



**REPORT  
ON  
FLY ASH GENERATION  
AT  
COAL/LIGNITE BASED THERMAL POWER  
STATIONS  
AND  
ITS UTILIZATION IN THE COUNTRY  
FOR  
THE YEAR 2014-15**



**CENTRAL ELECTRICITY AUTHORITY**

**NEW DELHI**

**OCTOBER, 2015**



## **FOREWORD**

Electricity generation in the country is and would remain predominantly by coal based stations in the near future. The Indian coal is of low grade having high ash content of the order of 30 - 45% generating large quantity of fly ash at coal/lignite based thermal power stations in the country. 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 power 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.

A large number of technologies have been developed for gainful utilization and safe management of fly ash under the concerted efforts made by Fly Ash Mission/Fly Ash Unit under Ministry of Science & Technology, Government of India since 1994. As a result, Fly ash earlier considered to be "hazardous industrial waste" material, has now acquired the status of useful and saleable commodity. The utilization of fly ash has increased from 6.64 million ton in 1996-97 to a level of 102.54 million-ton in 2014-15. The percentage of fly ash utilization during 2014-15 is 55.69% which is behind the target set by MoEF vide its notification dated 03.11.2009. This is a matter of concern and I understand MoEF&CC and other concerned departments are addressing the bottlenecks/difficulties to achieve the target. Recently, MoEF&CC have proposed an amendment dated 25<sup>th</sup> May, 2015 to existing notification for the purpose of increasing fly ash utilization.

This Report gives an overview of current status of fly ash generation and its utilization in the country for the year 2014-15. I am sure, that this publication will serve a useful purpose to guide all stake holders on the issues of fly ash utilization as per the notification of MoEF&CC, G.O.I.

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

New Delhi  
October, 2015

**(Major Singh)  
Chairperson, CEA**



## **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 targets of achieving 100% utilization of fly ash in time bound manner as prescribed in MoEF Notification of 3<sup>rd</sup> November, 2009. 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, GOI also issued 1<sup>st</sup> Notification on Fly Ash Utilization in September, 1999, which was subsequently amended in 2003 and 2009 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. MoEF&CC has issued draft notifications on 25.05.2015 with a view to enhancing fly ash utilization.

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 2014-15, the ash utilization level has reached to about 55.69% (102.54 MT) of total ash generated during the year as compared to less than 10% (6.6 MT) of the ash generated during the year 1996-97, a lot more needs to be done.

This report brings out present status of fly ash generation at 145 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 3<sup>rd</sup> November, 2009. 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 : [cetcd@cea.nic.in](mailto:cetcd@cea.nic.in))

New Delhi  
October, 2015

**(T.K.Barai)  
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## **ACKNOWLEDGEMENT**

The efforts made by S/ Shri Neeraj Kumar, Director, S.P.Singh, Deputy Director, B.P.Upadhyaya, Assistant Director, Laxmi Narain, Head Draftsman etc. are appreciable in bringing this report in a time bound manner.

We are very much thankful to NTPC to arrange printing of this report for the year 2014-15.

New Delhi  
October, 2015

**(Lalit Kumar)  
Chief Engineer (TCD)**

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

**FLY ASH GENERATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS AND ITS  
UTILIZATION IN THE COUNTRY  
(FOR THE YEAR 2014-15)**

**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) on behalf of Ministry of Power 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 yearly basis. The data thus obtained is analyzed and a report bringing out the status of fly ash generation and its utilization in the country is prepared. The said report is forwarded to Ministry of Power, Ministry of Environment, Forests and Climate Change 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.

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 2003 and 2009 vide Notifications dated 27<sup>th</sup> August, 2003 and 3<sup>rd</sup> November, 2009 respectively. The said Notification of 2009 as noted below prescribes targets of Fly Ash utilization in a phased manner for all Coal/Lignite based Thermal Power Stations in the country so as to achieve 100% utilization of fly ash.

The Thermal Power Stations in operation before the date of the Notification (i.e. 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 proposed an amendment to the Notification of 2009 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 factual 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 notification of 3<sup>rd</sup> November, 2009 and to take corrective measures in cases of Thermal Power Stations that are lagging behind achieving the prescribed targets of fly ash utilization.

**2.0 ASH GENERATION & UTILIZATION DURING THE YEAR 2014-15**

**2.1 A Brief Summary**

Fly ash generation & utilization data for the Year 2014-15 (April, 2014 to March, 2015) has been received from **145** (One hundred forty 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 2014-15**

Description		Year 2014-15
• Nos. of Thermal Power Stations from which data was received	:	145
• Installed capacity (MW)	:	1,38,915.80
• Coal consumed (Million tons)	:	549.72
• Fly Ash Generation (Million tons)	:	184.14
• Fly Ash Utilization (Million tons)	:	102.54
• Percentage Utilization	:	55.69
• Percentage Average Ash Content (%)	:	33.50

Power Station wise fly ash generation & its utilization status including modes of utilization for the 2014-15 for all the **145** 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 Retirement of Units during the Year 2014-15:

During the Year 2014-15, one unit with installed capacity of 62.5 MW as given in Table-II below have been decommissioned:

**TABLE-II**  
**UNITS RETIRED DURING THE YEAR 2014-15**

Sl. No.	Name of Thermal Power Station	Name of Power Utility	Unit No.	Capacity (MW)	Date of Retirement
(1)	(2)	(3)	(4)	(5)	(6)
<b>2014-15</b>					
1	Satpura	M.P.P.G.C. Ltd. (M.P.)	1	62.5	07.08.2014
<b>Total for 2014-15</b>					<b>62.5</b>

## 2.3 Power Utility wise Status of Fly Ash Generation & its Utilization during the Year 2014-15

The status of fly ash generation & utilization for the year 2014-15 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-III:

**TABLE-III**  
**POWER UTILITY WISE FLY ASH GENERATION AND UTILIZATION FOR THE YEAR 2014-15**

Sl. No.	Name of Power Utility	No. of TPS	Installed Capacity (MW)	Fly Ash Generation (Million-tonne)	Fly Ash Utilization (Million-tonne)	Percentage Utilization %
1	2	3	4	5	6	7
1	Andhra Pradesh Power Generation Corporation (A.P.GEN.CO)	2	2810.00	6.4264	4.0603	63.18
2	ACBPL (Chhattisgarh)	1	270.00	0.9148	0.8605	94.07
3	APL (Gujarat)	1	4620.00	1.5310	1.2930	84.45
4	APCPL (Haryana)	1	1500.00	1.8592	0.4066	21.87
5	AMNEPL (Maharashtra)	1	246.00	0.0000	0.0000	0.0000

<b>Sl. No.</b>	<b>Name of Power Utility</b>	<b>No. of TPS</b>	<b>Installed Capacity (MW)</b>	<b>Fly Ash Generation (Million- tonne)</b>	<b>Fly Ash Utilization (Million- tonne)</b>	<b>Percentage Utilization %</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
6	BEPL (UP)	5	450.00	1.0754	1.0363	96.36
7	Bihar State Power Generation Co. Ltd.	1	220.00	0.0000	0.0000	0.0000
8	C.E.S.C. Ltd.	4	1285.00	2.0926	2.0926	100.00
9	C.G.P.L (Gujarat)	1	4000.00	0.6480	0.1810	27.93
10	Chattisgarh State Power Generation Company Ltd. (C.S.P.G.C.L.)	4	2280.00	4.4018	0.7215	16.39
11	Damoadar Valley Corporation (D.V.C.)	6	6210.00	8.6181	8.2973	96.28
12	Durgapur Projects Ltd. (D.P.L.)	1	891.00	0.4560	0.4036	88.50
13	D.P.S.C.Ltd. (W.B)	2	42.00	0.0312	0.0312	100.00
14	E.P.G.L (Gujarat)	1	1200.00	0.2520	0.2520	100.00
15	Gujarat Industries Power Corporation Ltd. (G.I.P.C.L.)	1	500.00	0.4398	0.4398	100.00
16	Gujarat Mineral Development Corporation Ltd. (G.M.D.C.L.)	1	250.00	0.1571	0.1588	101.09
17	G.S.E.C.L. (Gujarat)	5	4220.00	4.4430	3.2180	72.43
18	Haryana Power Generation Cor. Ltd. (H.P.G.C.L.)	3	3167.80	3.4525	2.9052	84.15
19	Inderprastha Power Generation Company Ltd. (.I.P.G.C.L)	1	135.00	0.1281	0.1058	82.58
20	Jharkhand Urja Utpadan Nigam Limited (J.U.U.N.L.)	1	770.00	0.2816	0.0288	10.24
21	J.H.P.L (HR)	1	1320.00	1.3041	1.0456	80.18
22	J.P.L (Chhatisgarh)	2	2800.00	2.9690	1.7908	60.32
23	JSW Energy Ltd.	2	2060.00	0.5536	0.5137	92.79
24	Karnataka Power Corporation Ltd.(K.P.C.L.)	2	2720.00	7.9886	1.7639	22.081
25	Kanti Bijlee Utpadan Nigam Ltd.(K.B.U.N.L.)	1	220.00	0.2897	0.0550	18.99
26	Lanco Power Ltd.	1	600.00	0.5287	0.4762	90.077
27	Madhya Pradesh Power Generation Corporation Ltd. (M.P.P.G.C.L.)	4	4320.00	5.7093	2.8437	49.809
28	M.P.L (Jharkhand)	1	1050.00	1.6489	2.6548	161.01
29	Maharashtra State Power Generation Corporation Ltd. (M.S.P.G.C.L)	8	8460.00	12.7149	7.3685	57.95
30	Neyveli Lignite Corporation Ltd. (N.L.C.LTD)	5	2990.00	1.3624	1.2814	94.06
31	NSPCL (Chhatisgarh)	1	500.00	0.9095	0.5128	56.38
32	N.T.P.C.LTD.	17	33675.00	59.4260	23.3870	39.35
33	NTECL (Tamil Nadu)	1	1500.00	1.0231	0.0900	8.80
34	Orissa Power Generation Corporation Ltd. (O.P.G.C.L.)	1	420.00	0.8976	0.2034	22.66

<b>Sl. No.</b>	<b>Name of Power Utility</b>	<b>No. of TPS</b>	<b>Installed Capacity (MW)</b>	<b>Fly Ash Generation (Million- tonne)</b>	<b>Fly Ash Utilization (Million- tonne)</b>	<b>Percentage Utilization %</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
35	Punjab State Power Corporation Ltd. (P.S.P.C.L.)	3	2640.00	2.6644	2.2629	84.93
36	Rajasthan Rajya Vidyut Utpadan Nigam Ltd. (R.R.V.U.N.L.)	4	3990.00	5.5023	4.3986	79.94
37	Reliance Infrastructure Limited (R.I.L)	1	500.00	0.6910	0.7731	111.88
38	RPSCl (UP)	1	1200.00	1.3447	0.6012	44.71
39	R.W.P.L. (JSW)	1	1080.00	1.3104	1.1270	86.00
40	SEPL (AP)	1	450.00	0.1026	0.1008	98.25
41	Taqqa Neyveli Power Company Pvt.Ltd.	1	250.00	0.1302	0.1036	79.58
42	Tata Power Company (T.P.CO.)	2	1297.50	1.2383	1.2267	99.06
43	Tenughat Vidyut Nigam Ltd.(T.V.N.L.)	1	420.00	0.7480	0.7166	95.80
44	T.N.G & D Corporation (Tamil Nadu)	6	4660.00	5.4530	4.4525	81.65
45	Torrent Power Ltd.	1	422.00	0.3600	0.3680	102.22
46	UPCL (Karnataka)	1	1200.00	0.1400	0.1033	73.79
47	TSGENCO (Telangana)	5	2282.50	5.8970	1.3670	23.18
48	Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd.(U.P.R.V.U.N.L.)	5	4844.00	7.8573	3.4079	43.37
49	West Bengal Power Development Corporation Ltd. (W.B.P.D.C. L)	5	3860.00	7.2029	5.4068	75.06
50	WPCL (KSKEV Ltd.) (Maharastra)	1	540.00	0.2700	0.2700	100.00
51	Gupta Energy Pvt. Ltd.(Maharastra)	1	120.00	0.0000	0.0000	0.0000
52	Jaypee Bina Thermal Power Plant (MP)	1	500.00	0.6663	0.5296	79.48
53	EMCO ENERGY Ltd. (Maharastra)	1	600.00	0.7105	0.6673	93.92
54	Spectrum Coal & Power Ltd.(Chhattisgarh)	1	50.00	0.1698	0.1171	68.97
55	Adani Power Maharastra Ltd.	1	3300.00	3.0020	1.4900	49.63
56	Adani Power Ltd. (Rajasthan)	1	1320.00	0.9669	0.6804	70.37
57	RATTAN INDIA POWER Ltd.(Maharastra)	1	1350.00	0.5294	0.2677	50.56
58	Ideal Energy Projects Ltd.(Maharastra)	1	270.00	0.0000	0.0000	0.0000
59	ESSAR POWER LTD.(M.P)	1	1200.00	0.1589	0.1211	76.22
60	Meenakshi Energy Pvt. Ltd. (A.P)	1	300.00	0.0589	0.0142	24.07
61	ACB (INDIA) Ltd. (Chhattishgarh)	2	60.00	0.2289	0.2289	100.00
62	GMR Kamalanga Energy Ltd (Odisha)	1	1050.00	1.0035	0.3451	34.39

<b>Sl. No.</b>	<b>Name of Power Utility</b>	<b>No. of TPS</b>	<b>Installed Capacity (MW)</b>	<b>Fly Ash Generation (Million- tonne)</b>	<b>Fly Ash Utilization (Million- tonne)</b>	<b>Percentage Utilization %</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
63	INDIAN METALS & FERRO ALLOYS LTD. (Odisha)	1	258.00	0.3984	0.3984	100.00
64	WPCL (KSKEVL) (Chhatishgarh)	1	600.00	0.7339	0.4482	61.07
65	HALDIA ENERGY LIMITED (W.B.)	1	600.00	0.0700	0.0700	100.00
<b>GRAND TOTAL</b>		<b>145</b>	<b>138915.80</b>	<b>184.1435</b>	<b>102.5433</b>	<b>55.69</b>

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

The data of fly ash generation and utilization for year 2014-15 was received from 65 Power Utilities out of which **12** Power Utilities have achieved fly ash utilization level of 100% or more and **23** Power Utilities have achieved fly ash utilization level in the range of less than 100% to 75%;

The performance of these power utilities in fly ash utilization has been excellent during the aforesaid period (i.e. during the year 2014-15).

#### **State wise Status of Fly Ash Generation & its Utilization during the Year 2014-15**

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

**TABLE-IV**

#### **STATE WISE FLY ASH GENERATION AND ITS UTILIZATION DURING THE YEAR 2014-15**

<b>Sl. No.</b>	<b>Name of State</b>	<b>Nos. of TPS</b>	<b>Installed Capacity (MW)</b>	<b>Fly Ash Generation (Million- tonne)</b>	<b>Fly Ash Utilization (Million- tonne)</b>	<b>Percentage Utilization %</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
1	ANDHARAPRADES H	6	7610.00	13.8055	7.8705	57.01
2	BIHAR	4	4100.00	6.2117	1.7520	28.20
3	CHHATISGARH	15	12740.00	21.9114	8.5980	39.24
4	DELHI	2	840.00	0.9401	1.0788	114.75
5	GUJARAT	11	15212.00	7.8309	5.9106	75.48
6	HARYANA	5	5987.80	6.6158	4.3574	65.86
7	JHARKHAND	7	5307.50	6.8729	7.0943	103.22
8	KARNATAKA	4	4780.00	8.4616	2.2002	26.00
9	MADHYA PRADESH	7	10280.00	13.8455	5.4454	39.33
10	MAHARASHTRA	19	18336.00	18.6257	11.1246	59.73
11	ODISHA	5	5188.00	10.0225	4.9109	49.00
12	PUNJAB	3	2640.00	2.6644	2.2629	84.93
13	RAJASTHAN	7	6640.00	8.0768	6.5033	80.52
14	TAMILNADU	12	9150.00	7.6715	5.6304	73.39
15	TALANGANA	5	2832.50	7.1234	2.2077	30.99
16	UTTAR PRADESH	16	14804.00	24.3755	10.7995	44.30
17	WEST BENGAL	17	12468.00	19.0883	14.7969	77.52
<b>GRAND TOTAL</b>		<b>145</b>	<b>138915.80</b>	<b>184.1435</b>	<b>102.5433</b>	<b>55.69</b>

It may be seen from Table-IV above that:

- (i) 7 states namely Andhra Pradesh, Chhattisgarh, Madhya Pradesh, Maharashtra, Odisha, Uttar Pradesh and West Bengal have generated more than 10 million-ton of fly ash with U.P as the maximum of 24.3755 million ton during the Year 2014-15.
- (ii) During the Year 2014-15, Union territory of Delhi and state of Jharkhand has achieved fly ash utilization level of more than 100 % and the States of Gujarat, Punjab, Rajasthan, and West Bengal achieved the fly ash utilization level of more than 75 %.

### **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 station which was in operation before the date of notification i.e 3.11.2009 as well as the new thermal power station 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-V given below:

**TABLE-V**  
**TARGETS FOR FLY ASH UTILIZATION FOR THERMAL POWER STATIONS IN OPERATION BEFORE 3<sup>rd</sup> NOVEMBER, 2009**

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

The unutilized fly ash, if any, in relation to the target during a year would be required to be utilized within next two years in addition to the targets stipulated for those years and the balance unutilized fly ash accumulated during 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-VI given below:

**TABLE-VI**  
**TARGETS FOR FLY ASH UTILIZATION FOR THERMAL POWER STATION COMMISSIONED AFTER 3<sup>rd</sup> NOVEMBER, 2009**

<b>Sl. No.</b>	<b>Fly Ash Utilization Level</b>	<b>Target Date</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
1	At least 50% of fly ash generation	One year from the date of Commissioning
2	At least 70% of fly ash generation	Two years from the date of Commissioning
3	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 PRESENT STATUS OF FLY ASH UTILIZATION AS PER MoEF'S NOTIFICATION OF 3rd NOVEMBER, 2009**

Fly ash generation and utilization data received from Thermal Power Stations/Power Utilities in the country for the year 2014-15 has been analyzed broadly 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 2014-15, 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 into 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 as specified in Table-VI above depending upon their date of commissioning.

##### **4.1 Status during the Year 2014-15**

To have a broad assessment of the achievement of targets of fly ash utilization by those thermal power stations which were in operation as on 3<sup>rd</sup> November, 2009 (i.e. date of MoEF's Notification) for the year 2014-15, the fly ash utilization in terms of percentage as achieved by thermal power stations as on 31<sup>st</sup> March, 2015 has been compared with the targets of fly ash utilization required to be achieved by them as on 3<sup>rd</sup> November, 2014 for the Year 2014-15 as per MoEF's Notification of 3<sup>rd</sup> November, 2009.

For thermal power stations which were commissioned after 3<sup>rd</sup> November, 2009 (i.e. date of MoEF's Notification), the fly ash utilization in terms of percentage as achieved by them as on 31<sup>st</sup> March, 2015 for the year 2014-15 has been compared with the targets of fly ash utilization required to be achieved by them as per MoEF's Notification of 3<sup>rd</sup> November, 2009 and given in Table-XIII & XIV below depending upon their date of commissioning.

For thermal power stations which were in operation for less than one year as on 31<sup>st</sup> March, 2015 for the Year 2014-15, the target of fly ash utilization of 50% as applicable for the 1<sup>st</sup> year from the date of commissioning has been considered.

Based on above, the status of achievement of targets of fly ash utilization as prescribed in MoEF's notification of 3<sup>rd</sup> November, 2009 for the Year 2014-15 has been assessed and the same is given in Table-VII below.

**TABLE-VII**

##### **STATUS OF UTILIZATION OF FLY ASH AS PER MOEF'S NOTIFICATION DATED 3<sup>rd</sup> NOVEMBER, 2009 FOR THE YEAR 2014-15**

<b>Sl. No.</b>	<b>Description</b>	<b>Nos. of TPS</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
1	Nos. of TPS which have achieved the target of fly ash utilization as per MoEF's Notification of 3 <sup>rd</sup> November, 2009	50
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	89
3	Nos. of TPS which have not generated any significant fly ash or any fly ash	6
		<b>Total</b>
		<b>145</b>

It may be seen from Table-VII above that:

During the Year 2014-15, out of **145** (one hundred forty five) thermal power stations for which data was received, **50(fifty)** power stations have achieved the targets of fly ash utilization as stipulated in MoEF's Notification of 3<sup>rd</sup> November, 2009.

To increase the fly ash utilization MoEF&CC have proposed an amendment on 25<sup>th</sup> May, 2015. The draft amendment is enclosed at Annex-III.

To reduce the fly ash generation and transportation cost of coal MoEF&CC have issued a notification dated 2<sup>nd</sup> January, 2014. CEA has also issued an advisory to TPP to comply with provision of notification. A copy of notification dated 2nd January, 2014 and advisory issued by CEA is enclosed at Annex-IV.

#### **4.2 Range of Fly Ash Utilization during the Year 2014-15**

Based on the fly ash utilization data received from Thermal Power Stations/Power Utilities, the thermal power stations have been grouped into 5 categories as noted below depending upon range of utilization of fly ash by the stations.

