	1,2337	2,2140	17.34	0,0000	0,0273	0,2140					0,0000	0,0000	0,2140	21.12.1994	1	0,0000	0,0000	1,1350		
138	DRG POWER GENERATION PRIVATE LIMITED	DRG POWER GENERATION PRIVATE LIMITED (Tamil Nadu)	414.00	1,7368	5,60	0,0966	0,0966	100.00	0,1933	0,0773					0,0000	0,0000	0,0000	0,0000	01.06.2010	1	0,0000	0,0000	0,0000		
139	BATHINDA	P.S.P.C.L. (Punjab)	460.00	0,0000	0.00	0,0000	0,0000	0,1547	0,0000	0,2042	0,3035					0,0000	0,1547	22.09.1974	1	0,0000	0,0000	2,0100			
140	LEHRA NOHABAT	P.S.P.C.L. (Punjab)	920.00	0,6459	38.31	0,2476	0,2619	105.79	0,0103	0,1693	0,0000					0,0823	0,0823	0,2619	25.05.1998	1	0,0000	0,0000	6,6400		

(POWER UTILITY WISE) (YEAR 2019 - 20 (APRIL - 2019 TO MARCH - 2020))

## FLY ASH GENERATION AND ITS UTILIZATION AT COAL / LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2019 - 20 (APRIL - 2019 TO MARCH - 2020) (POWER UTILITY WISE)

