



भारत सरकार  
Government of India  
विद्युत मंत्रालय  
Ministry of Power

**REPORT ON FLY ASH GENERATION AT COAL/LIGNITE  
BASED THERMAL POWER STATIONS AND ITS  
UTILIZATION IN THE COUNTRY FOR THE YEAR 2018-19**

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

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## FOREWORD

Presently, the Electricity generation in the country comprises about 72% from coal based generating stations. In near future also the coal-based generation is likely to remain substantial. The Indian coal is of high ash content of the order of 30 - 45%, generating large quantity of fly ash at coal/lignite based Thermal Power Stations. At present, the Ash utilization is lower than its production on all India basis. As a result, there is surplus ash stock, which has been increasing every year. The management of fly ash has thus been a matter of concern in view of requirement of large area of land for its disposal because of its potential of causing pollution of air and water.

To address the above concerns, Ministry of Environment & Forests and Climate Change (MoEF&CC) has issued various Notifications on fly ash utilization prescribing therein the targets for fly ash utilization for Coal/Lignite based Thermal Power Stations with an aim to achieve 100% utilization in a phased manner. Central Electricity Authority has been monitoring since 1996 the status of fly ash generation and its utilization in the country.

The utilization of fly ash has increased from 7 million tons in 1996-97 to a level of 168.40 million-ton in 2018-19. The percentage of fly ash utilization during 2018-19 is 77.59%. To materialize 100% utilization of fly ash on all India basis, in line with MOEF&CC Notification extra efforts by all Thermal Power Stations are needed.

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.

  
(Prakash Mhaske)

New Delhi  
January, 2020



## **PREFACE**

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 and target of achieving 100% utilization of fly ash in time bound manner as prescribed in MoEF Notification of 14<sup>th</sup> September, 1999 and its subsequent amendment. 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.

Fly Ash Mission, a Technology Project in Mission Mode of Government of India 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. The 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. Ministry of Environment & Forests, Government of India also issued 1<sup>st</sup> Notification on Fly Ash Utilization in 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 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, back filling and stowing of mines, waste land development, construction of Roller Compacted concrete dams etc. Though, in 2018-19, the ash utilization level has reached to about 77.59% (168.40 MT) as compared to less than 10% (6.64 MT) during the year 1996-97, a lot more needs to be done.

This report brings out present status of fly ash generation at 195 coal/lignite based Thermal Power Stations and its utilization in the country. It also brings out the status of 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 also 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 Station for furnishing data in a timely manner. I would also like to place on record my appreciation of the efforts made by the officers and staff of Thermal Civil Design Division. We solicit suggestion 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 Chief Engineer, TCD, CEA, Room No. 901(N), Sewa Bhawan, R.K. Puram, New Delhi (E-mail Address: tcdcea@nic.in).

New Delhi  
January-2020

**(P.D. SIWAL)**  
**Member (Thermal)**

## **ACKNOWLEDGEMENT**

I express my sincere thanks to all the power utilities and the Thermal Power Stations for furnishing the data and information for bringing out this report on Fly Ash Generation and its utilization in the country for the year 2018-19. Timely furnishing the required data and information by various Power Utilities and Thermal Power Stations to CEA is important for bringing out the report.

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

I also express my thanks to the team comprising S/Shri Baleshwar Thakur, Director, Ranjeet Kumar, Deputy Director, Vijender Singh, Sr. Manager Bhagaban Bhattacharya, Assistant Director and other officers of TCD Division, CEA in preparation of this report.

New Delhi  
January-2020



**(R. S. RAM)**  
**Chief Engineer (TCD)**

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**THERMAL CIVIL DESIGN DIVISION**

**FLY ASH GENERATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS AND ITS  
UTILIZATION IN THE COUNTRY  
(FOR THE YEAR 2018-19)**

**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 low ash content of the order of 10-15%. Large quantity of ash is, thus being generated at coal/lignite based Thermal Power Stations in the country, which not only requires large area of precious land for its disposal but is also one of the sources of pollution of both air and water.

Central Electricity Authority (CEA) 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 is 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 Ministry of Power, Ministry of Science & Technology and 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 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 disposal of fly ash in ash ponds and to address the problem of pollution caused by fly ash, Ministry of Environment, Forests and Climate Change (MoEF&CC) has issued various Notifications on fly ash utilization. First Notification was issued on 14<sup>th</sup> September, 1999 which was subsequently amended in year 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 first year; 60% in second year; 75% in third year; 90% in fourth year and 100% in fifth year. The new Thermal Power Stations coming into operation after the MoEF'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% during in second year, 90% during third year and 100% during fourth year depending upon their date of commissioning. Ministry of Environment, Forest and Climate change has recently 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 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 notifications of 3<sup>rd</sup> November, 2009 and to take corrective measures in cases of Thermal Power Stations lagging behind in achieving the prescribed targets of fly ash utilization.

## 2.0 ASH GENERATION & UTILIZATION DURING THE YEAR 2018-19

### 2.1 A Brief Summary

Fly ash generation & utilization data for the Year 2018-19 (April 2018 to March 2019) has been received from **195** (One hundred ninety Five) coal/lignite based thermal power stations of various power utilities in the country. Data received has been analyzed to derive conclusions on present status of fly ash generation and its utilization in the country as a whole. A brief summary of status is given in Table-I below:

**TABLE-I**  
**SUMMARY OF FLY ASH GENERATION AND UTILIZATION DURING THE YEAR 2018-19**

Description		Year 2018-19
• Nos. of Thermal Power Stations from which data was received	:	<b>195</b>
• Installed capacity (MW)	:	<b>197966.50</b>
• Coal consumed (Million tons)	:	<b>667.43</b>
• Fly Ash Generation (Million tons)	:	<b>217.04</b>
• Fly Ash Utilization (Million tons)	:	<b>168.40</b>
• Percentage Utilization	:	<b>77.59</b>
• Percentage Average Ash Content (%)	:	<b>32.52</b>

Power Station wise fly ash generation & its utilization status including modes of utilization for the 2018-19 for all the **195** 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 2018-19:

During the Year 2018-19, Nine (9) Thermal power plant with total installed capacity of **4100 MW** as given in Table-II below was commissioned:

**TABLE-II**  
**DATA PROVIDED BY THERMAL POWER UNITS COMMISSIONED DURING THE YEAR 2018-19**

Sl. No.	Name of Thermal Power Station	Name of Power Utility	Unit No.	Capacity (MW)	Date of Commission
1	2	3	4	5	6
<b>2018-19</b>					
1	MAHAN	ESSAR POWER MP LTD.(M.P.)	2	600.00	07.10.2018
2	SHREE SINGAJI TPS	M.P.P.G.C.L. (M.P.)	3	660.00	18.11.2018
3	NABI NAGAR TPP	BHARATIYA RAIL BIJLEE COMPANY LIMITED (Bihar)	3	250.00	26.02.2019
4	UNCCHPINDA	R.K.M.POWERGEN PVT. LTD (PGCIL) (Chhattisgarh)	4	360.00	20.03.2019
5	BONGAIGAON TPP	NTPC LTD. (Assam)	3	250.00	26.03.2019
6	SHREE SINGAJI TPS	M.P.P.G.C.L. (M.P.)	4	660.00	27.03.2019
7	SOLAPUR STPP	NTPC LTD. (Maharashtra)	2	660.00	29.03.2019
8	GADARWARA	NTPC LTD.(Madhya Pradesh)	1	800.00	29.03.2019
9	Meja TTP	MEJA URJA NIGAM PVT. LTD.	1	660.00	31.03.2019
<b>Total for 2018-19</b>				<b>4100.00</b>	

### 2.3 Retirement of Thermal Power Units during the Year 2018-19:

During the Year 2018-19, 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 2018-19**

Sl. No.	Name of Thermal Power Station	Name of Power Utility	Unit No.	Capacity (MW)	Date of Decommissioning
(1)	(2)	(3)	(4)	(5)	(6)
<b>2018-19</b>					
1	OBRA TPS	UPRVUNL	8	1X94	03.04.2018
2	BANDEL TPS	WBPDC	3 & 4	2X60	20.04.2018
3	LAKWA TPS	APGCL	2 & 3	2x15	02.07.2018
4	BATHINDA TPS	PSPCL	1,2,3,4	4X110	31.08.2018
5	ROPAR	PSPCL	1 & 2	2X210	31.08.2018
6	BADARPUR TPS	NTPC Ltd	1,2,3,4 & 5	3x95 & 2x210	30.10.2018
7	NEVELI TPS-I		7	1X100	06.02.2019
8	KOTHAGUNDEM TPS	TSPGCL	3,6 & 8	1X60 & 2X120	19.03.2019
<b>Total for 2018-19</b>				<b>2,209.00</b>	

### 2.4 Power Utility Wise Status of Fly Ash Generation & its Utilization during the Year 2018-19

The status of fly ash generation & utilization for the year 2018-19 for various power utilities in the country has been assessed based on data received from Thermal Power Stations and the same is given in Table-IV:

**TABLE-IV**  
**POWER UTILITY WISE FLY ASH GENERATION AND UTILIZATION FOR THE YEAR 2018-19**

Sl. No.	Name of Power Utility	No. of TPS	Installed Capacity (MW)	Fly Ash Generation (Million-tonne)	Fly Ash Utilization (Million-tonne)	Percentage Utilization %
1	2	3	4	5	6	7
1	Andhra Pradesh Power Generation Corporation (APGENCO)	2	3410.00	6.0389	5.8924	97.58
2	APPDCL(Andhra Pradesh)	1	1600.00	1.2120	0.7926	65.40
3	ACB (INDIA) Ltd. (Chhattisgarh)	4	390.00	1.4348	1.4348	100.00
4	ADANI POWER (MUNDRA) LIMITED (Gujrat)	1	4620.00	0.7740	0.7951	102.73
5	APCPL (Haryana)	1	1500.00	1.5034	1.5545	103.40
6	ADANI POWER MAHARASHTRA LTD. (Maharashtra)	1	3300.00	4.3630	3.6847	84.45
7	ADANI POWER RAJASTHAN LTD. (Rajasthan)	1	1320.00	1.2800	1.5198	118.74
8	AMNEPL (Maharashtra) (No Generation)	1	246.00	0.0000	0.0000	No Generation
9	ADANI ELECTRICITY MUMBAI	1	500.00	0.5640	0.7324	129.85

Sl. No.	Name of Power Utility	No. of TPS	Installed Capacity (MW)	Fly Ash Generation (Million-tonne)	Fly Ash Utilization (Million-tonne)	Percentage Utilization %
1	2	3	4	5	6	7
	LIMITED (Maharashtra)					
10	ADHUNIK POWER & NATURAL RESOURCES LTD. (Jharkhand)	1	540.00	0.7484	0.8805	117.65
11	BEPL (UP)	5	450.00	0.2561	0.2562	100.03
12	BHARATIYA RAIL BIJLEE COMPANY LIMITED (Bihar)	1	750.00	0.6101	0.1744	28.59
13	BHARAT ALUMINIUM COMPANY LIMITED(BALCO) (Chhattisgarh)	2	1740.00	2.7982	2.8655	102.41
14	BHADRESHWAR VIDYUT PRIVATE LIMITED (Gujarat)	1	300.00	0.0493	0.0487	98.89
15	C.E.S.C. Ltd. (West Bengal)	3	1125.00	1.2700	1.2700	100.00
16	Chhattisgarh State Power Generation Company Ltd. (C.S.P.G.C.L.)	4	3280.00	6.0980	2.8422	46.61
17	COASTAL ENERGEN PVT. LTD (Tamil Nadu)	1	1200.00	0.0703	0.0705	100.23
18	C.G.P.L (Gujarat)	1	4150.00	0.7900	0.7410	93.80
19	CHEMPLAST SANMAR LIMITED(Tamil Nadu)	1	48.50	0.0183	0.0184	100.44
20	Damodar Valley Corporation (D.V.C.)	7	7090.00	9.9244	6.9338	69.87
21	Durgapur Projects Ltd. (D.P.L.)	1	550.00	0.6539	0.5707	87.29
22	Dhariwal Infrastructure Ltd. (Maharashtra)	1	600.00	0.6910	0.7246	104.86
23	EASTERN COALFIELDS LIMITED (West Bengal)(No Generation)	1	30.00	0.0000	0.0000	No Generation
24	ESSAR POWER MP LTD.(M.P.)	1	1200.00	0.5629	0.4834	85.89
25	Gujarat Industries Power Corporation Ltd. (G.I.P.C.L.)	1	500.00	0.6033	0.6033	100.00
26	Gujarat Mineral Development Corporation Ltd. (G.M.D.C.L.)	1	250.00	0.2665	0.3765	141.28
27	G.S.E.C.L. (Gujarat)	6	4500.00	0.4348	0.5410	124.42
28	GMR Warora Energy LTD. (Maharashtra)	1	600.00	0.7574	0.8280	109.32
29	GMR Kamalanga Energy LTD. (Odisha)	1	1050.00	1.7867	1.7887	100.11
30	GUPTA ENERGY PRIVATE LIMITED(Maharashtra) (No Generation)	1	120.00	0.0000	0.0000	No Generation
31	Haryana Power Generation Cor. Ltd. (H.P.G.C.L.)	3	2720.00	2.7481	2.9607	107.74
32	HALDIA ENERGY LIMITED (W.B.)	1	600.00	1.0488	1.0488	100.00
33	HINDUJA NATIONAL POWER CORPORATION LIMITED (Andhra Pradesh)	1	1040.00	0.1991	0.5201	261.18
34	IPGCL (Delhi)(No Generation)	1	135.00	0.0000	0.0000	No Generation
35	INDIA POWER CORPORATION Ltd. (W.B)	1	12.00	0.0171	0.0171	100.00
36	INDIAN METALS & FERRO ALLOYS LTD. (Odisha)	1	258.00	0.4367	0.4368	100.02
37	IL&FS TAMIL NADU POWER COMPANY LIMITED (Tamil Nadu)	1	1200.00	0.1300	0.1280	98.46
38	IDEAL ENERGY PROJECTS LIMITED (Maharashtra)	1	270.00	0.0306	0.0000	0.00

Sl. No.	Name of Power Utility	No. of TPS	Installed Capacity (MW)	Fly Ash Generation (Million-tonne)	Fly Ash Utilization (Million-tonne)	Percentage Utilization %
1	2	3	4	5	6	7
39	J.H.P.L (HR)	1	1320.00	1.6480	2.2565	136.92
40	J.P.L (Chhattisgarh)	2	3400.00	3.3650	3.4360	102.11
41	JAI PRAKSH POWER VENTURES LIMITED (MP)	2	1820.00	1.6062	1.6286	101.40
42	JSW Energy Ltd.	2	2060.00	0.6632	0.6956	104.88
43	JINDAL INDIA THERMAL POWER LIMITED (Odisha)	1	1200.00	1.3740	0.9460	68.85
44	JINDAL STEEL AND POWER LIMITED (CHHATTISGARH)	2	1386.00	1.8179	1.7921	98.58
45	JSW ENERGY (BARMER) LIMITED (Formerly Raj Westpower Ltd.) (Rajasthan)	1	1080.00	0.0880	0.1090	123.86
46	JSW STEEL LIMITED (Tamil Nadu)	1	60.00	0.0127	0.0127	100.11
47	Karnataka Power Corporation Ltd.(K.P.C.L.)	2	3420.00	3.0100	2.2885	76.03
48	KANTI BIJLEE UTPADAN NIGAM LIMITED (Bihar)	1	610.00	0.8118	0.3022	37.22
49	KSK MAHANADI POWER COMPANY LIMITED (Chhattisgarh)	1	1800.00	1.6041	1.6339	101.86
50	LANCO AMARKANTAK POWER LIMITED (Chhattisgarh)	1	600.00	1.1500	0.5755	50.05
51	LALITPUR POWER GENERATION COMPANY LIMITED (UP)	1	1980.00	1.1334	1.1334	100.00
52	LANCO ANPARA POWER LIMITED (Uttar Pradesh)	1	1200.00	1.2200	0.3600	29.51
53	MPL (Jharkhand)	1	1050.00	1.7344	1.7738	102.27
54	M.P.P.G.C.L. (M.P.)	4	5400.00	6.7342	2.6099	38.76
55	M.S.P.G.C.L.(Maharashtra)	7	9950.00	12.4260	8.0367	64.68
56	MARUTI CLEAN COAL AND POWER LIMITED (Chhattisgarh)	1	300.00	0.7290	0.7290	100.00
57	MEENAKSHI ENERGY PRIVATE LIMITED (Andhra Pradesh)	1	300.00	0.0014	0.0085	622.26
58	M/S JHABUA POWER LIMITED (MP)	1	600.00	0.5691	0.3456	60.74
59	M/s KORBA WEST POWER COMPANY LIMITED (Chhattisgarh)	1	600.00	0.0000	0.0600	No Generation
60	MB POWER (MADHYA PRADESH) LIMITED (M.P.)	1	1200.00	1.5779	1.6359	103.68
61	MEJA URJA NIGAM PRIVATE LIMITED(Uttar Pradesh)	1	660.00	0.0630	0.0001	0.22
62	Neyvelli Lignite Corporation Ltd. (N.L.C.LTD)	5	3140.00	1.3284	2.1880	164.71
63	NLC TAMIL NADU POWER LIMITED (Tamil Nadu)	1	1000.00	1.0347	1.0343	99.96
64	NSPCL	4	814.00	1.7242	1.6280	94.42
65	NTECL (Tamil Nadu)	1	1500.00	2.2570	1.5250	67.57
66	N.T.P.C.LTD.	21	40765.00	60.3834	38.5892	63.91
67	NTPC Ltd-BSPGCL(JV) (Bihar)	1	220.00	0.0000	0.0000	No Generation
68	NABHA POWER PROJECT (Punjab)	1	1400.00	1.4395	1.3055	90.69
69	NATIONAL ALUMINIUM COMPANY LIMITED (NALCO) (Odisha)	1	1200.00	2.4760	1.8206	73.53
70	O.P.G.C.L.(Odisha)	1	420.00	1.0141	0.3434	33.86

Sl. No.	Name of Power Utility	No. of TPS	Installed Capacity (MW)	Fly Ash Generation (Million-tonne)	Fly Ash Utilization (Million-tonne)	Percentage Utilization %
1	2	3	4	5	6	7
71	OPG POWER GENERATION PRIVATE LIMITED (Tamil Nadu)	1	414.00	0.0885	0.0961	108.55
72	Punjab State Power Corporation Ltd. (P.S.P.C.L).	4	2760.00	1.4883	3.0250	203.25
73	PRAYAGRAJ POWER GENERATION COMPANY LTD. (U.P.)	1	1980.00	1.3490	1.2555	93.07
74	R.K.M.POWERGEN PVT. LTD (PGCIL) (Chhattisgarh)	1	1440.00	0.5501	0.5417	98.47
75	Rajasthan Rajya Vidyut Utpadan Nigam Ltd. (R.R.V.U.N.L.)	3	3700.00	3.7222	4.0399	108.54
76	RPSCL (UP)	1	1200.00	0.8224	0.9553	116.16
77	RATTANINDIA POWER LTD. (Maharashtra)	1	1350.00	0.7214	0.8329	115.46
78	RAICHUR POWER CORPORATION LIMITED (Karnataka)	1	1600.00	0.1215	0.0400	32.91
79	RASHTRIYA ISPAT NIGAM LIMITED (Andhra Pradesh)	1	315.00	0.7628	0.2202	28.87
80	RAIPUR ENERGEN LIMITED(Formerly GMR CHHATTISGARH Energy Ltd) (Chhattisgarh)	1	1370.00	0.4964	0.5173	104.21
81	RELIANCE POWER LIMITED (Madhya Pradesh)	1	3960.00	4.0222	1.4916	37.08
82	SEPL(Andhra Pradesh)	1	600.00	0.0020	0.0020	100.00
83	SPECTRUM COAL & POWER LTD.(Chhattisgarh)	1	100.00	0.7169	0.5516	76.95
84	SAILILAGARH POWER GENERATION LIMITED (Chhattisgarh) (No Generation)	1	86.00	0.0000	0.0000	No Generation
85	SEMBCORP ENERGY INDIA Ltd. (Formerly Thermal Powertech Corporation India Ltd) (Andhra Pradesh)	1	1320.00	0.8874	0.7780	87.67
86	SWASTIK POWER & MINERALS RESOURCES PVT. LTD (Chhattisgarh) (No Generation)	1	25.00	0.0000	0.0000	No Generation
87	SKS POWER GENERATION(CHHATTISGARH) LIMITED (Chhattisgarh)	1	600.00	0.5582	0.3961	70.96
88	THE SINGARENI COLLIERIES COMPANY LIMITED (Telengana)	1	1200.00	1.8241	1.8736	102.71
89	TAQA NEYVELLY POWER CO.PVT. LTD. (Tamil Nadu)	1	250.00	0.1067	0.0803	75.22
90	T.P.CO. (Jharkhand)	2	1297.50	0.1573	0.1456	92.54
91	TORRENT POWER LTD.(Gujarat)	1	422.00	0.3319	0.3319	100.00
92	T.N.G & D Corporation (Tamil Nadu)	5	4320.00	5.2312	3.8536	73.67
93	TSGENCO (Telengana)	6	2582.50	5.2594	3.4865	66.29
94	TRN ENERGY PRIVATE LIMITED (Chhattisgarh)	1	600.00	1.0634	0.7895	74.25
95	TENUGHAT VIDHYUT NIGAM LIMITED (Jharkhand)	1	420.00	0.4931	0.6419	130.19
96	TALWANDI SABO POWER LTD (Punjab)	1	1980.00	2.2800	2.5100	110.09

Sl. No.	Name of Power Utility	No. of TPS	Installed Capacity (MW)	Fly Ash Generation (Million-tonne)	Fly Ash Utilization (Million-tonne)	Percentage Utilization %
1	2	3	4	5	6	7
97	Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd.(U.P.R.V.U.N.L.)	5	5590.00	7.3049	2.1795	29.84
98	UPCL (Karnataka)	1	1200.00	0.1260	0.1261	100.08
99	VIDARBHA INDUSTRIES POWER LTD. (Maharashtra)	1	600.00	0.4705	0.7488	159.16
100	VS LIGNITE POWER PRIVATE LIMITED (Rajasthan)	1	135.00	0.0540	0.0455	84.29
101	VEDANTA LIMITED	2	3615.00	5.5514	6.4910	116.93
102	West Bengal Power Development Corporation Limited (W.B.P.D.C.L)	5	4745.00	5.0456	5.7105	113.18
103	WPCL (KSKEV Ltd.) (Maharashtra)	1	540.00	0.2630	0.3016	114.66
	<b>GRAND TOTAL</b>	<b>195</b>	<b>197966.50</b>	<b>217.0381</b>	<b>168.3976</b>	<b>77.59</b>

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

The data of fly ash generation and utilization for year 2018-19 was received from **103** Power Utilities out of which **41** Power Utilities have achieved fly ash utilization level of 100% or more and **11** 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 2018-19

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

**TABLE-V**

### STATE WISE FLY ASH GENERATION AND ITS UTILIZATION DURING THE YEAR 2018-19

Sl. No.	Name of State	Nos. of TPS	Installed Capacity (MW)	Fly Ash Generation (Million-tonne)	Fly Ash Utilization (Million-tonne)	Percentage Utilization %
1	2	3	4	5	6	7
1	ANDHRA PRADESH	10	13185.00	16.3557	15.9110	97.28
2	ASSAM	1	750.00	0.4670	0.1410	30.19
3	BIHAR	5	5240.00	8.0389	3.7176	46.25
4	CHHATISGARH	29	23871.00	33.6561	24.5095	72.82
5	DELHI	2	840.00	0.2940	0.2900	98.64
6	GUJARAT	12	14742.00	3.2498	3.4376	105.78
7	HARYANA	5	5540.00	5.8995	6.7716	114.78
8	JHARKHAND	7	4897.50	6.3994	6.1448	96.02
9	KARNATAKA	6	9480.00	4.8656	3.6055	74.10
10	MADHYA PRADESH	12	19740.00	23.3303	10.8710	46.60
11	MAHARASHTRA	21	23666.00	23.8370	19.2967	80.95
12	ODISHA	10	11323.00	21.5589	17.0270	78.98
13	PUNJAB	6	6140.00	5.2078	6.8405	131.35
14	RAJASTHAN	7	6485.00	5.3645	6.7760	126.31

Sl. No.	Name of State	Nos. of TPS	Installed Capacity (MW)	Fly Ash Generation (Million-tonne)	Fly Ash Utilization (Million-tonne)	Percentage Utilization %
1	2	3	4	5	6	7
15	TAMILNADU	17	12882.50	10.0573	7.9449	79.00
16	TALANGANA	7	3782.50	7.0834	5.3601	75.67
17	UTTAR PRADESH	20	21370.00	23.0508	14.2799	61.95
18	WEST BENGAL	18	14032.00	18.2340	15.4729	84.86
	<b>GRAND TOTAL</b>	<b>195</b>	<b>197966.50</b>	<b>217.0381</b>	<b>168.3976</b>	<b>77.59</b>

It may be seen from Table-V above that:

- (i) 8 states namely Andhra Pradesh, Chhattisgarh, Madhya Pradesh, Maharashtra, Odisha, Tamil Nadu, Uttar Pradesh and West Bengal have generated more than 10 million-ton of fly ash each with Chhattisgarh highest 33.6561 million tons during the Year 2018-19.
- (ii) During the Year 2018-19 -states of Gujarat, Haryana, Punjab and Rajasthan have achieved fly ash utilization level of more than 100 %. Similarly, Union territory of Delhi and States of Andhra Pradesh and Jharkhand achieved the fly ash utilization level of more than 95 %.
- (iii) Assam, Bihar and Madhya Pradesh 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 have been brought out below:

#### 3.1 Thermal Power Station in Operation as on 3<sup>rd</sup> November, 2009

All coal and, or lignite based thermal Power Stations and, or 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 3<sup>rd</sup> NOVEMBER, 2009**

Sl. No.	Target of Fly Ash Utilization (In Percentage)	Target Date
(1)	(2)	(3)
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 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 3<sup>rd</sup> November, 2009

New coal and, or lignite based thermal Power Stations and, or expansion units commissioned after issue of MoEF's notification of 3<sup>rd</sup> 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 3<sup>rd</sup> NOVEMBER, 2009**

Sl. No.	Fly Ash Utilization Level	Target Date
(1)	(2)	(3)
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	90% of fly ash generation	Three years from the date of Commissioning
4	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 next two years in addition to the targets stipulated for these years and the balance unutilized fly ash accumulated during 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 2018-19 AS PER MoEF&CC's NOTIFICATION OF 3<sup>rd</sup> NOVEMBER, 2009

Fly ash generation and utilization data received from Thermal Power Stations/Power Utilities in the country for the year 2018-19 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 3<sup>rd</sup> November, 2009.