**TABLE-VIII**

#### **RANGE OF PERCENTAGE FLY ASH UTILIZATION DURING THE YEAR 2014-15**

<b>Sl. No.</b>	<b>Level of Fly Ash utilization</b>	<b>Nos. of Power Stations</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
1	100% and more than 100%	34
2	Less than 100% and up to 75%	35
3	Less than 75% and up to 60%	20
4	Less than 60%	50
5	Nos. of TPS which have not generated any significant fly ash or any fly ash	6
	<b>Total</b>	<b>145</b>

#### **4.3 Thermal Power Stations that have achieved Fly Ash utilization level of 100% or more during the Year 2014-15**

The following names of Thermal Power Stations achieved the fly ash utilization level of 100% or more during the year 2014-15. The fly ash utilization level achieved by each of these power stations is given in Table-IX below:

**TABLE-IX**

#### **THERMAL POWER STATIONS WITH FLY ASH UTILIZATION LEVEL OF 100% OR MORE DURING THE YEAR 2014-15**

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (Mt)</b>	<b>Fly ash Utilization (Mt)</b>	<b>% age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
1	CHAKABURA TPP	ACB (INDIA) Ltd. (Chhattishgarh)	30.00	0.1165	0.1165	100.00
2	CHAKABURA TPP (EXTN)	ACB (INDIA) Ltd. (Chhattishgarh)	30.00	0.1124	0.1124	100.00
3	B.B.G.S.	C.E.S.C. (West Bengal)	750.00	1.3770	1.3770	100.00

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (Mt)</b>	<b>Fly ash Utilization (Mt)</b>	<b>% age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
4	S.G.S.	C.E.S.C. (West Bengal)	135.00	0.2720	0.2720	100.00
5	T.G.S	C.E.S.C. (West Bengal)	240.00	0.4220	0.4220	100.00
6	NEW COSSIPORE	CESC (West.Bengal)	160.00	0.0216	0.0216	100.00
7	MEJIA	D.V.C. (West Bengal)	2340.00	3.8250	4.5249	118.30
8	DISHERGARH POWER STATION	DPSCL (W.B)	12.00	0.0312	0.0312	100.00
9	SALAYA	EPGL (Gujarat)	1200.00	0.2520	0.2520	100.00
10	SURAT LIGNITE	G.I.P.C.L. (Gujarat)	500.00	0.4398	0.4398	100.00
11	AKRIMOTA	G.M.D.C.L. (Gujarat)	250.00	0.1571	0.1588	101.09
12	GANDHINAGAR	G.S.E.C.L. (Gujarat)	870.00	0.6680	0.6720	100.60
13	KUTCH LIGNITE	G.S.E.C.L. (Gujarat)	290.00	0.2550	0.2550	100.00
14	SIKKA	G.S.E.C.L. (Gujarat)	240.00	0.1750	0.2220	126.86
15	VIJAYANAGAR	JSW Energy Limited (Karnataka)	860.00	0.3330	0.3330	100.00
16	MAITHON RBTTP	MPL (Jharkhand)	1050.00	1.6489	2.6548	161.01
17	NEYVELI -I EXPN	N.L.C.LTD (Tamilnadu)	420.00	0.2405	0.2405	100.01
18	BARSINGSAR LIGNITE	NLC (Rajsthan)	250.00	0.2972	0.2972	100.01
19	BADARPUR	N.T.P.C.LTD (Delhi).	705.00	0.8120	0.9730	119.83
20	TALCHAR(TPS)	N.T.P.C.LTD (Odisha).	460.00	1.2030	1.2070	100.33
21	DADRI	N.T.P.C.LTD. (U.P.)	1820.00	2.6070	2.7050	103.76
22	KOTA	RRVUNL (Rajsthan)	1240.00	1.7330	1.7345	100.09
23	GIRAL	RRVUNL (Rajsthan)	250.00	0.1222	0.1222	100.00
24	DAHANU	Reliance Infrastructure Ltd.(Maharashtra)	500.00	0.6910	0.7731	111.88
25	TROMBAY	T.P.CO. (Maharashtra)	750.00	0.0443	0.0443	100.00
26	SABARMATI	Torrent Power Ltd.(Gujarat)	422.00	0.3600	0.3680	102.22
27	ENNORE	T.N.G & D Corporation (Tamil Nadu)	340.00	0.0208	0.0237	113.64
28	METTUR	T.N.G & D Corporation (Tamil Nadu)	840.00	1.3028	1.7654	135.51
29	RAMAGUNDAM'B'	TSGENCO (Telangana)	62.50	0.0598	0.1503	251.53
30	HARDUAGANJ	UPRVUNL (UP)	670.00	0.9979	1.1963	119.88

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age
(1)	(2)	(3)	(4)	(5)	(6)	(7)
31	PANKI	UPRVUNL (UP)	210.00	0.3128	0.7825	250.12
32	BANDEL	W.B.P.D.C.L(W.B)	450.00	0.3269	0.5611	171.64
33	WARDHA WARORA	WPCL (KSKEV Ltd.) Maharashtra	540.00	0.2700	0.2700	100.00
34	HALDIA ENERGY LIMITED (W.B.)	HALDIA ENERGY LIMITED (W.B.)	600.00	0.0700	0.0700	100.00

It may be seen from Table-IX above that:

During the Year 2014-15, **34** thermal power stations have achieved the fly ash utilization level of 100% or more including **19** thermal power stations which have achieved fly ash utilization level of more than 100%.

Power Stations which have achieved fly ash utilization level of more than 100% during the year 2014-15 have utilized the fly ash stored in ash ponds during earlier years.

#### **4.4 Power Stations in Fly Ash Utilization Range of less than 100% and up to 75% during the Year 2014-15**

The names of Thermal Power Stations which have achieved the fly ash utilization level of less than 100% and up to 75% during the year 2014-15 along with fly ash utilization level achieved by each of these power stations are given in Table-X below:

**TABLE-X**  
**THERMAL POWER STATIONS WITH FLY ASH UTILIZATION LEVEL OF LESS THAN 100% AND UP TO 75% DURING THE YEAR 2014-15**

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	KASAI PALLI	ACBPL (Chhattishgarh)	270.00	0.9148	0.8605	94.07
2	MUNDRA TPS	APL (Gujrat )	4620.00	1.5310	1.2930	84.45
3	BARKHERA	BEPL (UP)	90.00	0.2210	0.2124	96.11
4	KHAMBER KHERA	BEPL (UP)	90.00	0.2129	0.2046	96.08
5	KUNDARKI	BEPL (UP)	90.00	0.2175	0.2104	96.75
6	MAQSOODPUR	BEPL (UP)	90.00	0.1986	0.1905	95.89
7	UTRAULA	BEPL (UP)	90.00	0.2254	0.2185	96.93
8	CHANDRAPURA	D.V.C.(Jharkhand)	890.00	1.6708	1.4384	86.09
9	DURGAPUR	D.V.C. (West Bengal)	350.00	0.5120	0.4599	89.81
10	KODARMA	DVC (Jharkhand)	1000.00	0.6671	0.6416	96.18
11	DURGAPUR PROJECTS POWER STAION	D.P.L (West Bengal).	891.00	0.4560	0.4036	88.50
12	MAHAN	ESSAR POWER MP LTD.(M.P)	1200.00	0.1589	0.1211	76.22
13	HISAR	H.P.G.C.L. (Haryana)	1200.00	1.4631	1.3696	93.61
14	PANIPAT	H.P.G.C.L. (Haryana)	1367.80	1.3160	1.2889	97.94
15	RAJGHAT	IPGCL (Delhi)	135.00	0.1281	0.1058	82.58
16	INDIAN METALS & FERRO ALLOYS LTD.	INDIAN METALS & FERRO ALLOYS LTD. (Odisha)	258.00	0.39843	0.39841	99.996

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age
(1)	(2)	(3)	(4)	(5)	(6)	(7)
17	MAHATMA GANDHI	JHPL (Haryana)	1320.00	1.3041	1.0456	80.18
18	RATNAGIRI	JSW Energy Limited (Maharashtra)	1200.00	0.2206	0.1807	81.91
19	AMARKANTAK TPS	Lanco Amarkantak Power Ltd. (Chhattisgarh)	600.00	0.5287	0.4762	90.08
20	SANJAY GANDHI	M.P.P.G.C.L.(M.P.)	1340.00	2.0306	1.6100	79.29
21	KORADI	M.S.P.G.C.L. (Maharashtra)	1100.00	0.9040	0.7629	84.39
22	NASIK	M.S.P.G.C.L. (Maharashtra)	630.00	1.2148	1.1057	91.02
23	PARLI	M.S.P.G.C.L. (Maharashtra)	1130.00	1.7914	1.4710	82.11
24	NEYVELI - II	N.L.C.LTD (Tamilnadu)	1470.00	0.5495	0.5393	98.14
25	BATHINDA	P.S.P.C.L.(Punjab)	460.00	0.3196	0.2427	75.93
26	ROPAR	P.S.P.C.L.(Punjab)	1260.00	1.4005	1.3298	94.95
27	CHHABRA	RRVUNL (Rajasthan)	1000.00	1.0402	0.8217	78.99
28	JALIIPA KAPURDI	RWPL (Rajasthan)	1080.00	1.3104	1.1270	86.00
29	SIMHAPURI	SEPL(A.P)	450.00	0.1026	0.1008	98.25
30	CUDDALORE	Taqा Neyveli Power Company Pvt. Ltd. (Tamilnadu)	250.00	0.1302	0.1036	79.58
31	JOJOBERA	T.P.CO. (Jarkhnad)	547.50	1.1940	1.1824	99.03
32	TENUGHAT	T.V.N.L. (Jarkhnad)	420.00	0.7480	0.7166	95.80
33	KOLAGHAT	W.B.P.D.C.L (West Bengal)	1260.00	2.4845	2.2362	90.01
34	JAYPEE BINA TPP	Jaypee Bina Thermal Power Plant (MP)	500.00	0.6663	0.5296	79.48
35	EMCO ENERGY Ltd.	EMCO ENERGY Ltd. (Maharashtra)	600.00	0.7105	0.6673	93.92

It may be seen from Table-X above that **35** thermal power stations during the year 2014-15 have achieved fly ash utilization level in the range of less than 100% to 75%.

#### **4.5 Power Stations in Fly Ash Utilization Range of less than 75% and up to 60% during the Year 2014-15**

The names of Thermal Power Stations which have achieved the fly ash utilization level of less than 75% and up to 60% during the year 2014-15 along with fly ash utilization level achieved by each of these power stations are given in Table-XI below:

**TABLE-XI**

**THERMAL POWER STATIONS WITH FLY ASH UTILIZATION LEVEL OF LESS THAN 75%  
AND UP TO 60% DURING THE YEAR 2014-15.**

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (Mt)</b>	<b>Fly ash Utilization (Mt)</b>	<b>% age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
1	RAYALSEEMA	A.P.GENCO (Andhrapradesh)	1050.00	2.3579	1.4488	61.45
2	Dr. N.T.R (Vijaiwada)	A.P.GENCO (Andhrapradesh)	1760.00	4.0685	2.6115	64.19
3	KAWAI	Adani Power Ltd. (Rajasthan)	1320.00	0.9669	0.6804	70.37
4	BOKARO 'B'	D.V.C (Jharkhand)	630.00	0.6625	0.4316	65.15
5	Durgapur Steel	DVC (West Bengal)	1000.00	1.2806	0.8010	62.55
6	UKAI	G.S.E.C.L. (Gujarat)	1350.00	1.5370	1.0230	66.56
7	O.P.Jindal (Stage-I)	JPL (Chhattisgarh.)	1000.00	2.2910	1.4135	61.70
8	NEYVELI - I	N.L.C.LTD (Tamilnadu)	600.00	0.2752	0.2044	74.27
9	RAMAGUNDAM	N.T.P.C. (Andhrapradesh)	2600.00	5.5140	3.5510	64.40
10	UNCHAHAR	N.T.P.C.LTD. (U.P.)	1050.00	1.9250	1.3610	70.70
11	LEHRA MOHABAT	P.S.P.C.L. (Punjab)	920.00	0.9443	0.6905	73.13
12	SURATGARH	RRVUNL (Rajasthan)	1500.00	2.6070	1.7203	65.99
13	METTUR-II	T.N.G & D Corporation (Tamil Nadu)	600.00	0.5062	0.3554	70.21
14	NORTH CHENNAI	T.N.G & D Corporation (Tamil Nadu)	630.00	1.0300	0.6574	63.83
15	TUTICORIN	T.N.G & D Corporation (Tamil Nadu)	1050.00	1.4921	1.1183	74.95
16	UDUPI	UPCL (Karnatak)	1200.00	0.1400	0.1033	73.79
17	SAGARDIGHI	W.B.P.D.C.L (W.B)	600.00	1.0150	0.6362	62.68
18	BAKRESWAR	W.B.P.D.C.L (W.B)	1050.00	2.2772	1.5263	67.03
19	RATIJA TPS	Spectrum Coal & Power Ltd. (Chhattisgarh)	50.00	0.1698	0.1171	68.97
20	KMPCL (AKALTARA)	WPCL (KSKEVL) (Chhattishgarh)	600.00	0.7339	0.4482	61.07

It may be seen from Table-XI above that **20** thermal power stations during the year 2014-15 have achieved fly ash utilization level of less than 75% and up to 60%.

#### **4.6 Power Stations with Fly Ash Utilization Level of less than 60% during the Year 2014-15**

The names of Thermal Power Stations which have achieved the fly ash utilization level of less than 60% during the year 2014-15 along with fly ash utilization level achieved by each of these power stations are given in Table-XII:

**TABLE-XII**

**THERMAL POWER STATIONS WITH FLY ASH UTILIZATION LEVEL OF BELOW 60% DURING THE YEAR 2014-15**

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Installed Capacity (MW)</b>	<b>Fly ash Generation (Mt)</b>	<b>Fly ash Utilization (Mt)</b>	<b>% age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
1	INDIRA GANDHI	APCPL (Haryana)	1500.00	1.8592	0.4066	21.87
2	TIRORA	Adani Power Maharastra Ltd.	3300.00	3.0020	1.4900	49.63
3	MUNDRA UMPP	CGPL (Gujrat)	4000.00	0.6480	0.1810	27.93
4	KORBA (WEST)	C.S.P.G.C.L Chhattisgarh	840.00	1.4307	0.1687	11.79
5	KORBA (WEST) Extn	C.S.P.G.C.L Chhattisgarh	500.00	0.7750	0.0000	0.00
6	DSPM	C.S.P.G.C.L. Chhattisgarh	500.00	0.9990	0.1760	17.62
7	KORBA (EAST)	C.S.P.G.C.L Chhattisgarh	440.00	1.1972	0.3768	31.47
8	WANAKBORI	G.S.E.C.L. (Gujarat)	1470.00	1.8080	1.0460	57.85
9	YAMUNANAGAR	H.P.G.C.L. (Haryana)	600.00	0.6734	0.2467	36.64
10	AMARAVATI TPS	RATTAN INDIA POWER Ltd.(Maharastra)	1350.00	0.5294	0.2677	50.56
11	O.P.Jindal (Stage-II)	JPL (Chhattisgarh.)	1800.00	0.6780	0.3773	55.65
12	PATRATU	J.U.U.N.L (Jarkhand)	770.00	0.2816	0.0288	10.24
13	BELLARY	K.P.C.L(Karnataka)	1000.00	5.0013	0.5791	11.58
14	RAICHUR	K.P.C.L(Karnataka)	1720.00	2.9873	1.1848	39.66
15	MUZAFFARPUR TPS	K.B.U.N.L (Bihar)	220.00	0.2897	0.0550	18.99
16	THAMMINAPATNAM TPS	Meenakshi Energy Pvt. Ltd. (A.P)	300.00	0.0589	0.0142	24.07
17	SATPURA	M.P.P.G.C.L. (M.P.)	1330.00	2.4319	1.0246	42.13
18	AMARKANTAK	M.P.P.G.C.L. (M.P.)	450.00	0.5267	0.2019	38.33
19	SHREE SINGAJI TPS	M.P.P.G.C.L. (M.P.)	1200.00	0.7201	0.0072	1.00
20	BHUSA WAL	M.S.P.G.C.L. (Maharastra)	1420.00	1.6642	0.8714	52.36
21	CHANDRAPUR	M.S.P.G.C.L. (Maharastra)	2340.00	4.1974	2.0536	48.93
22	KHAPARKHEDA	M.S.P.G.C.L. (Maharastra)	840.00	1.3508	0.7891	58.42
23	KHAPARKHEDA (Ext)	M.S.P.G.C.L. (Maharastra)	500.00	0.9053	0.0004	0.04
24	PARAS	M.S.P.G.C.L. (Maharastra)	500.00	0.6870	0.3143	45.75

Sl. No.	Name of TPS	Power Utility	Installed Capacity (MW)	Fly ash Generation (Mt)	Fly ash Utilization (Mt)	% age
(1)	(2)	(3)	(4)	(5)	(6)	(7)
25	BHILAI	NSPCL (Chhattisgarh)	500.00	0.9095	0.5128	56.38
26	VALLUR	NTECL (Tamilnadu)	1500.00	1.0231	0.0900	8.80
27	SIMHADRI	N.T.P.C. (Andhra Pradesh).	2000.00	2.9300	0.9850	33.62
28	KAHALGAON	N.T.P.C.LTD. (Bihar)	2340.00	5.6480	1.6870	29.87
29	KORBA	N.T.P.C. (Chhattisgarh).	2600.00	6.1140	1.9010	31.09
30	SIPAT	N.T.P.C. (Chhattisgarh).	2980.00	4.9410	1.5410	31.19
31	VINDHYACHAL	N.T.P.C.LTD.(M.P.)	4260.00	7.3110	1.9510	26.69
32	TALCHAR(KAN)	N.T.P.C.LTD (Odisha).	3000.00	6.5200	2.7570	42.29
33	RIHAND	N.T.P.C.LTD.(U.P.)	3000.00	4.8310	0.4930	10.20
34	SINGRAULI	N.T.P.C.LTD.(U.P.)	2000.00	3.7000	0.6210	16.78
35	TANDA	N.T.P.C.LTD.(U.P.)	440.00	1.0350	0.5740	55.46
36	FARAKKA	N.T.P.C.LTD.(W.B)	2100.00	3.6180	1.0070	27.83
37	MOUDA TPS	N.T.P.C.LTD (Maharastra)	1000.00	0.4430	0.0630	14.22
38	BARH SUPER THERMAL POWER STATION	N.T.P.C.LTD. (Bihar)	1320.00	0.2740	0.0100	3.65
39	IB VALLEY	O.P.G.C.L.(Odisha)	420.00	0.8976	0.2034	22.66
40	ROSA PHASE-I	RPSCL(U.P)	1200.00	1.3447	0.6012	44.71
41	NORTH CHENNAI -II	T.N.G & D Corporation (Tamil Nadu)	1200.00	1.1010	0.5323	48.35
42	KOTHAGUDEM (Stage I to IV)	TSGENCO (Telangana)	720.00	2.2286	0.1597	7.16
43	KOTHAGUDEM-V	TSGENCO (Telangana)	500.00	1.3768	0.0472	3.43
44	KOTHAGUDEM-VI	TSGENCO (Telangana)	500.00	1.1004	0.4017	36.50
45	KAKATIA	TSGENCO (Telangana)	500.00	1.1315	0.6081	53.74
46	ANPARA 'A' & 'B'	U.P.R.V.U.N.L(U.P)	1630.00	3.1568	0.0089	0.28
47	OBRA	U.P.R.V.U.N.L(U.P)	1194.00	1.3472	0.3087	22.91
48	PARICHHA	U.P.R.V.U.N.L(U.P)	1140.00	2.0425	1.1116	54.42
49	SANTALDIH	W.B.P.D.C.L (W.B)	500.00	1.0993	0.4471	40.67
50	KAMALANGA TPP	GMR Kamalanga Energy Ltd. (Odisha)	1050.00	1.0035	0.3451	34.39

It may be seen from Table-XII above that:

During the year 2014-15, out of **145** (one hundred forty five) thermal power stations, **50** stations could not reach the level of fly ash utilization to 60%.

Following 6 Nos. Thermal Power Stations did not generate any fly ash during 2014-15:

1. **Barauni**- Both Unit No.6&7 are under ongoing R&M works since long.
2. **Chinakuri**- Plant under shutdown from 21<sup>st</sup> November 2011.
3. **Neyveli – II- Expansion**- There is no significant fly ash generation during April, 2014 to March, 2015.
4. **Mihan** - TPS is under shut down condition since 5<sup>th</sup> November, 2013.
5. **GEPL TPP** – Both Unit-1 & 2 are under shutdown due to non-availability of coal source/coal blocks/coal linkage.
6. **Bela** - COD declared on 18.07.2013. As such plant has not run significantly from COD.

#### **5.0 UTILIZATION STATUS AS PER NOTIFICATION OF 3<sup>RD</sup> NOVEMBER, 2009 DURING THE YEAR 2014-15 (TARGET ACHIEVED AND NOT ACHIEVED)**

As per the targets mandated by the MoEF notification of dated 3<sup>rd</sup> November, 2009 for fly ash utilization by the power stations, a total of 50 stations achieved their target and as many as 89 Nos. could not reach the targets, while there were 6 stations where no fly ash was generated. The details are given at Table- XIII & XIV respectively.

**TABLE-XIII**

#### **UTILIZATION STATUS AS PER NOTIFICATION OF 3<sup>RD</sup> NOVEMBER, 2009 DURING THE YEAR 2014-15 (TARGET ACHIEVED)**

Sl. No	Name of TPS	Power Utility	Date of Commissioning	Installed Capacity	Fly ash Generation	Fly ash Utilization	% age	Target in %age	Status Achieved
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	
1	KASAI PALLI	ACBPL Chhattishgarh	13.12.2011	270.00	0.9148	0.8605	94.0684	90.00	Achieved
2	KAWAI	Adani Power Ltd. (Rajasthan)	31.05.2013	1320.00	0.9669	0.6804	70.3713	50.00	Achieved
3	CHAKABURA TPP	ACB (INDIA) Ltd. Chhattishgarh	27.02.2007	30.00	0.1165	0.1165	100.0000	100.00	Achieved
4	CHAKABURA TPP (EXTN)	ACB (INDIA) Ltd. Chhattishgarh	28.03.2014	30.00	0.1124	0.1124	100.0000	50.00	Achieved
5	BARKHERA	BEPL (UP)	29.10.2011	90.00	0.2210	0.2124	96.1073	90.00	Achieved
6	KHAMBER KHERA	BEPL (UP)	30.09.2011	90.00	0.2129	0.2046	96.0759	90.00	Achieved
7	KUNDARKI	BEPL (UP)	03.01.2012	90.00	0.2175	0.2104	96.7493	90.00	Achieved
8	MAQSOODPUR	BEPL (UP)	27.10.2011	90.00	0.1986	0.1905	95.8871	90.00	Achieved
9	UTRAULA	BEPL (UP)	30.01.2012	90.00	0.2254	0.2185	96.9310	90.00	Achieved
10	B.B.G.S.	C.E.S.C. (W.B.)	16.09.1997	750.00	1.3770	1.3770	100.0000	100.00	Achieved
11	S.G.S.	C.E.S.C. (West Bengal)	12.08.1990	135.00	0.2720	0.2720	100.0000	100.00	Achieved
12	T.G.S	C.E.S.C. (West Bengal)	05.03.1983	240.00	0.4220	0.4220	100.0000	100.00	Achieved
13	NEW COSSIPORE	CESC (West.Bengal)	24.11.1949	160.00	0.0216	0.0216	100.0000	100.00	Achieved
14	MEJIA	D.V.C. (West Bengal)	01.012.1997	2340.00	3.8250	4.5249	118.2971	100.00	Achieved
15	KODARMA	DVC (Jharkhand)	18.07.2013	1000.00	0.6671	0.6416	96.1768	50.00	Achieved
16	DISHERGARH POWER STATION	DPSCL (W.B)	25.09.2012	12.00	0.0312	0.0312	100.0000	70.00	Achieved
17	MAHAN	ESSAR POWER MP LTD.(M.P)	29.04.2013	1200.00	0.1589	0.1211	76.2172	50.00	Achieved
18	SALAYA	EPGL (Gujarat)	01.04.2012	1200.00	0.2520	0.2520	100.0000	90.00	Achieved
19	SURAT LIGNITE	G.I.P.C.L. (Gujarat)	06.11.1999	500.00	0.4398	0.4398	100.0000	100.00	Achieved
20	AKRIMOTA	G.M.D.C.L. (Gujarat)	31.03.2005	250.00	0.1571	0.1588	101.0872	100.00	Achieved
21	GANDHINAGAR	G.S.E.C.L. (Gujarat)	13.03.1977	870.00	0.6680	0.6720	100.5988	100.00	Achieved