S.No.	Name of TPS	Power Utility & state	Installed Capacity (MW)	Ash Content of coal (%)	Fly Ash Generation (MW)	Fly Ash Utilization (MW)	% age (7) / (5) x 100	In utilisation of Fly Ash based Bricks etc. (MW)	In manufacture of portland cement concrete etc. (MW)	In construction of Highways Roads/Railing etc. (MW)	In manufacture of Portland cement concrete etc. (MW)	In Infilling of embankments in RCC Dam construction & Tills etc. (MW)	In Ash dyke rehabilitation or levelling Areas (MW)	In mining rehabilitation of waste land & Development Areas (MW)	Total utilization (MW)	Date of Commission (dd/mm/yyyy)	Total filled up area (sq.m)	Ash stock available as on 31.3.2020				
172	KAKATIA (Stage-I) (Telangana)	T.S.G.E.N.C.O. (Telangana)	500.00	1.7224	36.542	0.6273	0.5597	94.01	0.1968	0.2496	0.0517	0.0442	0.0474	0.0000	0.5897	14.09.2010	1	2,891,6	1,444,36	4,352		
173	KAKATIA (Stage-II)	T.S.G.E.N.C.O. (Telangana)	600.00	2.3756	34.54	0.8205	0.8045	98.05	0.2971	0.3471	0.0071	0.0504	0.1027	0.0000	0.8045	24.03.2016	1					
174	RAGHAR TPP (NAVAYANA TPF)	TRI ENERGY PRIVATE LIMITED (Chhattisgarh)	600.00	1.5004	34.56	0.5166	0.4401	84.86	0.0130				0.4271		0.0000	0.4401	14.08.2016	1	0.3162	0.5728	0,8890	
175	TENUGIAT TPS	TENUGHAT VIDHVUL NIGAM LIMITED (Jharkhand)	420.00	1.7105	40.00	0.6842	0.4517	66.02				0.4517		0.0000	0.4517	14.04.1994	1	0.0000	0.0000	0.0000		
176	M/S/TAWANDI SABO POWER LTD	TAWANDI SABO POWER LTD (Punjab)	1980.00	5.4700	34.00	1.8600	2.0200	108.60	0.2100	1.2800	0.4800		0.0500		0.0000	2.0200	05.07.2014	1	0.0000	0.0000	2,5000	
177	ANUPRAK 'A' & 'B'	U.P.R.V.U.N.L. (U.P.)	2630.00	10.8405	33.44	3.6249	0.1414	3.90	0.0200	0.2296			0.0005		0.0003	0.1414	01.01.1987	1	0.0000	0.0000	55,6734	
178	HARDUNGANJ	U.P.R.V.U.N.L. (U.P.)	610.00	2.0971	39.79	0.8345	0.8167	97.87	0.0646	0.3035		0.4487			0.8167	26.05.1978	1	not provide				
179	CBRA	U.P.R.V.U.N.L. (U.P.)	1000.00	2.7424	40.53	1.1142	0.0861	7.73	0.0037				0.0061	26.01.1980	1	0.0000	0.0000	0.0000	11,5413			
180	PANKI	U.P.R.V.U.N.L. (U.P.) (No Generation)	210.00	0.0000	0.00			0.00	0.0000	0.0000				0.0000	0.0000	10.11.1976	1	0.0000	0.0000	0.0000		
181	PARICHA	U.P.R.V.U.N.L. (U.P.)	1140.00	2.6570	40.53	1.0768	1.0823	100.51	0.0826	0.5692	0.2969		0.0000	0.1336	1.0823	31.03.1984	1	0.0000	0.0000	8,5675		
182	UDUPI POWER CORPORATION LIMITED	UDUPI POWER CORPORATION LIMITED (Karnataka)	1200.00	1.4070	6.20	0.0873	0.0881	109.92	0.0198	0.0426		0.0228		0.0029	0.0881	11.11.2010	1	0.0000	0.0000	0.1913		
183	BUTIBORI VIDARBHA INDUSTRIES POWER LTD. (Maharashtra)	600.00	0.0000	0.00	0.0000	0.1700	0.00	0.0000	0.0000	0.1700	0.0000				0.1700	04.04.2013	1	0.0000	0.0000	0.0213		
184	VSL GENTLE POWER PRIVATE LTD	VSL GENTLE POWER PRIVATE LIMITED (Rajasthan)	135.00	0.6927	21.70	0.1503	0.1503	100.00	0.0076						0.1427	0.1503	FEB 2010	1	0.0000	0.0000	0.0000	
185	VEDANTA LTD TPP	VEDANTA LIMITED (Orissa)	2400.00	7.9112	38.04	3.0095	3.2431	107.76	0.0519	0.0454	0.0000		0.3566	2.1599		0.6293	3.2431	09.11.2010	1	0.0000	0.0000	7,6349
186	VEDANTA LTD CPP	VEDANTA LIMITED (Orissa)	1215.00	14.8321	39.30	5.8285	6.2282	106.86	0.0798	0.1785	0.0000		0.8615	4.4791		0.6293	6.2282	30.07.2008	1	0.0000	0.0000	7,0456
187	KOLAGHAT	W.B.P.D.C.L (W.B.)	1260.00	2.5314	43.45	1.0999	1.8077	164.35	0.0642	0.3486					1.3949		1.8077	16.08.1990	1	0.0000	0.0000	0.3761
188	SAGRISHI	W.B.P.D.C.L (W.B.)	1600.00	4.3337	34.47	1.4938	1.1082	74.19	0.0499	0.3171	0.1714				0.5698		1.1082	07.09.2008	1	0.0000	0.0000	6,7571
189	SANTALDH	W.B.P.D.C.L (W.B.)	335.00	0.7451	41.54	0.3095	0.3151	101.83	0.0150	0.1506	0.0375				0.1121	0.13151	04.09.1965	1	0.0000	0.0000	0.0695	
190	BAKRESWAR	W.B.P.D.C.L (W.B.)	500.00	0.2385	45.52	0.1995	0.0562	51.32	0.0330	0.0530					0.0000	0.0002	0.0562	01.04.2009	1	0.0000	0.0000	3,9703
191	SAI WARDHA POWER	WPCL (Maharashtra)	1050.00	4.2676	28.52	1.2171	1.0197	83.78	0.0449	0.3748					0.0000	0.0000	1.1917	18.07.1999	1	0.0000	0.0000	13,8733
192	LARA SUPER THERMAL POWER PROJECT	N.L.C. India Limited, NEVELLIE	540.00	0.1331	32.72	0.0436	0.0151	34.75	0.0062	0.0000	0.0000		0.0087	0.0002	0.0151	15.04.2010	1	0.0284	0	0.0284	0	
193	LARA SUPER THERMAL POWER STATION	N.T.P.C.LTD (Chhattisgarh)	600.00	1.7270	37.40	0.6459	0.0017	0.26	0.0037						0.0000	0.0017	23.03.2018	1	0.0014	0	0.29	
194	NEVELLIE	N.L.C. India Limited, NEVELLIE	1000.00	0.5626	2.81	0.0158	100.00	0.0030	0.0089						0.0039	0.0158	28.12.2019	1	0.0000	0	0	
195	KOTA SUPER THERMAL POWER STATION	RRVJNL - KOTA(Rajasthan)	1240.00	4.8318	37.28	1.8013	1.5243	84.62	0.3639	1.1543					1.5243	17.01.1983	1	0.0010	0	0.276994		
196	CHHABIA SUPER CRITICAL TPP	RRVJNL (Rajasthan)	1340.00	3.8252	32.08	1.2272	0.4110	33.49							0.4110		1	0.0038	0	0.809898		
197	KHARGONE SUPER THERMAL POWER STATION	N.T.P.C.LTD (Madhya Pradesh)	1320.00	0.2435	39.77	0.0968	10.13	0.0022	0.0076						0.0098	29.09.2019	1	0.0010	0	0.18		
	Grand Total		200691.50	676,6823	33.32	226,1339	187,3012	83.05	21,3888	57,8487	20,9667	1,6660	0.0000	22,1688	35,0600	10,3152	0,1415	17,9136	187,8052	197		