During the Year 2018-19, all those thermal power stations which were in operation on the date of issue of MoEF's notification (i.e. 3<sup>rd</sup> November, 2009) should have achieved the target of fly ash utilization of 100% within five years from the date of notification i.e. by 3<sup>rd</sup> November, 2014. All those thermal power stations which have come in operation after the date of issue of MoEF's notification (i.e. 3<sup>rd</sup> 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 2018-19

Based on target indicated under PARA 4.0 above, the status of achievement of fly ash utilization for the Year 2018-19 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 3<sup>rd</sup> NOVEMBER, 2009 FOR THE YEAR 2018-19**

Sl. No.	Description	Nos. of TPS
(1)	(2)	(3)
1	Nos. of TPS which have achieved the target of fly ash utilization as	<b>103</b>

Sl. No.	Description	Nos. of TPS
(1)	(2)	(3)
	per MoEF's Notification of 3 <sup>rd</sup> November, 2009 (Refer table XVI)	
2	Nos. 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 table- XVII)	<b>83</b>
3	Nos. of TPS which have not generated any significant fly ash or any fly ash(Refer table- XVIII)	<b>9</b>
	<b>Total</b>	<b>195</b>

It may be seen from Table-VIII above that:

During the Year 2018-19, out of **195** (one hundred ninety five) thermal power stations for which data was received, **100 (one hundred)** power stations have achieved the targets of fly ash utilization as stipulated in MoEF's Notification of 3<sup>rd</sup> November, 2009.

#### 4.2 Range of Fly Ash Utilization during the Year 2018-19

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 range of utilization of fly ash by the stations:

**TABLE-IX**

#### RANGE OF PERCENTAGE FLY ASH UTILIZATION DURING THE YEAR 2018-19

Sl. No.	Level of Fly Ash utilization	Nos. of Power Stations
(1)	(2)	(3)
1	100% and more than 100% (Refer table- X)	<b>92</b>
2	90% to less than 100% (Refer table- XI)	<b>20</b>
3	70% to less than 90% (Refer table- XII)	<b>25</b>
4	50% to less than 70% (Refer table- XIII)	<b>14</b>
5	Less than 50% (Refer table- XIV)	<b>35</b>
6	Nos. of TPS which have not generated any significant fly ash or any fly ash (Refer table- XV)	<b>9</b>
	<b>Total</b>	<b>195</b>

#### 4.3 Thermal Power Stations that have achieved Fly Ash utilization level of 100% or more during the Year 2018-19

The Thermal Power Stations with fly ash utilization in the range of 100% or more during the year 2018-19 is given in Table-X below:

**TABLE-X**

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age Utilization
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Dr. N.T.R (Vijawada)	APGENCO (Andhra Pradesh)	1760.00	4.1149	4.2752	103.90
2	KASAIPALI	ACB(INDIA)L (Chhattisgarh)	270.00	1.0789	1.0789	100.00

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age Utilization
(1)	(2)	(3)	(4)	(5)	(6)	(7)
3	SVPPPL Renki	ACB India Limited (Chhattisgarh)	60.00	0.0098	0.0098	100.00
4	CHAKABURA TPP	ACB (INDIA) Ltd. (Chhattisgarh)	30.00	0.17872	0.17872	100.00
5	CHAKABURA TPP (EXTN)	ACB (INDIA) Ltd. (Chhattisgarh)	30.00	0.16733	0.16733	100.00
6	INDIRA GANDHI	APCPL (Haryana)	1500.00	1.50337	1.55450	103.40
7	MUNDRA TPS	ADANI POWER (MUNDRA) LIMITED (Gujrat)	4620.00	0.77400	0.79510	102.73
8	KAWAI	ADANI POWER RAJASTHAN LTD. (Rajasthan)	1320.00	1.27995	1.51981	118.74
9	ADANI DAHANU	ADANI ELECTRICITY MUMBAI LIMITED (Maharashtra)	500.00	0.56400	0.73235	129.85
10	ADHUNIK PNR LTD.(MAHADEV PRASAD STPP)	ADHUNIK POWER & NATURAL RESOURCES LTD. (Jharkhand)	540.00	0.74844	0.88052	117.65
11	BARKHERA	BEPL (UP)	90.00	0.04699	0.04708	100.18
12	KHAMBER KHERA	BEPL (UP)	90.00	0.04580	0.04580	100.00
13	KUNDARKI	BEPL (UP)	90.00	0.06184	0.06184	100.00
14	MAQSOODAPUR	BEPL (UP)	90.00	0.04319	0.04319	100.00
15	UTRAULA	BEPL (UP)	90.00	0.05824	0.05824	100.00
16	BALCO CPP-II	BHARAT ALUMINIUM COMPANY LIMITED(BALCO) (Chhattisgarh)	540.00	1.04020	1.10760	106.48
17	B.B.G.S.	C.E.S.C. (West Bengal)	750.00	1.2160	1.2160	100.00
18	S.G.S.	C.E.S.C. (West Bengal)	135.00	0.0540	0.0540	100.00
19	KORBA (EAST)	C.S.P.G.C.L (Chhattisgarh)	440.00	0.7112	0.7726	108.64
20	MUTIARA	COASTAL ENERGEN PVT. LTD (Tamil Nadu)	1200.00	0.0703	0.0705	100.23
21	CHEMPLAST LIMITED TPS	CHEMPLAST SANMAR LIMITED(Tamil Nadu)	48.50	0.0183	0.0184	100.44
22	DHARIWAL INFRASTRUCTURE Ltd.	DHARIWAL INFRASTRUCTURE LIMITED(Maharashtra)	600.00	0.6910	0.7246	104.86
23	SURAT LIGNITE	G.I.P.C.L. (Gujarat)	500.00	0.6033	0.6033	100.00
24	AKRIMOTA	G.M.D.C.L. (Gujarat)	250.00	0.2665	0.3765	141.28
25	GANDHINAGAR	G.S.E.C.L. (Gujarat)	630.00	0.0744	0.1923	258.49
26	KUTCH LIGNITE	G.S.E.C.L. (Gujarat)	290.00	0.0438	0.0439	100.23
27	SIKKA	G.S.E.C.L. (Gujarat)	600.00	0.0100	0.0339	339.00
28	GMR WARORA ENERGY Ltd.	GMR WARORA ENERGY LTD. (Maharashtra)	600.00	0.7574	0.8280	109.32
29	GMR KAMALANGA TPP	GMR KAMALANGA ENERGY LTD. (Odisha)	1050.00	1.7867	1.7887	100.11
30	YAMUNANAGAR	H.P.G.C.L.(Haryana)	600.00	0.8591	1.0741	125.02
31	PANIPAT	H.P.G.C.L.(Haryana)	920.00	0.8244	1.2384	150.21
32	HALDIA ENERGY LIMITED	HALDIA ENERGY LIMITED (W.B)	600.00	1.0488	1.0488	100.00
33	Vizag TPS	HINDUJA NATIONAL POWER CORPORATION LIMITED (Andhra Pradesh)	1040.00	0.1991	0.5201	261.18
34	DISHERGARH POWER STATION	INDIA POWER CORPORATION Ltd. (W.B)	12.00	0.0171	0.0171	100.00
35	INDIAN METALS	INDIAN METALS &	258.00	0.4367	0.4368	100.02

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age Utilization
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	& FERRO ALLOYS LTD.	FERRO ALLOYS Ltd.(Odisha)				
36	MAHATMA GANDHI	JHPL (Haryana)	1320.00	1.6480	2.2565	136.92
37	O.P.Jindal Super TPP (Stage-I)	JPL (Chhattisgarh.)	1000.00	1.0610	1.0870	102.45
38	O.P.Jindal Super TPP(Stage-II)	JPL (Chhattisgarh.)	2400.00	2.3040	2.3490	101.95
39	JAYPEE BINA TPP	JAIPRAKSH POWER VENTURES LIMITED (MP)	500.00	0.5362	0.5416	101.01
40	JAYPEE NIGRIE SUPER TPP	JAIPRAKSH POWER VENTURES LIMITED (MP)	1320.00	1.0700	1.0870	101.59
41	RATNAGIRI	JSW ENERGY LIMITED (Maharashtra)	1200.00	0.4254	0.4277	100.54
42	VIJAYANAGAR	JSW ENERGY LIMITED (Karnataka)	860.00	0.2378	0.2679	112.65
43	DANGAMAHUA CAPTIVE POWER PLANT	JINDAL STEEL AND POWER LIMITED (CHHATTISGARH)	576.00	0.7748	0.7754	100.08
44	JALIPA KAPURDI	JSW ENERGY (BARMER) LIMITED (Formerly Raj Westpower Ltd.) (Rajasthan)	1080.00	0.0880	0.1090	123.86
45	JSW STEEL LIMITED CPP-II	JSW STEEL LIMITED (Tamil Nadu)	60.00	0.0127	0.0127	100.11
46	KMPCL (AKALTARA)	KSK MAHANADI POWER COMPANY LIMITED (Chhattisgarh)	1800.00	1.6041	1.6339	101.86
47	LALITPUR	LALITPUR POWER GENERATION COMPANY LIMITED (UP)	1980.00	1.1334	1.1334	100.00
48	MAITHON RBTPP	MPL (Jharkhand)	1050.00	1.7344	1.7738	102.27
49	NASHIK	M.S.P.G.C.L.(Maharashtra)	630.00	0.7022	1.4340	204.20
50	PARLI	M.S.P.G.C.L.(Maharashtra)	750.00	0.8578	2.5058	292.11
51	MCCPL BANDHAKHAR	MARUTI CLEAN COAL AND POWER LIMITED (Chhattisgarh)	300.00	0.7290	0.7290	100.00
52	THAMMINAPATNAM TPS	MEENAKSHI ENERGY PRIVATE LIMITED (Andhra Pradesh)	300.00	0.0014	0.0085	622.26
53	ANUPPUR TPS	MB POWER (MADHYA PRADESH) LIMITED (M.P.)	1200.00	1.5779	1.6359	103.68
54	NEYVELI -I EXPN	NLC LTD.(Tamil Nadu)	420.00	0.1421	0.1421	100.00
55	NEYVELI - II	NLC LTD.(Tamil Nadu)	1470.00	0.6663	0.7520	112.86
56	BARSINGSAR LIGNITE	NLC LTD. (Rajasthan)	250.00	0.2205	1.0618	481.63
57	BHILLAI TPS (BHILLAI PP-III)	NSPCL (Chhattisgarh)	500.00	0.9195	1.0585	115.12
58	BhILLAI TPS (BHILLAI PP-II)	NSPCL (Chhattisgarh)	74.00	0.1431	0.1438	100.51

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age Utilization
(1)	(2)	(3)	(4)	(5)	(6)	(7)
59	DURGAPUR CPP	NSPCL (Odisha)	120.00	0.2060	0.2602	126.34
60	DADRI	NTPC LTD. (U.P.)	1820.00	2.2340	2.2369	100.13
61	FEROZE GANDHI UNACHAR	NTPC LTD.(U.P.)	1050.00	1.7190	2.0290	118.03
62	TANDA	NTPC LTD. (U.P.)	440.00	0.5430	1.5590	287.11
63	RAMAGUNDAM	NTPC LTD. (Andhra Pradesh).	2600.00	4.2750	4.7150	110.29
64	SIMHADRI	NTPC LTD. (Andhra Pradesh).	2000.00	2.9770	2.9820	100.17
65	TALCHAR(TPS)	NTPC LTD (Odisha).	460.00	1.1290	1.1323	100.29
66	SOLAPUR	NTPC LTD. (Maharashtra)	1320.00	0.4265	0.5400	126.61
67	OPG POWER GENERATION PRIVATE LIMITED	OPG POWER GENERATION PRIVATE LIMITED (Tamil Nadu)	414.00	0.0885	0.0961	108.55
68	ROPAR	P.S.P.C.L. (Punjab)	705.00	0.3965	1.2771	322.11
69	CHHABRA	RRVUNL (Rajasthan)	1000.00	1.3707	1.4274	104.14
70	SURATGARH	RRVUNL (Rajasthan)	1500.00	1.4324	1.5319	106.95
71	KALISINDH	RRVUNL (Rajasthan)	1200.00	0.9191	1.0806	117.57
72	ROSA PHASE-I	RPSCL(U.P)	1200.00	0.8224	0.9553	116.16
73	AMRAVATI TPS	RATTANINDIA POWER LTD. (Maharashtra)	1350.00	0.7214	0.8329	115.46
74	GMR Chhattisgarh	RAIPUR ENERGEN LIMITED(Formerly GMR CHHATTISGARH Energy Ltd) (Chhattisgarh)	1370.00	0.4964	0.5173	104.21
75	SIMHAPURI	SEPL(Andhra Pradesh)	600.00	0.0020	0.0020	100.00
76	SINGARENI TPP	THE SINGARENI COLLIERIES COMPANY LIMITED (Telengana)	1200.00	1.8241	1.8736	102.71
77	TROMBAY	T.P.CO.(Maharashtra)	750.00	0.0502	0.0514	102.39
78	SABARMATI	TORRENT POWER LTD.(Gujarat)	422.00	0.3319	0.3319	100.00
79	RAMAGUNDAM'B'	TSPGCL (Telengana)	62.50	0.0921	0.1457	158.22
80	KOTHAGUDEM-VI	TSPGCL (Telengana)	500.00	0.6805	0.7168	105.34
81	KAKATIA (Stage-I)	T.S.G.E.N.C.O. (Telangana)	500.00	0.8088	0.8209	101.49
82	KAKATIA (Stage-II)	T.S.G.E.N.C.O. (Telangana)	600.00	0.7735	0.7852	101.52
83	TENUGHAT TPS	TENUGHAT VIDHYUT NIGAM LIMITED (Jharkhand)	420.00	0.4931	0.6419	130.19
84	M/s TALWANDI SABO POWER LTD	TALWANDI SABO POWER LTD (Punjab)	1980.00	2.2800	2.5100	110.09
85	UDUPI	UDUPI POWER CORPORATION LIMITED (Karnataka)	1200.00	0.1260	0.1261	100.08
86	BUTIBORI	VIDARBHA INDUSTRIES POWER LTD. (Maharashtra)	600.00	0.4705	0.7488	159.16
87	VEDANTA LTD TPP	VEDANTA LIMITED (Odisha)	2400.00	3.0881	3.7198	120.46
88	VEDANTA LTD CPP	VEDANTA LIMITED (Odisha)	1215.00	2.4633	2.7713	112.50
89	KOLAGHAT	W.B.P.D.C.L(W.B.)	1260.00	1.6165	2.1411	132.45
90	SANTALDIH	W.B.P.D.C.L (W.B.)	500.00	0.1090	0.1103	101.25
91	BAKRESWAR	W.B.P.D.C.L(W.B.)	1050.00	1.6057	1.8783	116.98

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age Utilization
(1)	(2)	(3)	(4)	(5)	(6)	(7)
92	SAI WARDHA POWER Ltd., WARORA	WPCL (Maharashtra)	540.00	0.2630	0.3016	114.66

It may be seen from Table-X above that:

During the Year 2018-19, 92 Thermal Power Stations have achieved the fly ash utilization of 100% or more. More than 100% fly ash utilization means utilization of ash generated during current year and utilization of un-utilized accumulated ash before current year.

#### 4.4 Thermal Power Stations with Fly Ash Utilization in the Range of 90% to less than 100% during the Year 2018-19

The Thermal Power Stations with fly ash utilization in the range of 90% to less than 100% during the year 2018-19 are given in Table-XI below:

**TABLE-XI**

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age Utilization
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	BALCO CPP-III	BHARAT ALUMINIUM COMPANY LIMITED(BALCO) (Chhattisgarh)	1200.00	1.7580	1.7579	99.995
2	BHADRESHWAR VIDYUT PRIVATE LTD TPS	BHADRESHWAR VIDYUT PRIVATE LIMITED (Gujarat)	300.00	0.0493	0.0487	98.889
3	MUNDRA UMPP	CGPL (Gujrat)	4150.00	0.7900	0.7410	93.797
4	CHANDRAPURA	D.V.C.(Jharkhand)	630.00	0.8719	0.8495	97.430
5	KODERMA	D.V.C. (Jharkhand)	1000.00	1.6171	1.6061	99.317
6	WANAKBORI	G.S.E.C.L. (Gujarat)	1470.00	0.1686	0.1570	93.090
7	IL&FS TAMIL NADU POWER COMPANY Ltd.	IL&FS TAMIL NADU POWER COMPANY LIMITED (Tamil Nadu)	1200.00	0.1300	0.1280	98.462
8	ANGUL CAPTIVE POWER PLANT	JINDAL STEEL AND POWER LIMITED (Chhattisgarh)	810.00	1.0431	1.0167	97.465
9	BALLARI	K.P.C.L (Karnataka)	1700.00	0.7940	0.7317	92.154
10	BHUSAWAL	M.S.P.G.C.L.(Maharashtra)	1210.00	1.7556	1.6756	95.444
11	NEYVELI - II EXPN	NLC LTD. (Tamil Nadu)	500.00	0.1070	0.1044	97.571
12	NLC TAMILNADU POWER Ltd	NLC TAMIL NADU POWER LIMITED (Tamil Nadu)	1000.00	1.0347	1.0343	99.962
13	BADARPUR	NTPC LTD (Delhi).	705.00	0.2940	0.2900	98.639
14	MOUDA TPS	NTPC LTD. (Maharashtra)	2320.00	2.6480	2.3880	90.181
15	RAJPURA TPS	NABHA POWER PROJECT (Punjab)	1400.00	1.4395	1.3055	90.691
16	GVK POWER(GOINDW ALSAHIB)LTD.,GOINDWALSAHIB	PSPCL (Punjab)	540.00	0.4669	0.4658	99.756
17	PRAYAGRAJ TPS	PRAYAGRAJ POWER	1980.00	1.3490	1.2555	93.067

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age Utilization
(1)	(2)	(3)	(4)	(5)	(6)	(7)
		GENERATION COMPANY LTD. (U.P.)				
18	UNCCHPINDA	R.K.M.POWERGEN PVT. LTD (PGCIL) (Chhattisgarh)	1440.00	0.5501	0.5417	98.466
19	HARDUAGANJ	U.P.R.V.U.N.L. (U.P.)	610.00	0.7889	0.7624	96.639
20	SAGARDIGHI	W.B.P.D.C.L(W.B.)	1600.00	1.2283	1.1470	93.379

It may be seen from Table-XI above that 20 thermal power stations during the year 2018-19 have achieved 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 2018-19

The Thermal Power Stations with fly ash utilization in the range of 70% to less than 90% during the year 2018-19 are given in Table-XII below:

**TABLE-XII**

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age Utilization
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	RAYALSEEMA	APGENCO (Andhra Pradesh)	1650.00	1.9240	1.617234	84.06
2	TIRODA	ADANI POWER MAHARASHTRA LTD. (Maharashtra)	3300.00	4.3630	3.6847	84.45
3	MEJIA	D.V.C.(West Bengal)	2340.00	3.8591	2.8519	73.90
4	DURGAPUR STEEL	D.V.C. (West Bengal)	1000.00	1.6118	1.2234	75.91
5	D.P.P.S.	D.P.L (West Bengal).	550.00	0.6539	0.5707	87.29
6	MAHAN	ESSAR POWER MP LTD.(M.P.)	1200.00	0.5629	0.4834	85.89
7	UKAI	G.S.E.C.L. (Gujarat)	1110.00	0.1312	0.1080	82.32
8	BHAVNAGAR LIGNITE	G.S.E.C.L. (Gujarat)	500.00	0.0068	0.0059	86.76
9	RAICHUR	K.P.C.L.(Karnataka)	1720.00	2.2160	1.5568	70.25
10	SANJAY GANDHI	M.P.P.G.C.L. (M.P.)	1340.00	2.0203	1.4539	71.96
11	FARAKKA	NTPC LTD. (W.B.)	2100.00	3.1350	2.5110	80.10
12	NALCO, CPP AUNGAL	NATIONAL ALUMINIUM COMPANY LIMITED (NALCO) (Odisha)	1200.00	2.4760	1.8206	73.53
13	LEHRA MOHABAT	P.S.P.C.L. (Punjab)	920.00	0.6249	0.5394	86.3173
14	RATIZA TPS	SPECTRUM COAL & POWER LTD.(Chhattisgarh)	100.00	0.7169	0.5516	76.9492
15	SEMBCORP ENERGY INDIA Ltd.(PAINAMPUR AM TPP) (SGPL-TPP)	SEMBCORP ENERGY INDIA Ltd. (Formerly Thermal Powertech Corporation India Ltd) (Andhra Pradesh)	1320.00	0.8874	0.7780	87.6697
16	SKS POWER GENERATION(CC)LTD (Binjkote)	SKS POWER GENERATION(CHHATTISGARH) LIMITED	600.00	0.5582	0.3961	70.9608

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age Utilization
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	TPP)	(Chhattisgarh)				
17	CUDDALORE	TAQA NEYVELLY POWER CO.PVT. LTD. (Tamil Nadu)	250.00	0.1067	0.0803	75.2246
18	JOJOBERA	T.P.CO. (Jharkhand)	547.50	0.1071	0.0942	87.9259
19	METTUR-I	T.N.G & D Corporation (Tamil Nadu)	840.00	1.1470	0.9373	81.7203
20	METTUR-II	T.N.G & D Corporation (Tamil Nadu)	600.00	0.6159	0.4889	79.3881
21	NORTH CHENNAI-II	T.N.G & D Corporation (Tamil Nadu)	1200.00	1.4326	1.0624	74.1576
22	RAIGARH TPP (NAWAPARA TPP)	TRN ENERGY PRIVATE LIMITED (Chhattisgarh)	600.00	1.0634	0.7895	74.2460
23	PARICHA	U.P.R.V.U.N.L. (U.P.)	1140.00	1.3370	1.0942	81.8399
24	VS LIGNITE POWER PRIVATE LTD	VS LIGNITE POWER PRIVATE LIMITED (Rajasthan)	135.00	0.0540	0.0455	84.2933
25	BANDEL	W.B.P.D.C.L (W.B.)	335.00	0.4861	0.4337	89.2308

It may be seen from Table-XII above that **25** thermal power stations during the year 2018-19 have achieved fly ash utilization level of less than 90% and up to 70%.

#### 4.6 Thermal Power Stations with Fly Ash Utilization in the range 50% to less than 70% during the Year 2018-19

The Thermal Power Stations with fly ash utilization in the range of 50% to less than 70% during the year 2018-19 are given in Table-XIII:

**TABLE-XIII**

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age Utilization
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	SRI DAMODARAM SANJEEVAIAH	APPDCL(Andhra Pradesh)	1600.00	1.2120	0.7926	65.40
2	RAJIV GANDHI (HISAR)	H.P.G.C.L.(Haryana)	1200.00	1.0645	0.6482	60.89
3	DERANG TPP	JINDAL INDIA THERMAL POWER LIMITED (Odisha)	1200.00	1.3740	0.9460	68.85
4	AMARKANTAK TPS (PATHADI TPP)	LANCO AMARKANTAK POWER LIMITED (Chhattisgarh)	600.00	1.1500	0.5755	50.05
5	AMARKANTAK	M.P.P.G.C.L. ( M.P.)	210.00	0.2477	0.1645	66.42
6	JHABUA POWER LIMITED (SEIONI TPP)(AVANTHA BHANDAR TPP)	M/S JHABUA POWER LIMITED (MP)	600.00	0.5691	0.3456	60.74
7	NEYVELI - I	NLC LTD.(Tamil Nadu)	500.00	0.1925	0.1277	66.33
8	VALLUR	NTPC TAMIL NADU ENERGY COMPANY LTD {(NTECL) (Tamil Nadu)}	1500.00	2.2570	1.5250	67.57



Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age Utilization
(1)	(2)	(3)	(4)	(5)	(6)	(7)
9	KORBA	NTPC (Chhattisgarh).	2600.00	5.4123	2.7650	51.09
10	BARH SUPER TPS	NTPC LTD (Bihar)	1320.00	2.2970	1.1520	50.15
11	TALCHAR(KAN)	NTPC LTD.(Odisha).	3000.00	7.5850	3.8080	50.20
12	KUDGI	NTPC LTD. (Karnataka)	2400.00	1.3703	0.8830	64.44
13	TUTICORIN	T.N.G & D Corporation (Tamil Nadu)	1050.00	1.0188	0.6922	67.94
14	NORTH CHENNAI-I	T.N.G & D Corporation (Tamil Nadu)	630.00	1.0169	0.6727	66.16

It may be seen from Table-XIII above that 14 thermal power stations during the year 2018-19 have achieved fly ash utilization in the range of 50% to less than 70%.

