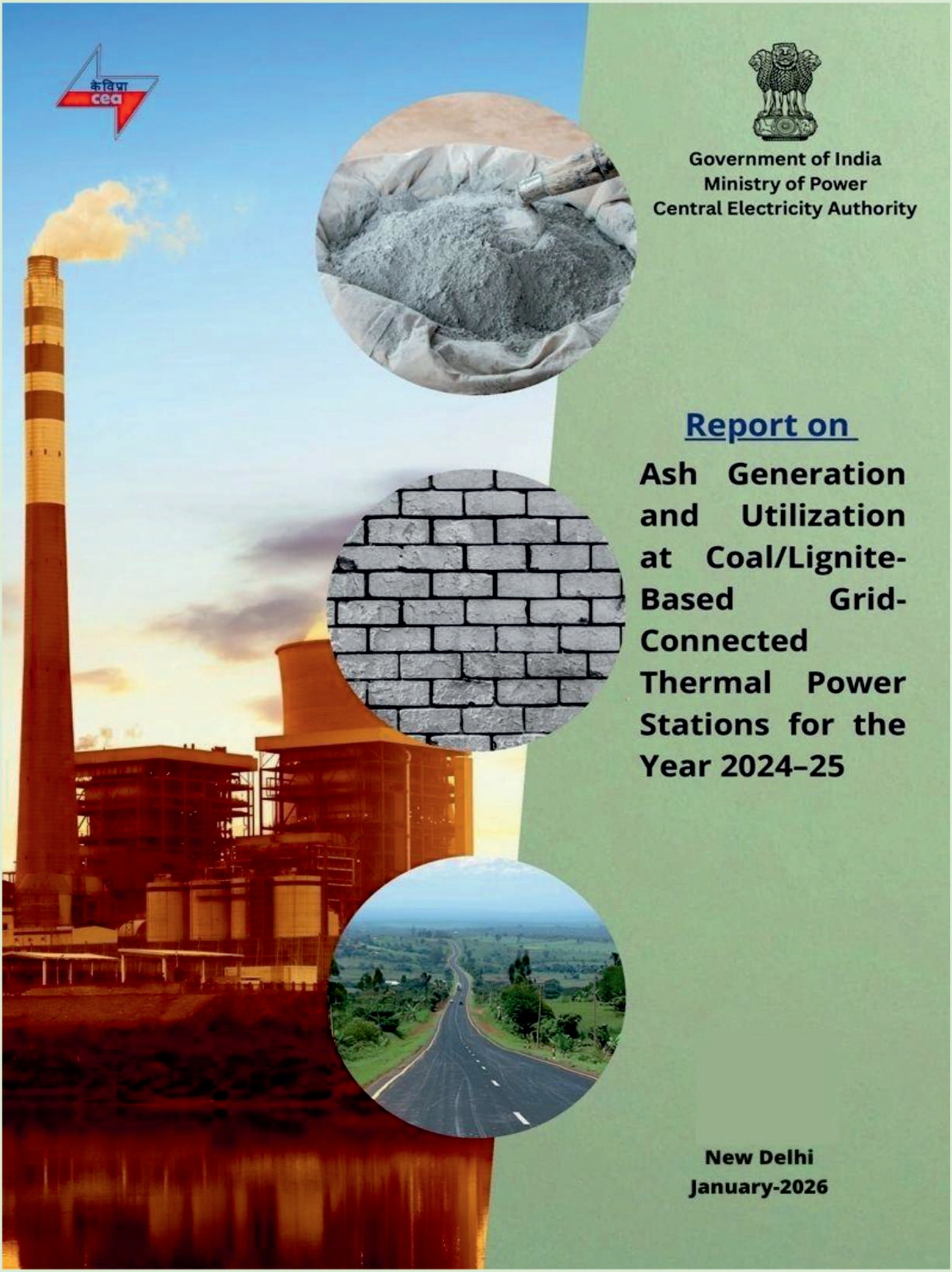

केविप्रा
cea

Government of India
Ministry of Power
Central Electricity Authority

Report on

Ash Generation and Utilization at Coal/Lignite-Based Grid-Connected Thermal Power Stations for the Year 2024–25

New Delhi
January-2026

Disclaimer

This report has been prepared based on information available on the CPCB Coal Ash Portal on 01.08.2025 and data received through email from the concerned generating stations. The data presented herein reflects entries made by the respective generating stations on the portal, as well as information furnished through email. The contents of this report are intended solely for informational and analytical purposes.

No independent verification of the data has been undertaken by the Central Electricity Authority (CEA). Accordingly, the accuracy, completeness, and reliability of the information contained herein remain the responsibility of the concerned generating stations. While due care has been exercised in compilation of the report, CEA does not accept any responsibility or liability whatsoever for any errors, omissions, or interpretations arising from the use of this report.

It is further clarified that this document shall not be construed as the Annual Implementation Report or Ash Compliance Report as prescribed under Clause E(2)(i) of the MoEF&CC Fly Ash Utilisation Notification dated 31.12.2021. This disclaimer shall apply irrespective of the purpose for which the report is used.