## Annex-II

## FLY ASH GENERATION AND ITS UTILIZATION AT COAL / LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2019-20 (APRIL - 2019 TO MARCH - 2020) (State Wise)

Sl. no.	Name of TPP	Power Utility & state	Installed Capacity (MW)	Coal Consumed (T/Day/100)	Fly Ash Generation (T/Day/100)	Utilization (%)	In making of Fly Ash based/other cementitious etc.	In construction of Highways & Roads including flyovers	Part of portland cement concrete	In hyd. power in RCC Dam construction	In reclamation of low lying Area	In mining filling	Others	Total Utilization (MT)	$\Sigma$ (10) to (20)				
1	Dr. N.T.R. Vijayawada A.P.Genco (Andhra Pradesh)		1760.00	9,041.0	45.88	4,148.1	4,090.5	98.61	1,9685	1,2619	5,886	0.0890	0.0000	0.0456	0.0000	0.1368	4,0905		
2	RAYASEEMA A.P.Genco (Andhra Pradesh)		1650.00	4,917.0	44.68	2,1968	1,5948	72.60	3,689	1,2259	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1,5948	
3	SILANDODARAM APPCL(Andhra Pradesh)		1600.00	4,5582	30.48	1,395	0.743	51.40	0.1362	0.5537	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.7143	
4	Vizag TPS HINDUJA NATIONAL POWER CORPORATION LIMITED (Andhra Pradesh)		1040.00	2,2557	58.29	0.8718	0.8516	44.23	0.1636	0.1747	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.3856	
5	THARMIKAPATRAM TPS MEENAKSHI ENERGY PVT. LTD.(Andhra Pradesh)	N.T.P.C. (Andhra Pradesh)	300.00	0.0000	0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
6	RAMAGUNDAM N.T.P.C.		2600.00	10,7275	36.10	3,8163	4,5118	118.23	2,0348	6,6956	0.0000	0.0000	0.5276	0.3120	0.9378	0.0000	0.0000	4,5118	
7	SIRHADRI N.T.P.C. (Andhra Pradesh).		2000.00	7,4995	35.19	2,6389	4,4302	16.88	0.4039	3,0360	2,8119	0.0000	0.0000	0.6741	0.0343	0.0000	0.0000	0.0000	4,392
8	SEHBCORP ENERGY INDIA LTD.(RAJAHMundry Ltd.) (Andhra Pradesh)	SEHBCORP ENERGY INDIA Ltd. (Formerly Thermal Powertron Corporation India Ltd.) (Andhra Pradesh) (SOPL-TPL)	1320.00	5,6865	20.91	1,2265	0.9710	79.17	0.0350	0.8555	0.0000	0.0104	0.0000	0.0701	0.0000	0.0000	0.0000	0.9710	
		<b>ASSAM</b>																	
1	BONGAIGAON NTPC LTD. (Assam)		750.00	2,2261	30.08	0.6998	0.3176	45.39	0.0559	0.0000	0.2617	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.3176	
		<b>BIHAR</b>																	
1	NABINAGAR BHARATIYA RAIL BULLETT COMPANY LIMITED (Bihar)		750.00	3,1576	35.32	1,1153	0.5558	49.84	0.0217	0.5341	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.5558	
2	MULAZAFFARPUR TPS KANTI BULLETT UPGRADAN NIGAM LTD. (BIHAR)		610.00	2,1030	39.18	0.8240	0.6250	75.85	0.0287	0.0000	0.0433	0.0000	0.0000	0.1850	0.0000	0.0000	0.0000	0.6250	
3	KAHALGAON NTPC LTD.(Bihar)		2340.00	13,4484	36.07	4,8504	3,7101	76.49	0.5231	0.6711	0.6404	0.0000	0.0000	1.0000	0.4525	0.0000	0.0000	3,7101	