#### 4.7 Thermal Power Stations with Fly Ash Utilization below 50% during the Year 2018-19

The Thermal Power Stations with fly ash utilization less than 50% during the year 2018-19 are given in Table-XIV:

**TABLE-XIV**

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age Utilization
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	NABINAGAR	BHARATIYA RAIL BIJLEE COMPANY LIMITED (Bihar)	750.00	0.6101	0.1744	28.59
2	MARWA TENDUBHATA	C.S.P.G.C.L (Chhattisgarh)	1000.00	1.7260	0.4313	24.99
3	DSPM	C.S.P.G.C.L. (Chhattisgarh)	500.00	0.9719	0.3144	32.35
4	KORBA (WEST)	C.S.P.G.C.L Chhattisgarh	1340.00	2.6890	1.3239	49.23
5	BOKARO 'B'	D.V.C.(Jharkhand)	710.00	0.8274	0.2989	36.12
6	DURGAPUR	D.V.C.(West Bengal)	210.00	0.3347	0.0257	7.66
7	RAGHUNATHPUR	D.V.C. (West Bengal)	1200.00	0.8024	0.0783	9.76
8	BELA TPS	IDEAL ENERGY PROJECTS LIMITED (Maharashtra)	270.00	0.0306	0.0000	0.00
9	MUZAFFARPUR TPS	KANTI BIJLEE UTPADAN NIGAM LIMITED (Bihar)	610.00	0.8118	0.3022	37.22
10	ANPARA-C TPS	LANCO ANPARA POWER LIMITED (Uttar Pradesh)	1200.00	1.2200	0.3600	29.51
11	SATPURA	M.P.P.G.C.L. (M.P.)	1330.00	2.3059	0.7016	30.43
12	SHREE SINGAJI TPS	M.P.P.G.C.L. (M.P.)	210.00	2.1602	0.2899	13.42
13	CHANDRAPUR	M.S.P.G.C.L.(Maharashtra)	2920.00	3.0892	1.0361	33.54
14	KHAPARKHEDA	M.S.P.G.C.L.(Maharashtra)	1340.00	2.6952	0.3837	14.24
15	KORADI	M.S.P.G.C.L.(Maharashtra)	2600.00	2.6580	0.7740	29.12
16	PARAS	M.S.P.G.C.L.(Maharashtra)	500.00	0.6679	0.2274	34.05
17	KWPCL TPP	M/s KORBA WEST POWER COMPANY	600.00	0.0000	0.0600	No Generation

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age Utilization
(1)	(2)	(3)	(4)	(5)	(6)	(7)
18	MEJA TPP	LIMITED (Chhattisgarh) MEJA URJA NIGAM PRIVATE LIMITED(Uttar Pradesh)	660.00	0.0630	0.0001	0.22
19	ROURKELA CPP	NSPCL (West Bengal)	120.00	0.4557	0.1654	36.30
20	SINGRAULI	NTPC LTD. (U.P.)	2000.00	2.8900	1.0130	35.05
21	RIHAND	NTPC LTD. (U.P.)	3000.00	3.5160	1.3020	37.03
22	VINDHYACHAL	NTPC LTD. (M.P.)	4760.00	8.2580	2.6760	32.40
23	SIPAT	NTPC LTD. (Chhattisgarh).	2980.00	4.7993	2.3770	49.53
24	KAHALGAON	NTPC LTD.(Bihar)	2340.00	4.3200	2.0890	48.36
25	BONGAIGAON	NTPC LTD. (Assam)	750.00	0.4670	0.1410	30.19
26	GADARWARA	NTPC LTD. (Madhya Pradesh)	800.00	0.0880	0.0000	0.00
27	IB VALLEY	O.P.G.C.L.(Odisha)	420.00	1.0141	0.3434	33.86
28	BATHINDA	P.S.P.C.L. (Punjab)	460.00	0.0000	0.7427	No Generation
29	YERAMARUS TPS	RAICHUR POWER CORPORATION LIMITED (Karnataka)	1600.00	0.1215	0.0400	32.91
30	RINL CAPTIVE TPP, VISAKHAPATNAM	RASHTRIYA ISPAT NIGAM LIMITED (Andhra Pradesh)	315.00	0.7628	0.2202	28.87
31	SASAN UMPP	REILIANCE POWER LIMITED (Madhya Pradesh)	3960.00	4.0222	1.4916	37.08
32	KOTHAGUEDEM-V	TSPGCL (Telangana)	500.00	1.1195	0.2786	24.88
33	KOTHAGUEDEM (Stage I to IV)	T.S.P.G.C.L (Telangana)	420.00	1.7849	0.7393	41.42
34	ANPARA 'A' & 'B'	U.P.R.V.U.N.L. (U.P.)	2630.00	4.3989	0.2326	5.29
35	OBRA	U.P.R.V.U.N.L. (U.P.)	1000.00	0.7802	0.0904	11.58

It may be seen from Table-XIV above that 35 Thermal Power Stations achieved fly ash utilization less than 50% during the year 2018-19.

#### 4.8 THERMAL POWER STATIONS WITH NO ASH GENERATION DURING THE YEAR 2018-19

The Thermal Power Stations with no fly ash generation during the year 2018-19 are given in Table-XV:

**TABLE-XV**

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age Utilization
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	MIHAN	AMNEPL (Maharashtra) (No Generation)	246.00	0.0000	0.0000	0.0000
2	T.G.S.	C.E.S.C. (West Bengal) (No Generation)	240.00	0.0000	0.0000	0.0000
3	CHINAKURI	EASTERN COALFIELDS LIMITED (West Bengal)(No Generation)	30.00	0.0000	0.0000	0.0000

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age Utilization
(1)	(2)	(3)	(4)	(5)	(6)	(7)
4	GEPL TPP	GUPTA ENERGY PRIVATE LIMITED(Maharashtra) (No Generation)	120.00	0.0000	0.0000	0.0000
5	RAJGHAT	IPGCL (Delhi)(No Generation)	135.00	0.0000	0.0000	0.0000
6	BARAUNI	NTPC Ltd-BSPGCL(JV) (Bihar)	220.00	0.0000	0.0000	0.0000
7	SAILILAGARH POWER GENERATION Ltd.	SAILILAGARH POWER GENERATION LIMITED (Chhattisgarh) (No Generation)	86.00	0.0000	0.0000	0.0000
8	SWASTIK POWER & MINERALS RESOURCES PVT. LTD.	SWASTIK POWER & MINERALS RESOURCES PVT. LTD (Chhattisgarh) (No Generation)	25.00	0.0000	0.0000	0.0000
9	PANKI	U.P.R.V.U.N.L. (U.P.)(No Generation)	210.00	0.0000	0.0000	0.0000

It may be seen from Table-XV above that:

It may be seen from Table-XV above that **09** thermal power stations during the year 2018-19 have not generated fly ash.

#### 5.0 FLY ASH UTILIZATION STATUS AS PER NOTIFICATION OF 3<sup>RD</sup> NOVEMBER, 2009 DURING THE YEAR 2018-19 (TARGET ACHIEVED AND NOT ACHIEVED)

As per the targets mandated by the MoEF&CC's notification of dated 3<sup>rd</sup> November, 2009 for fly ash utilization by the power stations, a total of **103** stations achieved their target and as many as **83** Nos. could not reach the targets. The details are given at Table- XVI and XVII respectively. However, the date of achieving the 100% ash utilization target is now extended to 31<sup>st</sup> December, 2017 as per new amendment notification dated 25<sup>th</sup> January, 2016.

#### **TABLE-XVI** **FLY ASH UTILIZATION STATUS AS PER NOTIFICATION OF 3<sup>RD</sup> NOVEMBER, 2009** **DURING THE YEAR 2018-19 (TARGET ACHIEVED)**

Sl. No	Name of TPS	Power Utility	Date of Commissioning	Installed Capacity (MW)	Fly ash Generation	Fly ash Utilization	% age Utilization	Target in %age
1	2	3	4	5	6	7	8	9
1	Dr. N.T.R (Vijawada)	APGENCO (Andhra Pradesh)	01.11.1979	1760.00	4.1149	4.2752	103.90	100
2	KASAI PALI	ACB(INDIA)L (Chhattisgarh)	13.12.2011	270.00	1.0789	1.0789	100.00	100
3	SVPL Renki	ACB India Limited (Chhattisgarh)	12.10.2011	60.00	0.0098	0.0098	100.00	100
4	CHAKABURA TPP	ACB (INDIA) Ltd. (Chhattisgarh)	27.02.2007	30.00	0.1787	0.1787	100.00	100
5	CHAKABURA TPP (EXTN)	ACB (INDIA) Ltd. (Chhattisgarh)	28.03.2014	30.00	0.1673	0.1673	100.00	100
6	INDIRA GANDHI	APCPL (Haryana)	31.10.2010	1500.00	1.5034	1.5545	103.40	100
7	MUNDRA TPS	ADANI POWER (MUNDRA) LIMITED (Gujrat)	04.08.2009	4620.00	0.7740	0.7951	102.73	100
8	KAWAI	ADANI POWER RAJASTHAN LTD. (Rajasthan)	31.05.2013	1320.00	1.2800	1.5198	118.74	100
9	ADANI DAHANU	ADANI ELECTRICITY MUMBAI LIMITED	01.07.1995	500.00	0.5640	0.7324	129.85	100

Sl. No	Name of TPS	Power Utility	Date of Commissioning	Installed Capacity (MW)	Fly ash Generation	Fly ash Utilization	% age Utilization	Target in %age
1	2	3	4	5	6	7	8	9
		(Maharashtra)						
10	ADHUNIK PNR LTD.(MAHAD EV PRASAD STPP)	ADHUNIK POWER & NATURAL RESOURCES LTD. (Jharkhand)	21.01.2013	540.00	0.7484	0.8805	117.65	100
11	BARKHERA	BEPL (UP)	29.10.2011	90.00	0.0470	0.0471	100.18	100
12	KHAMBER KHERA	BEPL (UP)	30.09.2011	90.00	0.0458	0.0458	100.00	100
13	KUNDARKI	BEPL (UP)	03.01.2012	90.00	0.0618	0.0618	100.00	100
14	MAQSOODAPUR	BEPL (UP)	27.10.2011	90.00	0.0432	0.0432	100.00	100
15	UTRAULA	BEPL (UP)	30.01.2012	90.00	0.0582	0.0582	100.00	100
16	BALCO CPP-II	BHARAT ALUMINIUM COMPANY LIMITED(BALCO) (Chhattisgarh)	6.2005	540.00	1.0402	1.1076	106.48	100
17	BALCO CPP-III	BHARAT ALUMINIUM COMPANY LIMITED(BALCO) (Chhattisgarh)	8.2015	1200.00	1.7580	1.7579	99.99	90
18	B.B.G.S.	C.E.S.C. (West Bengal)	16.09.1997	750.00	1.2160	1.2160	100.00	100
19	S.G.S.	C.E.S.C. (West Bengal)	12.08.1990	135.00	0.0540	0.0540	100.00	100
20	KORBA (EAST)	C.S.P.G.C.L (Chhattisgarh)	01.10.1966	440.00	0.7112	0.7726	108.64	100
21	MUTIARA	COASTAL ENERGEN PVT. LTD (Tamil Nadu)	23.12.2014	1200.00	0.0703	0.0705	100.23	100
22	CHEMPLAST LIMITED TPS	CHEMPLAST SANMAR LIMITED(Tamil Nadu)	07.03.2012	48.50	0.0183	0.0184	100.44	100
23	DHARIWAL INFRASTRUCTURE Ltd.	DHARIWAL INFRASTRUCTURE LIMITED(Maharashtra)	11.2.2014	600.00	0.6910	0.7246	104.86	100
24	SURAT LIGNITE	G.I.P.C.L. (Gujarat)	15.02.2000	500.00	0.6033	0.6033	100.00	100
25	AKRIMOTA	G.M.D.C.L. (Gujarat)	31.03.2005	250.00	0.2665	0.3765	141.28	100
26	GANDHINAGAR	G.S.E.C.L. (Gujarat)	20.03.1990	630.00	0.0744	0.1923	258.49	100
27	KUTCH LIGNITE	G.S.E.C.L. (Gujarat)	09.01.1990	290.00	0.0438	0.0439	100.23	100
28	SIKKA	G.S.E.C.L. (Gujarat)	14.09.2015	500.00	0.0100	0.0339	339.00	90
29	BHAVNAGAR LIGNITE	G.S.E.C.L. (Gujarat)	16.05.2016	500.00	0.0068	0.0059	86.76	70
30	GMR WARORA ENERGY Ltd.	GMR WARORA ENERGY LTD. (Maharashtra)	19.03.2013	600.00	0.7574	0.8280	109.32	100
31	GMR KAMALANGA TPP	GMR KAMALANGA ENERGY LTD. (Odisha)	30.04.2013	1050.00	1.7867	1.7887	100.11	100
32	YAMUNANAGAR	H.P.G.C.L.(Haryana)	14.04.2008	600.00	0.8591	1.0741	125.02	100
33	PANIPAT	H.P.G.C.L.(Haryana)	28.03.1989	920.00	0.8244	1.2384	150.21	100
34	HALDIA ENERGY LIMITED	HALDIA ENERGY LIMITED (W.B)	28.01.2015	600.00	1.0488	1.0488	100.00	100
35	Vizag TPS	HINDUJA NATIONAL POWER CORPORATION LIMITED (Andhra)	11.01.2016	1040.00	0.1991	0.5201	261.18	90

Sl. No	Name of TPS	Power Utility	Date of Commissioning	Installed Capacity (MW)	Fly ash Generation	Fly ash Utilization	% age Utilization	Target in %age
1	2	3	4	5	6	7	8	9
		Pradesh)						
36	DISHERGARH POWER STATION	INDIA POWER CORPORATION Ltd. (W.B)	25.09.2012	12.00	0.0171	0.0171	100.00	100
37	INDIAN METALS & FERRO ALLOYS LTD.	INDIAN METALS & FERRO ALLOYS Ltd.(Odisha)	2.1989	258.00	0.4367	0.4368	100.02	100
38	IL&FS TAMIL NADU POWER COMPANY Ltd.	IL&FS TAMIL NADU POWER COMPANY LIMITED (Tamil Nadu)	29.09.2015	1200.00	0.1300	0.1280	98.46	90
39	MAHATMA GANDHI	JHPL (Haryana)	29.03.2012	1320.00	1.6480	2.2565	136.92	100
40	O.P.Jindal Super TPP (Stage-I)	JPL (Chhattisgarh.)	08.12.2007	1000.00	1.0610	1.0870	102.45	100
41	O.P.Jindal Super TPP(Stage-II)	JPL (Chhattisgarh.)	14.03.2014	2400.00	2.3040	2.3490	101.95	100
42	JAYPEE BINA TPP	JAIPRAKSH POWER VENTURES LIMITED (MP)	31.08.2012	500.00	0.5362	0.5416	101.01	100
43	JAYPEE NIGRIE SUPER TPP	JAIPRAKSH POWER VENTURES LIMITED (MP)	03.09.2014	1320.00	1.0700	1.0870	101.59	100
44	RATNAGIRI	JSW ENERGY LIMITED (Maharashtra)	01.09.2010	1200.00	0.4254	0.4277	100.54	100
45	VIJAYANAGAR	JSW ENERGY LIMITED (Karnataka)	18.01.2000	860.00	0.2378	0.2679	112.65	100
46	DANGAMAHUA CAPTIVE POWER PLANT	JINDAL STEEL AND POWER LIMITED (CHHATTISGARH)	04.09.2010	576.00	0.7748	0.7754	100.08	100
47	JALIPA KAPURDI	JSW ENERGY (BARMER) LIMITED (Formerly Raj Westpower Ltd.) (Rajasthan)	26.11.2009	1080.00	0.0880	0.1090	123.86	100
48	JSW STEEL LIMITED CPP-II	JSW STEEL LIMITED (Tamil Nadu)	24.07.2006	60.00	0.0127	0.0127	100.11	100
49	KMPCL (AKALTARA)	KSK MAHANADI POWER COMPANY LIMITED (Chhattisgarh)	Sept,2013	1800.00	1.6041	1.6339	101.86	100
50	LALITPUR	LALITPUR POWER GENERATION COMPANY LIMITED (UP)	08.01.2016	1980.00	1.1334	1.1334	100.00	90
51	MAITHON RBTPP	MPL (Jharkhand)	01.09.2011	1050.00	1.7344	1.7738	102.27	100
52	NASHIK	M.S.P.G.C.L.(Maharashtra)	26.04.1979	630.00	0.7022	1.4340	204.20	100
53	PARLI	M.S.P.G.C.L.(Maharashtra)	01.11.2007	750.00	0.8578	2.5058	292.11	100
54	MCCPL BANDHAKHAR	MARUTI CLEAN COAL AND POWER LIMITED (Chhattisgarh)	30.07.2015	300.00	0.7290	0.7290	100.00	90
55	THAMMINAPATNAM TPS	MEENAKSHI ENERGY PRIVATE LIMITED (Andhra Pradesh)	07.10.2012	300.00	0.0014	0.0085	622.26	100

Sl. No	Name of TPS	Power Utility	Date of Commissioning	Installed Capacity (MW)	Fly ash Generation	Fly ash Utilization	% age Utilization	Target in %age
1	2	3	4	5	6	7	8	9
56	ANUPPUR TPS	MB POWER (MADHYA PRADESH) LIMITED (M.P.)	20.05.2015	1200.00	1.5779	1.6359	103.68	90
57	MEJA TPP	MEJA URJA NIGAM PRIVATE LIMITED(Uttar Pradesh)	31.03.2019	660.00	0.0630	0.0001	0.22	*
58	NEYVELI - I EXPN	NLC LTD.(Tamil Nadu)	21.10.2002	420.00	0.1421	0.1421	100.00	100
59	NEYVELI - II	NLC LTD.(Tamil Nadu)	29.03.1986	1470.00	0.6663	0.7520	112.86	100
60	NEYVELI - II EXPN	NLC LTD. (Tamil Nadu)	22.04.2015	500.00	0.1070	0.1044	97.57	90
61	BARSINGSAR LIGNITE	NLC LTD. (Rajasthan)	27.10.2009	250.00	0.2205	1.0618	481.63	100
62	BHILLAI TPS (BHILLAI PP-III)	NSPCL (Chhattisgarh)	05.01.2009	500.00	0.9195	1.0585	115.12	100
63	BhILLAI TPS (BHILLAI PP-II)	NSPCL (Chhattisgarh)	25.08.1982	74.00	0.1431	0.1438	100.51	100
64	DURGAPUR CPP	NSPCL (Odisha)	17.02.1987	120.00	0.2060	0.2602	126.34	100
65	DADRI	NTPC LTD. (U.P.)	Oct,1991	1820.00	2.2340	2.2369	100.13	100
66	FEROZE GANDHI UNACHAR	NTPC LTD.(U.P.)	11/1/1988	1050.00	1.7190	2.0290	118.03	100
67	TANDA	NTPC LTD. (U.P.)	1/1/2000	440.00	0.5430	1.5590	287.11	100
68	RAMAGUNDAM	NTPC LTD. (Andhra Pradesh).	11/1/1983	2600.00	4.2750	4.7150	110.29	100
69	SIMHADRI	NTPC LTD. (Andhra Pradesh).	2/1/2002	2000.00	2.9770	2.9820	100.17	100
70	TALCHAR (TPS)	NTPC LTD (Odisha).	03.06.1995	460.00	1.1290	1.1323	100.29	100
71	SOLAPUR	NTPC LTD. (Maharashtra)	01.04.2017	1320.00	0.4265	0.5400	126.61	50
72	GADARWARA	NTPC LTD. (Madhya Pradesh)	29.03.2019	800.00	0.0880	0.0000	0.00	*
73	OPG POWER GENERATION PRIVATE LIMITED	OPG POWER GENERATION PRIVATE LIMITED (Tamil Nadu)	01.08.2010	414.00	0.0885	0.0961	108.55	100
74	ROPAR	P.S.P.C.L. (Punjab)	31.03.1988	840.00	0.3965	1.2771	322.11	100
75	GVK POWER(GOINDWALSAHIB) LTD.,GOINDWALSAHIB	PSPCL (Punjab)	2016	540.00	0.4669	0.4658	99.76	90
76	PRAYAGRAJ TPS	PRAYAGRAJ POWER GENERATION COMPANY LTD. (U.P.)	29.02.2016	1980.00	1.3490	1.2555	93.07	90
77	UCCHPINDA	R.K.M.POWERGEN PVT. LTD (PGCIL) (Chhattisgarh)	23.11.2015	1440.00	0.5501	0.5417	98.47	90

Sl. No	Name of TPS	Power Utility	Date of Commissioning	Installed Capacity (MW)	Fly ash Generation	Fly ash Utilization	% age Utilization	Target in %age
1	2	3	4	5	6	7	8	9
78	CHHABRA	RRVUNL (Rajasthan)	11.06.2010	1000.00	1.3707	1.4274	104.14	100
79	SURATGARH	RRVUNL (Rajasthan)	31.10.1998	1500.00	1.4324	1.5319	106.95	100
80	KALISINDH	RRVUNL (Rajasthan)	07.05.2014	1200.00	0.9191	1.0806	117.57	100
81	ROSA PHASE-I	RPSCL(U.P)	12.03.2010	1200.00	0.8224	0.9553	116.16	100
82	AMRAVATI TPS	RATTANINDIA POWER LTD. (Maharashtra)	03.06.2013	1350.00	0.7214	0.8329	115.46	100
83	GMR Chhattisgarh	RAIPUR ENERGEN LIMITED(Formerly GMR CHHATTISGARH Energy Ltd) (Chhattisgarh)	1.06.2015	1370.00	0.4964	0.5173	104.21	90
84	SIMHAPURI	SEPL(Andhra Pradesh)	29.02.2012	600.00	0.0020	0.0020	100.00	100
85	SKS POWER GENERATION (CC)LTD (Binjkote TPP)	SKS POWER GENERATION(CHHATTISGARH) LIMITED (Chhattisgarh)	06.10.2017	100.00	0.7169	0.5516	76.95	50
86	SINGARENI TPP	THE SINGARENI COLLIERIES COMPANY LIMITED (Telengana)	25.09.2016	1200.00	1.8241	1.8736	102.71	70
87	TROMBAY	T.P.CO.(Maharashtra)	1984	750.00	0.0502	0.0514	102.39	100
88	SABARMATI	TORRENT POWER LTD.(Gujarat)	13.04.1997	422.00	0.3319	0.3319	100.00	100
89	RAMAGUNDA M'B'	TSPGCL (Telengana)	17.10.1971	62.50	0.0921	0.1457	158.22	100
90	KOTHAGUDE M-VI	TSPGCL (Telengana)	20.10.2011	500.00	0.6805	0.7168	105.34	100
91	KAKATIA (Stage-I)	T.S.G.E.N.C.O. (Telangana)	31.03.2010	500.00	0.8088	0.8209	101.49	100
92	KAKATIA (Stage-II)	T.S.G.E.N.C.O. (Telangana)	24.03.2016	600.00	0.7735	0.7852	101.52	90
93	RAIGARH TPP (NAWAPARA TPP)	TRN ENERGY PRIVATE LIMITED (Chhattisgarh)	13.08.2016	600.00	1.0634	0.7895	74.25	70
94	TENUGHAT TPS	TENUGHAT VIDHYUT NIGAM LIMITED (Jharkhand)	14.04.1994	420.00	0.4931	0.6419	130.19	100
95	M/s TALWANDI SABO POWER LTD	TALWANDI SABO POWER LTD (Punjab)	05.07.2014	1980.00	2.2800	2.5100	110.09	100
96	UDUPI	UDUPI POWER CORPORATION LIMITED (Karnatak)	11.11.2010	1200.00	0.1260	0.1261	100.08	100
97	BUTIBORI	VIDARBHA INDUSTRIES POWER LTD. (Maharashtra)	04.04.2013	600.00	0.4705	0.7488	159.16	100
98	VEDANTA LTD TPP	VEDANTA LIMITED (Odisha)	09.11.2010	2400.00	3.0881	3.7198	120.46	100

Sl. No	Name of TPS	Power Utility	Date of Commissioning	Installed Capacity (MW)	Fly ash Generation	Fly ash Utilization	% age Utilization	Target in %age
1	2	3	4	5	6	7	8	9
99	VEDANTA LTD CPP	VEDANTA LIMITED (Odisha)	30.07.2008	1215.00	2.4633	2.7713	112.50	100
100	KOLAGHAT	W.B.P.D.C.L(W.B.)	16.08.1990	1260.00	1.6165	2.1411	132.45	100
101	SANTALDIH	W.B.P.D.C.L (W.B.)	01.04.2009	500.00	0.1090	0.1103	101.25	100
102	BAKRESWAR	W.B.P.D.C.L(W.B.)	18.07.1999	1050.00	1.6057	1.8783	116.98	100
103	SAI WARDHA POWER Ltd, WARORA	WPCL (Maharashtra)	15.04.2010	540.00	0.2630	0.3016	114.66	100

**Note: Target of fly ash utilization as per MoEF&CC Notification 3<sup>rd</sup> 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)

(2) Cut-off Date for utilization target is 31.03.2019

**TABLE-XVII  
 FLY ASH UTILIZATION STATUS AS PER NOTIFICATION OF 3<sup>RD</sup> NOVEMBER, 2009  
 DURING THE YEAR 2018-19 (THERMAL POWER STATIONS WHO HAVE NOT MET THEIR TARGET)**

Sl. No.	Name of TPS	Power Utility	Date of Commissioning	Installed Capacity	Fly ash Generation	Fly ash Utilization	% age Utilization	Target in %age
1	2	3	4	5	6	7	8	9
1	RAYALSEEMA	APGENCO (Andhra Pradesh)	16.11.1994	1650.00	1.9240	1.6172	84.06	100
2	SRI DAMODARAM SANJEEVAIAH	APPDCL(Andhra Pradesh)	05.02.2015	1600.00	1.2120	0.7926	65.40	100
3	TIRODA	ADANI POWER MAHARASHTRA LTD. (Maharashtra)	23.09.2012	3300.00	4.3630	3.6847	84.45	100
4	NABINAGAR	BHARATIYA RAIL BIJLEE COMPANY LIMITED (Bihar)	16.01.2017	750.00	0.6101	0.1744	28.59	70
5	BHADRESHWAR VIDYUT PRIVATE LTD TPS	BHADRESHWAR VIDYUT PRIVATE LIMITED (Gujarat)	04.01.2015	300.00	0.0493	0.0487	98.89	100
6	MARWA TENDUBHATA	C.S.P.G.C.L (Chhattisgarh)	31.03.2016	1000.00	1.7260	0.4313	24.99	90
7	DSPM	C.S.P.G.C.L. (Chhattisgarh)	21.10.2007	500.00	0.9719	0.3144	32.35	100
8	KORBA (WEST)	C.S.P.G.C.L Chhattisgarh	21.03.1983	1340.00	2.6890	1.3239	49.23	100
9	MUNDRA UMPP	CGPL (Gujrat)	07.03.2012	4150.00	0.7900	0.7410	93.80	100
10	BOKARO 'B'	D.V.C.(Jharkhand)	31.03.1993	710.0000	0.8274	0.2989	36.12	100
11	CHANDRAPURA	D.V.C.(Jharkhand)	07.07.1968	630.00	0.8719	0.8495	97.43	100
12	DURGAPUR	D.V.C.(West)	Sep,1982	210.00	0.3347	0.0257	7.66	100