Any suggestions, feedback, or intimation regarding inadvertent errors in this document may be addressed to:

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भारत सरकार

Government of India

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Ministry of Power

केंद्रीय विद्युत प्राधिकरण

Central Electricity Authority

Report on Ash Generation and Utilization

For Grid-Connected Thermal Power Stations for the Year 2024–25

New Delhi

January- 2026

घनश्याम प्रसाद
अध्यक्ष तथा पदेन सचिव भारत सरकार
GHANSHYAM PRASAD
Chairperson & Ex-officio Secretary
To the Government Of India

केन्द्रीय विद्युत प्राधिकरण
भारत सरकार
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FOREWORD

As on 31st December 2025, coal and lignite-based power generating stations have a total installed capacity of 226.23 GW, accounting for a major share of the country's overall electricity generation. In the near future, coal-based power generation is expected to continue playing a its in the energy sector. However, Indian coal typically contains a high ash content—ranging from 35% to 50%—which leads to the production of large quantities of fly ash in coal and lignite-based thermal power stations. Currently, the overall utilization of fly ash across India remains lower than its rate of production. The management of fly ash has been a matter of concern in view of requirement of large area of land for its storage and disposal as well as its potential to cause air and water pollution.

To address these concerns, the Ministry of Environment, Forest and Climate Change (MoEF&CC) has issued various notifications on fly ash utilization, setting progressive targets for coal and lignite-based thermal power stations with the ultimate goal of achieving 100% utilization.

Over the years, the utilization of fly ash has increased remarkably—from about 6.64 million tonnes in 1996–97 to 307.14 million tonnes in 2024–25, achieving a utilization rate of 96.34% during 2024–25. To materialize 100 % utilization of fly ash on all India basis, in line with MoEF&CC Notifications, continued and enhanced efforts are required from all thermal power stations. Ash is now being utlised constructively in various applications. Innovative use cases are also emerging in ash utilisation. This is an encouraging sign.

I would like to extend my sincere gratitude to all Power Utilities, Thermal Power Stations, and the Central Pollution Control Board (CPCB) for providing valuable data and information on fly ash generation and utilization through the CPCB Coal Ash Portal, which has made this report possible. I am confident that this report will serve as a valuable resource for all stakeholders and will contribute towards achieving 100% fly ash utilization across the country.

For the concerted efforts, I wish to put on record my appreciation for the initiative of Shri Rajeev Singhal, Chief Engineer, Civil Design Division, CEA and his team in the preparation and publishing of this report are worth appreciating.

(Ghanshyam Prasad)

New Delhi,
20th January 2026

Praveen Gupta
Member (Thermal) & Ex-officio Additional Secretary to the GoI
Central Electricity Authority
Ministry of Power

PREFACE

The management of fly ash at coal and lignite-based thermal power stations across the country is a challenging task, in view of large quantity of ash being generated and the goal of achieving 100% utilization of fly ash within a defined timeframe, as stipulated in the latest MoEF&CC Notification dated 31st December 2021 and its subsequent amendments. Fly ash needs to be managed efficiently to prevent environmental degradation and to promote its safe and sustainable utilization.

The Notification on Fly Ash Utilization, issued on 31st December 2021 by the Ministry of Environment, Forest and Climate Change (MoEF&CC)—along with its subsequent amendments—has superseded all previous notifications and is applicable from the year 2022–23 onwards. These initiatives and policy measures undertaken by the Government of India have significantly enhanced the utilization of fly ash in various sectors such as the manufacture of fly ash-based building materials, production of Portland Pozzolana Cement (PPC), construction of roads, highways, and flyovers, reclamation of low-lying areas, mine backfilling and stowing, wasteland development, and the construction of roller-compacted concrete (RCC) dams, among others.

As a result of these concerted efforts, the level of fly ash utilization has improved remarkably—from less than 10% (6.64 million tonnes) in 1996–97 to about 96.34% (307.14 million tonnes) in 2024–25. Despite this commendable progress, further initiatives are required to achieve complete (100%) utilization of fly ash on an all-India basis.

This report presents comprehensive data on fly ash generation and utilization at 189 coal and lignite-based grid-connected thermal power stations in the country for the year 2024–25. It is anticipated that the report will serve as a valuable reference for all stakeholders involved in fly ash management—facilitating effective planning, utilization, and coordination between concerned thermal power stations and user agencies.

I also take this opportunity to acknowledge and appreciate the dedicated efforts of the officers and staff of the Civil Design Division in the preparation of this report.

Gupta

New Delhi
January, 2026

(Praveen Gupta)
Member (Thermal)

Rajeev Singhal
Chief Engineer
Central Electricity Authority
Ministry of Power

ACKNOWLEDGEMENT

I express my sincere thanks to all the Power Utilities and Thermal Power Stations in the country for uploading the fly ash generation and its utilization data on CPCB Coal Ash portal and also sharing data through email for the year 2024-25.

I would like to gratefully acknowledge Shri **Ghanshyam Prasad** Chairperson, CEA for his valuable suggestions and guidance in the preparation of this report. I also express my sincere gratitude to **Shri Praveen Gupta,** Member (Thermal), CEA, for providing valuable insights, direction, and constructive inputs, which have significantly contributed to enhancing the quality and comprehensiveness of the report.

I further place on record my sincere thanks and gratitude to the following officers for their commendable efforts, hard work and valuable contribution in compilation, analysis, and finalization of this report:

1. Smt Preeti Choudhary, Director,
2. Shri Saurabh Kumar, Deputy Director,
3. Shri Manish kumar, Deputy Director,
4. Shri Mukesh Kumar, Assistant Director,
5. Shri Nitosh Kumar, Assistant Director,
6. Shri Naveen , Assistant Director -II

It is hoped that this report will serve the intended purpose of guiding & assisting all concerned authorities/stakeholders involved in fly ash management—facilitating effective planning, enhanced utilization, and coordination between thermal power stations and user agencies.