4	BARTI SUPER TPS	NTPC LTD.(Bihar)	1320.00	5,3034	38.00	2,0636	1,3833	67.04	0.2168	0.3174	0.6036	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1,3833	
5	BARIANI CHHATTISGARH NTPC Ltd-SSGC(LD)(Bihar)		720.00	0.1744	41.60	0.0726	0.0131	18.01	0.0014	0.0111					0.0006			0.0131	
1	KASIPALI ACB (INDIA) Ltd. (Chhattisgarh)		270.00	1,7551	57.65	1,0119	0.9766	96.51	0.0303	0.0058	0.0000	0.0000	0.9398	0.0000	0.0000	0.0000	0.0000	0.9766	
2	SUPPL. Ranikhi ACB India Limited (Chhattisgarh)		66.00	0.4112	58.00	0.2385	0.2955	100.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.2395	0.0000	0.0000	0.0000	0.2395	
3	CHAKABURIA TPP ACB (INDIA) Ltd. (Chhattisgarh)		30.00	0.2954	54.59	0.1500	0.1508	100.53	0.0118	0.0000	0.0000	0.0000	0.1390	0.0000	0.0000	0.0000	0.1508		
4	CHAKABURIA TPP (EXTRN) ACB (INDIA) Ltd. (Chhattisgarh)		30.00	0.2954	54.78	0.1618	0.1618	100.00	0.0138	0.0000	0.0000	0.0000	0.1480	0.0000	0.0000	0.0000	0.1618		
5	BALCO TPI-II BHARAT ALUMINIUM COMPANY LIMITED(BALCO) (Chhattisgarh)		540.00	2,5657	38.35	0.9846	0.9895	100.39	0.0179	0.0000	0.0000	0.0000	0.0000	0.3062	0.0952	0.0000	0.0000	0.9895	
6	BALCO TPI-III BHARAT ALUMINIUM COMPANY LIMITED(BALCO) (Chhattisgarh)		1200.00	5,0417	37.38	1,8844	1,9057	100.39	0.0268	0.0000	0.0000	0.0000	0.0000	0.0095	1.048	0.1293	0.0000	1,9037	
7	MARWA TENDIBHATA C.S.P.G.C.L (Chhattisgarh)		1000.00	3,1651	43.05	1,3626	0.8667	59.20	0.0800	0.0191	0.1363	0.0000	0.0000	0.1879	0.3634	0.0000	0.0000	0.6332	
8	DSPM C.S.P.G.C.L (Chhattisgarh)		500.00	2,6599	1,1157	0.394	34.01			0.0000	0.0000	0.0000	0.0000	0.1214	0.1568	0.0000	0.0000	0.3794	
9	KORBA (WEST) C.S.P.G.C.L (Chhattisgarh)		1340.00	6,1515	43.71	2,6890	1,3640	50.73	0.1141	0.0000	0.0169	0.0000	0.2631	0.5098	0.0000	0.0000	0.4290	1,3640	
10	KORBA (EAST) C.S.P.G.C.L (Chhattisgarh)		440.00	1,0556	44.33	0.4679	0.3022	64.80	0.0062	0.0000	0.0000	0.0000	0.0069	0.2237	0.0664	0.0000	0.0000	0.3022	
11	O.C.Jindal Super TPP JBL (Chhattisgarh)		1000.00	1,8311	44.81	0.8205	0.8333	101.19	0.0000	0.0000	0.0000	0.0000	0.5380	0.1908	0.1015	0.0000	0.0000	0.8333	
12	O.P. Indi Super TPP(Stage-11) JBL (Chhattisgarh)		2400.00	5,5171	45.22	2,4951	2,5204	101.02	0.0159	0.0000	0.0000	0.0000	0.1750	0.0000	0.2756	0.0000	0.0000	2,5204	
13	DONGANWALI CAPTIVE INDIA STEEL AND POWER LIMITED POWER PLANT (CHHATTISGARH)		576.00	1,9130	47.52	0.9091	0.9690	99.99	0.0004	0.0002	0.0000	0.0000	0.0000	0.3004	0.0000	0.0000	0.0000	0.9690	
14	ANGUL CAPTIVE POWER JINDAL STEEL AND POWER LIMITED PLANT (Chhattisgarh)		810.00	2,3555	47.65	1,1223	1,1223	100.00	0.0314	0.0000	0.0000	0.0000	0.6408	0.1733	0.0000	0.0000	0.0000	1,1223	