Sl. No.	Name of TPS	Power Utility	Date of Commissioning	Installed Capacity	Fly ash Generation	Fly ash Utilization	% age Utilization	Target in % age
1	2	3	4	5	6	7	8	9
		Bengal)						
13	MEJIA	D.V.C.(West Bengal)	01.12.1997	2340.00	3.8591	2.8519	73.90	100
14	DURGAPUR STEEL	D.V.C. (West Bengal)	15.05.2012	1000.00	1.6118	1.2234	75.91	100
15	KODERMA	D.V.C. (Jharkhand)	18.07.2013	1000.00	1.6171	1.6061	99.32	100
16	RAGHUNATHPUR	D.V.C. (West Bengal)	31.03.2016	1200.00	0.8024	0.0783	9.76	70
17	D.P.P.S.	D.P.L (West Bengal).	30.04.2008	550.00	0.6539	0.5707	87.29	100
18	MAHAN	ESSAR POWER MP LTD.(M.P.)	29.04.2013	1200.00	0.5629	0.4834	85.89	100
19	UKAI	G.S.E.C.L. (Gujarat)	21.01.1979	1110.00	0.1312	0.1080	82.32	100
20	WANAKBORI	G.S.E.C.L. (Gujarat)	23.03.1982	1470.00	0.1686	0.1570	93.09	100
21	RAJIV GANDHI (HISAR)	H.P.G.C.L.(Haryana)	24.08.2010	1200.00	1.0645	0.6482	60.89	100
22	BELA TPS	IDEAL ENERGY PROJECTS LIMITED (Maharashtra)	18.07.2013	270.00	0.0306	0.0000	0.00	100
23	DERANG TPP	JINDAL INDIA THERMAL POWER LIMITED (Odisha)	05.06.2014	1200.00	1.3740	0.9460	68.85	100
24	ANGUL CAPTIVE POWER PLANT	JINDAL STEEL AND POWER LIMITED (Chhattisgarh)	13.05.2011	810.00	1.0431	1.0167	97.47	100
25	BALLARI	K.P.C.L (Karnataka)	25.03.2008	1700.00	0.7940	0.7317	92.15	100
26	RAICHUR	K.P.C.L.(Karnataka)	29.03.1985	1720.00	2.2160	1.5568	70.25	100
27	MUZAFFARPUR TPS	KANTI BIJLEE UTPADAN NIGAM LIMITED (Bihar)	11.2013	610.00	0.8118	0.3022	37.22	100
28	AMARKANTAK TPS (PATHADI TPP)	LANCO AMARKANTAK POWER LIMITED (Chhattisgarh)	01.05.2009	600.00	1.1500	0.5755	50.05	100
29	ANPARA-C TPS	LANCO ANPARA POWER LIMITED (Uttar Pradesh)	10.12.2011	1200.00	1.2200	0.3600	29.51	100
30	SANJAY GANDHI	M.P.P.G.C.L. (M.P.)	07.10.1993	1340.00	2.0203	1.4539	71.96	100
31	SATPURA	M.P.P.G.C.L. (M.P.)	07.01.1979	1330.00	2.3059	0.7016	30.43	100
32	AMARKANTAK	M.P.P.G.C.L. (M.P.)	10.09.2009	210.00	0.2477	0.1645	66.42	100
33	SHREE SINGAJI TPS	M.P.P.G.C.L. (M.P.)	01.02.2014	2520.00	2.1602	0.2899	13.42	90
34	BHUSAWAL	M.S.P.G.C.L. (Maharashtra)	18.09.1982	1210.00	1.7556	1.6756	95.44	100
35	CHANDRAPUR	M.S.P.G.C.L. (Maharashtra)	03.05.1985	2920.00	3.0892	1.0361	33.54	100
36	KHAPARKHEDA	M.S.P.G.C.L. (Maharashtra)	26.03.1989	1340.00	2.6952	0.3837	14.24	100
37	KORADI	M.S.P.G.C.L. (Maharashtra)	15.07.1978	2600.00	2.6580	0.7740	29.12	100
38	PARAS	M.S.P.G.C.L. (Maharashtra)	31.03.2008	500.00	0.6679	0.2274	34.05	100

Sl. No.	Name of TPS	Power Utility	Date of Commissioning	Installed Capacity	Fly ash Generation	Fly ash Utilization	% age Utilization	Target in % age
1	2	3	4	5	6	7	8	9
39	JHABUA POWER LIMITED (SEIONI TPP)(AVANTHA BHANDAR TPP)	M/S JHABUA POWER LIMITED (MP)	03.05.2016	600.00	0.5691	0.3456	60.74	70
40	KWPCL TPP	M/s KORBA WEST POWER COMPANY LIMITED (Chhattisgarh)	31.03.2014	600.00	0.0000	0.0600	No Generation	100
41	NEYVELI - I	NLC LTD.(Tamil Nadu)	1962	500.00	0.1925	0.1277	66.33	100
42	NLC TAMILNADU POWER Ltd	NLC TAMIL NADU POWER LIMITED (Tamil Nadu)	08.03.2015	1000.00	1.0347	1.0343	99.96	100
43	ROURKELA CPP	NSPCL (West Bengal)	01.03.2001	120.00	0.4557	0.1654	36.30	100
44	VALLUR	NTPC TAMIL NADU ENERGY COMPANY LTD {(NTECL) (Tamil Nadu)}	09.03.2012	1500.00	2.2570	1.5250	67.57	100
45	BADARPUR	NTPC LTD (Delhi).	July/73	705.00	0.2940	0.2900	98.64	100
46	SINGRAULI	NTPC LTD. (U.P.)	February/82	2000.00	2.8900	1.0130	35.05	100
47	RIHAND	NTPC LTD. (U.P.)	March/88	3000.00	3.5160	1.3020	37.03	100
48	KORBA	NTPC (Chhattisgarh).	3/1/1983	2600.00	5.4123	2.7650	51.09	100
49	VINDHYACHAL	NTPC LTD.( M.P.)	10/1/1987	4760.00	8.2580	2.6760	32.40	100
50	SIPAT	NTPC LTD. (Chhattisgarh).	5/1/2007	2980.00	4.7993	2.3770	49.53	100
51	FARAKKA	NTPC LTD. (W.B.)	1/1/1986	2100.00	3.1350	2.5110	80.10	100
52	KAHALGAON	NTPC LTD.(Bihar)	3/1/1992	2340.00	4.3200	2.0890	48.36	100
53	BARH SUPER TPS	NTPC LTD (Bihar)	11/1/2014	1320.00	2.2970	1.1520	50.15	100
54	TALCHAR(KAN)	NTPC LTD.(Odisha).	2/1/1995	3000.00	7.5850	3.8080	50.20	100
55	MOUDA TPS	NTPC LTD. (Maharashtra)	4/1/2012	2320.00	2.6480	2.3880	90.18	100
56	BONGAIGAON	NTPC LTD. (Assam)	June,2015	750.00	0.4670	0.1410	30.19	90
57	KUDGI	NTPC LTD. (Karnataka)	12/1/2016	2400.00	1.3703	0.8830	64.44	70
58	RAJPURA TPS	NABHA POWER PROJECT (Punjab)	24.01.2014	1400.00	1.4395	1.3055	90.69	100
59	NALCO, CPP AUNGAL	NATIONAL ALUMINIUM COMPANY LIMITED (NALCO) (Odisha)	29.09.1986	1200.00	2.4760	1.8206	73.53	100
60	IB VALLEY	O.P.G.C.L.(Odisha)	21.12.1994	420.00	1.0141	0.3434	33.86	100

Sl. No.	Name of TPS	Power Utility	Date of Commissioning	Installed Capacity	Fly ash Generation	Fly ash Utilization	% age Utilization	Target in % age
1	2	3	4	5	6	7	8	9
61	BATHINDA	P.S.P.C.L. (Punjab)	22.09.1974	460.00	0.0000	0.7427	No Generation	100
62	LEHRA MOHABAT	P.S.P.C.L. (Punjab)	25.05.1998	920.00	0.6249	0.5394	86.32	100
63	YERAMARUS TPS	RAICHUR POWER CORPORATION LIMITED (Karnataka)	07.03.2017	1600.00	0.1215	0.0400	32.91	70
64	RINL CAPTIVE TPP, VISAKHAPATNAM	RASHTRIYA ISPAT NIGAM LIMITED (Andhra Pradesh)	12.03.1989	315.00	0.7628	0.2202	28.87	100
65	SASAN UMPP	REILIANCE POWER LIMITED (Madhya Pradesh)	16.08.2013	3960.00	4.0222	1.4916	37.08	100
66	RATIZA TPS	SPECTRUM COAL & POWER LTD.(Chhattisgarh)	27.02.2013	100.00	0.7169	0.5516	76.95	100
67	SEMBCORP ENERGY INDIA Ltd.(PAINAMPURAM TPP) (SGPL-TPP)	SEMBCORP ENERGY INDIA Ltd. (Formerly Thermal Powertech Corporation India Ltd) (Andhra Pradesh)	3/1/2015	1320.00	0.8874	0.7780	87.67	100
68	CUDDALORE	TAQA NEYVELLY POWER CO.PVT. LTD. (Tamil Nadu)	15.12.2002	250.00	0.1067	0.0803	75.22	100
69	JOJOBERA	T.P.CO. (Jharkhand)	September, 1997	547.50	0.1071	0.0942	87.93	100
70	TUTICORIN	T.N.G & D Corporation (Tamil Nadu)	09.07.1979	1050.00	1.0188	0.6922	67.94	100
71	METTUR-I	T.N.G & D Corporation (Tamil Nadu)	07.01.1987	840.00	1.1470	0.9373	81.72	100
72	METTUR-II	T.N.G & D Corporation (Tamil Nadu)	11.10.2012	600.00	0.6159	0.4889	79.39	100
73	NORTH CHENNAI-I	T.N.G & D Corporation (Tamil Nadu)	25.10.1994	630.00	1.0169	0.6727	66.16	100
74	NORTH CHENNAI-II	T.N.G & D Corporation (Tamil Nadu)	20.03.2014	1200.00	1.4326	1.0624	74.16	100
75	KOTHAGUDEM-V	TSPGCL (Telangana)	27.03.1997	500.00	1.1195	0.2786	24.88	100
76	KOTHAGUDEM (Stage I to IV)	T.S.P.G.C.L (Telangana)	04.07.1966	420.00	1.7849	0.7393	41.42	100
77	ANPARA 'A' & 'B'	U.P.R.V.U.N.L. (U.P.)	01.01.1987	2630.00	4.3989	0.2326	5.29	100
78	HARDUAGANJ	U.P.R.V.U.N.L. (U.P.)	28.05.1978	610.00	0.7889	0.7624	96.64	100
79	OBRA	U.P.R.V.U.N.L. (U.P.)	26.01.1980	1000.00	0.7802	0.0904	11.58	100
80	PARICHA	U.P.R.V.U.N.L. (U.P.)	31.03.1984	1140.00	1.3370	1.0942	81.84	100
81	VS LIGNITE POWER PRIVATE LTD	VS LIGNITE POWER PRIVATE LIMITED	2.2010	135.00	0.0540	0.0455	84.29	100

Sl. No.	Name of TPS	Power Utility	Date of Commissioning	Installed Capacity	Fly ash Generation	Fly ash Utilization	% age Utilization	Target in % age
1	2	3	4	5	6	7	8	9
		(Rajasthan)						
82	SAGARDIGHI	W.B.P.D.C.L(W.B.)	07.09.2008	1600.00	1.2283	1.1470	93.38	100
83	BANDEL	W.B.P.D.C.L (W.B.)	04.09.1965	335.00	0.4861	0.4337	89.23	100

From the above table it may be seen that **14** Thermal Power Stations have achieved utilization target of more than 90% but had failed with very less margin

## 6.0 MODES OF FLY ASH UTILIZATION DURING THE YEAR 2018-19

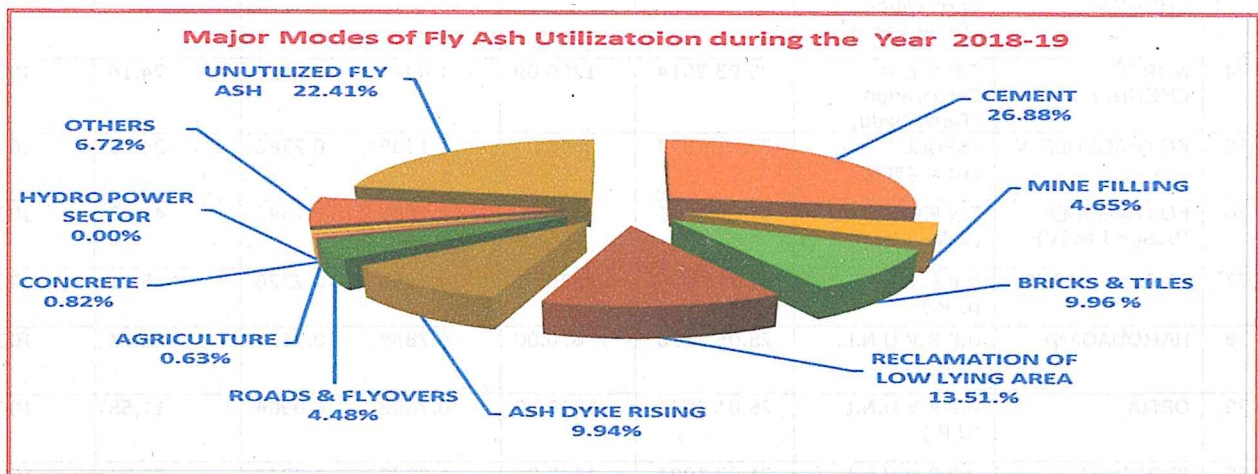
The data on fly ash utilization received from Thermal Power Stations/Power Utilities for the year 2018-19 has been analyzed to ascertain the modes in which fly ash was utilized and the quantity utilized in each mode.

The modes in which fly ash were utilized during the year 2018-19 along with utilization in each mode are given in Table-XVIII below:

**TABLE-XVIII  
MODES OF FLY ASH UTILIZATION DURING THE YEAR 2018-19**

Sl. No.	Mode of utilization	Quantity of Fly Ash utilized in the mode of utilization (from Annexure - I)	
		Million-ton	Percentage (%)
(1)	(2)	(3)	(4)
1	Cement	58.3401	26.88
2	Mine filling	10.1002	4.65
3	Bricks & Tiles	21.6097	9.96
4	Reclamation of low lying area	29.3177	13.51
5	Ash Dyke Raising	21.5734	9.94
6	Roads & flyovers	9.7244	4.48
7	Agriculture	1.3769	0.63
8	Concrete	1.7742	0.82
9	Hydro Power Sector	0.0000	0.00
10	Others	14.5809	6.72
11	Unutilized Fly Ash	48.6405	22.41
	<b>Total</b>	<b>217.0380</b>	<b>100.00</b>

The pie diagram showing the modes of utilization of fly ash during the Year 2018-19 is given in Figure-1 below:



**FIGURE-1**

During the Year 2018-19, the maximum utilization of fly ash to the extent of 26.88% of total fly ash generated was in the Cement sector, followed by 13.51 % in Reclamation of Low lying area, 9.96 % in Bricks & Tiles, 9.94 in Ash Dyke, 4.65 % in Mine Filling, 4.48 % in roads & Flyovers, 0.82 % in Concrete, 0.63 % in Agriculture 0.00 % in Hydro Power Sector, 6.72 % in Others and 22.41% remained as unutilized fly ash.

**7.0 PROGRESSIVE FLY ASH GENERATION & UTILIZATION DURING THE PERIOD FROM 1996-97 TO 2018-19**

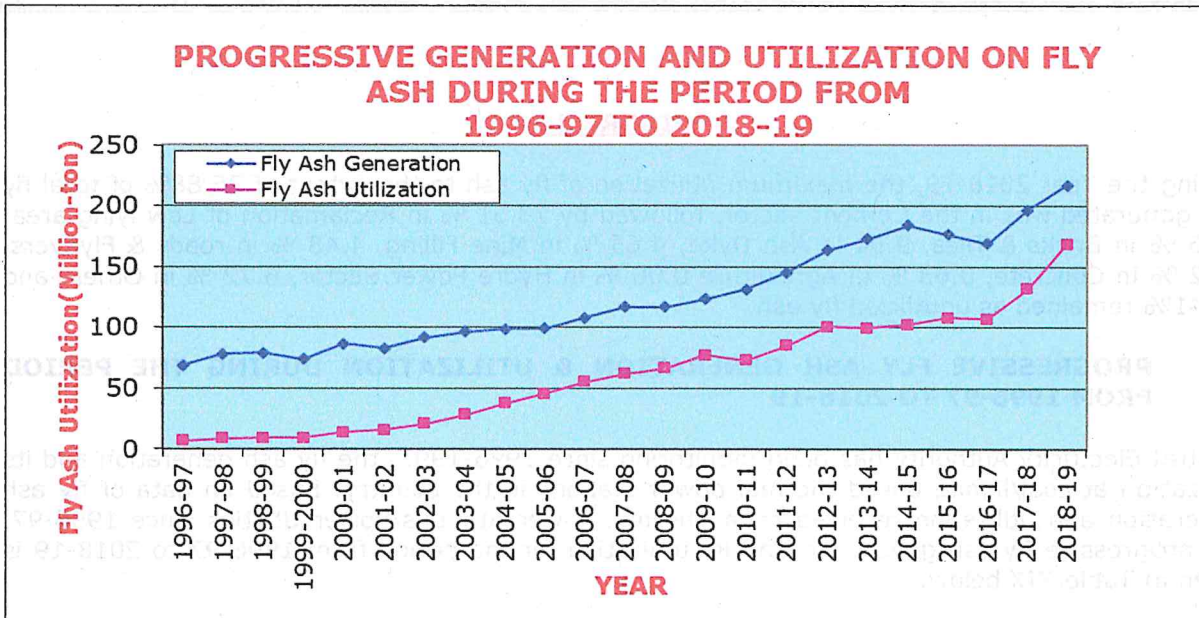
Central Electricity Authority has been monitoring since 1996-1997, the fly ash generation and its utilization at coal/lignite based thermal power stations in the country. Based on data of fly ash generation and utilization received from Thermal Power Stations/Power Utilities since 1996-97, the progressive fly ash generation and its utilization for the period from 1996-97 to 2018-19 is given in Table-XIX below:

**TABLE-XIX**

**PROGRESSIVE FLY ASH GENERATION AND ITS UTILIZATION DURING THE PERIOD FROM 1996-97 TO 2018-19**

Sl. No.	Year	Number of TPS Who provided data	Fly Ash Generation (Million-ton))	Fly Ash Utilization (Million-ton)	Fly Ash Utilization in % age
(1)	(2)	(3)	(4)	(5)	(6)
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

A graph showing progressive fly ash generation and its utilization for the period from 1996-97 to 2018-19 is given in Figure-2 below:



**FIGURE-2**

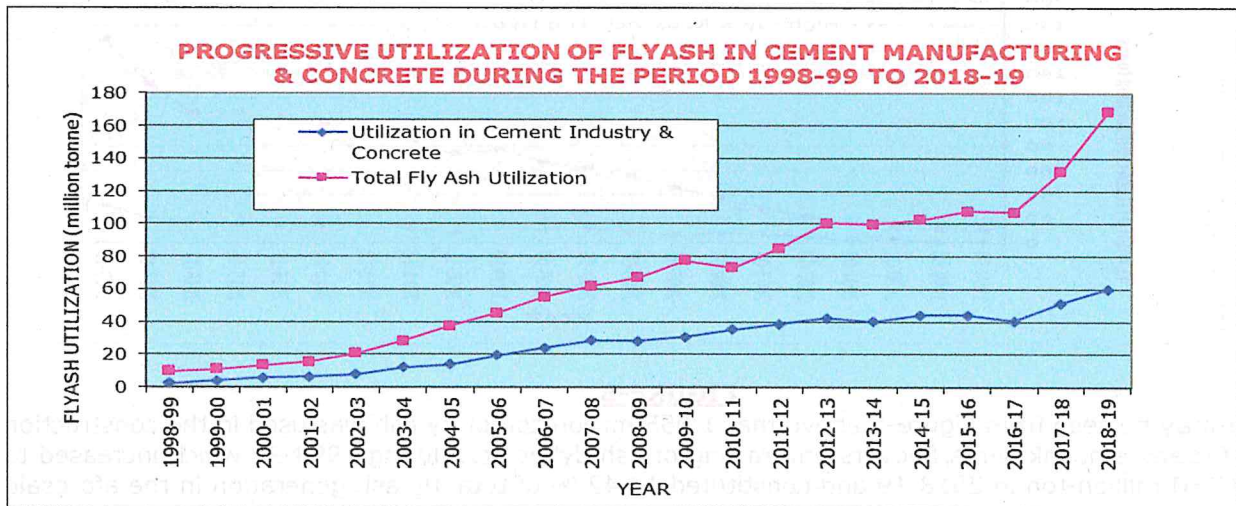
It may be seen from Table-XIX and Figure-2 above that:

- (i) The fly ash generation as well as utilization has generally been increasing since 1996-97. However, the Fly ash generation has shown down trend for the year 2016-17 due to lesser coal utilization than 2014-15.
- (ii) Fly ash utilization has increased from 9.63% in 1996-97 to the highest level of 77.59% during 2018-19.
- (iii) The fly ash generation has increased from 68.88 million-ton in 1996-97 to 217.04 million-ton in 2018-19 i.e. nearly 3.15 times.
- (iv) However, fly ash utilization has increased from 6.64 million-ton in 1996-97 to a level of 168.40 million ton in 2018-19 i.e. nearly more than 25.36 times over the same period.
- (v) From the Table XIX, it is seen that quantities of fly ash generation during 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19 have been 184.14, 176.74, 169.25, 196.44 and 217.04 million-ton respectively. Fly ash utilization during the said five years are 102.54, 107.77, 107.10, 131.87 and 168.40 million-ton. The utilization of fly ash during 2018-19 is the highest ever so far.
- (vi) The number of Thermal Power Stations who have provided data has increased during succession years.

## **8.0 PROGRESSIVE FLY ASH UTILIZATION IN VARIOUS MODES DURING THE PERIOD FROM 1998-99 TO 2018-19**

### **8.1 Cement Industry**

Fly ash is being used by Cement Industry as a pozzolanic material in manufacturing of Portland Pozzolana Cement. It saves both precious lime stone and coal. The utilization of fly ash in manufacturing of cement is highly value added use. A graph showing progressive utilization of fly ash by Cement Industry for the period from 1998-99 to 2018-19 is given in Figure-3 below:

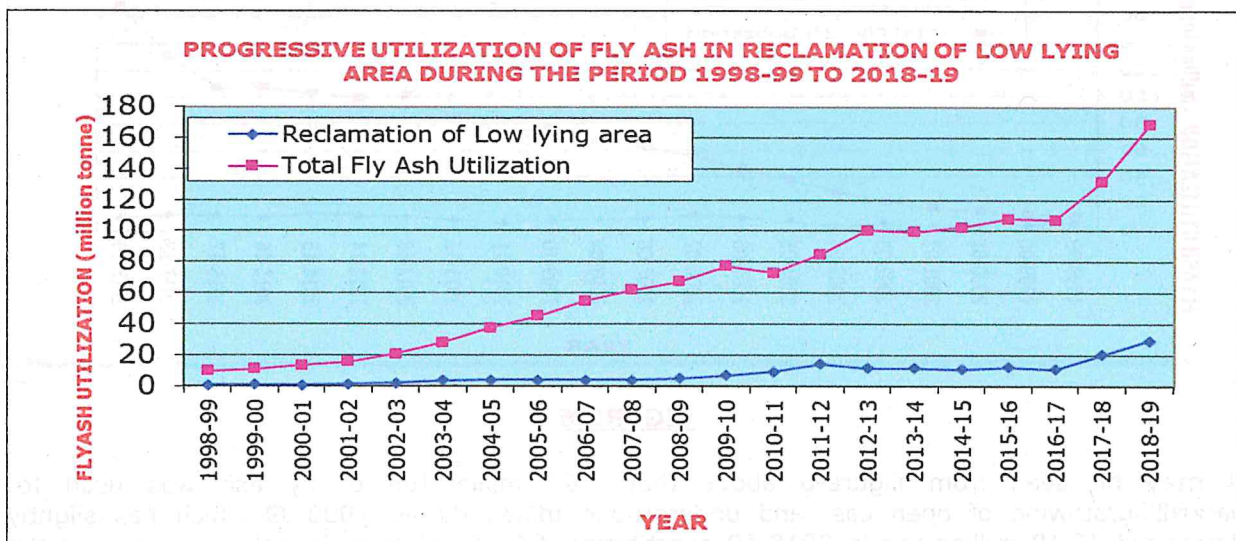


**FIGURE-3**

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 60.11 million-ton during 2018-19 and constituted 27.71 % of total fly ash generation in the aforesaid year.

### 8.2 Reclamation of Low Lying Areas

Fly ash as a substitute of soil/sand is used for reclamation of low lying areas thereby saving top soil. A graph showing the progressive utilization of fly ash in reclamation of low lying area for the period from 1998-99 to 2018-19 is given in Figure-4.

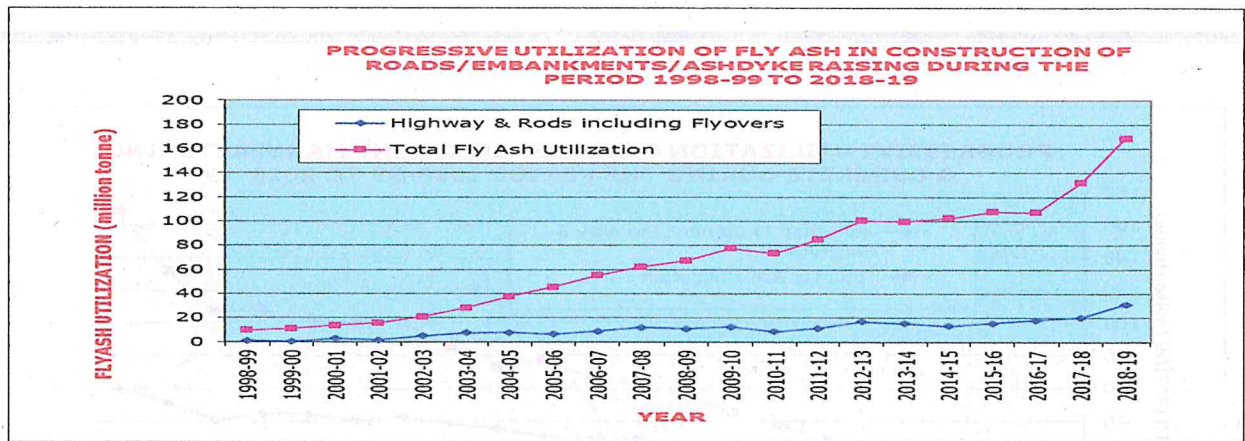


**FIGURE-4**

It may be seen from Figure-4 above that 4.17 million-ton of fly ash was used for reclamation of low lying area in 1998-99 which has increased to 29.32 million ton in 2018-19 constituting 13.51% 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 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 2018-19 is given in Figure-5 below:

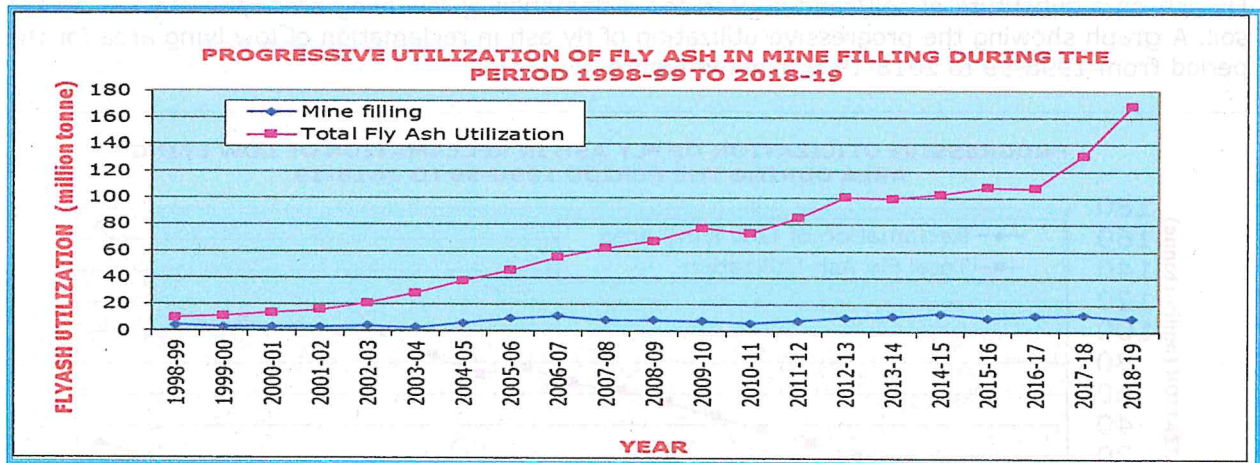


**FIGURE-5**

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 31.30 million-ton in 2018-19 and constituted 14.42 % of total fly ash generation in the aforesaid year. However, falling trend in recent past is seen.