<b>Sl. No</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Date of Commissioning</b>	<b>Installed Capacity</b>	<b>Fly ash Generati on</b>	<b>Fly ash Utilizatio n</b>	<b>% age</b>	<b>Target in %age</b>	<b>Status Achieved</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	
22	KUTCH LIGNITE	G.S.E.C.L. (Gujarat)	09.01.1990	290.00	0.2550	0.2550	100.0000	100.00	Achieved
23	SIKKA	G.S.E.C.L. (Gujarat)	26.03.1988	240.00	0.1750	0.2220	126.8571	100.00	Achieved
24	AMARAVATI TPS	RATTAN INDIA POWER Ltd. (Maharastra)	03.06.2013	1350.00	0.5294	0.2677	50.5644	50.00	Achieved
25	O.P.Jindal (Stage-II)	JPL (Chhattisgarh.)	14.03.2014	1800.00	0.6780	0.3773	55.6490	50.00	Achieved
26	VIJAYANAGAR	JSW Energy Limited (Karnataka)	18.01.2000	860.00	0.3330	0.3330	100.0000	100.00	Achieved
27	MAITHON RBTTP	MPL (Jharkhand)	01.09.2011	1050.00	1.6489	2.6548	161.0055	90.00	Achieved
28	NEYVELI -I EXPN	N.L.C.LTD (Tamilnadu)	21.10.2002	420.00	0.2405	0.2405	100.0091	100.00	Achieved
29	BARSINGSAR LIGNITE	NLC (Rajsthan)	27.10.2009	250.00	0.2972	0.2972	100.0077	100.00	Achieved
30	BADARPUR	N.T.P.C.LTD (Delhi).	Jul-73	705.00	0.8120	0.9730	119.8276	100.00	Achieved
31	TALCHAR (TPS)	N.T.P.C.LTD (Odisha).	03.06.1995	460.00	1.2030	1.2070	100.3325	100.00	Achieved
32	DADRI	N.T.P.C.LTD. (U.P.)	Oct.91	1820.00	2.6070	2.7050	103.7591	100.00	Achieved
33	KOTA	RRVUNL (Rajsthan)	17.01.1983	1240.00	1.7330	1.7345	100.0908	100.00	Achieved
34	GIRAL	RRVUNL (Rajsthan)	28.02.2007	250.00	0.1222	0.1222	100.0003	100.00	Achieved
35	DAHANU	Reliance Infrastructure Ltd.(Maharastra)	01.07.1995	500.00	0.6910	0.7731	111.8813	100.00	Achieved
36	SIMHPURI	SEPL(A.P)	04.05.2012	450.00	0.1026	0.1008	98.2454	70.00	Achieved
37	TROMBAY	T.P.CO. (Maharashtra)	1984	750.00	0.0443	0.0443	100.0000	100.00	Achieved
38	SABARMATI	Torrent Power Ltd.(Gujarat)	12.10.1978	422.00	0.3600	0.3680	102.2222	100.00	Achieved
39	ENNORE	T.N.G & D Corporation (Tamil Nadu)	31.03.1970	340.00	0.0208	0.0237	113.6355	100.00	Achieved
40	METTUR	T.N.G & D Corporation (Tamil Nadu)	07.01.1987	840.00	1.3028	1.7654	135.5061	100.00	Achieved
41	METTUR-II	T.N.G & D Corporation (Tamil Nadu)	11.10.2012	600.00	0.5062	0.3554	70.2072	70.00	Achieved
42	RAMAGUNDAM'B'	TSGENCO (Telangana)	17.10.1971	62.50	0.0598	0.1503	251.5334	100.00	Achieved
43	HARDUAGANJ	U.P.R.V.U.N.L. ( U.P.)	31.03.1977	670.00	0.9979	1.1963	119.8765	100.00	Achieved
44	PANKI	U.P.R.V.U.N.L. ( U.P.)	10.11.1976	210.00	0.3128	0.7825	250.1175	100.00	Achieved
45	BANDEL	W.B.P.D.C.L (W.B.)	04.09.1965	450.00	0.3269	0.5611	171.6427	100.00	Achieved
46	WARDHA WARORA	WPCL (KSKEV Ltd.) (Maharastra)	15.04.2010	540.00	0.2700	0.2700	100.0000	100.00	Achieved
47	JAYPEE BINA TPP	Jaypee Bina Thermal Power Plant (MP)	31.08.2012	500.00	0.6663	0.5296	79.4837	70.00	Achieved
48	EMCO ENERGY Ltd.	EMCO ENERGY Ltd. (Maharastra)	19.03.2013	600.00	0.7105	0.6673	93.9213	70.00	Achieved
49	KMPCL (AKALTARA)	WPCL (KSKEVL) (Chhatishgarh)	14.08.2013	600.00	0.7339	0.4482	61.0719	50.00	Achieved
50	HALDIA ENERGY LIMITTED (W.B)	HALDIA ENERGY LIMITTED (W.B.)	28.01.2015	600.00	0.0700	0.0700	100.0000	50.00	Achieved

**TABLE-XIV**

**UTILIZATION STATUS AS PER NOTIFICATION OF 3<sup>RD</sup> NOVEMBER,2009 DURING THE  
YEAR 2014-15 (TARGET NOT ACHIEVED)**

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Date of Commissioning</b>	<b>Installed Capacity</b>	<b>Fly ash Generati on</b>	<b>Fly ash Utilizatio n</b>	<b>% age</b>	<b>Target in % age</b>	<b>Status Not Achieved</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b></b>
1	RAYALSEEMA	A.P.GENCO Andhra pradesh	16.11.1994	1050.00	2.3579	1.4488	61.4460	100.00	Not Achieved
2	Dr. N.T.R (Vijawada)	A.P.GENCO Andhra pradesh	01.11.1979	1760.00	4.0685	2.6115	64.1884	100.00	Not Achieved
3	INDIRA GANDHI	APCPL (Haryana)	31.10.2010	1500.00	1.8592	0.4066	21.8695	100.00	Not Achieved
4	MUNDRA TPS	APL (Gujrat )	04.08.2009	4620.00	1.5310	1.2930	84.4546	100.00	Not Achieved
5	TIRORA	Adani Power Maharastra Ltd.	23.09.2012	3300.00	3.0020	1.4900	49.6320	70.00	Not Achieved
6	MUNDRA UMPP	CGPL (Gujrat)	07.03.2012	4000.00	0.6480	0.1810	27.9321	90.00	Not Achieved
7	KORBA (WEST)	C.S.P.G.C.L Chhattisgarh	21.06.1983	840.00	1.4307	0.1687	11.7918	100.00	Not Achieved
8	KORBA (WEST) Extn	C.S.P.G.C.L Chhattisgarh	05.09.2013	500.00	0.7750	0.0000	0.0000	50.00	Not Achieved
9	DSPM	C.S.P.G.C.L. Chhattisgarh	21.10.2007	500.00	0.9990	0.1760	17.6176	100.00	Not Achieved
10	KORBA (EAST)	C.S.P.G.C.L Chhattisgarh	01.10.1966	440.00	1.1972	0.3768	31.4735	100.00	Not Achieved
11	BOKARO 'B'	D.V.C. (Jharkhand)	24.03.1986	630.00	0.6625	0.4316	65.1470	100.00	Not Achieved
12	CHANDRAPURA	D.V.C. (Jharkhand)	10.10.1964	890.00	1.6708	1.4384	86.0876	100.00	Not Achieved
13	DURGAPUR	D.V.C. (West Bengal)	Dec-66	350.00	0.5120	0.4599	89.8127	100.00	Not Achieved
14	Durgapur Steel	DVC (West Bengal)	15.05.2012	1000.00	1.2806	0.8010	62.5494	70.00	Not Achieved
15	DURGAPUR PROJECTS POWER STAION	D.P.L (West Bengal).	23.04.1964	891.00	0.4560	0.4036	88.5020	100.00	Not Achieved
16	UKAI	G.S.E.C.L. (Gujarat)	19.03.1976	1350.00	1.5370	1.0230	66.5582	100.00	Not Achieved
17	WANAKBORI	G.S.E.C.L. (Gujarat)	23.03.1982	1470.00	1.8080	1.0460	57.8540	100.00	Not Achieved
18	HISAR	H.P.G.C.L. (Haryana)	24.08.2010	1200.00	1.4631	1.3696	93.6094	100.00	Not Achieved
19	YAMUNANAGAR	H.P.G.C.L. (Haryana)	14.04.2008	600.00	0.6734	0.2467	36.6365	100.00	Not Achieved
20	PANIPAT	H.P.G.C.L. (Haryana)	01.11.1979	1367.80	1.3160	1.2889	97.9407	100.00	Not Achieved
21	RAJGHAT	IPGCL (Delhi)	06.05.1989	135.00	0.1281	0.1058	82.5789	100.00	Not Achieved
22	MAHATMA GANDHI	JHPL (Haryana)	12.01.2012	1320.00	1.3041	1.0456	80.1778	90.00	Not Achieved
23	O.P.Jindal (Stage-I)	JPL (Chhattisgarh.)	08.12.2007	1000.00	2.2910	1.4135	61.6979	100.00	Not Achieved
24	PATRATU	J.U.U.N.L (Jarkhand)	30.01.1969	770.00	0.2816	0.0288	10.2442	100.00	Not Achieved
25	RATNAGIRI	JSW Energy Ltd. (Maharastra)	01.09.2010	1200.00	0.2206	0.1807	81.9130	100.00	Not Achieved
26	BELLARY	K.P.C.L (Karnataka)	25.03.2008	1000.00	5.0013	0.5791	11.5799	100.00	Not Achieved
27	RAICHUR	K.P.C.L. (Karnataka)	29.03.1985	1720.00	2.9873	1.1848	39.6612	100.00	Not Achieved
28	MUZAFFARPUR TPS	K.B.U.N.L (Bihar)	31.03.1985	220.00	0.2897	0.0550	18.9859	100.00	Not Achieved
29	AMARKANTAK TPS	Lanco Amarkantak Power Ltd. (Chhattisgarh )	01.05.2009	600.00	0.5287	0.4762	90.0770	100.00	Not Achieved

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Date of Commissioning</b>	<b>Installed Capacity</b>	<b>Fly ash Generation</b>	<b>Fly ash Utilization</b>	<b>% age</b>	<b>Target in % age</b>	<b>Status Not Achieved</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	
30	THAMMINAPATNAM TPS	Meenakshi Energy Pvt. Ltd. (A.P.)	10.07.2012	300.00	0.0589	0.0142	24.0719	70.00	Not Achieved
31	SANJAY GANDHI	M.P.P.G.C.L. (M.P.)	07.10.1993	1340.00	2.0306	1.6100	79.2876	100.00	Not Achieved
32	SATPURA	M.P.P.G.C.L. (M.P.)	01.07.1979	1330.00	2.4319	1.0246	42.1320	100.00	Not Achieved
33	AMARKANTAK	M.P.P.G.C.L. (M.P.)	1977	450.00	0.5267	0.2019	38.3284	100.00	Not Achieved
34	SHREE SINGAJI TPS	M.P.P.G.C.L. (M.P.)	01.02.2014	1200.00	0.7201	0.0072	1.0025	50.00	Not Achieved
35	BHUSA WAL	M.S.P.G.C.L. (Maharastra)	30.08.1979	1420.00	1.6642	0.8714	52.3610	100.00	Not Achieved
36	CHANDRAPUR	M.S.P.G.C.L. (Maharastra)	15.08.1983	2340.00	4.1974	2.0536	48.9261	100.00	Not Achieved
37	KHAPARKHEDA	M.S.P.G.C.L. (Maharastra)	26.03.1989	840.00	1.3508	0.7891	58.4186	100.00	Not Achieved
38	KHAPARKHEDA (Ext)	M.S.P.G.C.L. (Maharastra)	16.04.2012	500.00	0.9053	0.0004	0.0398	70.00	Not Achieved
39	KORADI	M.S.P.G.C.L. (Maharastra)	03.06.1974	1100.00	0.9040	0.7629	84.3916	100.00	Not Achieved
40	NASIK	M.S.P.G.C.L. (Maharastra)	26.04.1979	630.00	1.2148	1.1057	91.0239	100.00	Not Achieved
41	PARAS	M.S.P.G.C.L. (Maharastra)	31.03.2008	500.00	0.6870	0.3143	45.7534	100.00	Not Achieved
42	PARLI	M.S.P.G.C.L. (Maharastra)	10.10.1980	1130.00	1.7914	1.4710	82.1145	100.00	Not Achieved
43	NEYVELI - I	N.L.C.LTD (Tamilnadu)	1962	600.00	0.2752	0.2044	74.2733	100.00	Not Achieved
44	NEYVELI - II	N.L.C.LTD (Tamilnadu)	17.01.1988	1470.00	0.5495	0.5393	98.1378	100.00	Not Achieved
45	BHILAI	NSPCL (Chhattisgarh)	05.01.2009	500.00	0.9095	0.5128	56.3816	100.00	Not Achieved
46	VALLUR	NTECL (Tamilnadu)	09.03.2012	1500.00	1.0231	0.0900	8.7968	90.00	Not Achieved
47	RAMAGUNDAM	N.T.P.C. (Andhra Pradesh).	Nov.1983	2600.00	5.5140	3.5510	64.3997	100.00	Not Achieved
48	SIMHADRI	N.T.P.C. (Andhra Pradesh).	Feb.2002	2000.00	2.9300	0.9850	33.6177	100.00	Not Achieved
49	KAHALGAON	N.T.P.C.LTD. (Bihar)	Mar-92	2340.00	5.6480	1.6870	29.8690	100.00	Not Achieved
50	KORBA	N.T.P.C. (Chhattisgarh).	Mar-83	2600.00	6.1140	1.9010	31.0926	100.00	Not Achieved
51	SIPAT	N.T.P.C. (Chhattisgarh).	May-07	2980.00	4.9410	1.5410	31.1880	100.00	Not Achieved
52	VINDHYACHAL	N.T.P.C.LTD. (M.P.)	Oct-87	4260.00	7.3110	1.9510	26.6858	100.00	Not Achieved
53	TALCHAR(KAN)	N.T.P.C.LTD (Odisha).	Feb.1995	3000.00	6.5200	2.7570	42.2853	100.00	Not Achieved
54	RIHAND	N.T.P.C.LTD. (U.P.)	Mar-88	3000.00	4.8310	0.4930	10.2049	100.00	Not Achieved
55	SINGRAULI	N.T.P.C.LTD. (U.P.)	Feb-82	2000.00	3.7000	0.6210	16.7838	100.00	Not Achieved

<b>Sl. No.</b>	<b>Name of TPS</b>	<b>Power Utility</b>	<b>Date of Commissioning</b>	<b>Installed Capacity</b>	<b>Fly ash Generation</b>	<b>Fly ash Utilization</b>	<b>% age</b>	<b>Target in % age</b>	<b>Status Not Achieved</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	
56	UNCHAHAR	N.T.P.C.LTD. (U.P.)	Nov-88	1050.00	1.9250	1.3610	70.7013	100.00	Not Achieved
57	TANDA	N.T.P.C.LTD. (U.P.)	Jan-00	440.00	1.0350	0.5740	55.4589	100.00	Not Achieved
58	FARAKKA	N.T.P.C.LTD. (W.B.)	Jan.86	2100.00	3.6180	1.0070	27.8331	100.00	Not Achieved
59	MOUDA TPS	N.T.P.C.LTD (Maharastra)	April, 2012	1000.00	0.4430	0.0630	14.2212	70.00	Not Achieved
60	BARH SUPER THERMAL POWER STATION	N.T.P.C.LTD. (Bihar)	Nov.2014	1320.00	0.2740	0.0100	3.6496	50.00	Not Achieved
61	IB VALLEY	O.P.G.C.L. (Odisha)	21.12.1994	420.00	0.8976	0.2034	22.6605	100.00	Not Achieved
62	BATHINDA	P.S.P.C.L. (Punjab)	22.09.1974	460.00	0.3196	0.2427	75.9275	100.00	Not Achieved
63	LEHRA MOHABAT	P.S.P.C.L. (Punjab)	25.05.1998	920.00	0.9443	0.6905	73.1258	100.00	Not Achieved
64	ROPAR	P.S.P.C.L. (Punjab)	01.01.1985	1260.00	1.4005	1.3298	94.9481	100.00	Not Achieved
65	SURATGARH	RRVUNL (Rajsthan)	31.10.1998	1500.00	2.6070	1.7203	65.9865	100.00	Not Achieved
66	CHHABRA	RRVUNL (Rajsthan)	11.06.2010	1000.00	1.0402	0.8217	78.9935	100.00	Not Achieved
67	JALIIPA KAPURDI	RWPL (Rajsthan)	26.11.2009	1080.00	1.3104	1.1270	86.0043	100.00	Not Achieved
68	ROSA PHASE-I	RPSCL (U.P)	12.03.2010	1200.00	1.3447	0.6012	44.7099	100.00	Not Achieved
69	CUDDALORE	Taqा Neyveli Power Company Pvt. Ltd. Tamilnadu	15.12.2002	250.00	0.1302	0.1036	79.5768	100.00	Not Achieved
70	JOJOBERA	T.P.CO. (Jarkhnad)	Apr-96	547.50	1.1940	1.1824	99.0285	100.00	Not Achieved
71	TENUGHAT	T.V.N.L. (Jarkhnad)	13.04.1997	420.00	0.7480	0.7166	95.8035	100.00	Not Achieved
72	NORTH CHENNAI	T.N.G & D Corporation (Tamil Nadu)	25.10.1994	630.00	1.0300	0.6574	63.8252	100.00	Not Achieved
73	NORTH CHENNAI - II	T.N.G & D Corporation (Tamil Nadu)	Mar-13	1200.00	1.1010	0.5323	48.3470	70.00	Not Achieved
74	TUTICORIN	T.N.G & D Corporation (Tamil Nadu)	09.07.1979	1050.00	1.4921	1.1183	74.9521	100.00	Not Achieved
75	KOTHAGUDEM (Stage I to IV)	TSGENCO (Telangana)	04.07.1966	720.00	2.2286	0.1597	7.1645	100.00	Not Achieved
76	KOTHAGUDEM-V	TSGENCO (Telangana)	Mar-97	500.00	1.3768	0.0472	3.4309	100.00	Not Achieved
77	KOTHAGUDEM - VI	TSGENCO (Telangana)	23.10.2011	500.00	1.1004	0.4017	36.5048	90.00	Not Achieved
78	KAKATIA	TSGENCO (Telangana)	31.03.2010	500.00	1.1315	0.6081	53.7413	100.00	Not Achieved

Sl. No.	Name of TPS	Power Utility	Date of Commissioning	Installed Capacity	Fly ash Generation	Fly ash Utilization	% age	Target in % age	Status Not Achieved
1	2	3	4	5	6	7	8	9	
79	ANPARA 'A' & 'B'	U.P.R.V.U.N.L. (U.P.)	01.01.1987	1630.00	3.1568	0.0089	0.2823	100.00	Not Achieved
80	OBRA	U.P.R.V.U.N.L. (U.P.)	15.08.1967	1194.00	1.3472	0.3087	22.9142	100.00	Not Achieved
81	PARICHHA	U.P.R.V.U.N.L. (U.P.)	01.10.1985	1140.00	2.0425	1.1116	54.4208	100.00	Not Achieved
82	UDUPI	UPCL (Karnataka)	11.11.2010	1200.00	0.1400	0.1033	73.7857	100.00	Not Achieved
83	KOLAGHAT	W.B.P.D.C.L (W.B.)	14.08.1984	1260.00	2.4845	2.2362	90.0060	100.00	Not Achieved
84	SAGARDIGHI	W.B.P.D.C.L (W.B.)	21.12.2007	600.00	1.0150	0.6362	62.6753	100.00	Not Achieved
85	SANTALDIH	W.B.P.D.C.L (W.B.)	01.04.2009	500.00	1.0993	0.4471	40.6672	100.00	Not Achieved
86	BAKRESWAR	W.B.P.D.C.L (W.B.)	18.07.1999	1050.00	2.2772	1.5263	67.0253	100.00	Not Achieved
87	RATIJA TPS	Spectrum Coal & Power Ltd. (Chhattisgarh)	27.02.2013	50.00	0.1698	0.1171	68.9718	70.00	Not Achieved
88	KAMALANGA TPP	GMR Kamalanga Energy Ltd. (Odisha)	30.04.2013	1050.00	1.0035	0.3451	34.3879	50.00	Not Achieved
89	INDIAN METALS & FERRO ALLOYS LTD.	INDIAN METALS & FERRO ALLOYS LTD. (Odisha)	Feb. 1989	258.00	0.39843	0.39841	99.9957	100.00	Not Achieved

#### **LIST OF THERMAL POWER STATIONS WITH NO ASH GENERATION**

1	MIHAN	AMNEPL (Maharashtra)	20.04.2011	246.00	0.0000	0.0000	0.0000	No Generation
2	BARAUNI	B.S.P.G.C.L. (Bihar)	01.05.1983	220.00	0.0000	0.0000	0.0000	No Generation
3	CHINAKURI	DPSCL (W.B)	20.09.1990	30.00	0.0000	0.0000	0.0000	No Generation
4	BELA TPS	Ideal Energy Projects Ltd. (Maharashtra)	18.07.2013	270.00	0.0000	0.0000	0.0000	No Generation
5	NEYVELI - II EXPN	NLC (Tamil Nadu)	04.02.2012	250.00	0.0000	0.0000	0.0000	No Generation
6	GEPL TPP	Gupta Energy Pvt. Ltd. (Maharashtra)	17.09.2012	120.00	0.0000	0.0000	0.0000	No Generation

#### **6.0 MODES OF FLY ASH UTILIZATION DURING THE YEAR 2014-15**

The data on fly ash utilization received from Thermal Power Stations/Power Utilities for the year 2014-15 has been analyzed to ascertain the modes in which fly ash was utilized and the quantity utilized in each mode.