## Annex-II

## FLY ASH GENERATION AND ITS UTILIZATION AT COAL / LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2019-20 (APRIL - 2019 TO MARCH - 2020) (State Wise)

Sl. no.	Name of TPP	Power Utility & state	Installed Capacity (MW)	Coal Consumed (T/Day)	Ash Content (%)	Fly Ash Generation (MT)	Utilization (%)	In making of Fly Ash bricks/bricks etc.	In construction of Highways & Roads including flyovers etc.	In manufacture of portland cement	Part replacement of cement in concrete	In hydro power sector in RCC Dam construction	Part replacement of cement in concrete	In As Dyke raising	In reclamation of low lying Area	In mining filling	Others	Total Utilization (MT)	Total Utilization (MT) to
15	KNPCL (AKALIARA)	JKS MAHANANDI POWER COMPANY LIMITED (Chhattisgarh)	1800.00	6,511.4	30.85	2,009.0	2,020.9	109.55	0.0415	0.7392	0.0660	0.0000	0.0000	0.1476	1.2666	0.0000	0.0000	2,2089	
16	AMARKANTAK TPP (PATNAHDI TPP)	LANKO ANARKANTAK POWER LIMITED (Chhattisgarh )	600.00	2,419.0	39.64	0.9590	0.6550	68.30	0.0051	0.3322	0.0001	0.0000	0.1065	0.2110	0.0000	0.0000	0.0000	0.6550	
17	MECH BANDHAKHAR	MARUTI CLEAN COAL AND POWER LIMITED (Chhattisgarh)	300.00	1,704.5	45.00	0.7670	0.7474	97.44	0.0567	0.0000	0.2420	0.0000	0.0000	0.4487	0.0000	0.0000	0.0000	0.7474	
18	BHILLAI TPP (BHILLAI PP III)	NSPLC (Chhattisgarh)	500.00	1,779.5	39.73	0.7070	0.7077	100.10	0.0758	0.5767	0.0469	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.7077	
19	BHILLAI TPP (BHILLAI PP-II)	NSPLC (Chhattisgarh)	74.00	0.4133	40.88	0.1690	0.1699	100.52	0.0310	0.0463	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1699	
20	KORBA	NTPC (Chhattisgarh),	2600.00	13,248.6	36.35	4,599.76	3,484.7	67.01	0.0444	0.0000	0.0000	0.0000	0.0000	0.2091	0.1585	0.1567	0.0000	0.0000	
21	SIPAT	NTPC LTD. (Chhattisgarh),	2986.00	14,316.4	34.26	4,9052	4,6044	49.10	0.3738	0.5070	0.3005	0.0000	0.0000	0.0499	0.0149	0.0000	0.0000	0.1544	
22	UCCHIPURDA	R.K.M. POWERGEN PVT. LTD (RSCIL) (Chhattisgarh)	1440.00	2,991.6	43.54	0.9106	0.8652	95.34	0.0001	0.1793	0.1700	0.0000	0.0000	0.3865	0.1324	0.0000	0.0000	0.8682	
23	GMR Chhattisgarh	RAJENDR ENERGY LIMITED/Formerly GMR CHATTISGARH Energy Ltd)	1370.00	3,598.2	33.47	1,3081	1,3103	100.17	0.0590	0.9110	0.0071	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1,3103	
24	RATNA TPP	SPECTRUM COAL & POWER LTD.(Chhattisgarh)	100.00	0.5823	58.29	0.5726	0.5531	96.59	0.0164	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.5531	
25	SAL ILLAGARH POWER GENERATION LTD (Chhattisgarh)	(No Generation)	86.00	0.0000	0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
26	SWASTIK POWER & MINERALS RESOURCES PVT. LTD (Chhattisgarh) (No Generation)	25.00	0.0000	0.00	0.0000	0.0000	0.0000	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
27	SJS POWER LTD (Chhattisgarh)	SJS POWER GRABATION (CHATTISGARH) LIMITED (Bhimbeta TPP)	600.00	2,068.9	45.39	0.9391	0.7875	83.86	0.0129	0.4066	0.0283	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.7875	
28	RAGRANI TPP	TRN ENERGY PRIVATE LIMITED (Chhattisgarh)	600.00	1,500.4	34.56	0.5186	0.4401	84.86	0.0130	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.4401	
29	LARA SUPER THERMAL POWER PROJECT	N.I.T.P. LTD (Chhattisgarh)	800.00	1,727.0	37.40	0.6459	0.0017	2.26	0.0017	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0017	
<b>DELHI</b>																			
1	RAGHAT	IRGCL (Delhi)	135.00	0.0000	0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
2	BADARPUR	N.T.C.LTD (Delhi).	705.00	0.0000	0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
<b>GUJARAT</b>																			
1	MUNDRA TPP	ADANI POWER (MUNDRA) LIMITED (Gujarat)	4620.00	16,240	4.54	0.7360	0.7420	100.82	0.0000	0.3670	0.0000	0.0000	0.0000	0.0000	0.1450	0.0000	0.0000	0.2300	
2	BHADRESHWAR VIDYUT LTD (Gujarat)	PRIVATE LTD (Gujarat)	300.00	1,093.9	5.68	0.0421	0.0497	80.05	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0497	
3	MINTRA UPPP	CGPL (Gujarat)	4156.00	11,000.0	6.55	0.7200	0.8000	111.11	0.0120	0.3610	0.0000	0.0790	0.0000	0.0000	0.1730	0.0830	0.0000	0.0920	
4	SURAT LIGHTTE	G.I.P.C.L. (Gujarat)	500.00	3,565.2	16.01	0.5708	0.5708	100.00	0.2814	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2894	
5	AKRNHTA	G.M.D.C.L. (Gujarat)	256.00	0.5271	26.61	0.2467	0.2988	121.10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2988	0.0000	0.2988	
6	GANDHINagar	G.S.E.C.L. (Gujarat)	630.00	0.1165	34.25	0.0399	0.1814	454.64	0.0349	0.0589	0.0431	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1814	
7	KUTCH LIGHTTE	G.S.E.C.L. (Gujarat)	290.00	0.1235	28.99	0.0358	0.0358	100.00	0.0000	0.0052	0.0000	0.0000	0.0000	0.0000	0.0306	0.0000	0.0000	0.0358	
8	SIKKA	G.S.E.C.L. (Gujarat)	500.00	0.1303	7.37	0.036	0.0315	328.13	0.0174	0.0141	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0315	
9	UKAI	G.S.E.C.L. (Gujarat)	1110.00	0.1748	36.10	0.1353	0.1157	85.51	0.0509	0.0370	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1157	
10	WANAKBORI	G.S.E.C.L. (Gujarat)	1470.00	0.3566	35.00	0.1248	0.1410	112.98	0.0214	0.0743	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1410	
11	BHAVNAGAR LIGNITE	G.S.E.C.L. (Gujarat)	500.00	0.0748	11.10	0.0063	0.0072	86.75	0.0031	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	0.0000	0.0002	
12	SABARMATI	TORRENT POWER LTD (Gujarat)	362.00	1,268.8	23.83	0.3023	0.3023	100.00	0.0000	0.2476	0.0112	0.0000	-0.0559	0.0000	0.0000	0.0000	0.0000	0.0000	