#### 8.4 Back Filling/Stowing of Mines

Fly ash is being used for backfilling of open cast mines and stowing of underground mines which results in saving of top fertile soil and precious river sand. It has large potential for fly ash utilization especially for pit head thermal power stations. A graph showing the progressive utilization of fly ash in backfilling/stowing of mines for the period from 1998-99 to 2018-19 is given in Figure-6:



**FIGURE-6**

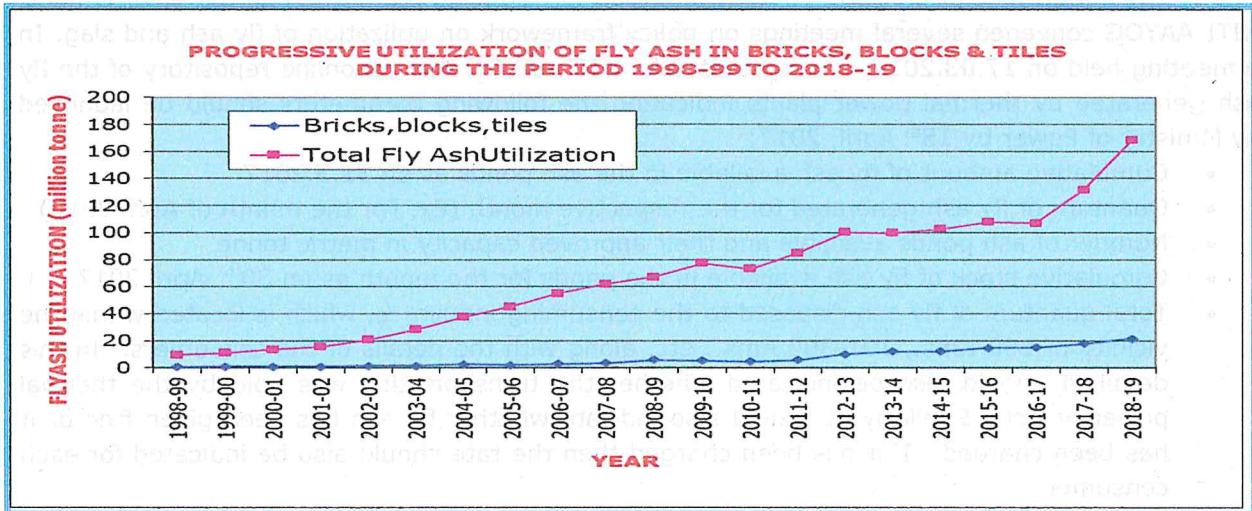
It may be seen from Figure-6 above that 0.65 million-ton of fly ash was used for backfilling/stowing of open cast and underground mines during 1998-99 which has slightly decreased 10.10 million-ton in 2018-19 constituting 4.65 % of total fly ash generation in the aforesaid year. The trend was on increasing side up to the year 2017-18 and slightly decreased during the year.

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

Fly ash is used in manufacturing of fly ash based building products like bricks, blocks, tiles etc which results in saving of fertile top soil. 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 2018-19 is given in Figure -7.

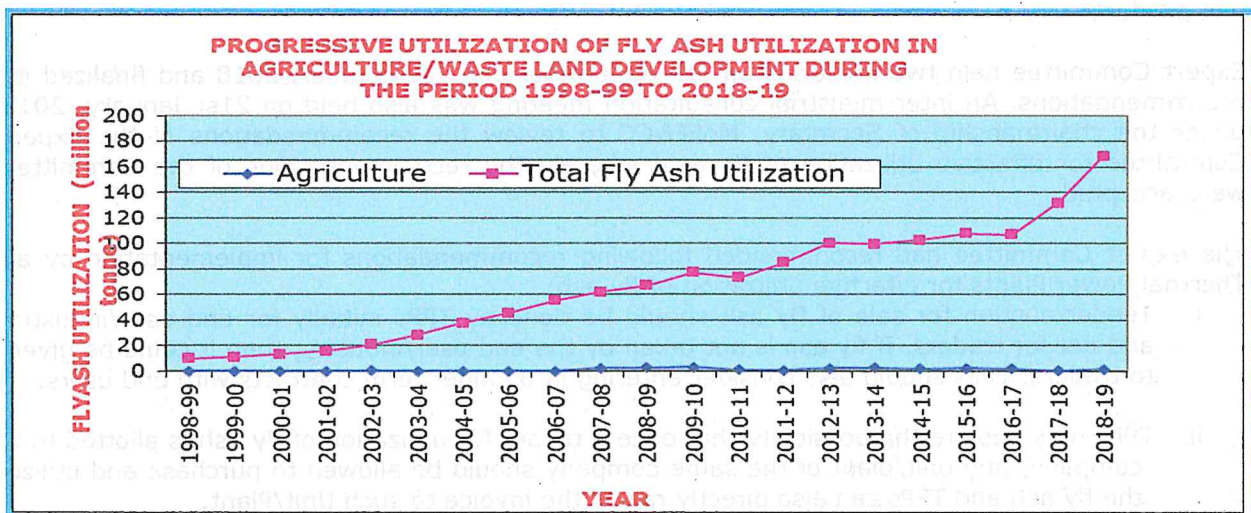


**FIGURE-7**

It may be seen from Figure-7 above that 0.70 million-ton of fly ash was used for making of fly ash based bricks/blocks/tiles etc during 1998-99 which increased to 21.61 million-ton in 2018-19 and constituted 9.96 % of total fly ash generation in the aforesaid year.

### 8.6 Agriculture

Fly ash is being used as manure in agricultural sector as it has many micronutrients. The progressive utilization of fly ash in Agricultural Sector for the period from 1998-99 to 2018-19 is given in Figure-8.



**FIGURE-8**

It may be seen from Figure-8 above that 0.13 million ton of fly ash was used in agricultural sector during 1998-99, which increased to 1.38 million ton in 2018-19 and constituted about 0.63 % 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 77.59 % of the fly ash generated and therefore, it has become a matter of concern in view 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 15<sup>th</sup> 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 30<sup>th</sup> 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 (ASHTRACK) were developed by CEA in collaboration with M/s NTPC Limited on behalf of Ministry of Power. Login ID and password have been issued to those Power Utilities/Thermal Power Stations who had approached us for uploading the monthly data of fly ash generation and its utilization.

## **10.0 RECOMMENDATION OF 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 following recommendations for implementation by all Thermal Power Plants for effective utilization of fly ash:

- i. Tender/auction for 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 the 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 raised 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 products, generate employment and act as models which will promote use of innovative fly ash products which 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 2018-19 is 217.04 million tonne due to combustion of 667.43 million tonne Coal/Lignite. During 2017-18, 196.44 million tonne of fly ash was generated due to combustion of 624.88 million tonne Coal/Lignite. However, the fly ash utilizations during 2017-18 and 2018-19 are 131.87 million tonne and 168.40 million tonne 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 77.59% is achieved during the year 2018-19. It would require a lot of efforts to achieve the target of 100% utilization of fly ash. The stipulations of notification of 2009 and subsequence amendments should be effectively implemented. As per this report about 22.44% un-utilized fly ash was dumped at the various Thermal Power Stations in the country during 2018-19.
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 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 kilometers 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 construction of building, road, 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 certain plan scheme of the Government Department. 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 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 Ministry of Science & Technology, GOI since 1994. Propagation of these



## 12.0 Abbreviations

CEA	:	Central Electricity Authority
MoEF	:	Ministry of Environment & Forest
MoEF&CC	:	Ministry of Environment & Forest and Climate Change (erstwhile MoEF)
MW	:	Mega Watt
MoP	:	Ministry of Power
MT	:	Million Tonnes
TPS	:	Thermal Power Stations
APGENCO	:	Andhra Pradesh Power Generation Corporation Ltd.
APPDCL	:	Andhra Pradesh Power Distribution Company Limited
ACBPL	:	Aryan Coal Benefication Private Ltd.
APL	:	Adani Power Ltd.,
APCPL	:	Aravali Power Corporation Pvt.Ltd.
AMNEPL	:	Abhijet MADC Nagpur energy Pvt. Ltd.
BEPL	:	Bajaj Energy Pvt. Ltd.
BSPGC	:	Bihar State Power Generation Company
CESC	:	Calcutta Electric Supply Company
CGPL	:	Coastal Gujarat Power Ltd.
CSPGCL	:	Chattisgarh State Power Generation Company Ltd.
DVC	:	Damodar Valley Corporation
DPL	:	Durgapur Project Ltd.
DPSC	:	Dishergarh Power Supply Company Ltd.
EPGL	:	Essar Power Gujarat Ltd.
GIPCL	:	Gujarat Industries Power Corporation Ltd.
GMDCL	:	Gujarat Mineral Development Corporation Ltd.
GSECL	:	Gujarat State Electric Corporation Ltd.
HPGCL	:	Haryana Power Generating company Ltd.
IPGCL	:	Indraprastha Power Generation Company Ltd.
IPCL	:	IL&FS Tamil Nadu Power Company Ltd.
JSEB	:	Jharkhand State Electricity Board.
JHPL	:	Jhajjar Power Ltd.
JPL	:	Jindal Power Ltd.
JSW	:	Jindal Steel Works
KPCL	:	Karnataka Power Corporation Ltd.
KBUNL	:	Kanti Bijlee Utpadan Nigam Ltd.
MPPGCL	:	Madhya Pradesh Power Generating Company Ltd.
MPL	:	Maithon Power Ltd.
MSPGCL	:	Maharashtra State Power Generating Company Ltd.
NLC	:	Neyveli Lignite Corporation
NSPCL	:	NTPC -SAIL Power Corporation Ltd.
NTPC	:	National thermal Power Corporation
NTECL	:	NTPC – Tamilnadu Electric Company Ltd.
OPGCL	:	Odisha Power Generation Corporation Ltd.
PSPCL	:	Punjab State Power Corporation Ltd.
RRVUNL	:	Rajasthan Rajya Vidyut Utpadan Nigam Ltd.
RIL	:	Reliance Infrastructure Ltd.
RPSCL	:	Rosa Power Supply Company Ltd.
RWPL	:	Raj West Power Ltd.
SEL	:	Sterlite energy Ltd.
SVPPL	:	Shri Vardhman Power Pvt. Ltd.
ST-CMS	:	ST-CMS
TPCO	:	Tata Power Company Ltd.
TVNL	:	Tenunghat Vidyut Nigam Ltd.
TNG&D	:	Tamil Nadu Generating and Distribution Corporation Ltd.
UPCI	:	Udupi Power Company Ltd.
UPRVUNL	:	Uttar Pradesh Rajaya Vidyut Utpadan Nigam Ltd.
VESPL	:	Vandanca energy Supply Power Ltd.
WBPCL	:	West Bengal Power Development Corporation Ltd.
WPCL	:	Wardha Power Company Ltd.

GEPL : Gupta Power Company Ltd.  
 VIP : Vidharbha Industries Power Ltd.  
 EPL : Essar Power Ltd.  
 ACB : Aryan Coal Beneficiary Ltd.  
 AP : Andhra Pradesh  
 MP : Madhya Pradesh  
 TN : Tamil Nadu  
 UP : Uttar Pradesh  
 WB : West Bengal

11.9 Abbreviations

AP	Andhra Pradesh
ACB	Aryan Coal Beneficiary Ltd.
AD	Adani Power Ltd.
AE	Asian Energy Ltd.
AG	Asian Gas Ltd.
AI	Asian Infrastructure Ltd.
AL	Asian Logistics Ltd.
AM	Asian Metals Ltd.
AN	Asian Networks Ltd.
AO	Asian Oil Ltd.
AP	Asian Power Ltd.
AR	Asian Resources Ltd.
AS	Asian Services Ltd.
AT	Asian Telecom Ltd.
AV	Asian Ventures Ltd.
AW	Asian Water Ltd.
AX	Asian X-ray Ltd.
AY	Asian Yarn Ltd.
AZ	Asian Zinc Ltd.
BA	Baharwal Power Ltd.
BB	Baharwal Power Ltd.
BC	Baharwal Power Ltd.
BD	Baharwal Power Ltd.
BE	Baharwal Power Ltd.
BF	Baharwal Power Ltd.
BG	Baharwal Power Ltd.
BH	Baharwal Power Ltd.
BI	Baharwal Power Ltd.
BJ	Baharwal Power Ltd.
BK	Baharwal Power Ltd.
BL	Baharwal Power Ltd.
BM	Baharwal Power Ltd.
BN	Baharwal Power Ltd.
BO	Baharwal Power Ltd.
BP	Baharwal Power Ltd.
BQ	Baharwal Power Ltd.
BR	Baharwal Power Ltd.
BS	Baharwal Power Ltd.
BT	Baharwal Power Ltd.
BU	Baharwal Power Ltd.
BV	Baharwal Power Ltd.
BW	Baharwal Power Ltd.
BX	Baharwal Power Ltd.
BY	Baharwal Power Ltd.
BZ	Baharwal Power Ltd.
CA	Central Authority
CB	Central Board
CC	Central Council
CD	Central Department
CE	Central Executive
CF	Central Finance
CG	Central Government
CH	Central Health
CI	Central Information
CJ	Central Inspection
CK	Central Investigation
CL	Central Labour
CM	Central Management
CN	Central National
CO	Central Office
CP	Central Planning
CQ	Central Production
CR	Central Research
CS	Central Secretariat
CT	Central Statistics
CU	Central Union
CV	Central Veterinary
CW	Central Welfare
CX	Central Working
CY	Central Writing
CZ	Central Year
DA	Damodar Valley Corporation
DB	Damodar Valley Corporation
DC	Damodar Valley Corporation
DD	Damodar Valley Corporation
DE	Damodar Valley Corporation
DF	Damodar Valley Corporation
DG	Damodar Valley Corporation
DH	Damodar Valley Corporation
DI	Damodar Valley Corporation
DJ	Damodar Valley Corporation
DK	Damodar Valley Corporation
DL	Damodar Valley Corporation
DM	Damodar Valley Corporation
DN	Damodar Valley Corporation
DO	Damodar Valley Corporation
DP	Damodar Valley Corporation
DQ	Damodar Valley Corporation
DR	Damodar Valley Corporation
DS	Damodar Valley Corporation
DT	Damodar Valley Corporation
DU	Damodar Valley Corporation
DV	Damodar Valley Corporation
DW	Damodar Valley Corporation
DX	Damodar Valley Corporation
DY	Damodar Valley Corporation
DZ	Damodar Valley Corporation
EA	Essar Power Ltd.
EB	Essar Power Ltd.
EC	Essar Power Ltd.
ED	Essar Power Ltd.
EE	Essar Power Ltd.
EF	Essar Power Ltd.
EG	Essar Power Ltd.
EH	Essar Power Ltd.
EI	Essar Power Ltd.
EJ	Essar Power Ltd.
EK	Essar Power Ltd.
EL	Essar Power Ltd.
EM	Essar Power Ltd.
EN	Essar Power Ltd.
EO	Essar Power Ltd.
EP	Essar Power Ltd.
EQ	Essar Power Ltd.
ER	Essar Power Ltd.
ES	Essar Power Ltd.
ET	Essar Power Ltd.
EU	Essar Power Ltd.
EV	Essar Power Ltd.
EW	Essar Power Ltd.
EX	Essar Power Ltd.
EY	Essar Power Ltd.
EZ	Essar Power Ltd.
FA	Fertiliser Corporation
FB	Fertiliser Corporation
FC	Fertiliser Corporation
FD	Fertiliser Corporation
FE	Fertiliser Corporation
FF	Fertiliser Corporation
FG	Fertiliser Corporation
FH	Fertiliser Corporation
FI	Fertiliser Corporation
FJ	Fertiliser Corporation
FK	Fertiliser Corporation
FL	Fertiliser Corporation
FM	Fertiliser Corporation
FN	Fertiliser Corporation
FO	Fertiliser Corporation
FP	Fertiliser Corporation
FQ	Fertiliser Corporation
FR	Fertiliser Corporation
FS	Fertiliser Corporation
FT	Fertiliser Corporation
FU	Fertiliser Corporation
FV	Fertiliser Corporation
FW	Fertiliser Corporation
FX	Fertiliser Corporation
FY	Fertiliser Corporation
FZ	Fertiliser Corporation
GA	Gujarat State Power Corporation
GB	Gujarat State Power Corporation
GC	Gujarat State Power Corporation
GD	Gujarat State Power Corporation
GE	Gujarat State Power Corporation
GF	Gujarat State Power Corporation
GG	Gujarat State Power Corporation
GH	Gujarat State Power Corporation
GI	Gujarat State Power Corporation
GJ	Gujarat State Power Corporation
GK	Gujarat State Power Corporation
GL	Gujarat State Power Corporation
GM	Gujarat State Power Corporation
GN	Gujarat State Power Corporation
GO	Gujarat State Power Corporation
GP	Gujarat State Power Corporation
GQ	Gujarat State Power Corporation
GR	Gujarat State Power Corporation
GS	Gujarat State Power Corporation
GT	Gujarat State Power Corporation
GU	Gujarat State Power Corporation
GV	Gujarat State Power Corporation
GW	Gujarat State Power Corporation
GX	Gujarat State Power Corporation
GY	Gujarat State Power Corporation
GZ	Gujarat State Power Corporation
HA	Haryana State Power Corporation
HB	Haryana State Power Corporation
HC	Haryana State Power Corporation
HD	Haryana State Power Corporation
HE	Haryana State Power Corporation
HF	Haryana State Power Corporation
HG	Haryana State Power Corporation
HH	Haryana State Power Corporation
HI	Haryana State Power Corporation
HJ	Haryana State Power Corporation
HK	Haryana State Power Corporation
HL	Haryana State Power Corporation
HM	Haryana State Power Corporation
HN	Haryana State Power Corporation
HO	Haryana State Power Corporation
HP	Haryana State Power Corporation
HQ	Haryana State Power Corporation
HR	Haryana State Power Corporation
HS	Haryana State Power Corporation
HT	Haryana State Power Corporation
HU	Haryana State Power Corporation
HV	Haryana State Power Corporation
HW	Haryana State Power Corporation
HX	Haryana State Power Corporation
HY	Haryana State Power Corporation
HZ	Haryana State Power Corporation
IA	India
IB	India
IC	India
ID	India
IE	India
IF	India
IG	India
IH	India
II	India
IJ	India
IK	India
IL	India
IM	India
IN	India
IO	India
IP	India
IQ	India
IR	India
IS	India
IT	India
IU	India
IV	India
IW	India
IX	India
IY	India
IZ	India
JA	Jammu and Kashmir
JB	Jammu and Kashmir
JC	Jammu and Kashmir
JD	Jammu and Kashmir
JE	Jammu and Kashmir
JF	Jammu and Kashmir
JG	Jammu and Kashmir
JH	Jammu and Kashmir
JI	Jammu and Kashmir
JJ	Jammu and Kashmir
JK	Jammu and Kashmir
JL	Jammu and Kashmir
JM	Jammu and Kashmir
JN	Jammu and Kashmir
JO	Jammu and Kashmir
JP	Jammu and Kashmir
JQ	Jammu and Kashmir
JR	Jammu and Kashmir
JS	Jammu and Kashmir
JT	Jammu and Kashmir
JU	Jammu and Kashmir
JV	Jammu and Kashmir
JW	Jammu and Kashmir
JX	Jammu and Kashmir
JY	Jammu and Kashmir
JZ	Jammu and Kashmir
KA	Karnataka
KB	Karnataka
KC	Karnataka
KD	Karnataka
KE	Karnataka
KF	Karnataka
KG	Karnataka
KH	Karnataka
KI	Karnataka
KJ	Karnataka
KK	Karnataka
KL	Karnataka
KM	Karnataka
KN	Karnataka
KO	Karnataka
KP	Karnataka
KQ	Karnataka
KR	Karnataka
KS	Karnataka
KT	Karnataka
KU	Karnataka
KV	Karnataka
KW	Karnataka
KX	Karnataka
KY	Karnataka
KZ	Karnataka
LA	Lakshadweep
LB	Lakshadweep
LC	Lakshadweep
LD	Lakshadweep
LE	Lakshadweep
LF	Lakshadweep
LG	Lakshadweep
LH	Lakshadweep
LI	Lakshadweep
LJ	Lakshadweep
LK	Lakshadweep
LL	Lakshadweep
LM	Lakshadweep
LN	Lakshadweep
LO	Lakshadweep
LP	Lakshadweep
LQ	Lakshadweep
LR	Lakshadweep
LS	Lakshadweep
LT	Lakshadweep
LU	Lakshadweep
LV	Lakshadweep
LW	Lakshadweep
LX	Lakshadweep
LY	Lakshadweep
LZ	Lakshadweep
MA	Madhya Pradesh
MB	Madhya Pradesh
MC	Madhya Pradesh
MD	Madhya Pradesh
ME	Madhya Pradesh
MF	Madhya Pradesh
MG	Madhya Pradesh
MH	Madhya Pradesh
MI	Madhya Pradesh
MJ	Madhya Pradesh
MK	Madhya Pradesh
ML	Madhya Pradesh
MM	Madhya Pradesh
MN	Madhya Pradesh
MO	Madhya Pradesh
MP	Madhya Pradesh
MQ	Madhya Pradesh
MR	Madhya Pradesh
MS	Madhya Pradesh
MT	Madhya Pradesh
MU	Madhya Pradesh
MV	Madhya Pradesh
MW	Madhya Pradesh
MX	Madhya Pradesh
MY	Madhya Pradesh
MZ	Madhya Pradesh
NA	Nagaland
NB	Nagaland
NC	Nagaland
ND	Nagaland
NE	Nagaland
NF	Nagaland
NG	Nagaland
NH	Nagaland
NI	Nagaland
NJ	Nagaland
NK	Nagaland
NL	Nagaland
NM	Nagaland
NN	Nagaland
NO	Nagaland
NP	Nagaland
NQ	Nagaland
NR	Nagaland
NS	Nagaland
NT	Nagaland
NU	Nagaland
NV	Nagaland
NW	Nagaland
NX	Nagaland
NY	Nagaland
NZ	Nagaland
OA	Odisha
OB	Odisha
OC	Odisha
OD	Odisha
OE	Odisha
OF	Odisha
OG	Odisha
OH	Odisha
OI	Odisha
OJ	Odisha
OK	Odisha
OL	Odisha
OM	Odisha
ON	Odisha
OO	Odisha
OP	Odisha
OQ	Odisha
OR	Odisha
OS	Odisha
OT	Odisha
OU	Odisha
OV	Odisha
OW	Odisha
OX	Odisha
OY	Odisha
OZ	Odisha
PA	Punjab
PB	Punjab
PC	Punjab
PD	Punjab
PE	Punjab
PF	Punjab
PG	Punjab
PH	Punjab
PI	Punjab
PJ	Punjab
PK	Punjab
PL	Punjab
PM	Punjab
PN	Punjab
PO	Punjab
PP	Punjab
PQ	Punjab
PR	Punjab
PS	Punjab
PT	Punjab
PU	Punjab
PV	Punjab
PW	Punjab
PX	Punjab
PY	Punjab
PZ	Punjab
QA	Quebec
QB	Quebec
QC	Quebec
QD	Quebec
QE	Quebec
QF	Quebec
QG	Quebec
QH	Quebec
QI	Quebec
QJ	Quebec
QK	Quebec
QL	Quebec
QM	Quebec
QN	Quebec
QO	Quebec
QP	Quebec
QQ	Quebec
QR	Quebec
QS	Quebec
QT	Quebec
QU	Quebec
QV	Quebec
QW	Quebec
QX	Quebec
QY	Quebec
QZ	Quebec
RA	Rajasthan
RB	Rajasthan
RC	Rajasthan
RD	Rajasthan
RE	Rajasthan
RF	Rajasthan
RG	Rajasthan
RH	Rajasthan
RI	Rajasthan
RJ	Rajasthan
RK	Rajasthan
RL	Rajasthan
RM	Rajasthan
RN	Rajasthan
RO	Rajasthan
RP	Rajasthan
RQ	Rajasthan
RR	Rajasthan
RS	Rajasthan
RT	Rajasthan
RU	Rajasthan
RV	Rajasthan
RW	Rajasthan
RX	Rajasthan
RY	Rajasthan
RZ	Rajasthan
SA	Sikkim
SB	Sikkim
SC	Sikkim
SD	Sikkim
SE	Sikkim
SF	Sikkim
SG	Sikkim
SH	Sikkim
SI	Sikkim
SJ	Sikkim
SK	Sikkim
SL	Sikkim
SM	Sikkim
SN	Sikkim
SO	Sikkim
SP	Sikkim
SQ	Sikkim
SR	Sikkim
SS	Sikkim
ST	Sikkim
SU	Sikkim
SV	Sikkim
SW	Sikkim
SX	Sikkim
SY	Sikkim
SZ	Sikkim
TA	Tamil Nadu
TB	Tamil Nadu
TC	Tamil Nadu
TD	Tamil Nadu
TE	Tamil Nadu
TF	Tamil Nadu
TG	Tamil Nadu
TH	Tamil Nadu
TI	Tamil Nadu
TJ	Tamil Nadu
TK	Tamil Nadu
TL	Tamil Nadu
TM	Tamil Nadu
TN	Tamil Nadu
TO	Tamil Nadu
TP	Tamil Nadu
TQ	Tamil Nadu
TR	Tamil Nadu
TS	Tamil Nadu
TT	Tamil Nadu
TU	Tamil Nadu
TV	Tamil Nadu
TW	Tamil Nadu
TX	Tamil Nadu
TY	Tamil Nadu
TZ	Tamil Nadu
UA	Uttaranchal
UB	Uttaranchal
UC	Uttaranchal
UD	Uttaranchal
UE	Uttaranchal
UF	Uttaranchal
UG	Uttaranchal
UH	Uttaranchal
UI	Uttaranchal
UJ	Uttaranchal
UK	Uttaranchal
UL	Uttaranchal
UM	Uttaranchal
UN	Uttaranchal
UO	Uttaranchal
UP	Uttaranchal
UQ	Uttaranchal
UR	