राजीव सिंघल

New Delhi
January,2026

(Rajeev Singhal)
Chief Engineer (CD)

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Annexure – 1 : List of 189 Thermal Power Plant.

Annexure – 2 : List of Major Cement Plants across India.

Annexure – 3 : Procedure for allocation mine void for ash filling by CLWG along with list of allocated mines.

LIST OF ABBREVIATIONS

1	BOXN	Bogie Open Wagon (used for bulk rail transport of fly ash)		**22**	KM	Kilo meter
2	BTAP	Bogie Tank Wagon for Alumina Powder (used for closed fly ash transport)		**23**	LMT	Lakh Metric Tonnes
3	CCR	Coal Combustion Residue		**24**	MoC	Ministry of Coal
4	CDD	Civil Design Division		**25**	MoEF&CC	Ministry of Environment, Forest and Climate Change
5	CEA	Central Electricity Authority		**26**	MoP	Ministry of Power
6	CLWG	Central Level Working Group		**27**	MT	Metric tonne
7	CO_2	Carbon Dioxide		**28**	MW	Mega watt
8	CPCB	Central Pollution Control Board		**29**	NACA	Nano Concrete Aggregate
9	CPP	Captive Power Plant		**30**	NPH	Non Pit Head
10	CSIR-CBRI	Council of Scientific and Industrial Research – Central Building Research Institute		**31**	NTPC	NTPC Ltd.
11	CSR	Corporate Social Responsibility		**32**	PCC	Pollution Control Committee
12	DPIIT	Department for Promotion of Industry and Internal Trade		**33**	PH	Pit Head
13	EV	Electric Vehicle		**34**	PPC	Portland Pozzolana Cement
14	GIS	Geographic Information System		**35**	R&D	Research and Development
15	GVP	Gypsum Vermiculate Plaster		**36**	RCC	Reinforced Cement Concrete
16	GW	Giga watt		**37**	SFTO	Special Freight Train Operator
17	HCSD	High Concentration Slurry Discharge		**38**	SoP	Standard Operating Procedure
18	IISS	Indian Institute of Soil Science		**39**	SPCB	State Pollution Control Board
19	IPP	Independent Power Producer		**40**	TPP	Thermal Power Plant
20	IWAI	Inland Waterways Authority of India		**41**	UFA	Ultra-Fine Fly Ash
21	kg/m^3	Kilogram per cubic meter				

Overview

Coal and lignite-based thermal power generation continue to serve as the backbone of India's electricity generation infrastructure, contributing a substantial share to the nation's overall power capacity. However, the inherent characteristics of Indian coal present significant environmental management challenges. Indian coal typically has a high ash content of around 35% to 50%.

As a result, an enormous quantity of Coal Combustion Residue (CCR), commonly referred to as fly ash, bottom ash or pond ash, is generated annually by coal and lignite-based thermal power stations across the country. This ash requires systematic utilization, management, and stabilization to mitigate its environmental impact and ensure sustainable handling in line with regulatory norms. Based on the data available for 189 thermal power plants enclosed as **Annexure-1**, the total coal consumption during the 2024-25 was 8869.60 LMT, resulting in a total ash generation of nearly 3187.98 LMT. 3071.38 LMT was utilized in various avenues such as cement manufacturing, brick and block production, mine filling, road and embankment construction, etc. Thus, an overall ash utilization is 96.34%, indicating a highly efficient management of ash resources and a significant reduction in the quantity of ash requiring disposal.

Note:- The reported ash utilization includes both the ash generated during the current year and the utilization of legacy ash.

1. Environmental and Health Implications

The generation and improper disposal of fly ash pose significant environmental, ecological, and public health concerns. Unscientific dumping of fly ash can lead to:

- Air pollution through the suspension of fine ash particles, causing respiratory and cardiovascular issues in nearby populations.
- Water contamination due to leaching of heavy metals into groundwater and surface water bodies.
- Soil degradation and loss of agricultural productivity in surrounding areas.
- Land use concerns, as large tracts of land are occupied for ash ponds and disposal sites.

Therefore, scientific and large-scale utilization of fly ash is essential not only for reducing the environmental footprint of thermal power generation but also for converting waste into a valuable resource for sectors such as cement, construction, roads, and mine filling.

2. Regulatory Framework

To address the growing environmental challenges associated with fly ash generation and disposal, the Ministry of Environment, Forest and Climate Change (MoEF&CC) has implemented a series of regulatory interventions and policy measures over the years.

The first comprehensive notification on Fly Ash Utilization was issued on 14th September 1999, laying down mandatory provisions for its gainful use. This notification was subsequently amended through notifications dated 27th August 2003, 3rd November 2009, and 25th January 2016, respectively. Each amendment progressively expanded the scope of utilization, set time-bound targets, and strengthened compliance mechanisms for thermal power plants and allied industries.

To streamline and consolidate all previous directives, the MoEF&CC issued a comprehensive Fly Ash Notification on 31st December 2021, which came into effect from 1st April 2022 and Subsequent amendments to this notification were issued on 30th December 2022 and 1st January 2024.

3. Data Source and Objective of the Report

The present report is based on data from 173 Thermal Power Plants (TPPs) sourced from the CPCB Coal Ash Portal, the centralized platform for monitoring fly ash generation and utilization across coal- and lignite-based Thermal Power Stations in the country. Data pertaining to 16 additional TPPs were received through email.

The dataset has been processed, structured, and analysed to provide a comprehensive and user-friendly overview of total fly ash generation and utilization performance across different states, utilities, and stations.