Annex-II

FLY ASH GENERATION AND ITS UTILIZATION AT COAL / LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2019-20 (APRIL - 2019 TO MARCH - 2020) (State WISE)

## Annex-II

## FLY ASH GENERATION AND ITS UTILIZATION AT COAL / LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2019-20 (APRIL - 2019 TO MARCH - 2020) (State Wise)

Sl. no.	Name of TPP	Power Utility & state	Installed Capacity (MW)	Coal Consumed MT	Ash Content %	Fly Ash Generation MT	Utilization MT	Usage (8)/(7)(x)100	In making of Fly Ash bricks/Asphaltic concrete etc.		Part in construction of Highways & Roads including flyovers	Part in manufacture of portland cement	Part in making of Fly Ash Ash Dyke raising sector in RCC Dam construction	Part in reclamation of river bed	In mining filling	In agriculture/ waste land Development	Others	Total Utilization MT	$\Sigma(10) to$
									MT	MT									
<b>MAHARASHTRA</b>																			
1	TIRODA	ADANI POWER MAHARASHTRA LTD. (Maharashtra)	3300.00	14,8850	32.35	4,8152	4,3758	90.87	0.0850	0.1192	0.0639	0.0000	0.3111	2,0367	0.0000	0.0044	1,7555	4,3738	
2	MHIAN	ANPER (Maharashtra) (No Generation)	246.00	0.0000	0.00	0.0000	0.0000	0.00									0.0000	0.0000	
3	ADANI DAHANU	ADANI ELECTRICITY MUMBAI LIMITED (Maharashtra)	500.00	1,9156	22.19	0.4251	0.5444	128.06	0.0001	0.0000	0.2905	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2537	
4	DHARIWAL INFRASTRUCTURE LTD.	DHARIWAL INFRASTRUCTURE LIMITED (Maharashtra)	600.00	2,0303	33.78	0.7442	0.7966	107.04	0.0920	0.6220	0.0096	0.0000	0.0000	0.0440	0.0290	0.0000	0.0000	0.0000	
5	GMR WARORA ENERGY LTD.	GMR WARORA ENERGY LTD. (Maharashtra)	600.00	2,6273	33.59	0.8824	0.9378	106.27	0.1725	0.5012	0.2433	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
6	GBPL TPP	GUPTA ENERGY PRIVATE LIMITED (Maharashtra) (No Generation)	120.00	0.0000	0.00	0.0000	0.0000	0.00										0.0000	
7	BELATPS	IDEAL ENERGY PROJECTS LIMITED (Maharashtra)	270.00	0.0000	0.00	0.0000	0.0000	0.00										0.0000	
8	RATNAGRI	JSW ENERGY LIMITED (Maharashtra)	1200.00	3,4376	11.01	0.3784	0.3764	99.49	0.0806	0.0858	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
9	BHUSAVAL	M.S.P.G.C.L. (Maharashtra)	1210.00	4,6728	39.81	1,6212	1,6970	104.67	0.1427	0.7766	0.0667	0.0000	0.0000	0.2100	0.0000	0.0000	0.0000	0.0000	
10	CHANDRAPUR	M.S.P.G.C.L. (Maharashtra)	2340.00	12,6323	38.82	4,9035	5,0138	21.49	0.0640	0.5986	0.0000	0.0000	0.0000	0.0000	0.2768	0.0000	0.0000	0.0000	
11	KHARARKHEDA	M.S.P.G.C.L. (Maharashtra)	1340.00	6,4749	40.95	2,5174	1,4087	55.96	0.3753	0.0000	0.2636	0.0000	0.0000	0.0000	0.698	0.0000	0.0000	0.0000	
12	KORADI	M.S.P.G.C.L. (Maharashtra)	1286.00	7,0004	40.66	2,8872	1,2159	42.11	0.3097	0.0119	0.4663	0.0000	0.0000	0.0000	0.4279	0.0000	0.0000	0.0000	
13	NASHIK	M.S.P.G.C.L. (Maharashtra)	630.00	1,9163	38.38	0.7354	1,4798	201.23	1,1967	0.2827	0.0004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