**Annex-I  
(POWER)**

**FLY ASH GENERATION AND ITS UTILIZATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2018-19 (APRIL-2018 TO MARCH-2019)**

**(UTILITY WISE)**

Sl. no.	Name of TPS	Power Utility & state	Installed Capacity (MW)	Coal Consumed (MT)	Ash Content of coal (%) (7)/(5)x100	Fly Ash Generation (MT)	Fly Ash Utilization (MT)	%age utilization (8)/(7)x100	In making of Fly Ash based/briquet blocks/Tiles etc. (MT)	In manufacture of portland cement pozzolana cement (MT)	In construction of Highways & Roads including flyovers (MT)	Part replacement of concrete in concrete construction (MT)	In Hydro power sector in RCC Dam construction (MT)	In Ash Dyke raising (MT)	In reclamation of low lying Area (MT)	In Mining filling (MT)	In agriculture/waste land Development (MT)	Others (MT)	Total Utilization (MT)	Date Of Commission	Total filled up data
1	Dr. N.T.R (Vijawada)	APGENCO (Andhra Pradesh)	1760.00	8.9415	46.02	4.1149	4.2752	103.90	2.2972	1.1738	0.0224	0.1598		1.5	0.4945	0.17	0.18	0.1276	4.2752	01.11.1979	1
2	RAYALSEEMA	APGENCO (Andhra Pradesh)	1650.00	4.8249	39.88	1.9240	1.6172	84.06	0.4403	1.1770					0.1366			1.6172	1.6172	16.11.1994	1
6	SRI DAMODARAM SANJEEVAIAH	APPDCL(Andhra Pradesh)	1600.00	4.4150	27.45	1.2120	0.7926	65.40	0.4990						0.9652			0.7926	0.7926	05.02.2015	1
7	KASAPALI	ACB(INDIA) (Chhattisgarh)	270.00	1.8834	57.29	1.0789	1.0789	100.00	0.0864									0.0074	1.0789	13.12.2011	1
8	SVPLP Renik	ACB India Limited (Chhattisgarh)	60.00	0.0163	60.00	0.0098	0.0098	100.00							0.0098				0.0098	12.10.2011	1
9	CHAKABURA TPP	ACB (INDIA) Ltd. (Chhattisgarh)	30.00	0.3249	55.00	0.1787	0.1787	100.00	0.0146						0.1641				0.1787	27.02.2007	1
10	CHAKABURA TPP (EXTN)	ACB (INDIA) Ltd. (Chhattisgarh)	30.00	0.3044	54.98	0.1673	0.1673	100.00	0.0146						0.1527				0.1673	28.03.2014	1
11	INDIRA GANDHI	APCLP (Haryana)	1500.00	4.7101	31.92	1.5034	1.5545	103.40	0.3434	1.2111								1.5545	1.5545	31.10.2010	1
12	MUNDRA TPS	ADANI POWER (MUNDRA) LIMITED (Gujrat)	4620.00	13.2500	5.84	0.7740	0.7951	102.73	0.3440						0.2180			0.2331	0.7951	04.08.2009	1
13	TIRODA	ADANI POWER MAHARASHTRA LTD. (Maharashtra)	3300.00	13.6870	31.88	4.3630	3.6847	84.45	0.0576	0.0156	0.0287			0.7525	0.5332			2.2971	3.6847	23.09.2012	1
14	KAWAL	ADANI POWER RAJASTHAN LTD. (Rajasthan)	1320.00	4.3288	29.57	1.2800	1.5198	118.74	0.1401	0.9988					0.3560			0.0250	1.5198	31.05.2013	1
15	MIHAN	AMNPL (Maharashtra) (No Generation)	246.00		#DIV/0!			#DIV/0!											0.0000	05.01.2011	1
16	ADANI DAHANU	ADANI ELECTRICITY MUMBAI LIMITED (Maharashtra)	500.00	2.1670	26.03	0.5640	0.7324	129.65	0.0064		0.3100			0.0560				0.3660	0.7324	01.07.1995	1
16A	ADHUNIK PNR LTD.(MAHADEV PRASAD STPP)	ADHUNIK POWER & NATURAL RESOURCES LTD. (Jharkhand)	540.00	1.9972	37.47	0.7484	0.8805	117.65	0.0452	0.1484				0.0810	0.4690			0.1321	0.8805	21.01.2013	1
17	BARKHERA	BEPL (UP)	90.00	0.1146	41.02	0.0470	0.0471	100.18	0.0025	0.0086					0.0359				0.0471	29.10.2011	1
18	KHAMBER KHERA	BEPL (UP)	90.00	0.1089	42.06	0.0458	0.0458	100.00	0.0049	0.0349					0.0061				0.0458	30.09.2011	1
19	KUNDARKI	BEPL (UP)	90.00	0.1527	40.50	0.0618	0.0618	100.00	0.0067	0.0446					0.0106				0.0618	03.01.2012	1
20	MAQSOODAPUR	BEPL (UP)	90.00	0.1065	40.57	0.0432	0.0432	100.00	0.0001	0.0051					0.0345				0.0432	27.10.2011	1
21	UTRAULA	BEPL (UP)	90.00	0.1464	39.78	0.0582	0.0582	100.00	0.0095	0.0334					0.0154				0.0582	30.01.2012	1
22	NABINAGAR	BHARATIYA RAIL BDLEE COMPANY LIMITED (Bihar)	750.00	1.7080	35.72	0.6101	0.1744	28.59	0.0014	0.1730									0.1744	16.01.2017	1
22A	BALCO CPP-II	BHARAT ALUMINIUM COMPANY LIMITED(BALCO) (Chhattisgarh)	540.00	2.7172	36.28	1.0402	1.1076	106.48	0.0072	0.0013					0.4907	0.0023		0.6060	1.1076	6.2005	1
22B	BALCO CPP-III	BHARAT ALUMINIUM COMPANY LIMITED(BALCO) (Chhattisgarh)	1200.00	4.7820	36.76	1.7580	1.7579	99.99	0.0084	0.0017				0.4267	0.5811			0.7400	1.7579	8.2015	1
22C	BHADRESHWAR VIDYUT PRIVATE LTD TPS	BHADRESHWAR VIDYUT PRIVATE LIMITED (Gujarat)	300.00	1.2677	3.89	0.0493	0.0487	98.89											0.0487	04.01.2015	1

## FLY ASH GENERATION AND ITS UTILIZATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2018-19 (APRIL-2018 TO MARCH-2019)

## (POWER UTILITY WISE)

Sl no.	Name of TPS	Power Utility & state	Installed Capacity (MW)	Coal Consumed (MT)	Ash Content of coal (%)	Fly Ash Generation (MT)	Fly Ash Utilization (MT)	%age utilization (8)/(7)x100	In making Fly Ash based/Bric k/Blocks/Tiles etc. (MT)	In manufacture of Portland cement pozzolana (MT)	In construction of Highways & Roads including flyovers (MT)	Part replacement of cement in concrete (MT)	In Hydro power sector in RCC Dam construction (MT)	In Ash Dyke raising (MT)	In reclamation of low lying Area (MT)	In Mining filling (MT)	In agriculture/waste land Development (MT)	Others (MT)	Total Utilization (MT)	Date Of Commission	Total filled up data
23	B.B.G.S.	C.E.S.C. (West Bengal)	750.00	3.5600	34.16	1.2160	1.2160	100.00	0.0530	0.9950	0.0090	0.0010	0.0030	0.1550	0.0030	0.1550			1.2160	16.09.1997	1
24	S.G.S.	C.E.S.C. (West Bengal)	135.00	0.1980	27.27	0.0540	0.0540	100.00	0.0140	0.0280	0.0070	0.0050							0.0540	12.08.1990	1
25	T.G.S.	C.E.S.C. (West Bengal) No Generation	240.00	0.0000	#DIV/0!	0.0000	0.0000	#DIV/0!	0.0000	0.0000	0.0000								0.0000	05.03.1983	1
26	MARWA TENDUBHATA	C.S.P.G.C.L. (Chhattisgarh)	1000.00	4.2014	41.08	1.7260	0.4313	24.99	0.0338	0.0872									0.4313	31.03.2016	1
27	DSPH	C.S.P.G.C.L. (Chhattisgarh)	500.00	2.4645	39.44	0.9719	0.3144	32.35											0.3144	21.10.2007	1
28	KORBA (WEST)	C.S.P.G.C.L. Chhattisgarh	1340.00	6.6700	40.31	2.6890	1.3239	49.23	0.0740	0.0169						0.4290			1.3239	21.03.1983	1
28A	KORBA (EAST)	C.S.P.G.C.L. (Chhattisgarh)	440.00	1.5094	47.12	0.7112	0.7726	108.64	0.0011										0.7726	01.10.1966	1
29	MUTTARA	COASTAL ENERGEN PVT. LTD (Tamil Nadu)	1200.00	2.0116	3.49	0.0703	0.0705	100.23	0.0212	0.0492									0.0705	23.12.2014	1
30	MUNDRA UNPP	CGPL (Gujrat)	4150.00	11.5000	6.87	0.7900	0.7410	93.80	0.0090	0.4700		0.0300		0.0800	0.1500	0.0020			0.7410	07.03.2012	1
30A	CHEMPLAST LIMITED TPS	LIMITED(Tamil Nadu)	48.50	0.2708	6.75	0.0183	0.0184	100.44	0.0184										0.0184	2009	1
31	BOJARO B'	D.V.C.(Jharkhand)	710.00	2.0851	39.68	0.8274	0.2989	36.12	0.0028	0.0028						0.2960			0.2989	31.03.1993	1
32	CHANDRAPURA	D.V.C.(Jharkhand)	630.00	1.9458	44.81	0.8719	0.8495	97.43	0.0013	0.0781						0.7700			0.8495	07.07.1966	1
33	DURGAPUR	D.V.C.(West Bengal)	210.00	0.7356	45.50	0.3447	0.0257	7.66	0.0257										0.0257	Sep.1982	1
34	MEIJA	D.V.C.(West Bengal)	2340.00	8.2692	46.67	3.8591	2.8519	73.90	0.0736	1.2494						1.5290			2.8519	01.12.1997	1
35	DURGAPUR STEEL	D.V.C. (West Bengal)	1000.00	3.9377	40.93	1.6118	1.2234	75.91	0.0545	0.9881				0.1808					1.2234	15.05.2012	1
36	KODERMA	D.V.C. (Jharkhand)	1000.00	3.6054	44.85	1.6171	1.6061	99.32	0.0031	0.7534				0.0150		0.4953			1.6061	18.07.2013	1
37	RAGHUNATHPUR	D.V.C. (West Bengal)	1200.00	1.9047	42.13	0.8024	0.0783	9.76	0.0062	0.0721									0.0783	31.03.2016	1
38	D.P.P.S.	D.P.L. (West Bengal)	550.00	1.6204	40.35	0.6539	0.5707	87.29	0.0181	0.4732						0.0794			0.5707	30.04.2008	1
39	DHARWAL INFRASTRUCTURE Ltd.	DHARWAL INFRASTRUCTURE LIMITED(Maharashtra)	600.00	2.1088	32.77	0.6910	0.7246	104.86	0.0883	0.6070	0.0293								0.7246	11.2.2014	1
5	CHINAKURI	EASTERN COALFIELDS LIMITED (West Bengal)(No Generation)	30.00		#DIV/0!	0.0000		#DIV/0!											0.0000	20.09.1990/shut down 21.11.2011	1
3	MAHAN	ESSAR POWER IIP LTD.(M.P.)	1200.00	2.0770	27.10	0.5629	0.4834	85.89	0.0027	0.1737				0.2040					0.4834	29.04.2013	1
40	SURAT LIGNITE	G.I.P.C.L. (Gujarat)	500.00	3.7073	16.27	0.6033	0.6033	100.00	0.4003									0.2030	0.6033	15.02.2000	1
41	AKRIMOTA	G.M.D.C.L.(Gujarat)	250.00	1.1993	22.22	0.2665	0.3765	141.28											0.3765	31.03.2005	1
42	GANDHINAGAR	G.S.E.C.L. (Gujarat)	630.00	0.2342	31.77	0.0744	0.1923	258.49	0.0325	0.0775	0.0611	0.0212							0.1923	20.03.1990	1
43	KUTCH LIGNITE	G.S.E.C.L. (Gujarat)	290.00	0.1640	26.71	0.0438	0.0439	100.23		0.0055						0.0384			0.0439	09.01.1990	1
44	SIKKA	G.S.E.C.L. (Gujarat)	500.00	0.1358	7.36	0.0100	0.0339	339.00	0.0207	0.0132									0.0339	14.09.2015	1



**Annex-I  
(POWER)**

**FLY ASH GENERATION AND ITS UTILIZATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2018-19 (APRIL-2018 TO MARCH-2019)**

**(UTILITY WISE)**

Sl no.	Name of TPS	Power Utility & state	Installed Capacity (MW)	Coal Consumed (MT)	Ash Content of coal (7)/(5)x100	Fly Ash Generation (MT)	Fly Ash Utilization (MT)	%age utilization (8)/(7)x100	In making of fly Ash based/Bric k/Blocks/Tiles etc. (MT)	In manufacture of portland cement pozzolana cement (MT)	In construction of Highways & Roads including flyovers (MT)	In Hydro power sector in RCC Dam construction (MT)	In Ash Dyke raising (MT)	In reclamation of low lying Area (MT)	In Mining filling (MT)	In agriculture /waste land Development (MT)	Others (MT)	Total Utilization (MT)	Date Of Commission	Total filled up data
45	UKAI	G.S.E.C.L. (Gujarat)	1110.00	0.4167	31.49	0.1312	0.1080	82.32	0.0521	0.0374	0.0002	0.0183	0.1080	21.01.1979			0.1080	21.01.1979	1	
46	WANAKBORI	G.S.E.C.L. (Gujarat)	1470.00	0.5223	32.28	0.1686	0.1570	93.09	0.0182	0.0937		0.0256	0.1570	23.03.1982			0.1570	23.03.1982	1	
46A	BHAYNAGAR LIGNITE	G.S.E.C.L. (Gujarat)	500.00	0.0625	10.88	0.0068	0.0059	86.76	0.0020	0.0000		0.0039	0.0059	16.05.2016			0.0059	16.05.2016	1	
47	GHR WARORA ENERGY Ltd.	GHR WARORA ENERGY LTD. (Maharashtra)	600.00	2.4976	30.32	0.7574	0.8280	109.32	0.0621	0.6181	0.0301		0.8280	19.03.2013		0.5597	0.8280	19.03.2013	1	
48	GHR KAMALANGA TPP	GHR KAMALANGA ENERGY LTD. (Odisha)	1050.00	4.8016	37.21	1.7867	1.7867	100.11	0.8202	0.1150	0.2938			30.04.2013			1.7867	30.04.2013	1	
50	GEPL TPP	GUPTA ENERGY PRIVATE LIMITED(Maharashtra) (No Generation)	120.00		#DIV/0!			#DIV/0!						19.07.2012			0.0000	19.07.2012	1	
+	RAJIV GANDHI (HISAR)	H.P.G.C.L.(Haryana)	1200.00	2.6974	39.47	1.0645	0.6482	60.89	0.1155	0.3944	0.0000	0.0041		24.08.2010			0.6482	24.08.2010	1	
52	YAMUNANAGAR	H.P.G.C.L.(Haryana)	600.00	2.1322	40.29	0.8591	1.0741	125.02	0.0148	0.5223	0.0000		0.5370	14.04.2008			1.0741	14.04.2008	1	
53	PANIPAT	H.P.G.C.L.(Haryana)	920.00	2.1695	38.00	0.8244	1.2384	150.21	0.0759	0.7271	0.2455		0.0113	28.03.1989			1.2384	28.03.1989	1	
54	HALDIA ENERGY LIMITED	HALDIA ENERGY LIMITED (W.B)	600.00	3.1024	33.81	1.0488	1.0488	100.00	0.0787	0.8990			0.0623	28.01.2015			1.0488	28.01.2015	1	
55	Vraag TPS	HINDIA NATIONAL POWER CORPORATION LIMITED (Andhra Pradesh)	1040.00	0.6047	32.93	0.1991	0.5201	261.18	0.1626	0.1228	0.1637		0.0709	11.01.2016			0.5201	11.01.2016	1	
56	RAJGHAT	IPGCL (Delhi)(No Generation)	135.00	0.0000	#DIV/0!	0.0000	0.0000	#DIV/0!						20.02.1990			0.0000	20.02.1990	1	
57	DISHERGARH POWER STATION	INDIA POWER CORPORATION Ltd. (W.B)	12.00	0.0336	50.86	0.0171	0.0171	100.00						25.09.2012	0.0171		0.0171	25.09.2012	1	
58	INDIAN METALS & FERRO ALLOYS LTD.	INDIAN METALS & FERRO ALLOYS Ltd.(Odisha)	258.00	0.9330	46.81	0.4367	0.4368	100.02	0.2918	0.0396	0.0053		0.0053	2.1989			0.4368	2.1989	1	
58A	IL&FS TAMIL NADU POWER COMPANY Ltd. (Nadu)	IL&FS TAMIL NADU POWER COMPANY LIMITED (Tamil Nadu)	1200.00	3.1050	4.19	0.1300	0.1280	98.46	0.0000	0.1280				29.09.2015			0.1280	29.09.2015	1	
58B	BELA TPS	IDEAL ENERGY PROJECTS LIMITED (Maharashtra)	270.00	0.1126	27.20	0.0306	0.0000	0.00						18.07.2013			0.0000	18.07.2013	1	
59	MAHATMA GANDHI	JHPL (Haryana)	1320.00	4.1308	39.90	1.6480	2.2565	136.92	0.0219	1.4766	0.7118		0.0462	29.03.2012			2.2565	29.03.2012	1	
60	O.P.Jindal Super Tpp (Stage-I)	JPL (Chhattisgarh.)	1000.00	2.4770	42.83	1.0610	1.0870	102.45					0.7530	08.12.2007	0.0710		1.0870	08.12.2007	1	
61	O.P.Jindal Super Tpp(Stage-II)	JPL (Chhattisgarh.)	2400.00	5.3060	43.42	2.3040	2.3490	101.95	0.0540				1.7030	14.03.2014	0.5920		2.3490	14.03.2014	1	
62	JAYPEE BINA TPP	JAIPRAKASH POWER VENTURES LIMITED (MP)	500.00	1.6615	32.27	0.5362	0.5416	101.01	0.0474	0.4041				31.08.2012			0.5416	31.08.2012	1	
63	JAYPEE NIGRIE SUPER TPP	JAIPRAKASH POWER VENTURES LIMITED (MP)	1320.00	4.0500	26.42	1.0700	1.0870	101.59	0.0270	1.0600			0.0900	03.09.2014			1.0870	03.09.2014	1	
64	RATNAGIRI	JSW ENERGY LIMITED (Maharashtra)	1200.00	3.3581	12.67	0.4254	0.4277	100.54	0.0563	0.0397	0.3317			01.09.2010			0.4277	01.09.2010	1	
65	VDAYANAGAR	JSW ENERGY LIMITED (Karnataka)	860.00	1.5269	15.58	0.2378	0.2679	112.65	0.0301	0.2083			0.0157	18.01.2000			0.2679	18.01.2000	1	
66	DERANG TPP	JINDAL INDIA THERMAL POWER LIMITED (Odisha)	1200.00	3.3520	40.99	1.3740	0.9460	68.85	0.0970				0.4840	05.06.2014		0.0030	0.9460	05.06.2014	1	
67	DANGAMAHUA CAPTIVE POWER PLANT	JINDAL STEEL AND POWER LIMITED (CHHATTISGARH)	576.00	1.6499	46.96	0.7748	0.7754	100.08	0.0012					04.09.2010	0.7742		0.7754	04.09.2010	1	

## FLY ASH GENERATION AND ITS UTILIZATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2018-19 (APRIL-2018 TO MARCH-2019) (POWER UTILITY WISE)

Sl no.	Name of TPS	Power Utility & state	Installed Capacity (MW)	Coal Consumed (MT)	Ash Content of coal (%)	Fly Ash Generation (MT)	Fly Ash Utilization (MT)	%age utilization (8)/(7)*100	In making of Fly Ash based/Brick/Blocks/Tiles etc. (MT)	In manufacture of portland cement pozzolana cement (MT)	In construction of Highways & Roads including flyovers (MT)	Part replacement of concrete in concrete (MT)	In Hydro power sector in RCC Dam construction (MT)	In Ash Dyke raising (MT)	In reclamation of low lying Area (MT)	In Mining filling (MT)	In agriculture/waste land Development (MT)	Others (MT)	Total Utilization $\sum_{(10)}$ to (MT)	Date Of Commission	Total filled up data
67B	ANGUL CAPTIVE POWER PLANT	JINDAL STEEL AND POWER LIMITED (Chhattisgarh)	810.00	2.2474	46.41	1.0431	1.0167	97.47	0.0232						0.4511			0.5423	1.0167	13.05.2011	1
67A	JALIPA KAPURDI	JSW ENERGY (BARMER) LIMITED (Formerly Rajasthan Westpower Ltd.) (Rajasthan)	1080.00	0.6110	14.40	0.0880	0.1090	123.86	0.0130	0.0830					0.0130				0.1090	26.11.2009	1
67B	JSW STEEL LIMITED CPP-II	JSW STEEL LIMITED (Tamil Nadu)	60.00	0.1197	10.61	0.0127	0.0127	100.11	0.0127										0.0127	24.07.2006	1
68	BALLARI	K.P.C.L. (Karnataka)	1700.00	2.6201	30.30	0.7940	0.7317	92.15	0.0655	0.6662	0.0000								0.7317	25.03.2008	1
69	BAICHUR	K.P.C.L. (Karnataka)	1720.00	6.2060	35.71	2.2160	1.5568	70.25	0.3340	1.0090	0.0068			0.2070					1.5568	29.03.1985	1
70	MUZAFFARPUR TPS	KANTI BULEE UTPADAN NIGAM LIMITED (Bihar)	610.00	2.0444	39.71	0.8118	0.3022	37.22	0.0132						0.2890				0.3022	11.2013	1
71	KHPCL (AKALARA)	KSK MAHARAJI POWER COMPANY LIMITED (Chhattisgarh)	1800.00	5.0131	32.00	1.6041	1.6339	101.86	0.0132	1.3172	0.0120				0.0031	0.2883			1.6339	Sept, 2013	1
72	AMARKANTAK TPS (PATHADI TPP)	LANCO AMARKANTAK POWER LIMITED (Chhattisgarh)	600.00	2.8881	39.82	1.1500	0.5755	50.05	0.0023	0.2445	0.0004			0.0981	0.2302				0.5755	01.05.2009	1
73	LALITPUR	LALITPUR POWER GENERATION COMPANY LIMITED (UP)	1980.00	3.4053	33.28	1.1334	1.1334	100.00	0.0079	0.5867				-0.0461	0.5850				1.1334	08.01.2016	1
73A	ANPARA-C TPS	LANCO ANPARA POWER LIMITED (Uttar Pradesh)	1200.00	4.9300	24.75	1.2200	0.3600	29.51		0.3600									0.3600	10.12.2011	1
74	MAITHON RBTPP	MPL (Jharkhand)	1050.00	4.2906	40.42	1.7344	1.7738	102.27	0.0991	0.1735					0.0135	1.4877			1.7738	01.09.2011	1
75	SANJAY GANDHI	M.P.P.G.C.L. ( M.P.)	1340.00	5.6985	38.45	2.0203	1.4539	71.96	0.0397	1.3662	0.0407				0.0072				1.4539	07.10.1993	1
76	SATPURA	M.P.P.G.C.L. ( M.P.)	1330.00	5.7049	40.42	2.3059	0.7016	30.43	0.4528	0.2381			0.0009	0.0092					0.7016	07.01.1979	1
77	AMARKANTAK	M.P.P.G.C.L. ( M.P.)	210.00	0.8802	28.14	0.2477	0.1645	66.42	0.0370	0.1154	0.0112								0.1645	10.09.2009	1
78	SHREE SINGAJI TPS	M.P.P.G.C.L. ( M.P.)	2520.00	5.6979	37.91	2.1602	0.2899	13.42	0.0065	0.1444								0.1390	0.2899	01.02.2014	1
79	BHUSAWAL	M.S.P.G.C.L. (Maharashtra)	1210.00	4.9792	35.26	1.7556	1.6756	95.44	0.3088	0.5750				0.4761	0.0296				1.6756	18.09.1982	1
80	CHANDRAPUR	M.S.P.G.C.L. (Maharashtra)	2920.00	11.5382	26.77	3.0892	1.0361	33.54	0.0371	0.9991									1.0361	03.05.1985	1
81	KHAPARKHEDA	M.S.P.G.C.L. (Maharashtra)	1340.00	6.4698	41.66	2.6952	0.3837	14.24	0.2678					0.1160					0.3837	26.03.1989	1
82	KORADI	M.S.P.G.C.L. (Maharashtra)	2600.00	6.4720	41.07	2.6560	0.7740	29.12	0.0070	0.0010	0.7660								0.7740	15.07.1978	1
83	INASHIK	M.S.P.G.C.L. (Maharashtra)	630.00	1.8643	37.67	0.7022	1.4340	204.20	1.0743	0.3597									1.4340	26.04.1979	1
84	PARLI	M.S.P.G.C.L. (Maharashtra)	750.00	2.0225	42.41	0.8578	2.5058	292.11	1.0639	0.1735			0.2040	0.9674					2.5058	01.11.2007	1
85	PARAS	M.S.P.G.C.L. (Maharashtra)	500.00	1.9320	34.57	0.6679	0.2274	34.05	0.2100	0.0174									0.2274	31.03.2008	1
86	MCCPL BANDHAKHAR	MARUTI CLEAN COAL AND POWER LIMITED (Chhattisgarh)	300.00	1.5690	45.88	0.7290	0.7290	100.00		0.0020					0.7270				0.7290	30.07.2015	1
87	THAMMINAPATNAM TPS	MEENAKSHI ENERGY PRIVATE LIMITED (Andhra Pradesh)	300.00	0.0275	4.97	0.0014	0.0085	622.26	0.0016					0.0069					0.0085	07.10.2012	1