The report aims to translate raw data into meaningful insights, supported by graphs, charts, and analytical visuals, to improve public access and understanding of fly ash generation and utilization patterns. It is also intended to assist policy-makers, researchers, industries, and consumers of fly ash by:

- Promoting transparency in data availability,
- Encouraging greater participation in ash utilization,
- Supporting the nation's vision for resource recovery, circular economy, and
- Sustainable power generation.

CHAPTER-1
ALL INDIA ASH GENERATION AND UTILISATION

1.1 Introduction

As per the data available on the CPCB Coal Ash Portal, a total of 530 Thermal Power Plants including both Captive Power Plants (CPPs) and Independent Power Producers (IPPs), are registered.

As per the records of the Central Electricity Authority (CEA), there were 204 grid-connected Thermal Power Plants (TPPs) in the country with a total installed capacity of 221.34 GW as on 31 March 2025. Of these, 189 TPPs, aggregating to an installed capacity of 214.06 GW, have been considered for analysis, and their fly ash generation and utilization data have been compiled and presented in the present Fly Ash Generation and Utilization Report for the year 2024–25.

The balance installed capacity of 7.28 GW pertains to thermal power plants that were not operational during the year on account of shutdown, retirement, or low generation.

Table 1.1

No. of Plants (Data Available)	Total Capacity (GW)	Coal Consumption (LMT)	Total Ash Generation (LMT)	Total Ash Utilisation (LMT)	% Utilisation
189	214.06	8869.6	3187.98	3071.38	96.34

1.2. Avenue Wise Bifurcation

As per the avenue-wise classification of fly ash utilization outlined in the MoEF&CC Notification, 2021, the data (as tabulated below) indicates that the major avenues of utilization are concentrated in a few key sectors. The construction of highways and roads accounts for the largest share at 34%, reflecting the growing use of fly ash in infrastructure development, particularly for embankments, base courses, and pavement layers. This is followed by cement manufacturing (28%), where fly ash serves as a valuable supplementary cementitious material enhancing the strength and durability of concrete. The production of fly ash-based bricks and blocks (13%) constitutes another major utilization channel, promoting eco-friendly alternatives to traditional clay bricks.

Additionally, mine void filling (10%) and reclamation of low-lying areas (11%) represent important environmental applications that support land restoration and reduce the need for ash disposal in ash ponds. Together, these sectors collectively account for the vast majority of fly ash utilization, demonstrating a balanced approach between industrial use, infrastructure development, and environmental restoration. The details of the avenue wise utilization of the fly ash are shown in the Table 1.2.

Table 1.2

All figures are in LMT

In Making of Fly Ash based/ Brick/ Blocks / Tiles etc.	In Manufacture of Portland Pozzolana cement	In Construction of Highways & Roads including flyovers	Part replacement of cement in concrete	In Hydro power sector in RCC Dam construction	In reclamation of low lying Area	In Mining filling
1	2	3	4	5	6	7
405.44	857.72	1040.04	66.77	3.04	318.93	306.65

In Agriculture/ wasteland development	In making of Ash and Geo-polymer based const. material	In Mfg. of sintered or cold bonded ash aggregate	In Const. of shoreline protection	In Export of Ash	In overburden dumps	Others
8	9	10	11	12	13	14
24.45	21.34	0.07	0.13	10.44	10.44	5.92

1.3. Ash Utilization in Percentage

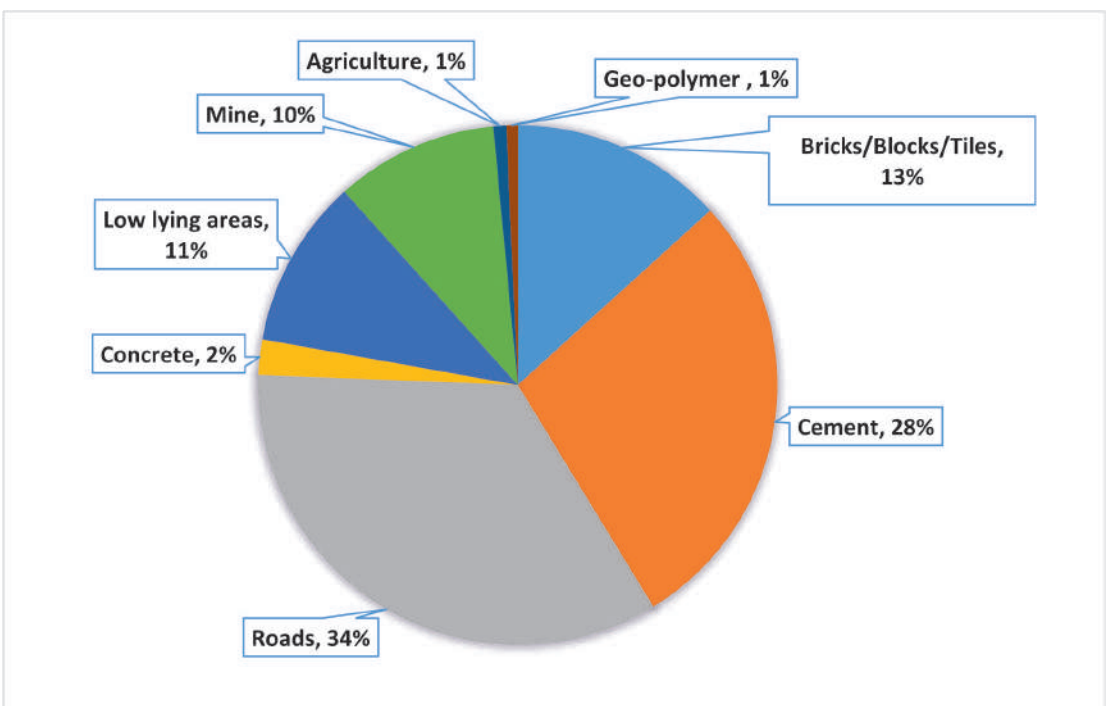


Figure 1.1 Avenue wise utilization of fly ash in percentage

1.4. Observations:-

Based on the data compiled for 189 thermal power plants, the breakup of plants across various ranges of ash utilization percentage during the year 2024–25 is as follows:

Table 1.3

Category	Percentage Ash Utilisation	No. of TPPs	Remarks
1	100 % and more than 100* % during the Year 2024-25	112	These plants achieved full or surplus utilization of ash, reflecting efficient management and strong linkages with end users such as cement and construction sectors.
2	Between 80% to 100 % during the Year 2024-25	47	These TPPs are nearing full utilization levels, with scope for optimization to reach complete utilization.
3	Between 60% to 80 % during the Year 2024-25	14	Plants in this category have moderate utilization and may require better coordination for disposal and transportation mechanisms.
4	Less than 60 % during the Year 2024-25	16	These plants show low utilization and may face challenges such as limited demand, logistics issues, or lack of nearby ash-consuming industries.

Note:- Utilization of more than 100% indicates that, in addition to the current year ash generation, some legacy ash or pond ash has also been utilized.

The major avenues for fly ash utilization have been identified across key sectors, with road construction (34%), cement manufacturing (28%), and brick production (13%) accounting for the largest shares. These are followed by ash filling in mines (10%) and reclamation of low-lying areas (11%).

1.5. Cement manufacturing

Cement manufacturing offers one of the most economically beneficial uses of fly ash. Many cement plants require dry fly ash for its cementitious properties. Its utilisation supports both economic growth and infrastructure development. Several cement producers maintain long-term tie-ups with nearby thermal power plants (TPPs) to ensure a consistent and cost-effective supply of quality fly ash. These collaborations are mutually beneficial, as cement producers gain access to a valuable raw material while TPPs are able to dispose of ash sustainably without adding transport costs to TPPs or electricity consumers. To facilitate greater collaboration between TPPs and cement manufacturers, a GIS-based map and an indicative and inexhaustible list of major cement plants (compiled from online sources as on 20th Oct 2025) is provided in **Annexure 2**.

1.6. Mine filling

Further, with respect to mine filling, the allocation of mines to TPPs is carried out by the Central Level Working Group (CLWG), Chaired by the Additional Secretary, Ministry of Coal (MoC), in accordance with the Standard Operating Procedures (SoPs) of the MoC. The detailed procedure, along with the list of allocated mines and the list of currently available/suitable mines, is provided in **Annexure-3**.

1.7. Trend Analysis

A trend analysis of progressive fly ash generation and its utilization from 1996-97 to 2024-25, based on data from previous CEA reports and recent information available on the CPCB Coal Ash Portal & obtained directly by CEA , shows a consistent improvement in fly ash management by Thermal Power Stations and Power Utilities.

The plotted data for the period 1996-97 to 2023-24 indicates a steady rise in fly ash utilization from just 9.64% in 1996-97 to approximately 96.34% in 2024-25 highlighting significant progress in sustainable ash utilization practices over time.