14	PABLI	M.S.P.G.C.L. (Maharashtra)	750.00	1,8929	44.34	0.832	3,8735	465.55	0.0678	0.1185	0.0000	0.0000	0.0000	0.0000	0.2912	0.0000	0.0000	0.0000	
15	PARAS	M.S.P.G.C.L. (Maharashtra)	500.00	2,0871	36.80	0.7681	0.8638	12,19	0.4344	0.0599	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
16	MGUDA TPP	NTPC LTD. (Maharashtra)	2320.00	6,6770	33.88	2,3297	2,3439	100.61	0.5244	0.3708	1,1532	0.0000	0.0000	0.0000	0.1182	0.1772	0.0000	0.0000	0.0000
17	SOLAPUR	NTPC LTD. (Maharashtra)	1320.00	0.9096	30.91	0.1516	0.1768	116.57	0.0716	0.1043	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
18	ANIRVANTIPPS	RATTANINDIA POWER LTD. (Maharashtra)	1350.00	1,9548	32.26	0.6306	0.7585	120.27	0.6172	0.0000	0.0215	0.0000	0.0000	0.0377	0.0320	0.0000	0.0000	0.0000	
19	TROMBAY	T.P.CO (Maharashtra)	750.00	2,3460	2.40	0.0564	0.0559	99.11	0.0069	0.0000	0.0000	0.0000	0.0000	0.0410	0.0000	0.0000	0.0000	0.0000	
20	BUTIBORI	VIDARBHA INDUSTRIES POWER LTD. (Maharashtra)	600.00	0.0000	0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
21	SAI WARDHA POWER LTD. (Maharashtra)	WPCL (Maharashtra)	540.00	0.1131	32.72	0.0436	0.0151	34.75	0.0062	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
<b>ODISHA</b>																			
1	GMR KAMALANGA TPP	GMR KAMALANGA ENERGY LTD. (Odisha)	1050.00	4,3381	39.30	1,7049	1,8206	106.79	0.7718	0.0115	0.9423	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1,8206
2	INDIAN HEAVY & FERRO ALLOYS LTD. (Orissa)	INDIAN HEAVY & FERRO ALLOYS LTD. (Orissa)	258.00	1,0901	47.24	0.5150	0.5550	100.00	0.2421	0.0682	0.0000	0.0000	0.0000	0.0000	0.2014	0.0000	0.0000	0.0000	0.5150
3	DERANG TPP	JINDAL INDIA THERMAL POWER LIMITED (Orissa)	1200.00	4,1874	41.00	1,7168	1,1338	66.04	0.1188	0.0000	0.0000	0.0000	0.0000	0.0000	0.6860	0.3290	0.0000	0.0000	1,1338
4	DURGAPUR CPP	NSPCL (Orissa)	120.00	0.6810	33.08	0.2252	0.2292	101.78	0.0800	0.0980	0.0000	0.0000	0.0000	0.0000	0.1302	0.0000	0.0000	0.0000	0.2232
5	TALCHAR(KIPS)	NTPC LTD.(Orissa),	460.00	3,0371	39.00	1,1845	1,1895	100.42	0.0100	0.0012	0.0000	0.0000	0.0000	0.0000	0.0040	1,1732	0.0000	0.0000	1,1895
6	TALCHAR(KAN)	NTPC LTD.(Orissa).	3000.00	15,8818	44.13	7,0092	4,7156	67.28	0.1185	0.0203	0.8950	0.0000	0.0000	0.5360	0.1458	0.0000	0.0000	0.0000	4,7156
7	NALCO-CPP ALUNGAL	NATIONAL ALUMINUM COMPANY LIMITED (Orissa)	1200.00	5,5181	45.04	2,4851	1,7774	71.52	0.5048	0.0000	0.4015	0.0000	0.0000	0.8398	0.0313	0.0000	0.0000	0.0000	1,7774
8	IB VALLEY	O.P.G.C.L.(Orissa)	420.00	2,9065	42.45	1,2337	2,1240	17.34	0.0000	0.0000	0.0000	0.0000	0.0000	0.2140	0.0000	0.0000	0.0000	0.0000	0,2140
9	VEDANTA LTD TPP	VEDANTA LIMITED (Orissa)	2400.00	7,9112	38.04	3,0095	3,2431	107.76	0.0454	0.0000	0.0000	0.0000	0.0000	0.3566	2,1599	0.0000	0.0000	0.0000	3,2431
10	VEDANTA LTD CPP	VEDANTA LIMITED (Orissa)	1215.00	14,8321	39.30	5,8285	6,2282	106.86	0.0798	0.1785	0.0000	0.0000	0.0000	0.8615	4,4791	0.0000	0.0000	0.0000	6,2282