**Annex-I  
(POWER)**

**UTILITY WISE)**

**FLY ASH GENERATION AND ITS UTILIZATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2018-19 (APRIL-2018 TO MARCH-2019)**

Sl. no.	Name of TPS	Power Utility & state	Installed Capacity (MW)	Coal Consumed (MT)	Ash Content of coal (%)	Fly Ash Generation (MT)	Fly Ash Utilization (MT)	%age utilization (B)/(7)x100	In making of Fly Ash based/Bric k/Blocks/Tiles etc. (MT)	In manufacture of portland cement pozzolana cement (MT)	In construction of Highways & Roads including flyovers (MT)	In replacement of concrete in RCC Dam construction (MT)	In Hydro power sector in RCC Dam construction (MT)	In Ash Dyke raising (MT)	In reclamation of low lying Area (MT)	In Mining filling (MT)	In agriculture /waste land Development (MT)	Others (MT)	Total Utilization (MT)	Date Of Commission	Total filled up data
88	JHABUA POWER LIMITED (SEONI TPP)(AVANTHA BHANDAR TPP)	M/S JHABUA POWER LIMITED (MP)	600.00	1.7951	31.70	0.5691	0.3456	60.74	0.0311	0.2964	0.0134			0.0460	0.0140			0.0047	0.3456	03.05.2016	1
89	KWPCL TPP	M/S KORBA WEST POWER COMPANY LIMITED (Chhattisgarh)	600.00	0.0000	#DIV/0!	0.0000	0.0600	#DIV/0!	0.0000	0.0000									0.0600	31.03.2014	1
90	ANUPPUR TPS	MB POWER (MADHYA PRADESH) LIMITED (M.P.)	1200.00	4.7206	33.43	1.5779	1.6359	103.68	0.0111	0.7489	0.0011	0.0009		0.1349	0.2215			0.0175	1.6359	20.05.2015	1
90A	MEJA TPP	MEJA URJA NIGAM PRIVATE LIMITED(Uttar Pradesh)	660.00	0.1570	40.13	0.0630	0.0001	0.22	0.0001	0.0001									0.0001	31.03.2019	1
91	NEVELLI - I	NLC LTD.(Tamil Nadu)	500.00	4.7390	4.06	0.1925	0.1277	66.33	0.0209	0.1037								0.0031	0.1277	1962	1
92	NEVELLI - I EXPN	NLC LTD.(Tamil Nadu)	420.00	3.0085	4.72	0.1421	0.1421	100.00	0.0169	0.0945		0.0000				0.0257		0.0004	0.1421	21.10.2002	1
93	NEVELLI - II	NLC LTD.(Tamil Nadu)	1470.00	11.7642	5.66	0.6663	0.7520	112.86	0.1519	0.3577	0.0741					0.1568		0.0114	0.7520	29.03.1986	1
94	NEVELLI - II EXPN	NLC LTD. (Tamil Nadu)	500.00	1.9005	5.63	0.1070	0.1044	97.57	0.0834										0.1044	22.04.2015	1
95	BARSINGAR LIGNITE	NLC LTD. (Rajasthan)	250.00	1.2342	17.86	0.2205	1.0618	481.63	0.4809	0.1270									1.0618	27.10.2009	1
96	NLC TAMILNADU POWER Ltd	NLC TAMILNADU POWER LIMITED (Tamil Nadu)	1000.00	3.4076	30.36	1.0347	1.0343	99.96	0.0881	0.7821	0.0209							0.1432	1.0343	08.03.2015	1
97	BHILLAI TPS (BHILLAI PP-III)	NSPCL (Chhattisgarh)	500.00	2.2696	40.51	0.9195	1.0585	115.12	0.1138	0.8658									1.0585	05.01.2009	1
97A	BHILLAI TPS (BHILLAI PP-II)	NSPCL (Chhattisgarh)	74.00	0.3757	38.08	0.1431	0.1438	100.51	0.0077	0.0605									0.1438	25.08.1982	1
97B	DURGAPUR CPP	NSPCL (Odisha)	120.00	0.7091	29.04	0.2060	0.2602	126.34		0.1082	0.0055								0.2602	17.02.1987	1
97C	ROURKELA CPP	NSPCL (West Bengal)	120.00	0.8912	51.13	0.4557	0.1654	36.30	0.0364	0.0863				0.0428					0.1654	01.03.2001	1
98	VALLUR	NTPC TAMILNADU ENERGY COMPANY LTD (NTECL) (Tamil Nadu)	1500.00	5.6240	40.13	2.2570	1.5250	67.57	0.2530	0.1520		0.1520							1.5250	09.03.2012	1
99	BADARPUR	NTPC LTD (Delhi)	705.00	0.9800	30.00	0.2940	0.2900	98.64	0.2570	0.0270	0.0060								0.2900	Jul-73	1
100	DAORI	NTPC LTD. (U.P.)	1820.00	6.6880	33.40	2.2340	2.2369	100.13	0.3799	1.3401	0.4618			0.0480				0.0070	2.2369	Oct,1991	1
101	SINGRAULI	NTPC LTD. (U.P.)	2000.00	9.1870	31.46	2.8900	1.0130	35.05	0.0000	0.0010				0.2100	0.8020				1.0130	Feb-82	1
102	RHAND	NTPC LTD. (U.P.)	3000.00	13.1210	26.80	3.5160	1.3020	37.03	0.1250	0.0500				0.3390	0.7290				1.3020	Mar-88	1
103	FEROZE GANDHI UNACHAR	NTPC LTD.(U.P.)	1050.00	4.6470	36.99	1.7190	2.0290	118.03	0.0390	0.9660	0.9650			0.0250			0.0140		2.0290	Nov-88	1
104	TANDA	NTPC LTD. (U.P.)	440.00	1.6150	33.62	0.5430	1.5590	287.11	0.0010	0.3450	0.8870				0.3260				1.5590	Jan-00	1
105	KORBA	NTPC (Chhattisgarh)	2600.00	13.6751	39.58	5.4123	2.7650	51.09	0.0569	0.0002				1.4630	0.1518	0.0765		1.0165	2.7650	Mar-83	1
106	VINDHYACHAL	NTPC LTD. (M.P.)	4760.00	24.5260	33.67	8.2580	2.6760	32.40	0.1230	0.0690				1.6890	0.2140			0.5810	2.6760	Oct-87	1
107	SIPAT	NTPC LTD. (Chhattisgarh)	2980.00	14.0010	34.28	4.7993	2.3770	49.53	0.3210	0.5430	0.1110			0.5860	0.2500		0.1240	0.4420	2.3770	May-07	1
108	RAMAGUNDAM	NTPC LTD. (Andhra Pradesh)	2600.00	11.5860	36.90	4.2750	4.7150	110.29	1.8220	0.6720				0.5550	0.7500	0.8500		0.0660	4.7150	Nov-83	1
109	SIMHADRI	NTPC LTD. (Andhra Pradesh)	2000.00	8.8410	33.67	2.9770	2.9820	100.17	0.5370	0.5380	0.7850			0.8200	0.0160			0.2860	2.9820	Feb-02	1
110	FARAKKA	NTPC LTD. (W.B.)	2100.00	9.4410	33.21	3.1350	2.5110	80.10	0.0430	0.3520	0.0800			0.7550	0.9780			0.3020	2.5110	Jan-86	1
111	KAHALGAON	NTPC LTD.(Bihar)	2240.00	12.5920	34.31	4.3200	2.0890	48.36	0.2690	0.5910	0.0540			0.3140	0.3830			0.4780	2.0890	Mar-92	1

## FLY ASH GENERATION AND ITS UTILIZATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2018-19 (APRIL-2018 TO MARCH-2019)

(POWER)

UTILITY WISE)

Sl. no.	Name of TPS	Power Utility & state	Installed Capacity (MW)	Coal Consumed (MT)	Ash Content of coal (%)	Fly Ash Generation (MT)	Fly Ash Utilization (MT)	%age utilization (B)/(7)X100	In making of Fly Ash based/Bric K/Blocks/Tiles etc. (MT)	In manufacture of Portland cement (MT)	In construction of Highways & Roads including flyovers (MT)	Part replacement of cement in concrete (MT)	In Hydro power sector in RCC Dam construction (MT)	In Ash Dyke raising (MT)	In reclamation of low lying Area (MT)	In Mining filling (MT)	In agriculture/waste land Development (MT)	Others (MT)	Total Utilization (MT)	Date Of Commission	Total filled up data
112	BARH SUPER TPS	NTPC LTD. (Bihar)	1320.00	5.7030	40.28	2.2970	1.1520	50.15	0.1410	0.2660	0.7450								1.1520	Nov-14	1
113	TALCHAR(TPS)	NTPC LTD.(Odisha).	460.00	2.8950	39.00	1.1290	1.1323	100.29	0.0113					0.0050	1.1160				1.1323	03.06.1995	1
114	TALCHAR(KAN)	NTPC LTD.(Odisha).	3000.00	17.1400	44.25	7.5850	3.8080	50.20	0.0980	0.0230	0.2230			3.3780	0.0860				3.8080	Feb-95	1
115	MOUDA TPS	NTPC LTD. (Maharashtra)	2320.00	7.8410	33.77	2.6480	2.3880	90.18	0.9110	0.3010	0.6970			0.4420	0.0370				2.3880	Apr-12	1
116	BONGAIGAON	NTPC LTD. (Assam)	750.00	1.5670	29.80	0.4670	0.1410	30.19	0.0320	0.0000	0.1090			0.0110					0.1410	June 2015	1
117	SOLAPUR	NTPC LTD. (Maharashtra)	1320.00	1.2560	33.96	0.4265	0.5400	126.61	0.1800	0.2990								0.0500	0.5400	01.04.2017	1
118	KUDGI	NTPC LTD. (Karnataka)	2400.00	4.1300	33.18	1.3703	0.8830	64.44	0.0030	0.8600									0.8830	Dec-16	1
118B	GADARWARA	NTPC LTD. (Madhya Pradesh)	800.00	0.2080	42.31	0.0880	0.0000	0.00											0.0000	29.03.2019	1
118C	BARAUNI	NTPC Ltd-BSPGCL(JV) (Bihar)	220.00	0.0000	#DIV/0!	0.0000	0.0000	#DIV/0!											0.0000	01.05.1983	1
119	RAJPIURA TPS	NABHA POWER PROJECT (Punjab)	1400.00	4.7651	30.21	1.4395	1.3055	90.69	0.0499	1.0676	0.0000	0.1056				0.0824			1.3055	24.01.2014	1
119A	NALCO, CPP AUNGAL	NATIONAL ALUMINIUM COMPANY LIMITED (NALCO) (Odisha)	1200.00	5.5940	44.26	2.4760	1.8206	73.53	0.3420		0.1036			1.2240	0.1510				1.8206	29.09.1986	1
120	IB VALLEY	O.P.G.C.L.(Odisha)	420.00	2.5643	39.55	1.0141	0.3434	33.86	0.0153		0.0088				0.3031			0.0001	0.3434	21.12.1994	1
120A	ORG POWER GENERATION PRIVATE LIMITED (Tamil Nadu)	ORG POWER GENERATION PRIVATE LIMITED (Tamil Nadu)	414.00	1.8158	4.87	0.0885	0.0961	108.55	0.0240	0.0721									0.0961	01.06.2010	1
121	BATHINDA	P.S.P.C.L. (Punjab)	460.00	0.0000	#DIV/0!	0.0000	0.7427	#DIV/0!	0.2980	0.4447									0.7427	22.09.1974	1
122	LEHRA MOHABAT	P.S.P.C.L. (Punjab)	920.00	1.6360	38.20	0.6249	0.5394	86.32	0.0097	0.4237	0.0621			0.0439					0.5394	25.05.1998	1
123	ROPAR	P.S.P.C.L. (Punjab)	840.00	1.1442	34.65	0.3965	1.2771	322.11	0.0219	0.6375	0.5198	0.0015			0.0930		0.0033		1.2771	31.03.1988	1
50A	GVK POWER(GOINDWALSAHIB)LTD.,GOINDWALS AHIB	PSPL (Punjab)	540.00	1.6827	27.75	0.4669	0.4658	99.76		0.4647				0.0011					0.4658	2016	1
124	PRAYAGRAJ TPS	PRAYAGRAJ POWER GENERATION COMPANY LTD. (U.P.)	1880.00	4.7921	28.15	1.3490	1.2555	93.07	0.0663	1.1891									1.2555	29.02.2016	1
127	UCCHPINDA	R.K.M.POWERGEN PVT. LTD (PGCIL) (Chhattisgarh)	1440.00	1.4126	38.94	0.5501	0.5417	98.47	0.0007	0.4692	0.0578				0.0004			0.0137	0.5417	23.11.2015	1
128	CHHABRA	RRVUNL (Rajasthan)	1000.00	4.1256	33.22	1.3707	1.4274	104.14	0.3188	0.9160	0.0151				0.0132				1.4274	11.06.2010	1
129	SURATGARH	RRVUNL (Rajasthan)	1500.00	4.3128	33.21	1.4324	1.5319	106.95	0.1373	0.7266								0.6680	1.5319	31.10.1998	1

**ANNEX-I  
(POWER)  
FLY ASH GENERATION AND ITS UTILIZATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2018-19 (APRIL-2018 TO MARCH-2019)  
(UTILITY WISE)**

Sl no.	Name of TPS	Power Utility & state	Installed Capacity (MW)	Coal Consumed (MT)	Ash Content of coal (%) (7)/(5)*100	Fly Ash Generation (MT)	Fly Ash Utilization (MT)	%age utilization (8)/(7)*100	In making of Fly Ash based/Brick/Blocks/Tiles etc. (MT)	In manufacture of portland cement/ pozzolana cement (MT)	In construction of Highways & Roads including flyovers (MT)	Part replacement of cement in concrete construction (MT)	In Hydro power sector in RCC Dam construction (MT)	In Ash Dyke raising (MT)	In reclamation of low lying Area (MT)	In Mining filling (MT)	In agriculture /waste land Development (MT)	Others (MT)	Total utilization (MT)	Date Of Commission	Total filed up data
129A	KALISINDH	RVVUNJL (Rajasthan)	1200.00	2,9340	31.33	0.9191	1.0806	117.57	0.0765	0.6511	0.0531		0.0026	0.0011				0.2961	1.0806	07.05.2014	1
131	ROSA PHASE-I	RPSCL(U.P)	1200.00	2,5711	31.99	0.8224	0.9553	116.16	0.0548	0.5266		0.0008	0.2433	0.0964			0.0333		0.9553	12.03.2010	1
132	AMRAVATI TPS	RATTANINDIA POWER LTD. (Maharashtra)	1350.00	2,3515	30.68	0.7214	0.8329	115.46	0.4100			0.0237	0.1254	0.2738				0.000044	0.8329	03.06.2013	1
133	YERAMARU TPS	RAICHUR POWER CORPORATION LIMITED (Karnataka)	1600.00	0.4736	25.66	0.1215	0.0400	32.91	0.0062	0.0338									0.0400	07.03.2017	1
133A	BINL CAPTIVE TPP, VISAKHAPATNAM	RASHTRIYA ISPAT NIGAM LIMITED (Andhra Pradesh)	315.00	1.7628	43.27	0.7628	0.2202	28.87		0.0417					0.1785				0.2202	12.03.1989	1
49	GMR Chhattisgarh	RAJPUTR ENERGEN LIMITED (Formerly GMR CHHATTISGARH Energy Ltd) (Chhattisgarh)	1370.00	1.6707	29.71	0.4964	0.5173	104.21	0.0368	0.4805									0.5173	1.06.2015	1
138	SASAN UMPP	RELIANCE POWER LIMITED (Madhya Pradesh)	3960.00	18.0836	22.24	4.0222	1.4916	37.08	0.0014	0.1329		0.0026			1.3547				1.4916	16.08.2013	1
134	SINHAPURI	SEPL(Andhra Pradesh)	600.00	0.0627	3.26	0.0020	0.0020	100.00											0.0020	29.02.2012	1
135	RATITZA TPS	SPECTRUM COAL & POWER LTD.(Chhattisgarh)	100.00	1.1592	61.84	0.7169	0.5516	76.95	0.0160					0.5336					0.5516	27.02.2013	1
136	SAILLAGARH POWER GENERATION Ltd.	SAILLAGARH POWER GENERATION LIMITED (Chhattisgarh) (No Generation)	86.00	0.0000	#DIV/0!	0.0000	0.0000	#DIV/0!											0.0000	00.00.2007	1
137	SEMPUR ENERGY INDIA Ltd. (PAINAMPURAM TPP) (SGPL-TPP)	SEMPUR ENERGY INDIA Ltd. (Formerly Thermal Powertech Corporation India Ltd) (Andhra Pradesh)	1320.00	4.8974	18.12	0.8874	0.7780	87.67	0.0063	0.7718									0.7780	Mar-15	1
137A	SWASTIK POWER & MINERALS RESOURCES PVT. LTD.	SWASTIK POWER & MINERALS RESOURCES PVT. LTD (Chhattisgarh) (No Generation)	25.00	0.0000	#DIV/0!	0.0000	0.0000	#DIV/0!											0.0000	02.05.2015	1
137C	SKS POWER GENERATION(CCLTD (Binjote TPP)	SKS POWER GENERATION(CHHATTISGARH ) LIMITED (Chhattisgarh)	600.00	1.1786	47.36	0.5582	0.3961	70.96	0.0069	0.0869	0.0016			0.1553		0.1455			0.3961	06.10.2017	1
137B	SINGARENI TPP	THE SINGARENI COLLIERIES COMPANY LIMITED (Telengana)	1200.00	5.1945	35.12	1.8241	1.8736	102.71	0.1710	0.7489		0.1925		0.0166		0.7446			1.8736	25.09.2016	1
139	CUDDALORE	TAQA NEWVELLY POWER CO.PVT. LTD. (Tamil Nadu)	250.00	0.2034	52.47	0.1067	0.0803	75.22	0.0134	0.0646									0.0803	15.12.2002	1
140	JOJOBERA	T.P.CO. (Jharkhand)	547.50	0.2518	42.53	0.1071	0.0942	87.93	0.0002	0.0505		0.0069			0.0366				0.0942	September,1997	1
141	TROMBAY	T.P.CO.(Maharashtra)	750.00	2.2950	2.19	0.0502	0.0514	102.39	0.0066			0.0359						0.0008	0.0514	1984	1
142	SABARMATI	TORRENT POWER LTD.(Gujarat)	422.00	1.5194	21.84	0.3319	0.3319	100.00		0.2595				0.0640					0.3319	13.04.1997	1
143	TUTICORIN	T.N.G & D Corporation (Tamil Nadu)	1050.00	4.5497	22.39	1.0188	0.6922	67.94	0.1113	0.5808								0.00003	0.6922	09.07.1979	1

## FLY ASH GENERATION AND ITS UTILIZATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2018-19 (APRIL-2018 TO MARCH-2019)

## (POWER UTILITY WISE)

Sl no.	Name of TPS	Power Utility & state	Installed Capacity (MW)	Coal Consumed (MT)	Ash Content of coal (%)	Fly Ash Generation (MT)	Fly Ash Utilization (MT)	%age utilization (B)/(7)X100	In making of Fly Ash based/Bric blocks/Tiles etc. (MT)	In manufacture of Portland cement pozzolana cement (MT)	In construction of Highways & Roads including flyovers (MT)	Part replacement of cement in concrete (MT)	In Hydro power sector in RCC Dam construction (MT)	In Ash Dyke raising (MT)	In reclamation of low lying Area (MT)	In Mining filling (MT)	In agriculture /waste land Development (MT)	Others (MT)	Total Utilization (MT)	Date Of Commission	Total filled up data
144	METTUR-I	T.N.G & D Corporation (Tamil Nadu)	840.00	4,0660	28.20	1,1470	0,9373	81.72	0.1405	0.5094								0.2874	0.9373	07.01.1987	1
145	METTUR-II	T.N.G & D Corporation (Tamil Nadu)	600.00	2,0056	30.71	0,6159	0,4889	79.39	0.0870	0.3811								0.0208	0.4889	11.10.2012	1
146	NORTH CHENNAI-I	T.N.G & D Corporation (Tamil Nadu)	630.00	2,7914	36.43	1,0169	0,8727	66.16	0.0502	0.2696	0.3530								0.6727	25.10.1994	1
147	NORTH CHENNAI-II	T.N.G & D Corporation (Tamil Nadu)	1200.00	5,0088	28.60	1,4326	1,0624	74.16	0.2782	0.7842									1.0624	20.03.2014	1
147A	RAMAGUNDAI'B	TSPSCL (Telengana)	62.50	0,2886	31.91	0,0921	0,1457	158.22		0.0107								0.1350	0.1457	17.10.1971	1
147B	KOTHAGUDEM-V	TSPSCL (Telengana)	500.00	3,1069	36.03	1,1195	0,2786	24.88		0.0631								0.2154	0.2786	27.03.1997	1
147C	KOTHAGUDEM-VI	TSPSCL (Telengana)	500.00	2,3499	28.96	0,6605	0,7168	105.34	0.0947	0.5689								0.0533	0.7168	20.10.2011	1
148	KOTHAGUDEM (Stage I to IV)	T.S.P.G.C.L (Telangana)	420.00	3,2963	54.15	1,7849	0,7393	41.42	0.4028	0.2465				0.0900				0.00004	0.7393	04.07.1966	1
149	KAKATIA (Stage-I)	T.S.G.E.N.C.O. (Telangana)	500.00	2,1826	37.06	0,8088	0,8209	101.49	0.1566	0.5562				0.1066	0.0013			0.0001	0.8209	31.03.2010	1
150	KAKATIA (Stage-II)	T.S.G.E.N.C.O. (Telangana)	600.00	2,0984	36.86	0,7735	0,7852	101.52	0.1401	0.5364				0.1069	0.0017				0.7852	24.03.2016	1
151	RAIGARH TPP (NAWAPARA TPP)	TRN ENERGY PRIVATE LIMITED (Chhattisgarh)	600.00	2,4469	43.46	1,0634	0,7895	74.25	0.0296						0.7599				0.7895	13.08.2016	1
152	TENUGHAT TPS	TENUGHAT VIDYUT NIGAM LIMITED (Jharkhand)	420.00	1,2327	40.00	0,4931	0,6419	130.19							0.6399			0.0020	0.6419	14.04.1994	1
153	M/S TALWANDI SABO POWER LTD (Punjab)	TALWANDI SABO POWER LTD (Punjab)	1980.00	6,8800	33.14	2,2800	2,5100	110.09	0.1300	1.3000	0.3700				0.2600			0.4500	2.5100	05.07.2014	1
154	ANPARA 'A' & 'B'	U.P.R.V.U.N.L. ( U.P.)	2630.00	12,7487	34.50	4,3969	0,2326	5.29	0.0031	0.2205					0.0089			0.0001	0.2326	01.01.1987	1
155	HARDUAGANU	U.P.R.V.U.N.L. ( U.P.)	610.00	1,9174	41.14	0,7889	0,7624	96.64	0.0382	0.3874					0.3368				0.7624	28.05.1978	1
156	OBRA	U.P.R.V.U.N.L. ( U.P.)	1000.00	2,5631	30.44	0,7802	0,0904	11.58	0.0015	0.0715	0.0173								0.0904	26.01.1980	1
157	PANKI	U.P.R.V.U.N.L. ( U.P.)(No Generation)	210.00	0,0000	#DIV/0!			#DIV/0!	0.0000	0.0000	0.0000								0.0000	10.11.1976, Shutdown	1
158	PARICHA	U.P.R.V.U.N.L. ( U.P.)	1140.00	3,4020	39.30	1,3370	1,0942	81.84	0.0530	0.7680				0.2732					1.0942	31.03.1984	1
159	UDUPI	UDUPI POWER CORPORATION LIMITED (Karnatak)	1200.00	2,2190	5.68	0,1260	0,1261	100.08	0.0233	0.0740								0.0032	0.1261	11.11.2010	1
160	BUTTORI	VIDARBA INDUSTRIES POWER LTD. (Maharashtra)	600.00	1,4377	32.73	0,4705	0,7488	159.16	0.0847	0.0851	0.4424								0.7488	04.04.2013	1
161	VS LIGNITE POWER PRIVATE LTD	VS LIGNITE POWER PRIVATE LIMITED (Rajasthan)	135.00	0,3595	15.01	0,0540	0,0455	84.29	0.0020										0.0435	2.2010	1
161A	VEDANTA LTD TPP	VEDANTA LIMITED (Odisha)	2400.00	7,8500	39.34	3,0881	3,7198	120.46	0.0137		0.0092			0.8329	2.2787			0.5852	3.7198	09.11.2010	1
161B	VEDANTA LTD CPP	VEDANTA LIMITED (Odisha)	1215.00	6,1600	39.99	2,4633	2,7713	112.50	0.0763	0.1980	0.0123			0.6555	1.8259			0.0033	2.7713	30.07.2008	1
162	KOLAGHAT	W.B.P.D.C.L(W.B.)	1260.00	3,8391	42.11	1,6165	2,1411	132.45	0.0916	0.5492					1.5004				2.1411	16.08.1990	1

FLY ASH GENERATION AND ITS UTILIZATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2018-19 (APRIL-2018 TO MARCH-2019)  
(UTILITY WISE)