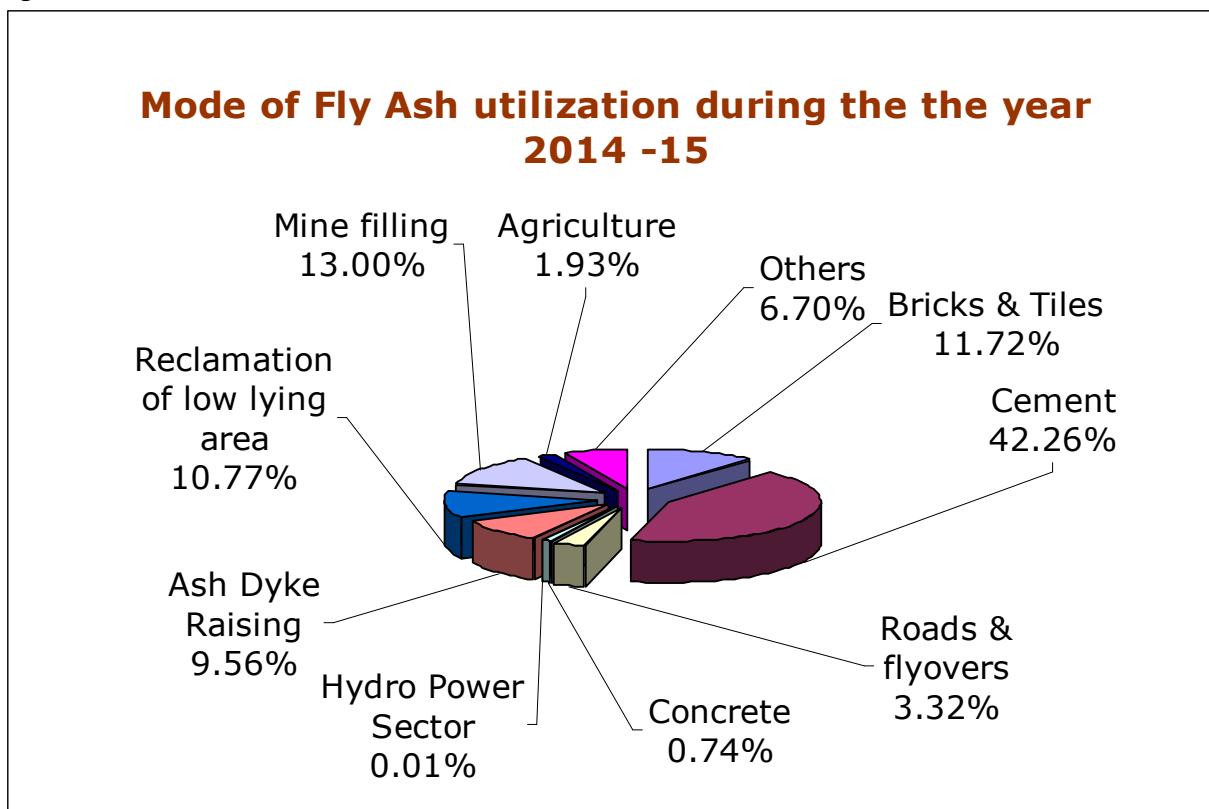
The modes in which fly ash were utilized during the year 2014-15 along with utilization in each mode are given in Table-XV below:

**TABLE-XV**

**MODES OF FLY ASH UTILIZATION DURING THE YEAR 2014-15**

Sl. No.	Mode of utilization	Quantity of Fly Ash utilized in the mode of utilization	
		Million-ton	Percentage (%)
(1)	(2)	(3)	(4)
1	Cement	43.3300	42.26
2	Mine filling	13.3311	13.00
3	Bricks & Tiles	12.0216	11.72
4	Reclamation of low lying area	11.0398	10.77
5	Ash Dyke Raising	9.8025	9.56
6	Roads & flyovers	3.4086	3.32
7	Agriculture	1.9748	1.93
8	Concrete	0.7606	0.74
9	Hydro Power Sector	0.0054	0.01
10	Others	6.8690	6.70
	<b>Total</b>	<b>102.5433</b>	<b>100.00</b>

The pie diagram showing the modes of utilization of fly ash during the Year 2014-15 is given in Figure-1 below:



**FIGURE-1**

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

During the Year 2014-15, the maximum utilization of fly ash to the extent of 42.26 % of total fly ash utilized was in the Cement sector, followed by 13.00 % in mine filling, 11.72 % in making bricks & tiles, 10.77 % in reclamation of low lying area, 9.56 % in ash dyke raising, 3.32 % in roads & embankments, 1.93 % in Agriculture, 0.74 % in Concrete, 0.01 % in Hydro Power Sector & 6.70 % in Others etc.

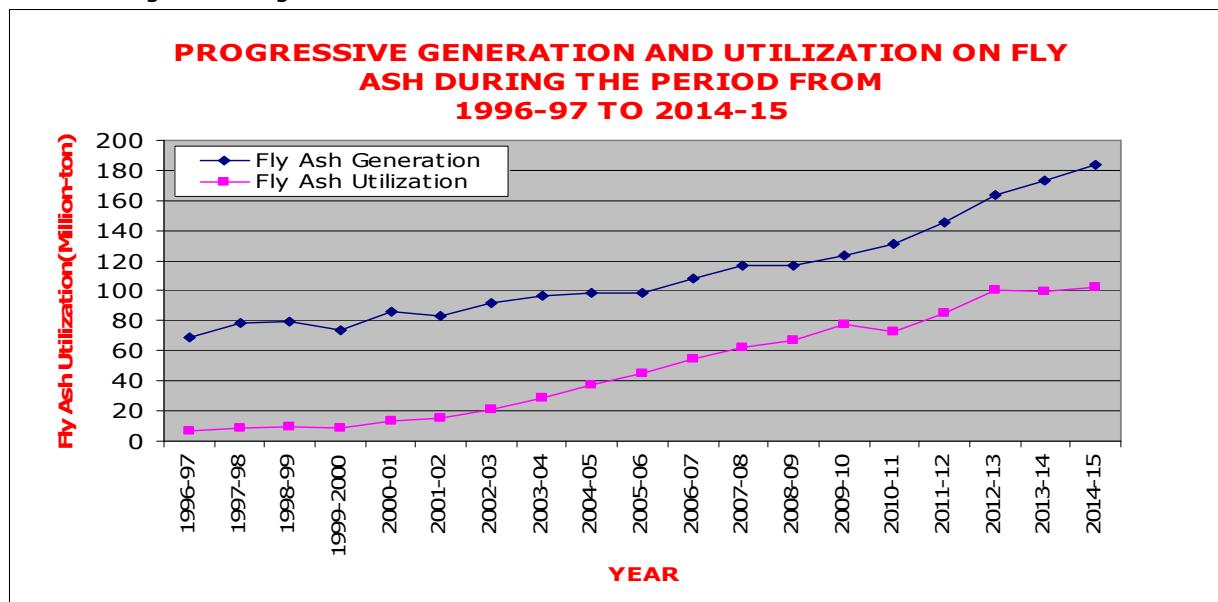
## **7.0 PROGRESSIVE FLY ASH GENERATION & UTILIZATION DURING THE PERIOD FROM 1996-97 TO 2014-15**

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 2014-15 is given in Table-XVI below:

**TABLE-XVI  
PROGRESSIVE FLY ASH GENERATION AND ITS UTILIZATION DURING THE PERIOD FROM 1996-97 TO 2014-15**

<b>Sl. No.</b>	<b>Year</b>	<b>Fly Ash Generation (Million-ton)</b>	<b>Fly Ash Utilization (Million-ton)</b>	<b>Fly Ash Utilization in % age</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>
1	1996-97	68.88	6.64	9.63
2	1997-98	78.06	8.43	10.80
3	1998-99	78.99	9.22	11.68
4	1999-2000	74.03	8.91	12.03
5	2000-01	86.29	13.54	15.70
6	2001-02	82.81	15.57	18.80
7	2002-03	91.65	20.79	22.68
8	2003-04	96.28	28.29	29.39
9	2004-05	98.57	37.49	38.04
10	2005-06	98.97	45.22	45.69
11	2006-07	108.15	55.01	50.86
12	2007-08	116.94	61.98	53.00
13	2008-09	116.69	66.64	57.11
14	2009-10	123.54	77.33	62.60
15	2010-11	131.09	73.13	55.79
16	2011-12	145.41	85.05	58.48
17	2012-13	163.56	100.37	61.37
18	2013-14	172.87	99.62	57.63
19	2014-15	184.14	102.54	55.69

A graph showing progressive fly ash generation and its utilization for the period from 1996-97 to 2014-15 is given in Figure-2 below:



**FIGURE-2**

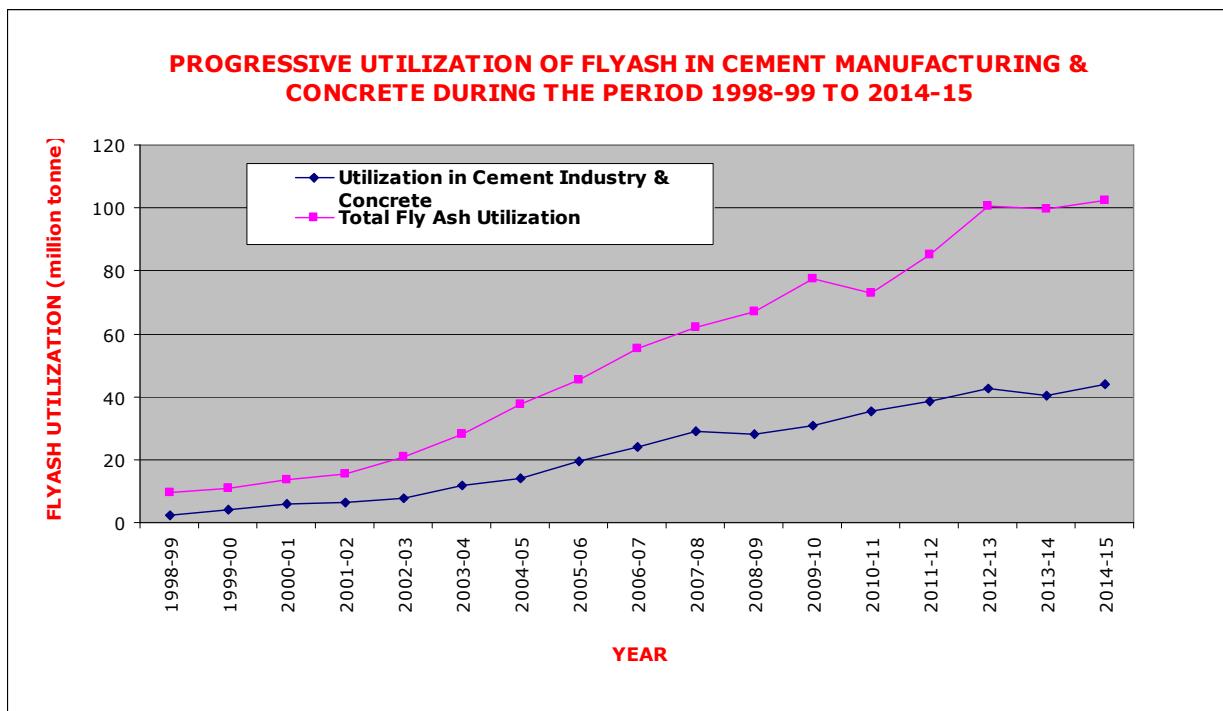
It may be seen from Table-XVI and Figure-2 above that:

- (i) The fly ash generation as well as utilization has generally been increasing since 1996-97.
- (ii) Fly ash utilization has increased from 9.63% in 1996-97 to the highest level of 62.60% in 2009-10 with 55.69 % during 2014-15.
- (iii) The fly ash generation has increased from 68.88 million-ton in 1996-97 to 184.14 million-ton in 2014-15 i.e. nearly 2.5 times.
- (iv) However, fly ash utilization has increased from 6.64 million-ton in 1996-97 to a level of 102.54 million ton in 2014-15 i.e. nearly more than 15 times over the same period.
- (v) From the Table XVI, it is seen that quantities of fly ash generation during 2012-13,2013-14 and 2014-15 have been 163.56, 172.87 and 184.14 tonnes respectively, indicating there in gradual increase in fly ash generation. Fly ash utilization during the said three years are 100.37, 99.62 and 102.54 tonnes, indicating slight variation.

## **8.0 PROGRESSIVE FLY ASH UTILIZATION IN VARIOUS MODES DURING THE PERIOD FROM 1998-99 TO 2014-15**

### **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 2014-15 is given in Figure-3 below:

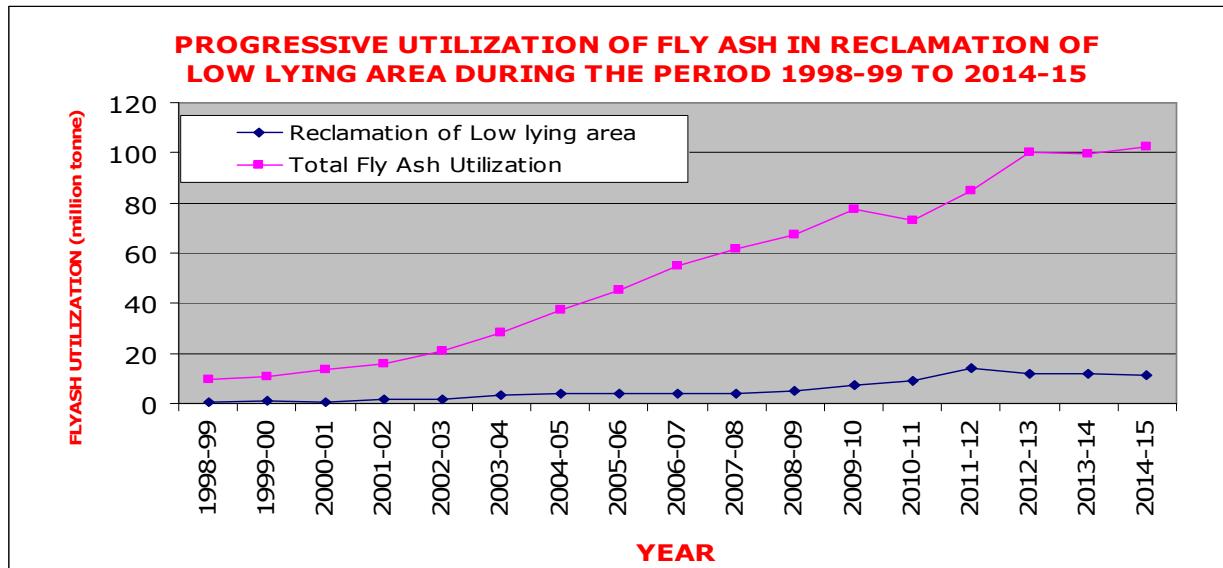


**FIGURE-3**

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 43.33 million-ton during 2014-15 and constituted 42.26 % of total fly ash utilization 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 2014-15 is given in Figure-4.

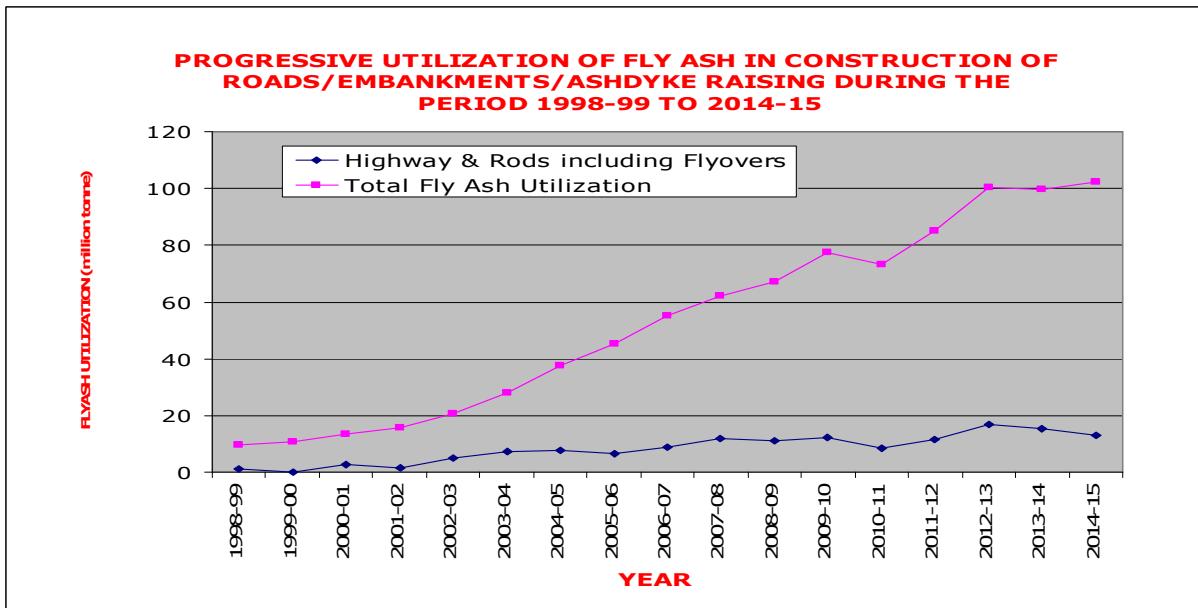


**FIGURE-4**

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 11.04 million ton in 2014-15 constituting 10.77 % of total fly ash utilization during the aforesaid year. However, utilization under this mode has become stable availability wise.

## **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 2014-15 is given in Figure-5 below:

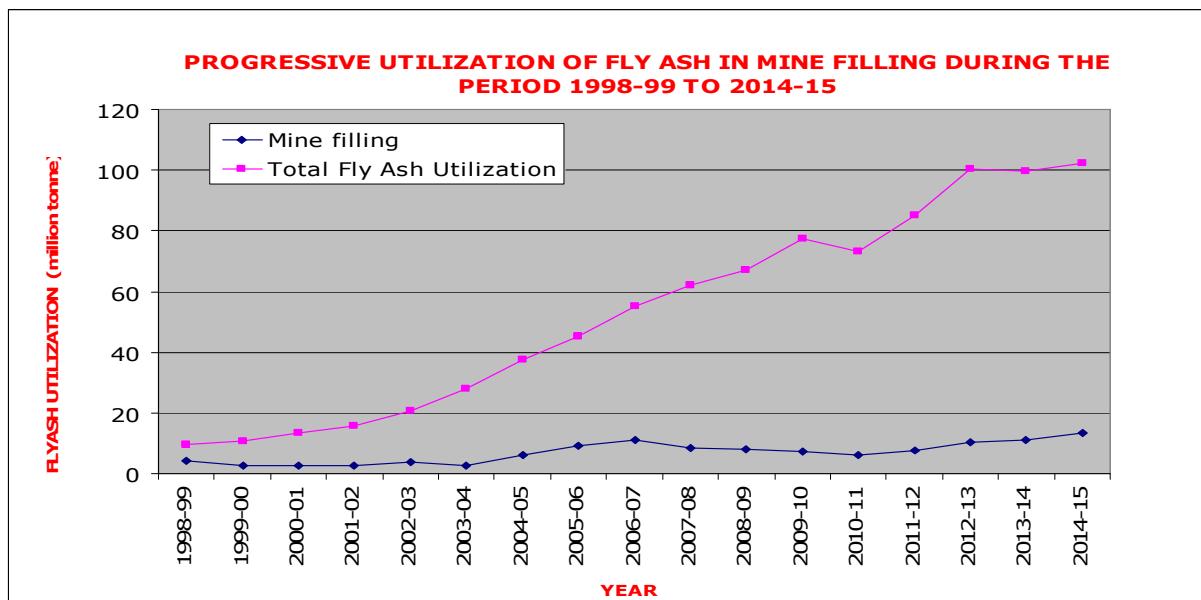


**FIGURE-5**

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 13.21 million-ton in 2014-15 and constituted 12.88 % of total fly ash utilization 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 2014-15 is given in Figure-6:



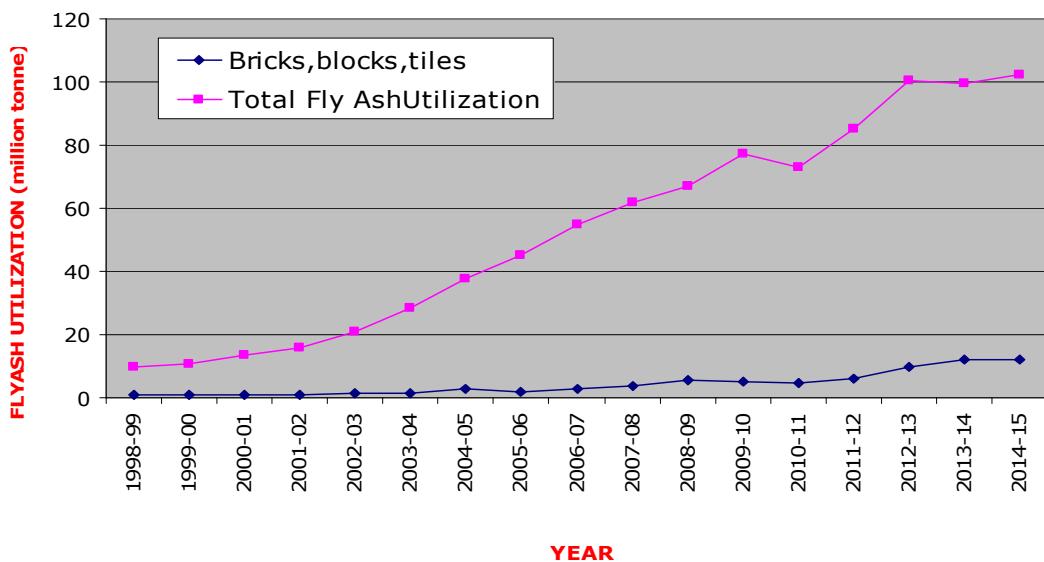
**FIGURE-6**

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 increased to 13.33 million-ton in 2014-15 constituting 13.00 % of total fly ash utilization in the aforesaid year. The trend is on increasing side.

#### **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 2014-15 is given in Figure -7.

**PROGRESSIVE UTILIZATION OF FLY ASH IN BRICKS, BLOCKS & TILES DURING THE PERIOD 1998-99 TO 2014-15**



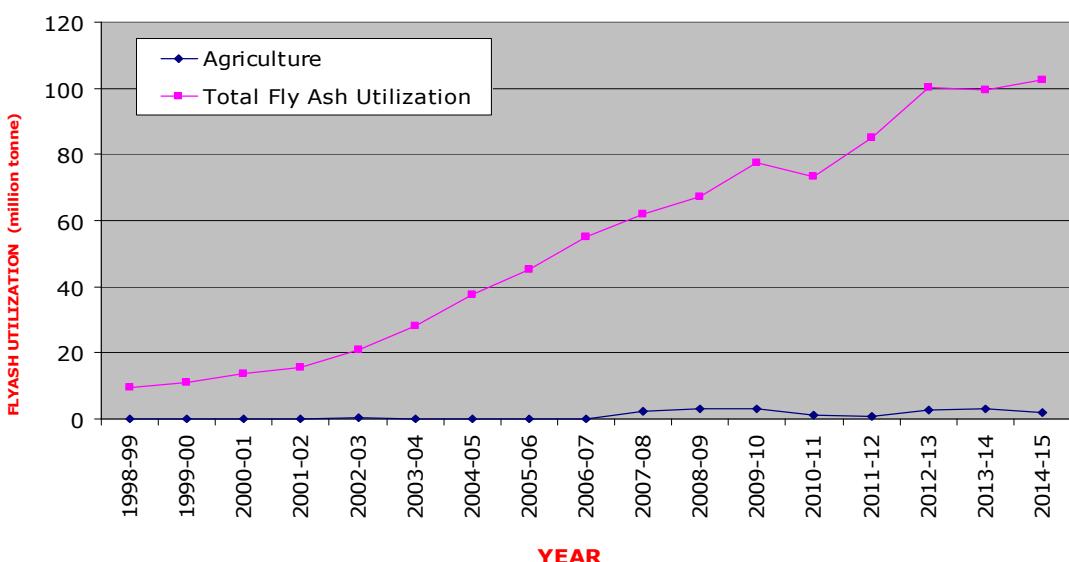
**FIGURE-7**

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 12.02 million-ton in 2014-15 and constituted 11.72 % of total fly ash utilization 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 2014-15 is given in Figure-8.

**PROGRESSIVE UTILIZATION OF FLY ASH UTILIZATION IN AGRICULTURE/WASTE LAND DEVELOPMENT DURING THE PERIOD 1998-99 TO 2014-15**



**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 1.97 million ton in 2014-15 and constituted about 1.93 % of total fly ash utilization in the aforesaid year.