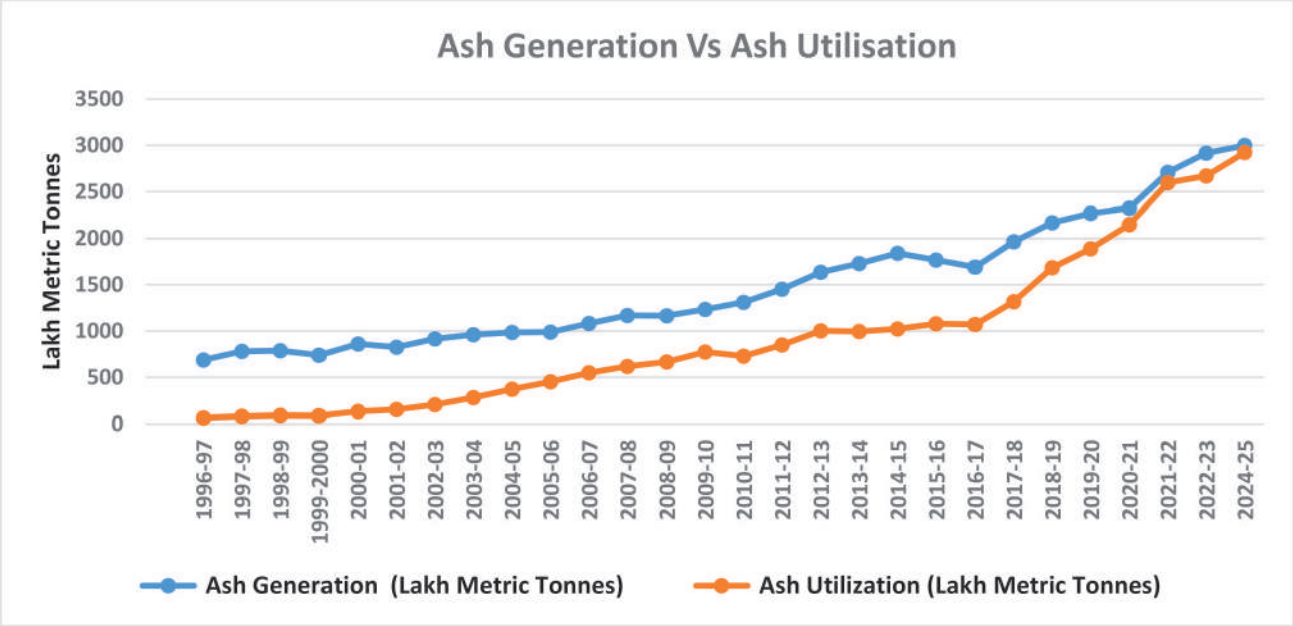


Figure 1.2

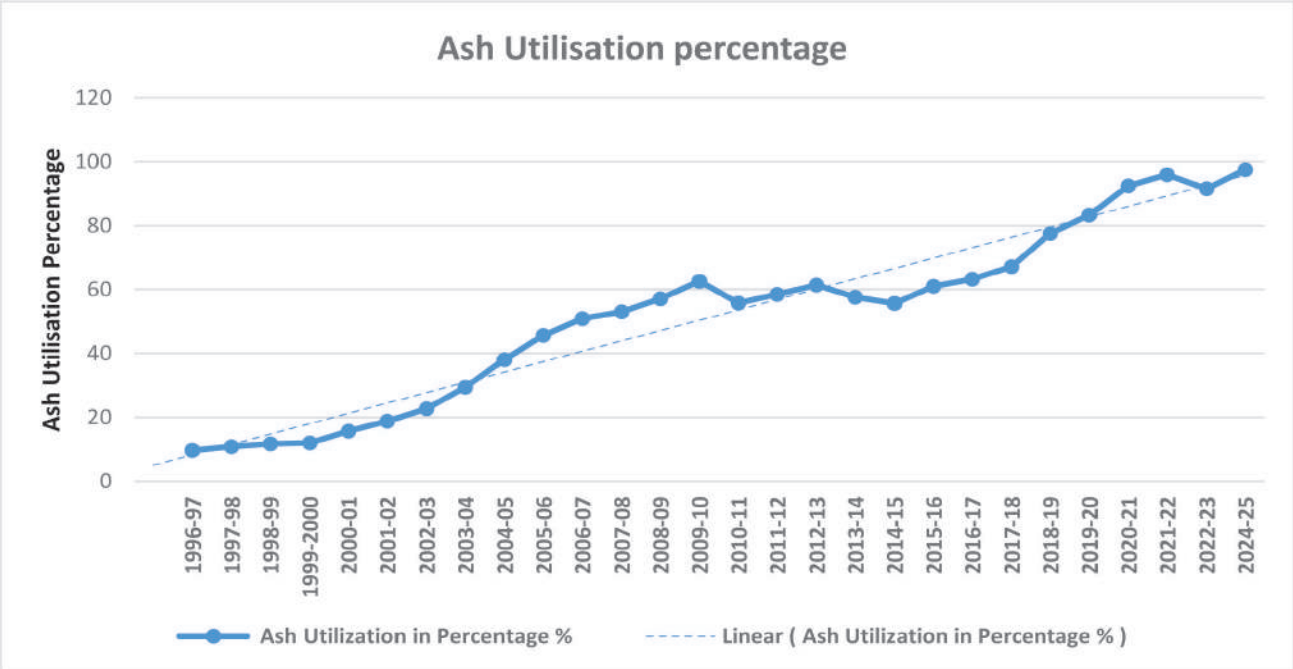
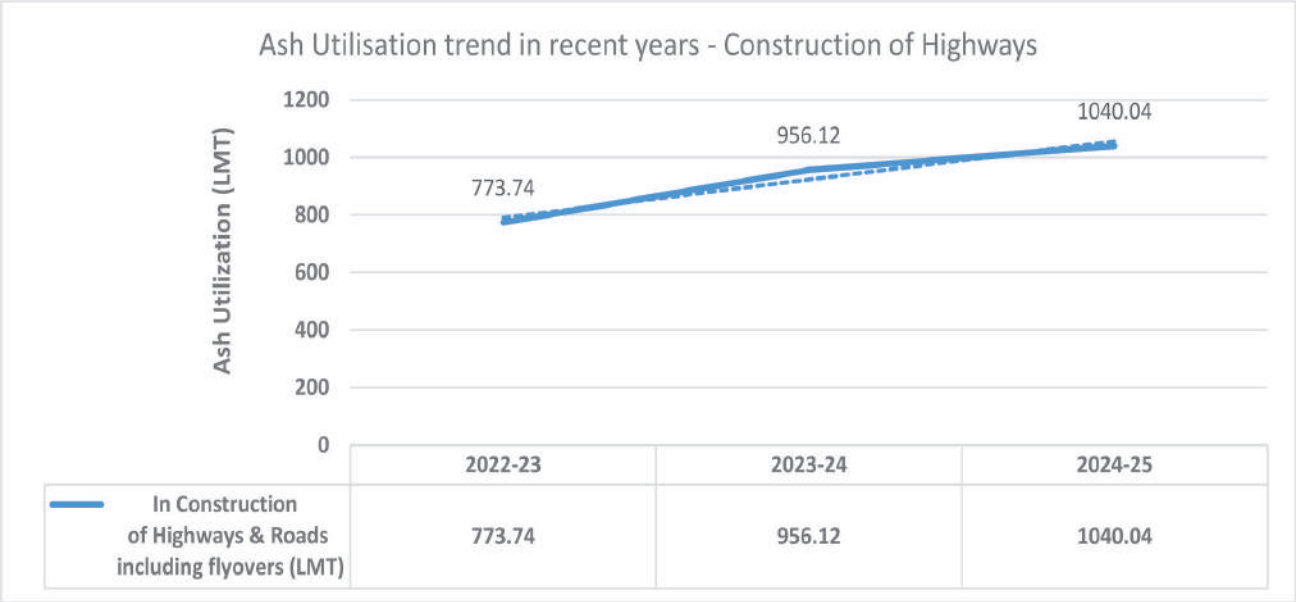


Figure 1.3

1.8. Trend Analysis - Avenue wise: The avenue-wise ash utilisation trend for recent years (based on data available from the CPCB Coal Ash Portal) has been plotted for the major utilisation avenues—such as cement manufacturing, road construction, brick manufacturing, and mine filling as shown below.