Annex-II

ASH FLY ASH GENERATION AND ITS UTILIZATION AT COAL / LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2019-20 (APRIL - 2019 TO MARCH - 2020) (State WISE)

Annex-II

STATE WISE FLY ASH GENERATION AND ITS UTILIZATION AT COAL / LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2019-20 (APRIL - 2019 TO MARCH - 2020) (State Wise)

**Annex-II**

**FLY ASH GENERATION AND ITS UTILIZATION AT COAL / LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2019-20 (APRIL - 2019 TO MARCH - 2020) (State Wise)**

Sr no.	Name of TPS	Power Utility & state	Installed Capacity (MW)	Coal Consumed MT	Fly Ash Generation MT	Usage MT	Usage (B) MT/400	Utilization %age	In making of Fly Ash based/other bio cements etc.	MT	MT	Part replacement sector in portland cement	Part replacement sector in RCC Dam construction	MT	MT	MT	MT	MT	Total Utilization
11	DISHERGAH POWER STATION	INDIA POWER CORPORATION Ltd. (W.B)	12,00	0.0000	0.00	0.0000	0.0000	0.00		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	ROURKELA CPO	NSPLC (West Bengal)	120,00	0.8758	42.52	0.3724	0.5727	153.78	0.0458	0.4095	0.0324	0.0000	0.0000	0.0443	0.0000	0.0000	0.0000	0.0000	0.5727
13	FARAKKA	NTPC LTD. (W.B.)	2100,00	9.0404	34.19	3.1810	4.0912	128.61	0.0664	0.2833	2.9192	0.0000	0.0000	0.0585	0.4225	0.0000	0.0000	0.0000	31.13
14	KOLAGHAT	W.B.P.D.L.(W.B.)	1260,00	2.5314	43.45	1.0999	1.8077	164.35	0.0642	0.3486	0.0000	0.0000	0.0000	1.3949	0.0000	0.0000	0.0000	0.0000	4.0912
15	SAGARDIGHI	W.B.P.D.L.(W.B.)	1600,00	4.3337	34.47	1.4938	1.1082	74.19	0.0499	0.3171	0.1714	0.0000	0.0000	0.5984	0.0000	0.0000	0.0000	0.0000	1.1082
16	BANDEL	W.B.P.D.L.(W.B.)	335,00	0.2451	41.54	0.3095	0.3151	101.83	0.0150	0.1506	0.0375	0.0000	0.0000	0.1123	0.0000	0.0000	0.0000	0.0000	0.3151
17	SANTALDHI	W.B.P.D.L.(W.B.)	500,00	0.2385	45.92	0.1095	0.0562	51.32	0.0030	0.0530	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0562
18	BAKRESWAR	W.B.P.D.L.(W.B.)	1050,00	4.2676	28.52	1.2171	1.0197	83.78	0.0449	0.9748	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0197
	<b>Grand Total</b>		<b>20691.50</b>	<b>678.6823</b>	<b>33.32</b>	<b>226.1339</b>	<b>181.8052</b>	<b>33.05</b>	<b>21.3388</b>	<b>57.4847</b>	<b>20.9667</b>	<b>1.6660</b>	<b>0.0000</b>	<b>22.1688</b>	<b>35.0600</b>	<b>10.6152</b>	<b>0.1415</b>	<b>17.9136</b>	<b>187.8052</b>