## **9.0 CONCLUSIONS & RECOMMENDATIONS**

1. The highest level of fly ash utilization of about 62.6% was achieved in the year 2009-10 and it is, however, 55.69 % in the year 2014-15. The utilization is behind the target. It would require a lot of efforts to achieve the target of 100% utilization of fly ash as stipulated in MoEF's Notification of 3<sup>rd</sup> November, 2009. The utilization of fly ash is not commensurate with fly ash generation and that is why there percentage decrease. The stipulations of notification of 2009 and recently proposed amendment should be effectively implemented.
2. 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.
  - 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, the raising of ash dyke etc.
  - The use of fly ash in Agriculture and waste land development has large potential. Department of Science and Technology Govt. of India, through their research Projects, has established that use of fly ash in agriculture is safe.
  - 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 technologies by establishing 'Self sustaining technology demonstration centers' would facilitate and accelerate the fly ash utilization in the country.
  - Thermal Power Stations have to explore and promote all possible modes of fly ash utilization at their respective thermal power station for increasing the fly ash utilization in the country in line with MoEF's notification of 3<sup>rd</sup> November, 2009.
  - There is a need to encourage 'Industry-Institute Interactions' for entrepreneur development, creating awareness and organizing training programmes and workshops.
  - Induction of 'Fly Ash' as a subject in academic curriculum of Engineering and Architecture is needed.
  - The meeting of the Monitoring Committee, constituted by MoEF to monitor the fly ash notification, 1999 was held on 18.06.2014 where in various issues responsible for under utilization of fly ash were discussed. Subsequently, concerned Ministries, Departments, PSUs have been asked to take necessary action so as to ensure enhanced utilization of fly ash.

\*\*\*

## 10.0 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.
ACBPL	: Aryan Coal Beneficiation 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.
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 Pradeh Rajaya Vidyut Utpadan Nigam Ltd.
VESPL	: Vandanca energy Supply Power Ltd.
WBPDCL	: 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

**FLY ASH GENERATION AND ITS UTILIZATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2014-15( APRIL-2014 TO MARCH, 2015) ( POWER UTILITY- WISE )**

Sl. No.	Name of TPS	Power Utility & State	FLY ASH GENERATION AND ITS UTILIZATION							MODES OF UTILIZATION									Total Utilization
			Installed Capacity	Coal consumed	Ash content of coal	Fly Ash Generation	Fly Ash Utilization	% age Utilization	In making of Fly Ash based/ Bricks/ Blocks/ Tiles etc.	In manufacture of Portland Pozzolana Cement	In construction of Highways & Roads including Flyovers	Part replacement of cement in concrete	In Hydro Power Sector in RCC Dam Construction	In Ash dyke raising	In reclamation of low lying Area	In Mine filling	In Agriculture/ Waste land Development	Others	
			(MW)	(million ton)	% age	(million ton)	(million ton)	%	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1	RAYALSEEMA	A.P.GENCO (Andhraapradesh)	1050.00	5.4309	43.4155	2.3579	1.4488	61.4460	0.3479	1.1009	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.4488
2	Dr. N.T.R (Vijawada)	A.P.GENCO (Andhraapradesh)	1760.00	9.5045	42.8062	4.0685	2.6115	64.1884	0.9530	1.0859	0.0167	0.0278	0.0000	0.0000	0.3897	0.0000	0.0000	0.1385	2.6115
3	KASAI PALLI	ACBPL (Chhattisgarh)	270.00	1.7352	52.7201	0.9148	0.8605	94.0684	0.0763	0.0000	0.0275	0.0000	0.0000	0.0000	0.7568	0.0000	0.0000	0.0000	0.8605
4	INDIRA GANDHI	APCPCL (Haryana)	1500.00	5.4682	34.0000	1.8592	0.4066	21.8695	0.0262	0.1604	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.4065598
5	MUNDRA TPP	APL (Gujrat)	4620.00	16.1560	9.4764	1.5310	1.2930	84.4546	0.0320	0.5550	0.1020	0.0000	0.0000	0.0000	0.4760	0.0000	0.0000	0.1280	1.2930
6	MIHAN	AMNEPL (Maharashtra)(No generation)	246.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	TIRORA	Adani Power Maharashtra Ltd.	3300.00	9.5010	31.5967	3.0020	1.4900	49.6320	0.0302	0.0078	0.0000	0.0000	0.0000	0.6141	0.8378	0.0001	0.0000	0.0000	1.4900
8	KAWAI	Adani Power Ltd. (Rajasthan)	1320.00	4.1571	23.2590	0.9669	0.6804	70.3713	0.0037	0.6623	0.0000	0.0000	0.0000	0.0144	0.0000	0.0000	0.0000	0.0000	0.6804
9	CHAKABURA TPP	ACB (INDIA) Ltd. (Chhattisgarh)	30.00	0.2630	44.2972	0.1165	0.1165	100.0000	0.0178	0.0008	0.0000	0.0000	0.0000	0.0913	0.0000	0.0000	0.0066	0.116495	
10	CHAKABURA TPP (EXTN)	ACB (INDIA) Ltd. (Chhattisgarh)	30.00	0.2504	44.8860	0.1124	0.1124	100.0000	0.0159	0.0000	0.0000	0.0000	0.0000	0.0965	0.0000	0.0000	0.0124	0.1124	
11	BARAUNI	B.S.P.G.C.L.(Bihar) (No Generation)	220.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	BARKHERA	BEPL (UP)	90.00	0.5144	42.9499	0.2210	0.2124	96.1073	0.0020	0.1240	0.0000	0.0000	0.0000	0.0336	0.0527	0.0000	0.0000	0.0000	0.2124
13	KHAMBER KHERA	BEPL (UP)	90.00	0.4751	44.8186	0.2129	0.2046	96.0759	0.0025	0.1246	0.0000	0.0000	0.0000	0.0337	0.0438	0.0000	0.0000	0.0000	0.2046
14	KUNDARKI	BEPL (UP)	90.00	0.5043	43.1274	0.2175	0.2104	96.7493	0.0007	0.1561	0.0000	0.0000	0.0000	0.0211	0.0326	0.0000	0.0000	0.0000	0.2104
15	MAQSOODPUR	BEPL (UP)	90.00	0.4649	42.7273	0.1986	0.1905	95.8871	0.0002	0.0908	0.0000	0.0000	0.0000	0.0313	0.0681	0.0000	0.0000	0.0000	0.1905
16	UTTRAULI	BEPL (UP)	90.00	0.5115	44.0689	0.2254	0.2185	96.9310	0.0000	0.1602	0.0000	0.0000	0.0000	0.0348	0.0235	0.0000	0.0000	0.0000	0.2185
17	B.B.G.S.	C.E.S.C. (West Bengal)	750.00	3.4860	39.5009	1.3770	1.3770	100.0000	0.0320	1.0140	0.0000	0.0000	0.0000	0.3310	0.0000	0.0000	0.0000	0.0000	1.3770
18	S.G.S.	C.E.S.C. (West Bengal)	135.00	0.7170	37.9358	0.2720	0.2720	100.0000	0.0100	0.2130	0.0000	0.0130	0.0000	0.0360	0.0000	0.0000	0.0000	0.0000	0.2720
19	T.G.S	C.E.S.C. (West Bengal)	240.00	1.1120	37.9496	0.4220	0.4220	100.0000	0.0820	0.1550	0.0470	0.0000	0.0000	0.1380	0.0000	0.0000	0.0000	0.0000	0.4220
20	NEW COSSIPORE	CESC (West.Bengal)	160.00	0.1040	20.7692	0.0216	0.0216	100.0000	0.0000	0.0035	0.0000	0.0000	0.0122	0.0000	0.0000	0.0000	0.0059	0.0216	
21	MUNDRA UMPP	CGPL (Gujrat)	4000.00	10.5900	6.1190	0.6480	0.1810	27.9321	0.0000	0.1370	0.0000	0.0440	0.0000	0.0000	0.0000	0.0000	0.0000	0.1810	
22	KORBA (WEST)	C.S.P.G.C.L Chhattisgarh	840.00	4.3910	32.5816	1.4307	0.1687	11.7918	0.0000	0.0000	0.0000	0.0000	0.1520	0.0167	0.0000	0.0000	0.0000	0.1687	
23	KORBA (WEST) Extn	C.S.P.G.C.L Chhattisgarh	500.00	2.4560	31.5554	0.7750	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
24	DSPM	C.S.P.G.C.L.Chhattisgarh	500.00	2.6990	37.0137	0.9990	0.1760	17.6176	0.0000	0.0000	0.0000	0.0000	0.0000	0.1760	0.0000	0.0000	0.0000	0.0000	0.1760
25	KORBA (EAST)	C.S.P.G.C.LChhattisgarh	440.00	2.4502	48.8606	1.1972	0.3768	31.4735	0.0008	0.0000	0.0000	0.0000	0.0000	0.0878	0.2882	0.0000	0.0000	0.0000	0.3768
26	BOKARO 'B'	D.V.C.(Jharkhand)	630.00	1.3427	49.3405	0.6625	0.4316	65.1470	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.4316	0.0000	0.0000	0.0000	0.4316
27	CHANDRAPURA	D.V.C.(Jharkhand)	890.00	3.3734	49.5291	1.6708	1.4384	86.0876	0.0065	0.0217	0.0000	0.0000	0.0000	0.1161	0.0000	1.2940	0.0000	0.0000	1.4384
28	DURGAPUR	D.V.C.(West Bengal)	350.00	1.0610	48.2569	0.5120	0.4599	89.8127	0.0000	0.0019	0.0000	0.0000	0.0000	0.0000	0.4579	0.0000	0.0000	0.4599	
29	MEJIA	D.V.C.(West Bengal)	2340.00	8.1840	46.7375	3.8250	4.5249	118.2971	0.0244	0.8923	0.0000	0.0000	0.0000	0.0000	3.5892	0.0190	0.0000	4.5249	
30	Durgapur Steel	DVC (West Bengal)	1000.00	2.6481	48.3603	1.2806	0.8010	62.5494	0.0182	0.5783	0.0000	0.0000	0.0000	0.0005	0.2041	0.0000	0.0000	0.0000	0.8010
31	KODARMA	DVC (Jharkhand)	1000.00	1.4033	47.5424	0.6671	0.6416	96.1768	0.0168	0.1302	0.0000	0.0000	0.0000	0.0000	0.4947	0.0000	0.0000	0.0000	0.6416
32	DURGAPUR PROJECTS POWER STAION	D.P.L (West Bengal)	891.00	1.0690	42.6567	0.4560	0.4036	88.5020	0.0030	0.0829	0.0837	0.0000	0.0000	0.0380	0.0000	0.0000	0.1960	0.0000	0.4036
33	CHINAKURI	DPSCL (W.B)(No generation)	30.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
34	DISHERGARH POWER STATION	DPSCL (W.B)	12.00	0.0439	0.0241	0.0312	0.0312	100.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0312	0.0000	0.0000	0.0312	
35	MAHAN	ESSAR POWER MP LTD.(M.P)	1200.00	3.9398	40.3388	0.1589	0.1211	76.2172	0.0010	0.0690	0.0000	0.0000	0.0000	0.0075	0.0436	0.0000	0.0000	0.0000	0.1211
36	SALAYA	EPGL (Gujarat)	1200.00	2.8780	8.7561	0.2520	0.2520	100.0000	0.0000	0.2420	0.0000	0.0000	0.0000	0.0100	0.0000	0.0000	0.0000	0.0000	0.2520
37	SURAT LIGNITE	G.I.P.C.L. (Gujarat)	500.00	3.3324	13.1973	0.4398	0.4398	100.0000	0.3843	0.0000	0.0554	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.4398
38	AKRIMOTA	G.M.D.C.L. (Gujarat)	250.00	1.1283	13.9232	0.1571	0.1588	101.0872	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1588	0.0000	0.0000	0.1588
39	GANDHINAGAR	G.S.E.C.L. (Gujarat)	870.00	2.1850	30.5721	0.6680	0.6720	100.5988	0.1480	0.4510	0.0000	0.0500	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6720
40	KUTCH LIGNITE	G.S.E.C.L. (Gujarat)	290.00	1.8660	13.6656	0.2550	0.2550	100.0000	0.0000	0.1190	0.0000	0.0000	0.0000	0.0000	0.1360	0.0000	0.0000	0.0000	0.2550
41	SIKKA	G.S.E.C.L. (Gujarat)	240.00	0.6800	25.7353	0.1750	0.2220	126.8571	0.0590	0.1630	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2220
42	UKAI	G.S.E.C.L. (Gujarat)	1350.00	4.4950	34.1935	1.5370	1.0230	66.5582	0.3810	0.3690	0.0000	0.0000	0.0000	0.0710	0.0000	0.0000	0.0000	0.0000	1.0230
43	WANAKBORI	G.S.E.C.L. (Gujarat)	1470.00	5.1940	34.8094	1.8080	1.0460	57.8540	0.1210	0.7620	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0460
44	HISAR	H.P.G.C.L. (Haryana)	1200.00	4.0502	36.1239	1.4631	1.3696	93.6094	0.0086	0.6796	0.3626	0.0524	0.0000	0.2664	0.0000	0.0000	0.0000	0.0000	1.3696
45	YAMUNANAGAR	H.P.G.C.L. (Haryana)	600.00	2.2915	29.3869	0.6734	0.2467	36.6365	0.0018	0.2449	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2467
46	PANIPAT	H.P.G.C.L. (Haryana)	1367.80	3.1490	41														

**FLY ASH GENERATION AND ITS UTILIZATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2014-15( APRIL-2014 TO MARCH, 2015) ( POWER UTILITY- WISE )**

Sl. No.	Name of TPS	Power Utility & State	FLY ASH GENERATION AND ITS UTILIZATION										MODES OF UTILIZATION								Total Utilization
			Installed Capacity	Coal consumed	Ash content of coal	Fly Ash Generation	Fly Ash Utilization	% age Utilization	In making of Fly Ash based/ Bricks/ Blocks/ Tiles etc.	In manufacture of Portland Pozzolana Cement	In construction of Highways & Roads including Flyovers	Part replacement of cement in concrete	In Hydro Power Sector in RCC Dam Construction	In Ash dyke raising	In reclamation of low lying Area	In Mine filling	In Agriculture/ Waste land Development	Others			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)		
51	MAHATMA GANDHI	JHPL (Haryana)	1320.00	3,9239	33,2338	1,3041	1,0456	80.1778	0.0364	0.9347	0.0744	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1,0456	
52	O.P.Jindal (Stage-I)	JPL (Chhattisgarh.)	1000.00	5,6940	40,2353	2,2910	1,4135	61,6979	0.0125	0.0000	0.0000	0.0000	0.0000	0.1950	0.2170	0.9890	0.0000	0.0000	0.0000	1,4135	
53	O.P.Jindal (Stage-II)	JPL (Chhattisgarh.)	1800.00	1,6780	40,4052	0,6780	0.3773	55,6490	0.0000	0.0000	0.0000	0.0003	0.0000	0.0000	0.0000	0.3770	0.0000	0.0000	0.0000	0.3773	
54	PATRATU	J.U.U.N.L (Jarkhand)	770.00	0,7419	37,9588	0,2816	0.0288	10,2442	0.0065	0.0000	0.0000	0.0000	0.0000	0.0000	0.0223	0.0000	0.0000	0.0000	0.0000	0.0288	
55	RATNAGIRI	JSW Energy Limited (Maharashtra)	1200.00	3,5247	6,2587	0,2206	0,1807	81,9130	0.0122	0.0771	0.0000	0.0914	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1807	
56	VIJAYANAGAR	JSW Energy Limited (Karnataka)	860.00	2,5210	13,2090	0,3330	0,3330	100,0000	0.0120	0.2280	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0930	0.3330	
57	BELLARY	K.P.C.L (Karnataka)	1000.00	3,4421	145,2994	5,0013	0,5791	11,5799	0.0000	0.5791	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.5791	
58	RAICHUR	K.P.C.L (Karnataka)	1720.00	8,3051	35,9695	2,9873	1,1848	39,6612	0.1432	1,0416	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1,1848	
59	MUZAFFARPUR TPS	K.B.U.N.L (Bihar)	220.00	0,6594	43,9299	0,2897	0,0550	18,9859	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0550	0.0000	0.0000	0.0000	0.0000	0.0550	
60	AMARKANTAK TPS	Lanco Amarkantak Power Ltd. ( Chhattisgarh )	600.00	1,5897	33,2556	0,5287	0,4762	90,0770	0.0124	0,3538	0,0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1000	0.4762	
61	THAMMINAPATNAM TPS	Meenakshi Energy Pvt. Ltd. (A.P.)	300.00	1,0214	5,7673	0,0589	0,0142	24,0719	0.0142	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0142	
62	MAITHON BTTP	MPL (Jharkhand)	1050.00	3,9895	41,3316	1,6489	2,6548	161,0055	0.0190	0.0000	0.0000	0.0000	0.0000	0.0000	2,6358	0.0000	0.0000	0.0000	0.0000	2,6548	
63	SANJAY GANDHI	M.P.P.G.C.L. ( M.P. )	1340.00	5,1378	39,5231	2,0306	1,6100	79,2876	0.0199	1,5901	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1,6100	
64	SATPURA	M.P.P.G.C.L. ( M.P. )	1330.00	5,5168	44,0816	2,4319	1,0246	42,1320	0,3506	0,0061	0,0004	0,0005	0,0000	0,0610	0,3961	0,0003	0,2092	0,0004	0,0004	1,0246	
65	AMARKANTAK	M.P.P.G.C.L. ( M.P. )	450.00	1,4590	36,0982	0,5267	0,2019	38,3284	0,0179	0,1839	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,2019	
66	SHREE SINGAJI TPS	M.P.P.G.C.L. ( M.P. )	1200.00	1,5558	46,2859	0,7201	0,0072	1,0025	0,0072	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0072	
67	BHUSAWAL	M.S.P.G.C.L.(Maharashtra)	1420.00	4,8005	34,6676	1,6642	0,8714	52,3610	0,3283	0,4066	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0748	0,8714	
68	CHANDRAPUR	M.S.P.G.C.L.(Maharashtra)	2340.00	10,9194	38,4395	4,1974	2,0536	48,9261	0,0591	1,3186	0,0887	0,0000	0,0000	0,0000	0,1535	0,0000	0,0597	0,3740	0,20536		
69	KHAPARKHEDA	M.S.P.G.C.L.(Maharashtra)	840.00	4,4203	30,5595	1,3508	0,7891	58,4186	0,2025	0,0000	0,2033	0,0000	0,0000	0,0000	0,3380	0,0000	0,0000	0,0000	0,0453	0,7891	
70	KHAPARKHEDA ( Ext )	M.S.P.G.C.L.(Maharashtra)	500.00	2,4716	36,6265	0,9053	0,0004	0,0398	0,0004	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0004	
71	KORADI	M.S.P.G.C.L.(Maharashtra)	1100.00	2,1520	42,0074	0,9040	0,7629	84,3916	0,1559	0,0000	0,0670	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,7629	
72	NASIK	M.S.P.G.C.L.(Maharashtra)	630.00	3,4421	35,2925	1,2148	1,1057	91,0239	0,8390	0,2665	0,0003	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	1,1057	
73	PARAS	M.S.P.G.C.L.(Maharashtra)	500.00	2,4411	28,1437	0,6870	0,3143	45,7534	0,2263	0,0881	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,3143	
74	PARLI	M.S.P.G.C.L.(Maharashtra)	1130.00	3,8359	46,7009	1,7914	1,4710	82,1145	0,4043	0,6222	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0289	0,4156	1,4710	
75	NEYVELI - I	N.L.C.LTD(Tamilnadu)	600.00	5,3270	5,1661	0,2752	0,2044	74,2733	0,0400	0,1640	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0004	0,2044	
76	NEYVELI - I EXPN	N.L.C.LTD(Tamilnadu)	420.00	3,4487	6,9745	0,2405	0,2405	100,0091	0,0510	0,1394	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0501	0,0000	0,2405	
77	NEYVELI - II	N.L.C.LTD(Tamilnadu)	1470.00	12,0208	4,5712	0,5495	0,5393	98,1378	0,1023	0,2996	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,1374	0,0000	0,5393	
78	NEYVELI - II EXPN	NLC (T. Nadu) (No generation)	250.00	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	
79	BARSINGAR LIGNITE	NLC (Rajasthan)	250.00	1,3516	21,9883	0,2972	0,2972	100,0077	0,0471	0,1437	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,1065	0,0000	0,2972	
80	BHILAI	NSPCL (Chhattisgarh)	500.00	2,2684	40,0950	0,9095	0,5128	56,3816	0,0937	0,4047	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0144	0,5128		
81	VALLUR	NTCL (Tamilnadu)	1500.00	4,0097	25,5154	1,0231	0,0900	8,7968	0,0000	0,0000	0,0000	0,0000	0,0000	0,0900	0,0000	0,0000	0,0000	0,0000	0,0900		
82	RAMAGUNDAM	N.T.P.C. (Andhra Pradesh)	2600.00	14,2980	38,5648	5,5140	3,5510	64,3997	0,8550	0,9490	0,1920	0,0000	0,0000	0,0010	0,0000	0,9680	0,0000	0,5860	0,5510		
83	SIMHADRI	N.T.P.C. (Andhra Pradesh)	2000.00	9,8040	29,8858	2,9300	0,9850	33,6177	0,2930	0,1090	0,0000	0,0000	0,0000	0,05830	0,0000	0,0000	0,0000	0,0000	0,0000	0,9850	
84	KAHALGAON	N.T.P.C.LTD.(Bihar)	2340.00	13,4160	42,0990	5,6480	1,6870	29,8690	0,2420	0,2700	0,0000	0,0000	0,0000	0,5480	0,0160	0,0000	0,0000	0,6110	0,6870		
85	KORBA	N.T.P.C. (Chhattisgarh)	2600.00	14,4990	42,1946	6,1140	1,9010	31,0926	0,1090	0,0060	0,0000	0,0000	0,0000	1,4140	0,0000	0,0000	0,0000	0,3720	1,9010		
86	SIPAT	N.T.P.C. (Chhattisgarh)	2980.00	13,2100	37,4035	4,9410	1,5410	31,1880	0,2710	1,2110	0,0050	0,0000	0,0000	0,0150	0,0090	0,0000	0,0000	0,0300	1,5410		
87	BADARPUR	N.T.P.C.LTD (Delhi)	705.00	2,7060	30,0074	0,8120	0,9730	19,8276	0,2190	0,3010	0,0000	0,0000	0,0000	0,1800	0,0020	0,0000	0,0000	0,0000	0,0000	0,9730	
88	VINDHYACHAL	N.T.P.C.LTD. ( M.P. )	4260.00	20,7010	35,3171	7,3110	1,9510	26,6858	0,0880	0,2280	0,0000	0,0000	0,0000	0,4650	0,0550	0,0000	0,0000	1,1150	1,9510		
89	TALCHAR(KAN)	N.T.P.C.LTD(Odisha)	3000.00	17,6340	36,9740	6,5200	2,7570	42,2853	0,0920	0,0340	0,0000	0,0000	0,0000	2,4780	0,0000	0,0000	0,0000	0,1530	2,7570		
90	TALCHAR(TPS)	N.T.P.C.LTD(Odisha)	460.00	3,0840	39,0078	1,2030	1,2070	100,3325	0,0190	0,0000	0,0020	0,0000	0,0000	0,0660	0,0000	1,1200	0,0000	0,0000	1,2070		
91	RIHAND	N.T.P.C.LTD. (U.P.)	3000.00	14,6950	32,8751	4,8310	0,4930	10,2049	0,0400	0,0730	0,0000	0,0000	0,0000	0,2640	0,0520	0,0000	0,0000	0,0640	0,4930		
92	SINGRAULI	N.T.P.C.LTD. (U.P.)	2000.00	10,2390	36,1363	3,7000	0,6210	16,7838	0,0140	0,0820	0,0000	0,0000	0,0000	0,							