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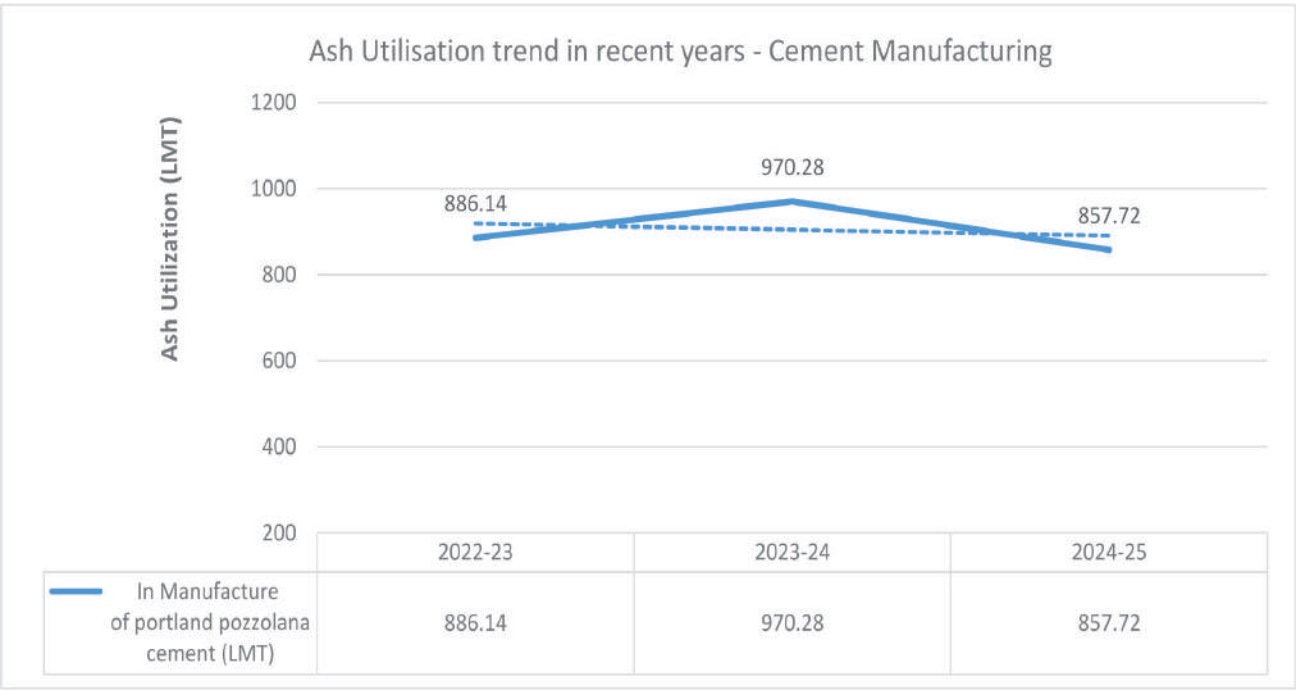

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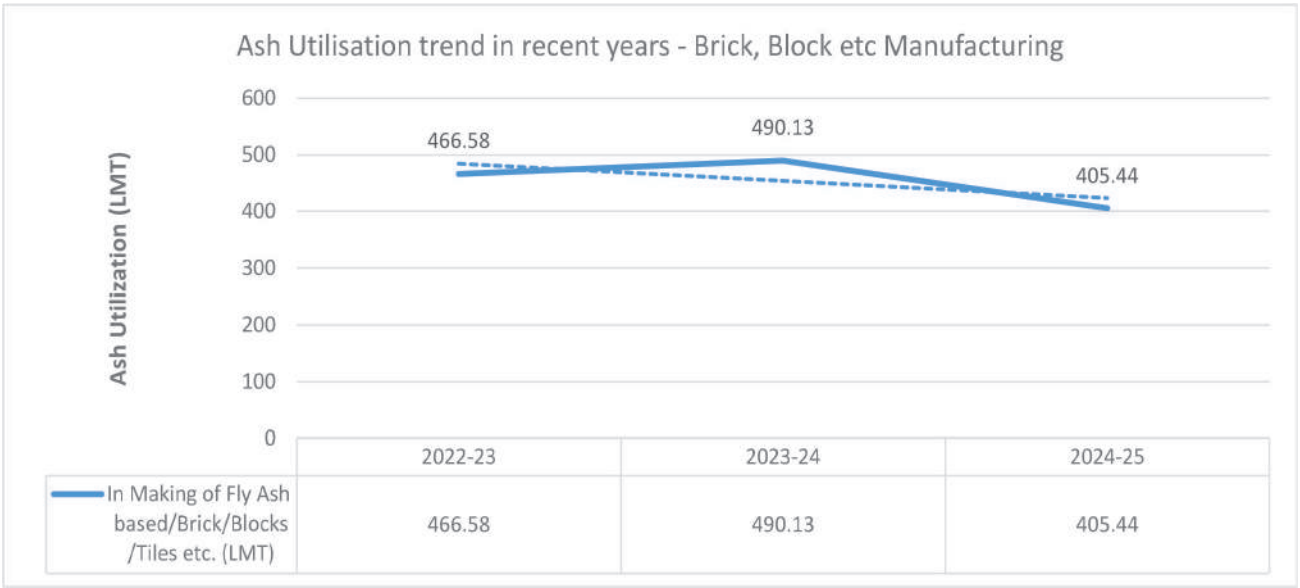