Sl no.	Name of TPS	Power Utility & state	Installed Capacity (MW)	Coal Consumed (MT)	Ash Content of coal (%) (7)/(5)x100	Fly Ash Generation (MT)	Fly Ash Utilization (MT)	%age utilization (8)/(7)x100	In making of Fly Ash based/Brick/Blocks/Tiles etc. (MT)	In manufacture of portland pozzolana cement (MT)	In construction of Highways & Roads including flyovers (MT)	Part replacement of cement in concrete (MT)	In Hydro power sector in RCC Dam construction (MT)	In Ash Dyke raising (MT)	In reclamation of low lying Area (MT)	In Mining filling (MT)	In agriculture/waste land Development (MT)	Others (MT)	Total Utilization (MT) $\Sigma(10)$ to	Date Of Commission	Total lined up data
163	SAGARDIGHI	W.B.P.D.C.L.(W.B.)	1600.00	3.6005	34.12	1.2283	1.1470	93.38	0.0770	0.2548					0.8152				1.1470	07.09.2008	1
164	BANDEL	W.B.P.D.C.L.(W.B.)	335.00	1.1539	42.13	0.4661	0.4337	89.23	0.0258	0.2328					0.1752				0.4337	04.09.1965	1
165	SANTALDIH	W.B.P.D.C.L.(W.B.)	500.00	0.2374	45.90	0.1090	0.1103	101.25	0.0026	0.0352					0.0719			0.0005	0.1103	01.04.2009	1
166	BAKRESWAR	W.B.P.D.C.L.(W.B.)	1050.00	4.1406	38.78	1.6057	1.6783	116.98	0.0440	0.0539					0.9804				1.8783	18.07.1999	1
167	SAI WARDHA POWER Ltd.,WARORA	WPCL (Maharashtra)	540.00	0.7790	33.76	0.2630	0.3016	114.66	0.0320	0.1410	0.0126			0.0290		0.0870			0.3016	15.04.2010	1
	<b>Grand Total</b>		<b>197966.50</b>	<b>667.4302</b>	<b>32.52</b>	<b>217.0381</b>	<b>168.3976</b>	<b>77.59</b>	<b>21.6097</b>	<b>58.3401</b>	<b>9.7244</b>	<b>1.7742</b>	<b>0.0000</b>	<b>21.5734</b>	<b>29.3177</b>	<b>10.1002</b>	<b>1.3769</b>	<b>14.5809</b>	<b>168.3975</b>		<b>195</b>





**ANNEX-II**  
**FLY ASH GENERATION AND ITS UTILIZATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2018-19 (APRIL-2018 TO MARCH-2019) (State Wise)**

Sl no.	Name of TPS	Power Utility & state	Installed Capacity (MW)	Coal Consumed (7)/(5)×100	Ash Content of coal (7)	Fly Ash Generation	Fly Ash Utilization	%age utilization (8)/(7)×100	In making of Fly Ash based/Brick/Blocks/Tile blocks etc.	In manufacture of portland cement pozzolana	In construction of Highways & Roads including flyovers	Part replacement of cement in concrete	In Hydro power sector in RCC Dam construction	In Ash Dyke raising	In reclamation of low lying Area	In Mining filling	In agriculture/waste land Development	Others	Total Utilization	
																				(4)
<b>ANDHRA PRADESH</b>																				
1	Dr. N.T.R (Vijawada)	APGENCO (Andhra Pradesh)	1760.00	8.9415	46.02	4.1149	4.2752	103.90	2.2972	1.1738	0.0224	0.1598	0.0000	0.0000	0.4945	0.0000	0.0000	0.0000	0.1276	4.2752
2	RAYALSEEMA	APGENCO (Andhra Pradesh)	1650.00	4.8249	39.88	1.9240	1.6172	84.06	0.4403	1.1770	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.6172
3	SRI DAMODARAM SANJEEVAIAH Vizag TPS	APPDCL(Andhra Pradesh)	1600.00	4.4150	27.45	1.2120	0.7926	65.40	0.1570	0.4990	0.0000	0.0000	0.0000	0.0000	0.1366	0.0000	0.0000	0.0000	0.7926	
4	Vizag TPS	HINDUJA NATIONAL POWER CORPORATION LIMITED (Andhra Pradesh)	1040.00	0.6047	61.84	0.1991	0.5201	76.95	0.1626	0.1228	0.1637	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0709	0.5201
5	THAMMIPATNAM TPS	MEENAKSHI ENERGY PVT. Ltd.(Andhra Pradesh)	300.00	0.0275	4.97	0.0014	0.0085	622.26	0.0016	0.0000	0.0000	0.0000	0.0000	0.0069	0.0000	0.0000	0.0000	0.0000	0.0085	
6	RAMAGUNDAM	N.T.P.C. (Andhra Pradesh)	2600.00	11.5860	36.90	4.2750	4.7150	110.29	1.8220	0.6720	0.0000	0.0000	0.0000	0.5550	0.7500	0.8500	0.0000	0.0660	4.7150	
7	SIMHAORI	N.T.P.C. (Andhra Pradesh)	2000.00	8.8410	33.67	2.9770	2.9820	100.17	0.5370	0.5380	0.7850	0.0000	0.0000	0.8200	0.0160	0.0000	0.0000	0.2860	2.9820	
8	RINL CAPTIVE TPP, VISAKHAPATNAM	RASHTRIYA ISPAT NIGAM LIMITED (Andhra Pradesh)	315.00	1.7628	43.27	0.7628	0.2202	28.87	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.1785	0.0000	0.0000	0.0000	0.2202	
9	SIMHAPURI	SEPL(Andhra Pradesh)	600.00	0.0627	3.26	0.0020	0.0020	100.00	0.0020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0020	
10	SEBICORP ENERGY INDIA (EXTN)	SEBICORP ENERGY INDIA Ltd. (Formerly Thermal Powertech Corporation India Ltd) (Andhra Pradesh)	1320.00	4.8974	18.12	0.8874	0.7780	87.67	0.0063	0.7718	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.7780	
<b>ASSAM</b>																				
1	BONGAIGAON	NTPC LTD. (Assam)	750.00	1.5670	29.80	0.4670	0.1410	30.19	0.0320	0.0000	0.1090	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1410	
<b>BIHAR</b>																				
1	NABINAGAR	BHARATIYA RAIL BIDLEE COMPANY LIMITED (Bihar)	750.00	1.7080	35.72	0.6101	0.1744	28.59	0.0014	0.1730	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1744	
2	MUZAFFARPUR TPS	KANTI BIDLEE UTPADAN NIGAM LIMITED (Bihar)	610.00	2.0444	39.71	0.8118	0.3022	37.22	0.0132	0.0000	0.0000	0.0000	0.0000	0.0009	0.2890	0.0000	0.0000	0.0000	0.3022	
3	KAHALGAON	NTPC LTD.(Bihar)	2340.00	12.5920	34.31	4.3200	2.0890	48.36	0.2690	0.5910	0.0540	0.0000	0.0000	0.3140	0.3830	0.0000	0.0000	0.0000	2.0890	
4	BARH SUPER TPS	NTPC LTD (Bihar)	1320.00	5.7030	40.28	2.2970	1.1520	50.15	0.1410	0.2660	0.7450	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.1520	
5	BARAUNI	NTPC Ltd-BSPGCL(V) (Bihar)	220.00	0.0000	#DIV/0!	0.0000	0.0000	#DIV/0!											0.0000	
<b>CHHATTISGARH</b>																				
1	KASAIPALI	ACB(INDIA)L (Chhattisgarh)	270.00	1.8834	57.29	1.0789	1.0789	100.00	0.0864	0.0000	0.0000	0.0000	0.0000	0.0000	0.9852	0.0000	0.0000	0.0074	1.0789	
2	SVPPL Renki	ACB India Limited (Chhattisgarh)	60.00	0.0163	60.00	0.0098	0.0098	100.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0098	0.0000	0.0000	0.0000	0.0098	
3	CHAKABURA TPP	ACB (INDIA) Ltd. (Chhattisgarh)	30.00	0.3249	55.00	0.1787	0.1787	100.00	0.0146	0.0000	0.0000	0.0000	0.0000	0.0000	0.1641	0.0000	0.0000	0.0000	0.1787	
4	CHAKABURA TPP (EXTN)	ACB (INDIA) Ltd. (Chhattisgarh)	30.00	0.3044	54.98	0.1673	0.1673	100.00	0.0146	0.0000	0.0000	0.0000	0.0000	0.0000	0.1527	0.0000	0.0000	0.0000	0.1673	
5	BALCO CPP-II	BHARAT ALUMINIUM COMPANY LIMITED(BALCO) (Chhattisgarh)	540.00	2.7172	38.28	1.0402	1.1076	106.48	0.0072	0.0013	0.0000	0.0000	0.0000	0.0000	0.4907	0.0023	0.0000	0.0000	1.1076	



**ANNEX-II**  
**FLY ASH GENERATION AND ITS UTILIZATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2018-19 (APRIL-2018 TO MARCH-2019) (State Wise)**

Sl no.	Name of TPS	Power Utility & state	Installed Capacity (MW)	Coal Consumed (MT)	Ash Content of coal (%) (7)/(5) x 100	Fly Ash Generation (MT)	Fly Ash Utilization (MT)	%age utilization (B)/(C) x 100	In making of Fly Ash based/Brick/Blocks/Tiles etc. (MT)	In manufacture of portland cement pozzolana (MT)	In construction of Highways & Roads including flyovers (MT)	Part replacement of cement in concrete (MT)	In Hydro power sector in RCC Dam construction (MT)	In Ash Dyke raising (MT)	In reclamation of low lying Area (MT)	In Mining filling (MT)	In agriculture/waste land Development (MT)	Others (MT)	Total Utilization (MT)	Σ (10) to (19)
29	RAIGARH TPP (NAWAPARA TPP)	TRN ENERGY PRIVATE LIMITED (Chhattisgarh)	600.00	2.4469	43.46	1.0634	0.7895	74.25	0.0296	0.0000	0.0000	0.0000	0.0000	0.0000	0.7599	0.0000	0.0000	0.0000	0.0000	0.7895
<b>DELHI</b>																				
1	RAJGHAT	IPCL (Delhi)	135.00	0.0000	#DIV/0!	0.0000	0.0000	#DIV/0!												0.0000
2	BADARPUR	N.T.P.C.LTD (Delhi)	705.00	0.9800	30.00	0.2940	0.2900	98.64	0.2570	0.0270	0.0060	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2900
<b>GUJARAT</b>																				
1	MUNDRA TPS	ADANI POWER (MUNDRA) LIMITED (Gujarat)	4620.00	13.2500	5.84	0.7740	0.7951	102.73	0.0000	0.3440	0.0000	0.0000	0.0000	0.0000	0.2180	0.0000	0.0000	0.0000	0.2331	0.7951
2	BHADRESHWAR VIDYUT PRIVATE LTD	BHADRESHWAR VIDYUT PRIVATE LIMITED (Gujarat)	300.00	1.2677	3.89	0.0493	0.0487	98.89	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0487	0.0487
3	MUNDRA UMPP	CGPL (Gujarat)	4150.00	11.5000	6.87	0.7900	0.7410	93.80	0.0090	0.4700	0.0000	0.0300	0.0000	0.0000	0.0800	0.0020	0.0000	0.0000	0.1500	0.7410
4	SURAT LIGNITE	G.I.P.C.L. (Gujarat)	500.00	3.7073	16.27	0.6033	0.6033	100.00	0.4003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2030	0.6033
5	AKRIMOTA	G.M.D.C.L. (Gujarat)	250.00	1.1993	22.22	0.2665	0.3765	141.28	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.3765	0.0000	0.0000	0.0000	0.3765
6	GANDHINAGAR	G.S.E.C.L. (Gujarat)	630.00	0.2342	31.77	0.0744	0.1923	258.49	0.0325	0.0775	0.0611	0.0212	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1923
7	KUTCH LIGNITE	G.S.E.C.L. (Gujarat)	290.00	0.1640	26.71	0.0438	0.0439	100.23	0.0000	0.0055	0.0000	0.0000	0.0000	0.0000	0.0000	0.0384	0.0000	0.0000	0.0439	
8	SIKKA	G.S.E.C.L. (Gujarat)	500.00	0.1358	7.36	0.0100	0.0339	339.00	0.0207	0.0132	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0339	
9	UKAI	G.S.E.C.L. (Gujarat)	1110.00	0.4167	31.49	0.1312	0.1080	82.32	0.0521	0.0374	0.0000	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0183	0.1080
10	WANAKBORI	G.S.E.C.L. (Gujarat)	1470.00	0.5223	32.28	0.1666	0.1570	93.09	0.0182	0.0937	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0256	0.1570
11	BHAVNAGAR LIGNITE	G.S.E.C.L. (Gujarat)	500.00	0.0625	10.88	0.0068	0.0059	86.76	0.0020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0039	0.0000	0.0000	0.0059	
10	SABARMATI	TORRENT POWER LTD.(Gujarat)	422.00	1.5194	21.84	0.3319	0.3319	100.00	0.0000	0.2595	0.0000	0.0000	0.0000	0.0640	0.0000	0.0000	0.0084	0.0000	0.3319	
<b>HARYANA</b>																				
1	INDIRA GANDHI	APCPL (Haryana)	1500.00	4.7101	31.92	1.5034	1.5545	103.40	0.3434	1.2111	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.5545	
2	RAJIV GANDHI (HISAR)	H.P.G.C.L.(Haryana)	1200.00	2.6974	39.47	1.0645	0.6482	60.89	0.1155	0.3944	0.0000	0.0041	0.0000	0.0000	0.1343	0.0000	0.0000	0.0000	0.6482	
3	YAMUNANAGAR	H.P.G.C.L.(Haryana)	600.00	2.1322	40.29	0.8591	1.0741	125.02	0.0148	0.5223	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0741	
4	PANIPAT	H.P.G.C.L.(Haryana)	920.00	2.1695	38.00	0.8244	1.2384	150.21	0.0759	0.7271	0.2455	0.0000	0.0000	0.0000	0.1786	0.0000	0.0000	0.0000	1.2384	
5	MAHATMA GANDHI	JHPL (Haryana)	1320.00	4.1308	39.90	1.6480	2.2565	136.92	0.0219	1.4766	0.7118	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.2565	
<b>JHARKHAND</b>																				
1	ADHUNIK PNR LTD.(MAHADEV PRASAD STPP)	ADHUNIK POWER & NATURAL RESOURCES LTD. (Jharkhand)	540.00	1.9972	37.47	0.7484	0.8805	117.65	0.0452	0.1484	0.0000	0.0049	0.0000	0.0810	0.4690	0.0000	0.0000	0.0000	0.1321	0.8805



**ANNEX-II**  
**FLY ASH GENERATION AND ITS UTILIZATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2018-19 (APRIL-2018 TO MARCH-2019) (State WISE)**

Sl No.	Name of TPS	Power Utility & state	Installed Capacity (MW)	Coal Consumed	%age (7)/(5)*100	Fly Ash Generation	Fly Ash Utilization	%age (8)/(7)*100	In making of Fly ash based/brick/blocker/tile etc.	In manufacture of portland pozzolana cement	In construction of highways & roads including flyovers	Part replacement of cement in concrete	In Hydro power sector in RCC Dam construction	In Ash Dyke raising	In reclamation of low lying Area	In Mining filling	In agriculture/waste land Development	Others	Total Utilization (MT)	
																				MT
<b>MAHARASHTRA</b>																				
1	TIRODA	ADANI POWER MAHARASHTRA LTD. (Maharashtra)	3300.00	11.6870	31.86	4.3630	3.6847	84.45	0.0576	0.0156	0.0287	0.0000	0.0000	0.7525	0.5332	0.0000	0.0000	0.0000	2.2971	3.6847
2	MIHAN	AMNEPL (Maharashtra) (No Generation)	246.00	0.0000	#DIV/0!	0.0000	0.0000													0.0000
3	ADANI DAHANU	ADANI ELECTRICITY MUMBAI LIMITED (Maharashtra)	500.00	2.1670	26.03	0.5640	0.7324	129.85	0.0004	0.0000	0.0000	0.3100	0.0000	0.0560	0.0000	0.0000	0.0000	0.3660	0.7324	
4	DHARWAL INFRASTRUCTURE Ltd.	DHARWAL INFRASTRUCTURE LIMITED (Maharashtra)	600.00	2.1088	32.77	0.6910	0.7246	104.86	0.0683	0.6070	0.0293	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.7246
5	GMR WARORA ENERGY Ltd.	GMR WARORA ENERGY LTD. (Maharashtra)	600.00	2.4976	30.32	0.7574	0.8280	109.32	0.0621	0.6181	0.0301	0.0000	0.0000	0.0000	0.0000	0.1177	0.0000	0.0000	0.0000	0.8280
6	GEPL TPP	GUPTA ENERGY PRIVATE LIMITED (Maharashtra) (No Generation)	120.00	0.0000	#DIV/0!	0.0000	0.0000													0.0000
7	BELA TPS	IDEAL ENERGY PROJECTS LIMITED (Maharashtra)	270.00	0.1126	27.20	0.0306	0.0000	0.00												0.0000
8	RATNAGIRI	JSW ENERGY LIMITED (Maharashtra)	1200.00	3.3581	12.67	0.4254	0.4277	100.54	0.0563	0.0397	0.0000	0.3317	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.4277
9	BHUSAWAL	M.S.P.G.C.L. (Maharashtra)	1210.00	4.9792	35.26	1.7556	1.6756	95.44	0.3088	0.5750	0.0000	0.0000	0.0000	0.4761	0.0000	0.0000	0.0296	0.2861	1.6756	
10	CHANDRAPUR	M.S.P.G.C.L. (Maharashtra)	2920.00	11.5282	26.77	3.0892	1.0361	33.54	0.0371	0.9991	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0361
11	KHAPARKHEDA	M.S.P.G.C.L. (Maharashtra)	1340.00	6.1698	41.66	2.6952	0.3837	14.24	0.2678	0.0000	0.0000	0.0000	0.0000	0.1160	0.0000	0.0000	0.0000	0.0000	0.3837	
12	KORADI	M.S.P.G.C.L. (Maharashtra)	2600.00	6.4720	41.07	2.6580	0.7740	29.12	0.0070	0.0010	0.7660	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.7740
13	NASHIK	M.S.P.G.C.L. (Maharashtra)	630.00	1.8643	37.67	0.7022	1.4340	204.20	1.0743	0.3597	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.4340
14	PARLI	M.S.P.G.C.L. (Maharashtra)	750.00	2.0225	42.41	0.8578	2.5058	292.11	1.0639	0.1735	0.0000	0.2040	0.0000	0.9674	0.0000	0.0000	0.0339	0.0632	2.5058	
15	PARAS	M.S.P.G.C.L. (Maharashtra)	500.00	1.9320	34.57	0.6679	0.2274	34.05	0.2100	0.0174	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2274	
16	MOUDA TPS	NTPC LTD. (Maharashtra)	2320.00	7.8410	33.77	2.6480	2.3680	90.18	0.9110	0.3010	0.6970	0.0000	0.0000	0.4420	0.0370	0.0000	0.0000	0.0000	0.0000	2.3680
17	SOLAPUR	NTPC LTD. (Maharashtra)	1320.00	1.2560	33.96	0.4265	0.5400	126.61	0.1800	0.2990	0.0000	0.0000	0.0000	0.1010	0.0000	0.0000	0.0000	0.0500	0.5400	
18	AMRAVATI TPS	RATTANINDIA POWER LTD. (Maharashtra)	1350.00	2.3515	30.68	0.7214	0.8329	115.46	0.4100	0.0000	0.0000	0.0237	0.0000	0.1254	0.2738	0.0000	0.0000	0.0000	0.8329	
19	TROMBAY	T.P.CO. (Maharashtra)	750.00	2.2950	2.19	0.0902	0.0514	102.39	0.0066	0.0000	0.0000	0.0359	0.0000	0.0000	0.0000	0.0081	0.0000	0.0008	0.0514	
20	BUTIBORI	VIDARBA INDUSTRIES POWER LTD. (Maharashtra)	600.00	1.4377	32.73	0.4705	0.7488	159.16	0.0847	0.0851	0.4424	0.1365	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.7488	
21	SAI WARDHA POWER Ltd., WARORA	WPCL (Maharashtra)	540.00	0.7790	33.76	0.2630	0.3016	114.56	0.0320	0.1410	0.0126	0.0000	0.0000	0.0290	0.0000	0.0870	0.0000	0.0000	0.3016	
<b>ODISHA</b>																				
1	GMR KAMALANGA TPP	GMR KAMALANGA ENERGY LTD. (Odisha)	1050.00	4.8016	37.21	1.7867	1.7887	100.11	0.8202	0.1150	0.2938	0.0000	0.0000	0.0000	0.0000	0.0000	0.5597	0.0000	0.0000	1.7887
2	INDIAN METALS & FERRO ALLOYS LTD.	INDIAN METALS & FERRO ALLOYS Ltd. (Odisha)	258.00	0.9330	46.81	0.4367	0.4368	100.02	0.2918	0.0396	0.0053	0.0000	0.0000	0.0000	0.0947	0.0000	0.0000	0.0053	0.4368	



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Sl No.	Name of TPS	Power Utility & state	Installed Capacity (MW)	Coal Consumed (MT)	Ash Content of coal (%)	Fly Ash Generation (MT)	Fly Ash Utilization (MT)	%age utilization (B)/(7)*100	In making of Fly Ash based/Brick/blocks/rubble etc. (MT)	In manufacture of portland cement (MT)	In construction of Highways & Roads including flyovers (MT)	Part replacement of cement in concrete (MT)	In Hydro power sector in RCC Dam construction (MT)	In Ash Dyke raising (MT)	In reclamation of low lying Area (MT)	In Mining filling (MT)	In agriculture/ waste land Development (MT)	Others (MT)	Total Utilization $\Sigma$ (10) to (19) (MT)
2	CHEMPLAST LIMITED TPS	CHEMPLAST SANKAR LIMITED(Tamil Nadu)	48.50	0.2708	6.75	0.0183	0.0184	100.44	0.0184	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0184
3	IL&FS TAMIL NADU POWER COMPANY Ltd.	IL&FS TAMIL NADU POWER COMPANY LIMITED (Tamil Nadu)	1200.00	3.1050	4.19	0.1300	0.1280	98.46	0.0000	0.1280	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1280
4	JSW STEEL LIMITED CPP-II	JSW STEEL LIMITED (Tamil Nadu)	60.00	0.1197	10.61	0.0127	0.0127	100.11	0.0127	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0127
5	NEWVELL - I	MLC LTD.(Tamil Nadu)	500.00	4.7390	4.06	0.1825	0.1277	66.33	0.0209	0.1037	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0031	0.1277
6	NEWVELL -I EXPN	MLC LTD.(Tamil Nadu)	420.00	3.0085	4.72	0.1421	0.1421	100.00	0.0169	0.0945	0.0000	0.0000	0.0000	0.0000	0.0000	0.0257	0.0046	0.0004	0.1421
7	NEWVELL - II	MLC LTD.(Tamil Nadu)	1470.00	11.7642	5.66	0.6663	0.7520	112.86	0.1519	0.3577	0.0741	0.0000	0.0000	0.0000	0.0000	0.1569	0.0000	0.0114	0.7520
8	NEWVELL - II EXPN	MLC LTD. (Tamil Nadu)	500.00	1.9005	5.63	0.1070	0.1044	97.57	0.0834	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0211	0.0000	0.1044
9	MLC TAMILNADU POWER Ltd	MLC TAMIL NADU POWER LIMITED (Tamil Nadu)	1000.00	3.4076	30.36	1.0347	1.0343	99.96	0.0881	0.7821	0.0209	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1432	1.0343
10	VALLUR	NTPC TAMIL NADU ENERGY COMPANY LTD (NTECL) (Tamil Nadu)}	1500.00	5.6240	40.13	2.2570	1.5250	67.57	0.2530	0.1520	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.9680	1.5250
11	ORG POWER GENERATION PRIVATE LIMITED	ORG POWER GENERATION PRIVATE LIMITED (Tamil Nadu)	414.00	1.8158	4.87	0.0885	0.0961	108.55	0.0240	0.0721	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0961
12	CUDDALORE	TAGA NEWVELLY POWER CO.PVT. LTD. (Tamil Nadu)	250.00	0.2034	52.47	0.1067	0.0803	75.22	0.0134	0.0646	0.0000	0.0000	0.0000	0.0000	0.0000	0.0023	0.0000	0.0000	0.0803
13	TUTICORIN	T.N.G & D Corporation (Tamil Nadu)	1050.00	4.5497	22.39	1.0188	0.6922	67.94	0.1113	0.5808	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6922
14	METTUR-I	T.N.G & D Corporation (Tamil Nadu)	840.00	4.0680	28.20	1.1470	0.9373	81.72	0.1405	0.5094	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2874	0.9373
15	METTUR-II	T.N.G & D Corporation (Tamil Nadu)	600.00	2.0055	30.71	0.6159	0.4889	79.39	0.0870	0.3811	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0208	0.4889
16	NORTH CHENNAI-I	T.N.G & D Corporation (Tamil Nadu)	630.00	2.7914	36.43	1.0169	0.6727	66.16	0.0502	0.2696	0.3530	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6727
17	NORTH CHENNAI-II	T.N.G & D Corporation (Tamil Nadu)	1200.00	5.0088	20.60	1.4326	1.0624	74.16	0.2782	0.7842	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0624
<b>TELENGANA</b>																			
1	SINGARENI TPP	THE SINGARENI COLLIERIES COMPANY LIMITED (Telangana)	1200.00	5.1945	35.12	1.8241	1.8736	102.71	0.1710	0.7489	0.0000	0.1925	0.0000	0.0000	0.0166	0.7446	0.0000	0.0000	1.8736
2	RAHAGUNDAMB'	TSPGCL (Telangana)	62.50	0.2886	31.91	0.0921	0.1457	158.22	0.0000	0.0107	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1350	0.1457
3	KOTHAGUDEM-V	TSPGCL (Telangana)	500.00	3.1069	36.03	1.1195	0.2786	24.88	0.0000	0.0631	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2154	0.2786
4	KOTHAGUDEM-VI	TSPGCL (Telangana)	500.00	2.3499	28.96	0.6805	0.7168	105.34	0.0947	0.5689	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0533	0.7168
5	KOTHAGUDEM (Stage I to IV)	T.S.P.G.C.L.(Telangana)	420.00	3.2963	54.15	1.7849	0.7393	41.42	0.4028	0.2465	0.0000	0.0000	0.0000	0.0900	0.0000	0.0000	0.0000	0.0000	0.7393
6	KAKATIA (Stage-I)	T.S.G.E.N.C.O. (Telangana)	500.00	2.1826	37.06	0.8088	0.8209	101.49	0.1566	0.5562	0.0000	0.0000	0.0000	0.1066	0.0013	0.0000	0.0000	0.0001	0.8209
7	KAKATIA (Stage-II)	T.S.G.E.N.C.O. (Telangana)	600.00	2.0984	36.86	0.7735	0.7852	101.52	0.1401	0.5364	0.0000	0.0000	0.0000	0.1069	0.0017	0.0000	0.0000	0.0000	0.7852
<b>UTTAR PRADESH</b>																			