**FLY ASH GENERATION AND ITS UTILIZATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2014-15( APRIL-2014 TO MARCH, 2015) ( POWER UTILITY- WISE )**

Sl. No.	Name of TPS	Power Utility & State	FLY ASH GENERATION AND ITS UTILIZATION							MODES OF UTILIZATION										Total Utilization
			Installed Capacity	Coal consumed	Ash content of coal	Fly Ash Generation	Fly Ash Utilization	% age Utilization	In making of Fly Ash based/ Bricks/ Blocks/ Tiles etc.	In manufacture of Portland Pozzolana Cement	In construction of Highways & Roads including Flyovers	Part replacement of cement in concrete	In Hydro Power Sector in RCC Dam Construction	In Ash dyke raising	In reclamation of low lying Area	In Mine filling	In Agriculture/ Waste land Development	Others		
			(MW)	(million ton)	% age	(million ton)	(million ton)	(%)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	
99	IB VALLEY	O.P.G.C.L.(Odisha)	420.00	2,312.3	38.6677	0.8976	0.2034	22.6605	0.0040	0.0000	0.0017	0.0000	0.0000	0.1887	0.0090	0.0000	0.0000	0.0000	0.2034	
100	BATHINDA	P.S.P.C.L. (Punjab)	460.00	0.9578	33.3689	0.3196	0.2427	75.9275	0.0221	0.2199	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0007	0.0000	0.2427	
101	LEHRA MOHABAT	P.S.P.C.L. (Punjab)	920.00	2,734.3	34.5340	0.9443	0.6905	73.1258	0.0121	0.6406	0.0000	0.0365	0.0000	0.0000	0.0013	0.0000	0.0000	0.0000	0.6905	
102	ROPAR	P.S.P.C.L. (Punjab)	1260.00	4,053.6	34.5500	1.4005	1.3298	94.9481	0.0272	1.2595	0.0000	0.0187	0.0000	0.0000	0.0244	0.0000	0.0000	0.0000	1.3298	
103	KOTA	RRVUNL (Rajasthan)	1240.00	6,149.0	28.1824	1.7330	1.7345	100.0908	0.4043	1.1781	0.0525	0.0322	0.0000	0.0000	0.0000	0.0000	0.0085	0.0589	1.7345	
104	SURATGARH	RRVUNL (Rajasthan)	1500.00	6,735.9	38.7039	2.6070	1.7203	65.9865	0.2742	1.4381	0.0080	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.7203	
105	CHHABRA	RRVUNL (Rajasthan)	1000.00	3,231.8	32.1860	1.0402	0.8217	78.9935	0.0307	0.6278	0.0000	0.0000	0.0054	0.0000	0.0000	0.0000	0.0000	0.0000	0.8217	
106	GIRAL	RRVUNL (Rajasthan)	250.00	0.4467	27.3468	0.1222	0.1222	100.0003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1222	0.0000	0.1222	
107	JALIIPA KAPURDI	RWPL (Rajasthan)	1080.00	6,959.1	18.8300	1.3104	1.1270	86.0043	0.0283	0.5731	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.5256	0.0000	1.1270	
108	ROSA PHASE-I	RPSCL(U.P)	1200.00	5,211.5	25.8034	1.3447	0.6012	44.7099	0.0000	0.1301	0.2909	0.0008	0.0000	0.0000	0.1794	0.0000	0.0000	0.6012		
109	DAHANU	Reliance Infrastructure Ltd.,(Maharashtra)	500.00	2,346.0	29.4544	0.6910	0.7731	111.8813	0.0001	0.0000	0.0000	0.3000	0.0000	0.2430	0.0000	0.0000	0.0000	0.2300	0.7731	
110	SIMHPURI	SEPL(A.P)	450.00	2,082.5	4.9256	0.1026	0.1008	98.2454	0.0776	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0232	0.1008		
111	CUDDALORE	Taga Neyveli Power Company Pvt. Ltd. (Tamilnadu)	250.00	1,840.4	7.0767	0.1302	0.1036	79.5768	0.0028	0.0945	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1036	
112	JOBOJERA	T.P.CO. (Jarkhad)	547.50	2,602.5	45.8784	1.1940	1.1824	99.0285	0.0010	0.6680	0.0000	0.0666	0.0000	0.0000	0.4698	0.0370	0.0000	0.0000	1.1824	
113	TROMBAY	T.P.CO. (Maharashtra)	750.00	1,997.0	2,218.3	0.0443	0.0443	100.0000	0.0000	0.0000	0.0000	0.0377	0.0000	0.0000	0.0000	0.0058	0.0008	0.0000	0.0443	
114	SABARMATI	Torrent Power Ltd.(Gujarat)	422.00	1,8000	20.0000	0.3600	0.3680	102.2222	0.0000	0.3150	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0530	0.0000	0.3680	
115	TENUGHAT	T.V.N.L.(Jarkhad)	420.00	1,870.0	40.0000	0.7480	0.7166	95.8035	0.0000	0.0000	0.0000	0.0000	0.0000	0.7166	0.0000	0.0000	0.0000	0.7166		
116	ENNORE	T.N.G & D Corporation (Tamil Nadu)	340.00	0,0721	28.8796	0.0208	0.0237	113.6355	0.0044	0.0065	0.0000	0.0000	0.0000	0.0014	0.0000	0.0000	0.0115	0.0237		
117	METTUR	T.N.G & D Corporation (Tamil Nadu)	840.00	4,838.4	26.9270	1.3028	1.7654	135.5061	0.3245	1.4410	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.7654	
118	METTUR-II	T.N.G & D Corporation (Tamil Nadu)	600.00	2,157.8	23.4606	0.5062	0.3554	70.2072	0.0972	0.2582	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.3554	
119	NORTH CHENNAI	T.N.G & D Corporation (Tamil Nadu)	630.00	2,945.0	34.9745	1.0300	0.6574	63.8252	0.0504	0.2240	0.3830	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6574	
120	NORTH CHENNAI - II	T.N.G & D Corporation (Tamil Nadu)	1200.00	4,365.0	25.2234	1.1010	0.5323	48.3470	0.3143	0.2180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.5323	
121	TUTICORIN	T.N.G & D Corporation (Tamil Nadu)	1050.00	6,373.3	23.4110	1.4921	1.1183	74.9521	0.1946	0.8988	0.0000	0.0235	0.0000	0.0000	0.0014	0.0000	0.0000	0.0000	1.1183	
122	KOTHAGUDEM (Stage I to IV)	TSGENCO (Telangana)	720.00	4,475.6	49.7949	2.2286	0.1597	71.6444	0.0962	0.0549	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0086	0.1597	
123	KOTHAGUDEM-V	TSGENCO (Telangana)	500.00	2,804.5	49.0917	1.3768	0.0472	3.4309	0.0213	0.0044	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0215	0.0472	
124	KOTHAGUDEM-VI	TSGENCO (Telangana)	500.00	2,521.4	43.6437	1.1004	0.4017	36.5048	0.0058	0.3959	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.4017	
125	RAMAGUNDAM'B'	TSGENCO (Telangana)	62.50	0,1347	44.3645	0.0598	0.1503	251.5334	0.0013	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1490	0.1503	
126	KAKATIA	TSGENCO (Telangana)	500.00	2,608.9	43.3709	1.1315	0.6081	53.7413	0.1279	0.4802	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6081	
127	ANPARA 'A' & 'B'	U.P.R.V.U.N.L. ( U.P.)	1630.00	8,023.9	39.3431	3.1568	0.0089	0.2823	0.0000	0.0000	0.0000	0.0000	0.0000	0.0089	0.0000	0.0000	0.0000	0.0089		
128	HARDUAGANJ	U.P.R.V.U.N.L. ( U.P.)	670.00	2,981.5	33.4709	0.9979	1.1963	119.8765	0.0106	0.4817	0.0000	0.0000	0.0000	0.0000	0.7041	0.0000	0.0000	0.0000	1.1963	
129	OBRA	U.P.R.V.U.N.L. ( U.P.)	1194.00	3,195.4	42.1606	1.3472	0.3087	22.9142	0.0000	0.3087	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.3087		
130	PANKI	U.P.R.V.U.N.L. ( U.P.)	210.00	0,9173	34.1061	0.3128	0.7825	250.1175	0.0007	0.0777	0.0000	0.0000	0.0000	0.0000	0.7041	0.0000	0.0000	0.7825		
131	PARICCHA	U.P.R.V.U.N.L. ( U.P.)	1140.00	4,859.7	42.0303	2.0425	1.1116	54.4208	0.1375	0.8547	0.0000	0.0000	0.0000	0.1194	0.0000	0.0000	0.0000	1.1116		
132	UDUPI	UPCL (Karnatak)	1200.00	2,703.4	5.1878	0.1400	0.1033	73.7857	0.0006	0.0775	0.0000	0.0252	0.0000	0.0000	0.0000	0.0000	0.0000	0.1033		
133	KOLAGHAT	W.B.P.D.C.L(W.B.)	1260.00	6,244.0	39.7902	2.4845	2.2362	90.0060	0.0934	0.4422	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0437	0.6569	2.2362	
134	SAGARDIGHI	W.B.P.D.C.L(W.B.)	600.00	2,791.8	36.3566	1.0150	0.6362	62.6753	0.0709	0.3623	0.0000	0.0000	0.0000	0.0000	0.2030	0.0000	0.0000	0.6362		
135	BANDEL	W.B.P.D.C.L (W.B.)	450.00	0,9364	34.9060	0.3269	0.5611	171.6427	0.0017	0.1077	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2805	0.0000	0.5611	
136	SANTALDH	W.B.P.D.C.L (W.B.)	500.00	2,549.3	43.1225	1.0993	0.4471	40.6672	0.0079	0.0000	0.0000	0.0000	0.0000	0.0000	0.4338	0.0000	0.0000	0.0054	0.4471	
137	BAKRESWAR	W.B.P.D.C.L(W.B.)	1050.00	5,452.0	41.7682	2.2772	1.5263	67.0253	0.0513	0.8820	0.0000	0.0000	0.0000	0.0000	0.5740	0.0000	0.0000	0.0190	1.5263	
138	WARDHA WARORA	WPCL (KSKEV LTD.) (Maharashtra)	540.00	0.8000	33.7500	0.2700	0.2700	100.0000	0.2160	0.0000	0.0000	0.0000	0.0000	0.0540	0.0000	0.0000	0.0000	0.2700		
139	GEPL TPP	Gupta Energy Pvt. Ltd.(Maharashtra) (N Generation)	120.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
140	JAYPEE BINA TPP	Jaypee Bina Thermal Power Plant (MP)	500.00	1,673.2	39.8219	0.6663	0.5296	79.4837	0.0021	0.4679	0.0000	0.0000	0.0000	0.0000	0.0596	0.0000	0.0000	0.0000	0.5296	
141	EMCO ENERGY Ltd.	EMCO ENERGY Ltd. (Maharashtra)	600.00	2,162.9	32.8496	0.7105	0.6673	93.9213	0.0000	0.5160	0.0000	0.0000	0.0000	0.0000	0.0000	0.1513	0.0000	0.0000	0.6673	
142	RATIJA TPS	Spectrum Coal & Power Ltd. (Chhattisgarh)	50.00	0.3236	52.4694	0.1698	0.1171	68.9718	0.0100	0.0000	0.0000	0.0000	0.0000	0.0000	0.1072	0.0000	0.0000	0.0000	0.1171	
143	KAMALANGA TPP	GMR Kamalanga Energy Ltd. (Odisha)	1050.00	3,269.1	30.6960	1.0035	0.3451	34.3879	0.1081	0.0000	0.0000	0.0000								

**FLY ASH GENERATION AND ITS UTILIZATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2014-15 ( APRIL-2014 TO MARCH, 2015) ( STATE- WISE )**

Sl. No.	Name of TPS	Power Utility & State	FLY ASH GENERATION AND ITS UTILIZATION							MODES OF UTILIZATION								Total Utilization	
			Installed Capacity	Coal consumed	Ash content of coal	Fly Ash Generation	Fly Ash Utilization	% age Utilization	In making of Fly Ash based/ Bricks/ Blocks/ Tiles etc.	In manufacture of Portland Pozzolana Cement	In construction of Highways & Roads including Flyovers	Part replacement of cement in concrete	In Hydro Power Sector in RCC Dam Construction	In Ash dyke raising	In reclamation of low lying Area	In Mine filling	In Agriculture/ Waste land Development		
			(MW)	(million ton)	% age	(million ton)	(million ton)	%	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1	KOTHAGUDEM (Stage I to IV)	TSGenco (Telangana)	720.00	4.475560	49.794886	2.228600	0.159665	7.164363	0.096152	0.054918	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.008595	0.159665
2	KOTHAGUDEM-V	TSGenco (Telangana)	500.00	2.804507	49.091659	1.376779	0.047236	3.430870	0.021324	0.004411	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.021500	0.047235
3	KOTHAGUDEM-VI	TSGenco (Telangana)	500.00	2.521385	43.643672	1.100425	0.041078	36.504844	0.005842	0.395866	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.401708
4	RAMAGUNDAM'B'	TSGenco (Telangana)	62.50	0.134703	44.364520	0.059760	0.150317	251.533377	0.001317	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.149000	0.150317
5	KAKATIA	TSGenco (Telangana)	500.00	2.608853	43.370864	1.131482	0.608073	53.741323	0.127891	0.480183	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.608073
6	RAYALSEEMA	A.P.GENCO (Andhra pradesh)	1050.00	5.430901	43.415503	2.357853	1.448807	61.446027	0.347936	1.100865	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.448801
7	Dr. N.T.R (Vijawada)	A.P.GENCO (Andhra pradesh)	1760.00	9.504484	42.806164	4.068505	2.611507	64.188369	0.952965	1.085869	0.016660	0.027806	0.000000	0.389687	0.000000	0.000000	0.138520	2.611507	
8	RAMAGUNDAM	N.T.P.C. (Andhra Pradesh).	2600.00	14.298000	38.564834	5.514000	3.551000	64.399710	0.855000	0.949000	0.192900	0.000000	0.000000	0.001000	0.000000	0.956800	0.586000	3.551000	
9	SIMHADRI	N.T.P.C. (Andhra Pradesh).	2000.00	9.804000	29.885761	2.930000	0.985000	33.617747	0.293000	0.109000	0.000000	0.000000	0.000000	0.583000	0.000000	0.000000	0.000000	0.985000	
10	SIMHAPURI	SEPL(Andhra Pradesh)	450.00	2.082486	4.925639	0.102576	0.100776	98.245443	0.077611	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.023165	0.100776
11	THAMMINAPATNAM TPS	Meenakshi Energy Pvt. Ltd. (A.P)	300.00	1.021366	5.767265	0.058995	0.014180	0.014180	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.014180	
12	BARAUNI	B.S.P.G.C.L.(Bihar) (No Generation)	220.00	0.000000	41.331568	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	
13	Muzaffarpur TPS	K.B.U.N.L (Bihar)	220.00	0.659434	43.299910	0.289689	0.055000	18.985894	0.000000	0.000000	0.000000	0.000000	0.055000	0.000000	0.000000	0.000000	0.000000	0.055000	
14	KAHALGAON	N.T.P.C.LTD.(Bihar)	2340.00	13.416000	42.098986	5.648000	1.687000	29.868980	0.242000	0.270000	0.000000	0.000000	0.548000	0.016000	0.000000	0.000000	0.611000	1.687000	
15	BARTH SUPER THERMAL POWER STATION	N.T.P.C.LTD.(Bihar)	1320.00	0.806000	33.990530	2.740000	0.010000	3.649635	0.020000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.010000	
16	KORBA (WEST)	C.S.P.G.C.L Chhattisgarh	840.00	4.390973	32.581617	1.430650	0.168700	11.791843	0.000000	0.000000	0.000000	0.000000	0.152000	0.016700	0.000000	0.000000	0.000000	0.168700	
17	KORBA (WEST) Extn	C.S.P.G.C.L Chhattisgarh	500.00	2.456000	31.555375	0.775000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	
18	DSPM	C.S.P.G.C.L Chhattisgarh	500.00	2.699000	37.013709	0.999000	0.176000	17.617618	0.000000	0.000000	0.000000	0.000000	0.176000	0.000000	0.000000	0.000000	0.000000	0.176000	
19	KORBA (EAST)	C.S.P.G.C.L Chhattisgarh	440.00	2.450228	48.860637	1.197197	0.376800	31.473517	0.000800	0.000000	0.000000	0.000000	0.087800	0.288200	0.000000	0.000000	0.000000	0.376800	
20	AMARKANTAK TPS	Lanco Power Ltd., ( Chhattisgarh )	600.00	1.589666	33.255602	0.528653	0.476195	90.074055	0.012350	0.353816	0.010705	0.000000	0.000000	0.000000	0.000000	0.000000	0.09954	0.476195	
21	KASAI PALLI	ACBPL (Chhattisgarh)	270.00	1.735162	52.720149	0.914780	0.860519	94.068410	0.076300	0.000000	0.027455	0.000000	0.000000	0.756764	0.000000	0.000000	0.000000	0.860519	
22	KORBA	N.T.P.C. (Chhattisgarh)	2600.00	14.490000	42.194617	6.114000	1.901000	31.092574	0.109000	0.006000	0.000000	0.000000	1.414000	0.000000	0.000000	0.000000	0.372000	1.901000	
23	SIPAT	N.T.P.C. (Chhattisgarh)	2980.00	13.210000	37.403482	4.941000	1.541000	31.180189	0.271000	1.211000	0.005000	0.000000	0.015000	0.009000	0.000000	0.000000	0.030000	1.541000	
24	BHILAI	NSPCL (Chhattisgarh)	500.00	2.268423	40.094991	0.909524	0.512804	56.381580	0.093730	0.404693	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.014381	0.512804
25	RATIJA TPS	Spectrum Coal & Power Ltd. (Chhattisgarh)	50.00	0.323636	52.469441	0.169810	0.117121	68.971792	0.009950	0.000000	0.000000	0.000000	0.107171	0.000000	0.000000	0.000000	0.000000	0.117121	
26	O.P.Jindal (Stage-I)	JPL (Chhattisgarh.)	1000.00	5.694000	40.235335	2.291000	1.413500	61.697948	0.012500	0.000000	0.000000	0.000000	0.195000	0.217000	0.989000	0.000000	0.000000	1.413500	
27	O.P.Jindal (Stage-II)	JPL (Chhattisgarh.)	1800.00	1.678000	40.405244	0.678000	0.377300	55.648968	0.000000	0.000000	0.000000	0.000000	0.000000	0.377000	0.000000	0.000000	0.000000	0.377300	
28	CHAKABURIA TPP	ACB (INDIA) Ltd. (Chhattisgarh)	30.00	0.262985	44.297203	1.161495	0.116495	100.000000	0.017797	0.000753	0.000000	0.000000	0.091341	0.000000	0.000000	0.000000	0.000000	0.116495	
29	CHAKABURIA TPP(EXTN)	ACB (INDIA) Ltd. (Chhattisgarh)	30.00	0.250361	44.885985	0.112377	0.112377	100.000000	0.015877	0.000000	0.000000	0.000000	0.096500	0.000000	0.000000	0.000000	0.000000	0.112377	
30	KMPCL (AKALTARA)	WPCL (KSKEVL) (Chhattisgarh)	600.00	1.986707	36.939067	0.733871	0.448189	61.071891	0.002927	0.445262	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.448189	
31	RAJGHAT	IPGCL (Delhi)	135.00	0.388336	33.420451	0.128113	0.105794	82.578771	0.081494	0.024300	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.105794	
32	BADARPUR	N.T.P.C.LTD (Delhi)	705.00	2.706000	30.007391	0.812000	0.973000	119.827586	0.219000	0.301000	0.271000	0.000000	0.180000	0.002000	0.000000	0.000000	0.000000	0.973000	
33	SALAYA	EPGL (Gujarat)	1200.00	2.878000	8.756081	0.252000	0.252000	100.000000	0.000000	0.024200	0.000000	0.000000	0.010000	0.000000	0.000000	0.000000	0.000000	0.252000	
34	SURAT LIGNITE	G.I.P.C.L.(Gujarat)	500.00	1.332411	13.197342	0.439790	0.439790	100.000000	0.384347	0.000000	0.055440	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.439787
35	AKRIMOTA	G.M.D.C.L.(Gujarat)	250.00	1.128295	13.923220	0.157095	0.158803	101.087240	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.158803	
36	GANDHINAGAR	G.S.E.C.L. (Gujarat)	870.00	2.185000	30.572082	0.668000	0.672000	100.598802	0.148000	0.451000	0.000000	0.050000	0.000000	0.000000	0.000000	0.000000	0.000000	0.023000	0.672000
37	KUTCH LIGNITE	G.S.E.C.L. (Gujarat)	290.00	1.866000	13.665595	0.255000	0.255000	100.000000	0.000000	0.119000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.255000	
38	SIKKA	G.S.E.C.L. (Gujarat)	240.00	0.680000	25.735294	0.175000	0.222000	126.857143	0.059000	0.163000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.222000	
39	UKAI	G.S.E.C.L. (Gujarat)	1350.00	4.495000	34.193548	1.537000	1.023000	66.558230	0.381000	0.369000	0.000000	0.000000	0.071000	0.000000	0.000000	0.000000	0.000000	0.202000	
40	WANAKBORI	G.S.E.C.L.(Gujarat)	1470.00	5.194000	34.809395	1.808000	1.046000	57.853982	0.121000	0.762000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.163000	
41	MUNDRA UMP	CGPL (Gujrat)	4000.00	10.590000	6.118980	0.648000	0.181000	27.932099	0.000000	0.13									

**FLY ASH GENERATION AND ITS UTILIZATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2014-15 ( APRIL-2014 TO MARCH, 2015) ( STATE- WISE )**

Sl. No.	Name of TPS	Power Utility & State	FLY ASH GENERATION AND ITS UTILIZATION							MODES OF UTILIZATION								Total Utilization	
			Installed Capacity	Coal consumed	Ash content of coal	Fly Ash Generation	Fly Ash Utilization	% age Utilization	In making of Fly Ash based/ Bricks/ Blocks/ Tiles etc.	In manufacture of Portland Pozzolana Cement	In construction of Highways & Roads including Flyovers	Part replacement of cement in concrete	In Hydro Power Sector in RCC Dam Construction	In Ash dyke raising	In reclamation of low lying Area	In Mine filling	In Agriculture/ Waste land Development		
			(MW)	(million ton)	% age	(million ton)	(million ton)	%	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
49	BOKARO 'B'	D.V.C.(Jharkhand)	630.00	1.342668	49.340492	0.662479	0.431585	65.146971	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.431585	0.000000	0.000000	0.000000	0.431585
50	CHANDRAPURA	D.V.C.(Jharkhand)	890.00	3.373379	49.529063	1.670803	1.438354	86.087588	0.006523	0.021734	0.000000	0.000000	0.000000	0.116143	0.000000	1.293954	0.000000	0.000000	1.438354
51	KODRMA	DVC ( Jharkhand )	1000.00	1.403254	47.542426	0.667141	0.641635	96.176820	0.016805	0.130174	0.000000	0.000000	0.000000	0.494656	0.000000	0.000000	0.000000	0.000000	0.641635
52	PATRATU	J.S.E.B. (Jharkhand)	770.00	0.741888	37.958800	0.281612	0.1028849	10.244245	0.006530	0.000000	0.000000	0.000000	0.000000	0.022319	0.000000	0.000000	0.000000	0.000000	0.028849
53	TENUGHAT	T.V.N.L.(Jharkhand)	420.00	1.869973	39.999989	0.747989	0.716600	95.803548	0.000000	0.000000	0.000000	0.000000	0.000000	0.716600	0.000000	0.000000	0.000000	0.000000	0.716600
54	JOJOBERA	T.P.CO. (Jharkhand)	547.50	2.602530	45.878434	1.194000	1.182400	99.028476	0.001000	0.668000	0.000000	0.006610	0.000000	0.469760	0.037000	0.000000	0.000000	0.000000	1.182370
55	MAITHON RBTTP	MPL (Jharkhand)	1050.00	3.989476	41.331568	1.648913	2.654840	161.005462	0.018994	0.000000	0.000000	0.000000	0.000000	0.2635846	0.000000	0.000000	0.000000	0.000000	2.654840
56	VIJAYANAGAR	JSW Energy Limited (Karnataka)	860.00	2.521000	13.209044	0.333000	0.100000	0.012000	0.228000	0.000000	0.000000	0.000000	0.000000	0.000000	0.093000	0.000000	0.000000	0.000000	0.000000
57	BELLARY	K.P.C.L (Karnataka)	1000.00	3.442070	145.299395	5.001307	0.579147	11.579919	0.000000	0.579147	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.579147
58	RAICHUR	K.P.C.L (Karnataka)	1720.00	8.305100	35.969465	2.987300	1.184800	39.661233	0.143200	1.041600	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.184800
59	UDUPI	UPCL (Karnataka)	1200.00	2.703400	5.178664	0.140000	0.103300	73.785714	0.000600	0.077500	0.000000	0.025200	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.103300
60	SANJAY GANDHI	M.P.P.G.C.L. ( M.P. )	1340.00	5.137819	39.523074	2.030624	1.610034	79.287648	0.019889	1.590146	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.610035
61	SATPURA	M.P.P.G.C.L. ( M.P. )	1330.00	5.516784	44.081588	2.431886	1.024601	42.131965	0.350638	0.006057	0.000412	0.000503	0.000000	0.061034	0.396063	0.000338	0.209180	0.000377	1.024601
62	AMARKANTAK	M.P.P.G.C.L. ( M.P. )	450.00	1.458981	36.098154	0.526665	0.201862	38.328390	0.017924	0.183939	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.201862
63	SHREE SINGAJI TPS	M.P.P.G.C.L. ( M.P. )	1200.00	1.555813	46.285923	0.702122	0.007219	1.002552	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.007219
64	VINDHYACHAL	N.T.P.C.LTD. ( M.P. )	4260.00	20.701000	35.317134	7.311000	1.951000	26.685816	0.088000	0.228000	0.000000	0.000000	0.000000	0.465000	0.055000	0.000000	0.000000	1.115000	1.951000
65	JAYPEE BINA TPP	Jaypee Bina Thermal Power Plant (MP)	500.00	1.673200	39.821898	0.666300	0.529600	79.483716	0.002100	0.467900	0.000000	0.000000	0.000000	0.059600	0.000000	0.000000	0.000000	0.000000	0.529600
66	MAHAN	ESSAR POWER MP LTD.(M.P.)	1200.00	0.393800	40.338751	0.158854	0.121074	76.217155	0.010000	0.068970	0.000000	0.000000	0.000000	0.007500	0.043604	0.000000	0.000000	0.000000	0.121074
67	MIHAN	AMNEPL (Maharashtra)	246.00	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
68	RATNAGIRI	JSW Energy Limited (Maharashtra)	1200.00	3.524700	6.258689	0.220600	0.180700	81.912965	0.012200	0.077100	0.000000	0.091400	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.180700
69	BHUSAWAL	M.S.P.G.C.L.(Maharashtra)	1420.00	4.800500	34.667555	1.664216	0.871400	52.360992	0.328323	0.406628	0.000000	0.000000	0.000000	0.074837	0.061612	0.871400	0.059700	0.373985	2.053617
70	CHANDRAPUR	M.S.P.G.C.L.(Maharashtra)	2340.00	10.919444	38.439540	4.197384	2.053617	48.926117	0.059118	1.318614	0.088700	0.000000	0.000000	0.153500	0.000000	0.000000	0.000000	0.000000	0.000000
71	KHAPARKHEDA	M.S.P.G.C.L.(Maharashtra)	840.00	4.420264	30.559453	1.350808	0.789124	58.418607	0.202516	0.000000	0.000000	0.000000	0.000000	0.338040	0.000000	0.000000	0.000000	0.045318	0.789124
72	KHAPARKHEDA (Ext)	M.S.P.G.C.L.(Maharashtra)	500.00	2.471601	36.626502	0.905261	0.000360	0.039768	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
73	KORADI	M.S.P.G.C.L.(Maharashtra)	1100.00	2.152000	42.007435	0.904000	0.762900	84.391593	0.155900	0.000000	0.607000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.762900
74	NASIK	M.S.P.G.C.L.(Maharashtra)	630.00	3.442050	35.292515	1.214786	1.105745	91.023851	0.838973	0.266552	0.000250	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.105745
75	PARAS	M.S.P.G.C.L.(Maharashtra)	500.00	2.441117	28.143666	0.687020	0.314335	0.226260	0.088065	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.314325	
76	PARLI	M.S.P.G.C.L.(Maharashtra)	1130.00	3.835900	46.700905	1.791400	1.471000	82.114547	0.404300	0.622200	0.000000	0.000000	0.000000	0.028900	0.415600	0.000000	0.000000	1.471000	0.000000
77	MOUDA TPS	N.T.P.C.LTD. (Maharashtra)	1000.00	1.600000	27.687500	0.443000	0.063000	14.221219	0.000600	0.057000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.063000
78	DAHANU	Reliance Infrastructure Ltd.(Maharashtra)	500.00	2.346000	29.454390	0.691000	1.773100	111.881331	0.000144	0.000000	0.000000	0.000000	0.000000	0.243000	0.000000	0.000000	0.000000	0.230000	0.773144
79	TROMBAY	T.P.CO.(Maharashtra)	750.00	1.997000	2.218327	0.044300	0.044300	100.000000	0.000000	0.000000	0.037700	0.000000	0.000000	0.000000	0.005800	0.000800	0.000000	0.044300	0.000000
80	Wardha Warora	WPCL (Maharashtra)	540.00	0.800000	33.750000	0.270000	0.270000	100.000000	0.216000	0.000000	0.000000	0.000000	0.000000	0.054000	0.000000	0.000000	0.000000	0.000000	0.270000
81	IB VALLEY	O.P.G.C.L.(Odisha)	420.00	2.321287	38.667687	0.897588	0.203398	22.660508	0.003978	0.000000	0.000000	0.000000	0.000000	0.000000	0.188680	0.009000	0.000000	0.000000	0.203398
82	TALCHAR(KAN)	N.T.P.C.LTDD(Odisha)	3000.00	17.634000	36.974027	6.520000	2.757000	42.285276	0.092000	0.034000	0.000000	0.000000	0.000000	0.2478000	0.000000	0.000000	0.000000	0.153000	2.757000
88	TALCHAR(TPS)	N.T.P.C.LTD(Odisha)	460.00	3.084000	39.007782	1.203000	1.207000	100.332502	0.019000	0.000000	0.002000	0.000000	0.000000	0.066000	0.000000	0.112000	0.000000	0.000000	1.207000
89	INDIAN METALS & FERRO ALLOYS LTD. (Odisha)	INDIAN METALS & FERRO ALLOYS LTD. (Odisha)	258.00	0.772384	51.584464	0.398430	0.398413	99.995733	0.054139	0.000000	0.000508	0.000000	0.000000	0.005576	0.059903	0.000000	0.000000	0.000000	0.267706
85	BELA TPS	Ideal Energy Projects Ltd. (Maharashtra) No Generation	270.00	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
86	RRVUNL	P.S.P.C.L.(Punjab)	420.00	0.957780	33.368936	0.319601	0.242665	75.927485	0.022117	0.219882	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.242665
92	LEHRA MOHABAT	P.S.P.C.L. (Punjab)	920.00	2.734328	34.534006	0.944273	0.690507	73.125780	0.012104	0.640613	0.000000	0.036505	0.000000	0.001285	0.000000	0.000000	0.000000	0.000000	0.690507
93	ROPAR</																		

**FLY ASH GENERATION AND ITS UTILIZATION AT COAL/LIGNITE BASED THERMAL POWER STATIONS IN THE COUNTRY FOR THE YEAR 2014-15 ( APRIL-2014 TO MARCH, 2015) ( STATE- WISE )**

Sl. No.	Name of TPS	Power Utility & State	FLY ASH GENERATION AND ITS UTILIZATION							MODES OF UTILIZATION								Total Utilization		
			Installed Capacity	Coal consumed	Ash content of coal	Fly Ash Generation	Fly Ash Utilization	% age Utilization	In making of Fly Ash based/ Bricks/ Blocks/ Tiles etc.	In manufacture of Portland Pozzolana Cement	In construction of Highways & Roads including Flyovers	Part replacement of cement in concrete	In Hydro Power Sector in RCC Dam Construction	In Ash dyke raising	In reclamation of low lying Area	In Mine filling	In Agriculture/ Waste land Development			
			(MW)	(million ton)	% age	(million ton)	(million ton)	%	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)	(million ton)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	
97	GIRAL	RRVUNL (Rajasthan)	250.00	0.446681	27.346809	0.122153	0.122153	100.000319	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.122153	0.000000	0.000000	0.122153	
98	JALIIPA KAPURDI	RWPL (Rajasthan)	1080.00	6.959100	18.830021	1.310400	1.127000	86.004274	0.028300	0.573100	0.000000	0.000000	0.000000	0.000000	0.000000	0.525600	0.000000	0.000000	1.127000	
99	BARSINGAR LIGNITE	NLC (Rajasthan)	250.00	1.351630	21.988340	0.297201	0.297224	100.007739	0.047052	0.143670	0.000000	0.000000	0.000000	0.000000	0.000000	0.106502	0.000000	0.000000	0.297224	
100	KAWAI	Adani Power Ltd. (Rajasthan)	1320.00	4.157100	23.259003	0.966900	0.680420	70.371290	0.037000	0.662300	0.000000	0.000000	0.000000	0.000000	0.014420	0.000000	0.000000	0.000000	0.680420	
101	ENNORE	T.N.G & D Corporation (Tamil Nadu)	340.00	0.072120	28.879645	0.020828	0.023668	113.635491	0.004358	0.006473	0.000000	0.000000	0.000000	0.000000	0.001393	0.000000	0.000000	0.011455	0.023679	
102	METTUR	T.N.G & D Corporation (Tamil Nadu)	840.00	4.838407	26.926982	1.302837	1.765423	135.506053	0.324467	1.440954	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.765421	
103	METTUR-II	T.N.G & D Corporation (Tamil Nadu)	600.00	2.157827	23.460639	0.506240	0.355417	70.207214	0.097183	0.258233	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.355416	
104	NORTH CHENNAI	T.N.G & D Corporation (Tamil Nadu)	630.00	2.945000	34.974533	1.030000	0.657400	63.825243	0.050400	0.224000	0.383800	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.657400	
105	NORTH CHENNAI - II	T.N.G & D Corporation (Tamil Nadu)	1200.00	4.365000	25.223368	1.101000	0.532300	48.346957	0.314300	0.218000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.532300	
106	TUTICORIN	T.N.G & D Corporation (Tamil Nadu)	1050.00	6.373311	23.410987	1.492055	1.118326	74.952063	0.194578	0.898842	0.000000	0.000000	0.023490	0.000000	0.001378	0.000000	0.000000	0.000000	1.118302	
107	NEYVELI - I	N.L.C.LTD.(Tamilnadu)	600.00	5.327000	5.166135	0.275200	0.204400	74.723256	0.040000	0.164000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.204430	
108	NEYVELI - I EXPN	N.L.C.LTD(Tamilnadu)	420.00	3.448660	6.974506	0.240527	0.240549	100.009147	0.051004	0.139406	0.000000	0.000000	0.000000	0.000000	0.050139	0.000000	0.000000	0.240549		
109	NEYVELI - II	N.L.C.LTD.(Tamilnadu)	1470.00	12.020804	4.571250	0.549501	0.539268	98.137765	0.102297	0.299595	0.000000	0.000000	0.000000	0.000000	0.137376	0.000000	0.000000	0.539268		
110	Neyveli - II Exp	NLC (T. Nadu) (No significant fly ash generation)	250.00	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000		
111	Vallur	NETCL (Tamilnadu)	1500.00	4.009719	25.153179	1.023095	0.090000	8.796837	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.090000	
112	CUDDALORE	ST-CMS (Tamil Nadu)	250.00	1.840392	7.076699	0.130239	0.103640	79.576778	0.028180	0.094505	0.000000	0.000000	0.000000	0.000000	0.006326	0.000000	0.000000	0.103641		
113	ANPARA 'A' & 'B'	U.P.R.V.U.N.L. ( U.P.)	1630.00	8.023865	39.343110	3.156838	0.008912	0.282308	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.008912	0.000000	0.000000	0.000000	0.008912	
114	HARDUGANJ	U.P.R.V.U.N.L. ( U.P.)	670.00	2.981454	33.479017	0.997920	1.196272	119.876543	0.010551	0.481654	0.000000	0.000000	0.000000	0.000000	0.704063	0.000000	0.000000	1.196268		
115	OBRA	U.P.R.V.U.N.L. ( U.P.)	1194.00	3.195400	42.160606	1.347200	0.308700	22.914192	0.000000	0.308700	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.308700	
116	PANKI	U.P.R.V.U.N.L. ( U.P.)	210.00	0.917258	34.106108	0.312841	0.782470	250.117533	0.000655	0.077714	0.000000	0.000000	0.000000	0.000000	0.704104	0.000000	0.000000	0.000000	0.782472	
117	PARICHHIA	U.P.R.V.U.N.L. ( U.P.)	1140.00	4.859702	42.030273	2.042546	1.111570	54.420806	0.137500	0.854720	0.000000	0.000000	0.000000	0.000000	0.119350	0.000000	0.000000	0.000000	1.111570	
118	RIHAND	N.T.P.C.LTD. (U.P.)	3000.00	14.695000	32.875128	4.831000	0.493000	10.204927	0.040000	0.073000	0.000000	0.000000	0.000000	0.000000	0.264000	0.052000	0.000000	0.064000	0.493000	
119	SINGRAULI	N.T.P.C.LTD. (U.P.)	2000.00	10.239000	36.136341	3.700000	0.621000	16.783784	0.014000	0.082000	0.000000	0.000000	0.000000	0.000000	0.525000	0.000000	0.000000	0.621000		
120	UNCHAHAR	N.T.P.C.LTD. (U.P.)	1050.00	5.005000	38.461538	1.925000	1.361000	70.701299	0.028000	1.300000	0.000000	0.000000	0.000000	0.000000	0.004000	0.000000	0.000000	0.001000	1.361000	
121	TANDA	N.T.P.C.LTD. (U.P.)	440.00	2.498000	41.433147	1.035000	0.574000	55.458937	0.086000	0.218000	0.000000	0.000000	0.000000	0.000000	0.015000	0.048000	0.000000	0.207000	0.574000	
122	DADRI	N.T.P.C.LTD. (U.P.)	1820.00	8.128000	32.074311	2.607000	2.705000	103.759110	0.426000	1.533000	0.000000	0.000000	0.000000	0.000000	0.394000	0.000000	0.000000	0.352000	2.705000	
123	Barkhera	BEPL (UP)	90.00	0.514446	42.949900	0.220954	0.212353	96.107335	0.002021	0.124044	0.000000	0.000000	0.000000	0.000000	0.033567	0.052721	0.000000	0.000000	0.212353	
124	Khambar Khera	BEPL (UP)	90.00	0.475130	44.818635	0.212947	0.204591	96.075935	0.002457	0.124596	0.000000	0.000000	0.000000	0.000000	0.033703	0.043835	0.000000	0.000000	0.204591	
125	Kundarki	BEPL (UP)	90.00	0.504253	43.127444	0.217471	0.210402	96.749260	0.000651	0.156067	0.000000	0.000000	0.000000	0.000000	0.021097	0.032588	0.000000	0.000000	0.210402	
126	Magsoodpur	BEPL (UP)	90.00	0.464913	42.727331	0.198645	0.190475	95.887135	0.000228	0.090824	0.000000	0.000000	0.000000	0.000000	0.031331	0.068092	0.000000	0.000000	0.190475	
127	Utraula	BEPL (UP)	90.00	0.511458	44.068872	0.225394	0.218476	96.930989	0.000000	0.160176	0.000000	0.000000	0.000000	0.000000	0.034830	0.023471	0.000000	0.000000	0.218477	
128	ROSA PHASE-I	RPSC(L.U.P)	1200.00	5.211499	25.803382	1.344743	0.601233	44.709881	0.000000	0.130093	0.000000	0.000000	0.000000	0.000000	0.179436	0.000000	0.000000	0.000000	0.601233	
129	B.B.G.S.	C.E.S.C. (West Bengal)	750.00	3.486000	39.500861	1.377000	1.377000	100.000000	0.032000	0.140000	0.000000	0.000000	0.000000	0.000000	0.331000	0.000000	0.000000	0.000000	1.377000	
130	S.G.S.	C.E.S.C. (West Bengal)	135.00	0.717000	37.935844	0.272000	0.272000	100.000000	0.010000	0.213000	0.000000	0.013000	0.000000	0.000000	0.036000	0.000000	0.000000	0.000000	0.272000	
131	T.G.S	C.E.S.C. (West Bengal)	240.00	1.112000	37.949640	0.422000	0.422000	100.000000	0.082000	0.155000	0.047000	0.000000	0.000000	0.000000	0.138000	0.000000	0.000000	0.000000	0.422000	
132	NEW COSSIPORE	CESC (West Bengal)	160.00	0.104000	20.769231	0.021600	0.021600	100.000000	0.000000	0.000000	0.000350	0.000000	0.000000	0.000000	0.012200	0.000000	0.000000	0.000590	0.021600	
133	DURGAPUR	D.V.C. (West Bengal)	350.00	1.061013	48.256902	0.512012	0.459852	69.812739	0.000000	0.001931	0.000000	0.000000	0.000000	0.000000	0.457921	0.000000	0.000000	0.000000	0.459852	
134	MEJIA	D.V.C. (West Bengal)	2340.00	8.184000	46.737537	3.825000	4.524864	118.297098	0.024360	0.892300	0.000000	0.000000	0.000000	0.000000	0.000000	0.358924	0.019000	0.000000	0.424864	
135	Durgapur Steel	DVC (West Bengal)	1000.00	2.648091	48.360309	1.280625	0.801023	62.549380	0.018226	0.578260	0.000000	0.000000	0.000000	0.000000	0.000451	0.204086	0.000000	0.000000	0.801023	
136	DURGAPUR PROJECTS POWER STATION	D.P.L (West Bengal)	891.00	1.06																

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# भारत का राजपत्र

## The Gazette of India

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## अधिसूचना

नई दिल्ली, 25 मई, 2015

का.आ. 1396(अ).—केन्द्रीय सरकार ने, का.आ. 763(अ) तारीख 14 सितंबर, 1999 (जिसे इसके पश्चात उक्त अधिसूचना कहा गया है), का.आ. 979(अ) तारीख 27 अगस्त, 2003 और का.आ. 2804(अ) तारीख 3 नवंबर, 2009 द्वारा ईटों के विनिर्माण के लिए ऊपरी मृदा की उत्खनन को निषिद्ध करने और कोयला या लिंग्नाइट आधारित तापीय विद्युत संयत्रों से एक सौ किलोमीटर की विनिर्दिष्ट परिधि में भवन सामग्री के विनिर्माण और निर्माण क्रियाकलापों में फ्लाई ऐश के उपयोग को बढ़ावा देने के लिए निर्देश जारी किए थे;

और उक्त संशोधन अधिसूचना सं. का.आ. 804(अ) तारीख 3 नवंबर, 2009 द्वारा तापीय संयत्रों द्वारा फ्लाई ऐश के सौ प्रतिशत उपयोग के लक्ष्य को प्राप्त करने के लिए समय-सीमा विनिर्दिष्ट की थी;

और यह देखा गया है कि तापीय विद्युत संयत्रों द्वारा सौ प्रतिशत फ्लाई ऐश के उपयोग के लक्ष्य को अभी प्राप्त किया जाना है और अप्रयुक्त फ्लाई ऐश की मात्रा निरंतर बढ़ रही है;

और यह भी देखा गया है कि निर्माण एंजेंसियां फ्लाई ऐश तथा फ्लाई ऐश आधारित उत्पादों का अपनी निर्माण परियोजनाओं में प्रयोग नहीं कर रही हैं;

और यह महसूस किया गया कि टेंश में फ्लाई ऐश और फ्लाई ऐश आधारित उत्पादों के उपयोग के लिए अतिरिक्त उपाय करने की तत्काल आवश्यकता है;

और भारत सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय ने इस मुद्दे का परीक्षण किया है और केन्द्रीय सरकार का यह मत है कि उक्त अधिसूचना में संशोधन किए जाने की आवश्यकता है;

और पर्यावरण (संरक्षण) नियम, 1986 के नियम 5 के उपनियम (3) के खंड (क) में यह उपबंध है कि जहां केन्द्रीय सरकार किसी उद्योग की अवस्थितियों या किसी क्षेत्र में प्रसंस्करण या उत्पादन करने पर प्रतिषेध या निर्वधन अधिरोपित करना समीचीन समझे तो वह ऐसा करने के अपने आशय की सूचना दे सकती है;

अब, इसीलिए, पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3 की उपधारा (1) और उपधारा (2) के खंड (5) तथा धारा 5 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए निम्नलिखित और संशोधन, जिन्हें उक्त अधिसूचना में करने के प्रयोजन से केन्द्रीय सरकार पर्यावरण (संरक्षण) नियम 1986 के नियम 5 के उपनियम (3) के खंड (क) की अपेक्षा के अनुसार जनता, जिसके उससे प्रभावित होने की संभावना है, की सूचना के लिए एतद्वारा प्रकाशित किए जाते हैं; और एतद्वारा सूचना दी जाती है कि उक्त प्रारूप संशोधन अधिसूचना पर सरकारी राजपत्र, जिसमें अधिसूचना प्रकाशित होगी, की प्रतियां जनता को उपलब्ध कराए जाने की तारीख को अथवा उस तारीख से साठ दिनों की अवधि की समाप्ति के पश्चात विचार किया जाएगा;

आधेप या सुझाव, यदि कोई हों, सचिव, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, चतुर्थ तल, पृथ्वी ब्लॉक, इंदिरा पर्यावरण भवन, जोर बाग, नई दिल्ली-110003 को या इलेक्ट्रॉनिक रूप से ई-मेल : [bnsinha@gov.in](mailto:bnsinha@gov.in), shard.sapra@nic.in पर भेजे जा सकते हैं। आधेप या सुझाव, जो उक्त प्रारूप संशोधनों के संबंध में ऊपर विनिर्दिष्ट समय के भीतर किसी व्यक्ति से प्राप्त होते हैं, पर केन्द्रीय सरकार द्वारा विचार किया जाएगा।

#### प्रारूप संशोधन

##### 1. उक्त अधिसूचना के पैरा 1 में -

- (क) उप पैरा 1(क) में "सौ किलोमीटर" शब्दों के स्थान पर "पांच सौ किलोमीटर" शब्द रखे जाएंगे;
- (ख) उप पैरा (3) में "100 कि.मी" अंको और शब्दों के स्थान पर "पांच सौ किलोमीटर" शब्द रखे जाएंगे;
- (ग) उप पैरा (5), में "सौ किलोमीटर" शब्दों के स्थान पर "पांच सौ किलोमीटर" शब्द रखे जाएंगे;
- (घ) उप पैरा (7) में "सौ किलोमीटर" शब्दों के स्थान पर "पांच सौ किलोमीटर" शब्द रखे जाएंगे।

##### 2. उक्त अधिसूचना के पैरा 2 में, उप पैरा (7) के पश्चात, निम्नलिखित उप पैरा अंतः स्थापित किया जाएगा, अर्थात्:-

- "(8) प्रत्येक कोयला या लिग्नाइट आधारित तापीय विद्युत संयंत्र (अंतिम सूचना से भावी उपयुक्त तारीख विनिर्दिष्ट की जाए) अपने पास उपलब्ध फ्लाई ऐश के प्रत्येक प्रकार का स्टॉक अपनी वेबसाइट पर अपलोड करेगा और उसके पश्चात प्रत्येक पखवाड़ में कम से कम एक बार फ्लाई ऐश के प्रत्येक प्रकार के स्टॉक की स्थिति को अद्यतन करेगा।
- (9) कोयला या लिग्नाइट आधारित तापीय विद्युत संयंत्र से 100 कि.मी की परिधि में, भवन और सड़क निर्माण परियोजनाओं के लिए फ्लाई ऐश के परिवहन की लागत ऐसे कोयला या लिग्नाइट आधारित तापीय संयंत्र द्वारा वहन की जाएगी और 100 किमी परिधि के बाहर तथा 500 कि.मी तक परिवहन लागत प्रयोक्ता निर्माण एंजेंसी और कोयला या लिग्नाइट आधारित तापीय संयंत्र के मध्य समानत रूप से बांटी जाएगी।
- (10) कोयला या लिग्नाइट आधारित तापीय संयंत्रों द्वारा पांच सौ कि.मी की परिधि में, प्रधानमंत्री ग्रामीण सड़क योजना और सरकार के धाति सूजन कार्यक्रमों, जो भवनों, सड़कों, बांधों और तटबंधों के निर्माण से संबंधित हैं, के तहत चलायी जा रही सड़क निर्माण परियोजनाओं के स्थल तक फ्लाई ऐश के परिवहन की समग्र लागत वहन की जाएगी।"

##### 3. उक्त अधिसूचना के पैरा 3 के उप पैरा (7) के पश्चात, निम्नलिखित उप पैरा अंतः स्थापित किया जाएगा, अर्थात् :-

- "(8) विभिन्न निर्माण परियोजना को अनुमोदित करने वाले सभी राज्य प्राधिकरणों का यह उत्तरदायित्व होगा कि वे फ्लाई ऐश या फ्लाई ऐश आधारित उत्पादों के प्रयोग हेतु तापीय विद्युत संयंत्रों और निर्माण एंजेंसी या ठेकेदारों के मध्य समझौता ज्ञापन या कोई अन्य प्रबंध किया जाना सुनिश्चित करें।

[सं. 9-8/2005-एचएसएमडी]

बिश्वनाथ सिन्हा, संयुक्त सचिव

**टिप्पणी :** मूल अधिसूचना भारत के राजपत्र, असाधारण, भाग II, खंड 3 उपखंड (ii) में अधिसूचना सं. का.आ. 763(अ) तारीख 14 सितंबर, 1999 द्वारा प्रकाशित की गई थी और इसमें पश्चातवर्ती संशोधन अधिसूचना सं. का.आ. 979(अ) तारीख 27 अगस्त, 2003 और का.आ. 2804(अ) तारीख 3 नवंबर, 2009 द्वारा किए गए थे।

## MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

### NOTIFICATION

New Delhi, the 25th March, 2015

S.O. 1396(E).—whereas by notification number S.O. 763(E) dated the 14<sup>th</sup> September, 1999 (hereinafter referred to as the said notification) notifications S.O. 979(E) dated the 27<sup>th</sup> August, 2003 and S.O. 2804 (E) dated the 3<sup>rd</sup> November, 2009, the Central Government issued directions for restricting the excavation of top soil for manufacture of bricks and promoting utilisation of fly ash in the manufacture of building materials and in construction activities with a specified radius of one hundred kilometers from coal or lignite based thermal power plants;

And whereas, vide the said amendment notification number S.O.804(E) dated the 3<sup>rd</sup> November, 2009, timeline to achieve the target of hundred per cent utilisation of fly ash by thermal power plants was specified;

And whereas, it is observed that the thermal power plants are yet to achieve the target of hundred per cent utilisation of fly ash and the unutilised fly ash quantum is continuously increasing;

And whereas, it is observed that the construction agencies are not using fly ash and fly ash based products in their construction projects;

And whereas, it is felt that there is an urgent need to provide additional measures for utilization of fly ash and fly ash based products in the country;

And whereas, the issue has been examined by the Government of India in the Ministry of Environment and Forests and the Central Government is of the opinion that the said notification needs to be amended;

And whereas, clause (a) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986 provides that whenever the Central Government considers it expedient to impose prohibition or restrictions on the locations of any industry or the carrying on of processes or operations in any area, it may give notice of its intention to do so;

Now, therefore, in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of the section 3, and section 5 of the Environment (Protection)Act, 1986 (29 of 1986), the following further amendments, which the Central Government proposes to make in the said notification is hereby published as required by clause (a) of sub-rule(3) of rule 5 of the Environment (Protection) Rules, 1986 for the information of the public likely to be affected thereby; and notice is hereby given that the said draft amendment notification will be taken into consideration on or after the expiry of the period of sixty days from the date on which copies of the Official Gazette, in which this notification is published, are made available to the public;

Objections or suggestions, if any, may be addressed to the Secretary, Ministry of Environment, Forest and Climate Change, 4<sup>th</sup> Level, Prithvi Block, Indira Paryavaran Bhawan, Jorbagh Road, New Delhi-110003, or electronically at e-mail address: [bnsinha@gov.in](mailto:bnsinha@gov.in), [sharad.sapra@nic.in](mailto:sharad.sapra@nic.in). The objection or suggestion, which may be received from any person with respect to the said draft amendments within the period specified above, will be taken into consideration by the Central Government.

### DRAFT AMENDMENTS

1. In the said notification, in paragraph 1,-

(a) in sub-paragraph 1(A), for the words "hundred kilometers", the words "five hundred kilometers" shall be substituted:

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- (b) in sub-paragraph (3), for the figures and letters “100 km.” the words and letters “five hundred kilometers” shall be substituted;
- (c) in sub-paragraph (5), for the words “hundred Kilometers”, the words “five hundred Kilometers” shall be substituted.
- (d) in sub-paragraph (7), for the words “hundred Kilometers”, the words “five hundred Kilometers” shall be substituted.

2. In the said notification, in paragraph 2, after the sub-paragraph (7) the following sub-paragraphs shall be inserted, namely:—

“(8) Every coal or lignite based thermal power plants shall, (A suitable date prospective to final notification is to be specified) upload the stock of each type of fly ash available with them on their website and, thereafter shall update the stock position for each type of fly ash at least once in every fortnight.

(9) A radius of hundred Kilometers from a coal or lignite based thermal power plant, the cost of transportation of fly ash for building and road construction projects shall be borne by such coal or lignite based thermal power plant and the cost of transportation beyond a radius of hundred Kilometers and upto five hundred kilometers shall be shared equally between the user construction agency engaged and the coal or lignite based thermal power plant.

(10) The coal or lignite based thermal power plants within a radius of five hundred kilometers shall bear the entire cost of transportation of fly ash to the site of road construction projects under Pradhan Mantri Gramin Sadak Yojna and asset creation programmes of the Government involving construction of buildings, road, dams and embankments”.

3. In the said notification, in paragraph 3, after the sub-paragraph (7) the following sub-paragraph shall be inserted, namely:—

“(8) It shall be the responsibility of all State Authorities/approving various construction projects to ensure that Memorandum of Understanding or any other arrangement for using fly ash or fly ash based products is made between the thermal power plants and the construction agency or contractors.”

*Central Govt bodies*  
[No. 9-8/2005-HSMD]

BISHWANATH SINHA, Jt Secy.

**Note :** The principal notification was published in the Gazette of India, Extra ordinary, Part II, section 3, sub-section (ii) *vide* notification number S.O. 763 (E), dated the 14<sup>th</sup> September, 1999 and was subsequently amended *vide* notification numbers S.O. 979(E), dated the 27<sup>th</sup> August, 2003 and S.O. 2804 (E), dated the 3<sup>rd</sup> November, 2009.

रजिस्ट्री सं. डी० एल०-33004/99

REGD. NO. D. L.-33004/99



# भारत का राजपत्र

## The Gazette of India

असाधारण

EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (i)

PART II—Section 3—Sub-section (i)

प्राधिकार से प्रकाशित

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पर्यावरण और वन मंत्रालय

अधिसूचना

नई दिल्ली, 2 जनवरी, 2014

सा.का.नि. 02(अ).—केन्द्रीय सरकार ने, पर्यावरण (संरक्षण) नियम, 1986 के नियम 5 के साथ पठित पर्यावरण संरक्षण अधिनियम, 1986 (1986 का 29) की धारा 3 की उप-धारा (2) और धारा 25 का प्रयोग करते हुए, पर्यावरण (संरक्षण) नियम, 1986 का और संशोधन करने के लिए भारत के राजपत्र, असाधारण में सं. सा.का.नि. 552(अ), तारीख 11 जुलाई, 2012 द्वारा सभी सूचना दी थी कि उक्त प्रारूप नियमों पर उस तारीख से जिसको राजपत्र की प्रतियां, जिसमें सूचना प्रकाशित वी जाती है, जनता को उपलब्ध करा दी जाती हैं, साठ दिनों की अवधि की समाप्ति के पश्चात् विचार किया जाएगा;

और जनता को उक्त राजपत्र की प्रतियां 31 जुलाई, 2012 को उपलब्ध करा दी गई थी;

और केन्द्रीय सरकार द्वारा उपर वर्णित प्रारूप नियमों पर प्राप्त सुझावों या आक्षेपों पर सम्यक्तः विचार किया गया है;

अतः अब केन्द्रीय सरकार, पर्यावरण (संरक्षण) नियम, 1986 के नियम 5 के साथ पठित पर्यावरण संरक्षण अधिनियम, 1986 (1986 का 29) की धारा 3 की उप-धारा (2), धारा 6 और धारा 25 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, पर्यावरण (संरक्षण) नियम, 1986 का और संशोधन करने के लिए निम्नलिखित नियम बनाती है, अर्थात् :—

1. (1) इन नियमों का संक्षिप्त नाम पर्यावरण (संरक्षण) संशोधन नियम, 2014 है।
- (2) ये राजपत्र में प्रकाशन की तारीख को प्रवृत्त होंगे।

2. पर्यावरण (संरक्षण) अधिनियम, 1986 में, नियम 3 के उप-नियम (8) के स्थान पर निम्नलिखित उप-नियम रखा जाएगा,

अर्थात् :—

“(8) इसमें नीचे विनिर्दिष्ट तारीख से निम्नलिखित कोयला आधारित ताप ऊर्जा संयंत्र त्रैमासिक औसत आधार पर कच्चा अथवा मिश्रित अथवा सज्जीकृत कोयले का जिसमें भष्म अंतर्वर्स्तु 34% से अनधिक हो, उपयोग करेंगे, अर्थात् : —

- (क) एकल ताप विद्युत संयंत्र (किसी भी क्षमता का) या 100 मेगावाट या अधिक प्रतिष्ठापित क्षमता का या उससे अधिक क्षमता का प्रतिष्ठापित कैप्टिव ताप विद्युत संयंत्र जो गर्तमुख से 1000 किलोमीटर से अधिक दूरी पर या किसी शहरी क्षेत्र या किसी पारिस्थितिकीय रूप से संवेदनशील क्षेत्र में या गंभीर रूप से प्रदूषित औद्योगिक क्षेत्र में आवस्थित है, गर्तमुख से उसकी दूरी पर ध्यान दिए बिना सिवाय किसी गर्तमुख विद्युत संयंत्र के, तुरंत प्रभाव से;
- (ख) एकल ताप विद्युत संयंत्र (किसी भी क्षमता का) या 100 मेगावाट या उससे अधिक प्रतिष्ठापित क्षमता का कैप्टिव ताप विद्युत संयंत्र जो गर्तमुख से 750-1000 किलोमीटर के बीच की दूरी पर अवस्थित है, 1 जनवरी, 2015 से;
- (ग) एकल ताप ऊर्जा संयंत्र (किसी भी क्षमता का) या 100 मेगावाट या उससे अधिक प्रतिष्ठापित क्षमता का कैप्टिव ताप विद्युत संयंत्र जो गर्तमुख से 500-749 किलोमीटर के बीच की दूरी पर अवस्थित है, 5 जून, 2016 से;

परंतु यह कि ऐसे किसी ताप ऊर्जा संयंत्र के संबंध में, जो परिसंचारी तरल-तर दहन या वायुमंडलीय तरल-तर दहन या संपीड़ित द्रवित तरल-तर दहन या समाकलित गैसीकरण संयुक्त आवर्तन चक्र प्रौद्योगिकियों का या ऐसी कोई स्वच्छ प्रौद्योगिकियों का, जो केन्द्रीय सरकार द्वारा राजपत्र में अधिसूचित की जाएं, प्रयोग कर रहा है, खंड (क), (ख) और (ग) लागू नहीं होंगे।

**स्पष्टीकरण** :— इस नियम के प्रयोजन के लिए,—

- (i) ‘सज्जीकृत कोयला’ से ऐसा कोयला अभिप्रेत है जिसमें उच्चतर कैलोरी मान अंतर्विष्ट है किंतु भौतिक पृथक्करण या धोवन प्रक्रिया के माध्यम से अभिप्राप्त कच्चे कोयले में अंतर्विष्ट मूल भष्म से निम्नतर भष्म अंतर्विष्ट है;
- (ii) ‘कैप्टिव ताप ऊर्जा संयंत्र’ से ऐसा ताप ऊर्जा संयंत्र अभिप्रेत हैं जो किसी उद्योग द्वारा उसके अनन्य उपयोग के लिए विद्युत सृजन के लिए स्थापित किया गया है;
- (iii) ‘अत्यधिक प्रदूषित औद्योगिक क्षेत्र’ से ऐसा औद्योगिक समूह या क्षेत्र अभिप्रेत है, जहां प्रदूषण गंभीर स्तर पर पहुंच चुका है या पहुंच जाने की संभावना है और जिसकी केन्द्रीय सरकार या राज्य सरकार या केन्द्रीय प्रदूषण नियंत्रण बोर्ड या राज्य प्रदूषण नियंत्रण बोर्ड द्वारा ऐसे क्षेत्र के रूप में पहचान की जा चुकी है;
- (iv) ‘पारिस्थितिकीय रूप से संवेदनशील क्षेत्र’ से, ऐसा क्षेत्र अभिप्रेत है, जहां पारिस्थितिकीय संतुलन आसानी से विक्षुल होने की संभावना है और जिसकी केन्द्रीय सरकार द्वारा पहचान की गई है और उसे अधिसूचित किया गया है;
- (v) ‘प्रतिष्ठापित क्षमता’ की संगणना किसी सीमा के भीतर सभी इकाईयों की व्यष्टिक क्षमता को जोड़कर की जाएगी;
- (vi) ‘गर्तमुख विद्युत संयंत्र’ से कोई केपटिव या एकल विद्युत केन्द्र अभिप्रेत है जिसका खनन क्षेत्र से लदाई बिन्दु तक विद्युत केन्द्र में सामान्य लोक परिवहन प्रणाली का उपयोग किए बिना विद्युत केन्द्र में कोयले के परिवहन के लिए उसके अनन्य उपयोग के लिए केपटिव परिवहन प्रणाली है;
- (vii) ‘एकल ताप विद्युत संयंत्र’ से ऐसा विद्युत संयंत्र अभिप्रेत है जिसकी स्थापना विद्युत ग्रिड में विद्युत आपूर्ति के लिए विद्युत के सृजन के लिए या उन अवस्थाओं पर जिन्हें विद्युत वितरण प्रणाली के साथ सुसज्जित नहीं किया गया है, विद्युत आपूर्ति के लिए की गई है; और
- (viii) ‘शहरी क्षेत्र’ से ऐसे शहर की क्षेत्र सीमा अभिप्रेत जिसकी जनसंख्या नवीनतम जनगणना के अनुसार दस लाख से अधिक हो ।’।

[फा. सं. क्यू-15017/11/2011-सी.पी.डब्ल्यू.]

सुशील कुमार, अपर सचिव

**टिप्पणी**—मूल नियम भारत के राजपत्र में सं. का. आ. 844(अ), तारीख 19 नवम्बर, 1986 द्वारा प्रकाशित किए गए थे और पश्चात्वर्ती संशोधन सं. का.आ. 82(अ), तारीख 16 फरवरी, 1987; का.आ. 64(अ), तारीख 18 जनवरी, 1988;

सा.का.नि., 931(अ), तारीख 27 अक्टूबर, 1989; का.आ. 23 (अ), तारीख 16 जनवरी, 1991; सा.का.नि. 95(अ), तारीख 12 फरवरी, 1992; सा.का.नि. 329(अ), तारीख 13 मार्च, 1992; सा.का.नि. 562(अ), तारीख 27 मई, 1992; सा.का.नि. 884(अ), तारीख 20 नवम्बर, 1992; सा.का.नि. 386(अ), तारीख 22 अप्रैल, 1993; सा.का.नि. 422(अ), तारीख 19 मई, 1993; सा.का.नि. 801(अ), तारीख 31 दिसंबर, 1993; सा.का.नि. 320(अ), तारीख 16 मार्च, 1994; सा.का.नि. 560(अ), तारीख 19 सितंबर, 1997; सा.का.नि. 378(अ), तारीख 30 जून, 1998; सा.का.नि. 07(अ), तारीख 22 दिसंबर, 1998; सा.का.नि. 407(अ), तारीख 31 मई, 2001; और सा.का.नि. 826(अ), तारीख 16 नवंबर, 2009 और सा.का.नि. 513(अ), तारीख 28 जून, 2012 द्वारा किए गए।

## MINISTRY OF ENVIRONMENT AND FORESTS NOTIFICATION

New Delhi, the 2nd January, 2014

**G.S.R. 02(E).**—Whereas the Central Government had, in exercise of its powers under sub-section (2) of Section 3 and Section 25 of the Environment (Protection) Act, 1986 (29 of 1986), read with rule 5 of the Environment (Protection) Rules, 1986, published draft rules further to amend the Environment (Protection) Rules, 1986, in the Gazette of India, Extraordinary, *vide* number G.S.R. 552(E), dated 11th July, 2012 for information of all persons and organizations likely to be affected thereby; and notice was given that the said draft rules would be taken into consideration by the Central Government on or after the expiry of a period of sixty days from the date on which copies of the Gazette containing this notification are made available to the public;

And whereas, the copies of the said Gazette notification were made available to the public on the 31st July, 2012; And whereas, the suggestions or objections received in response to the above mentioned draft rules have been duly considered by the Central Government;

Now, therefore, in exercise of the powers conferred by Section 3, Section 6 and Section 25 of the Environment (Protection) Act, 1986 (29 of 1986) read with rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely :—

1. (1) These rules may be called the Environment (Protection) Amendment Rules, 2014.  
(2) They shall come into force on the date of their publication in the Official Gazette.
2. In the Environment (Protection) Rules, 1986, in rule 3, for sub-rule (8), the following sub-rule shall be substituted, namely :—

“(8) With effect from the date specified hereunder, the following coal based thermal power plants shall be supplied with, and shall use, raw or blended or beneficiated coal with ash content not exceeding thirty-four per cent, on quarterly average basis, namely :—

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

Provided that in respect of a thermal power plant using Circulating Fluidised Bed Combustion or Atmosphere Fluidised Bed Combustion or Pressurized Fluidised Bed Combustion or Integrated Gasification in the Official Gazette, the provisions of clauses (a), (b) and (c) shall not be applicable.

**Explanation:** For the purpose of this rule,—

- (i) ‘beneficiated coal’ means coal containing higher calorific value but lower ash than the original ash content in the raw coal obtained through physical separation or washing process;
- (ii) ‘captive thermal power plant’ means a power plant which is set up by an industry to generate electricity for its exclusive use;
- (iii) ‘critically polluted industrial area’ means an industrial cluster or area where pollution levels have reached or likely to reach critical level, and has been identified as such by the Central Government or the State Government or the Central Pollution Control Board or a State Pollution Control Board;
- (iv) ‘ecologically sensitive area’ means an area whose ecological balance is prone to be easily disturbed and has been identified and notified by the Central Government;
- (v) ‘installed capacity’ shall be calculated by adding, individual capacity of all units within a boundary;
- (vi) ‘pit-head power plant’ means any captive or stand-alone power station having captive transportation system for its exclusive use for transportation of coal from the loading point at the mining end, up to the uploading point at the power station without using the normal public transportation system;
- (vii) ‘stand-alone thermal power plant’ means a power plant which is set up to generate electricity for feeding to electricity grid or for locations that are not fitted with an electricity distribution system; and
- (viii) ‘urban area’ means an area limit of a city having a population of more than one million according to the last census.”.

[F. No. Q-15017/11/2011-CPW]

SUSHEEL KUMAR, Addl. Secy.

**Note:—**The Principal rules were published in the Gazette of India *vide* number S.O. 844(E), dated the 19th November, 1986 and subsequently amended *vide* numbers S.O. 82(E), dated 16th February, 1987; S.O. 64(E), dated 18th January, 1988; G.S.R. 931(E), dated 27th October, 1989; S.O. 23(E), dated 16th January, 1991; G.S.R. 95(E), dated 12th February, 1992; G.S.R. 329(E), dated 13th March, 1992; G.S.R. 562(E), dated 27th May, 1992; G.S.R. 884(E), dated 20th November, 1992; G.S.R. 386(E), dated 22nd April, 1993; G.S.R. 422(E), dated 19th May, 1993; G.S.R. 801(E), dated 31st December, 1993; G.S.R. 320(E), dated 16th March, 1994; G.S.R. 560(E), dated 19th September, 1997; G.S.R. 378(E), dated 30th June, 1998; G.S.R. 7(E), dated 22nd December, 1998; G.S.R. 407(E), dated 31st May, 2001; G.S.R. 826(E), dated 16th November, 2009 and G.S.R. 513(E), dated 28th June, 2012.