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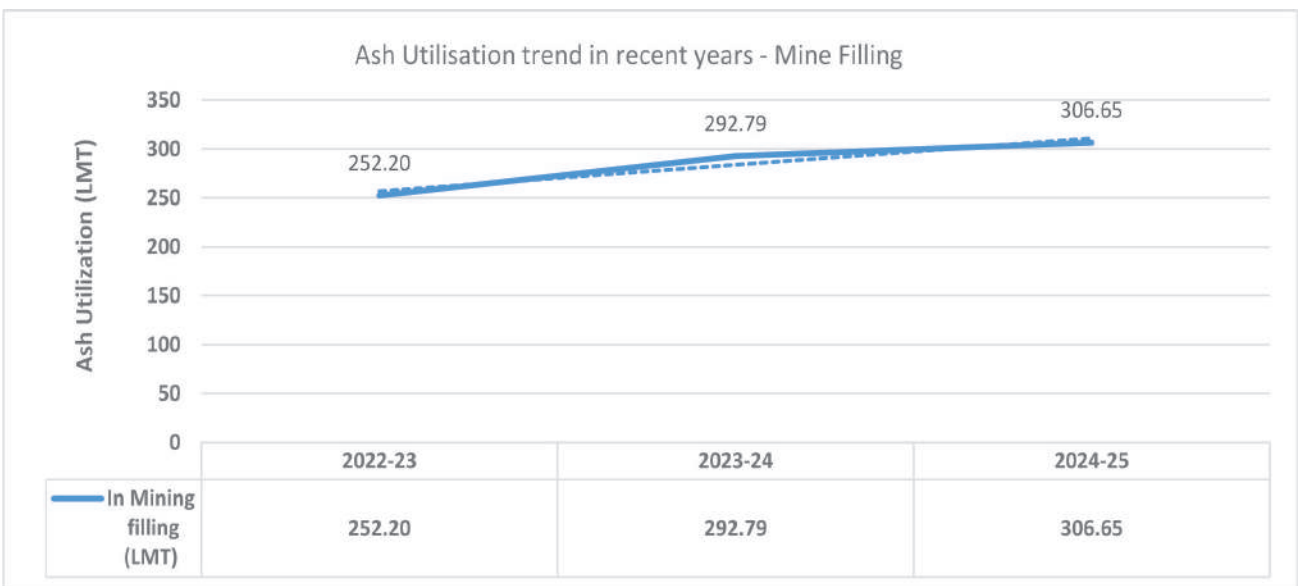


Figure 1.7

CHAPTER - 2
All INDIA – Pit Head & Non-Pit Head TPPs

2.1. Introduction

"Pit-Head Power Plant," as referred under the Environment (Protection) Rules, 1986 means power stations having captive transportation system for its exclusive use for transportation of coal from the loading point at the mining end upto the uploading point at the power station without using the normal public transportation system.

As per the data available with the Central Electricity Authority, there are 30 Thermal Power Plants classified as Pit Head Thermal Power Plants. One of these plants has been closed, and accordingly, the remaining 29 Pit Head Thermal Power Plants have been taken into account for the preparation of this report.

For all **189 TPPs** covered under the reporting framework, a total of **3,187.98 LMT** of fly ash was generated, out of which **3,071.38 LMT was utilised**, resulting in an **overall fly ash utilisation rate of 96.34%**.

Table 2.1

All figures are in LMT

Type of Plant	No. of Plants	Installed Capacity (MW)	Coal Consumption	Total Ash Generation	Total Ash Utilization	% Utilization
1	2	3	4	5	6	7
PH	29	47350	2348.27	765.46	683.98	89.36
NPH	160	166708	6521.33	2422.52	2387.40	98.55
Total TPP	189	214058	8869.60	3187.98	3071.38	96.34

2.2 Avenue Wise Bifurcation

Table 2.2

All figures are in LMT

Type of Plant	No. of Plants	In Making of Fly Ash based/Brick/ Blocks/Tiles etc.	In Manufacture of portland pozzolana cement	In Construction of Highways & Roads including flyovers	Part replacement of cement in concrete	In Hydro power sector in RCC Dam construction	In reclamation of low lying Area
1	2	3	4	5	6	7	8
PH	29	41.49	33.92	451.51	4.48	0.00	61.60
NPH	160	363.95	823.80	588.53	62.29	3.04	257.33
Total TPP	189	405.44	857.72	1040.04	66.77	3.04	318.93

In Mine filling	In Agriculture/wasteland development	In making of Ash and Geo-polymer based const. material	In Mfg of sintered or cold bonded aggregate	In Const. of shoreline protection	In Export of Ash	In overburden dumps	Others
9	10	11	12	13	14	15	16
73.66	0.00	15.55	0.01	0.00	0.00	0.00	1.76
233.00	24.44	5.79	0.06	0.13	10.44	10.44	4.16
306.66	24.44	21.34	0.07	0.13	10.44	10.44	5.92

2.3 Ash Utilization in %

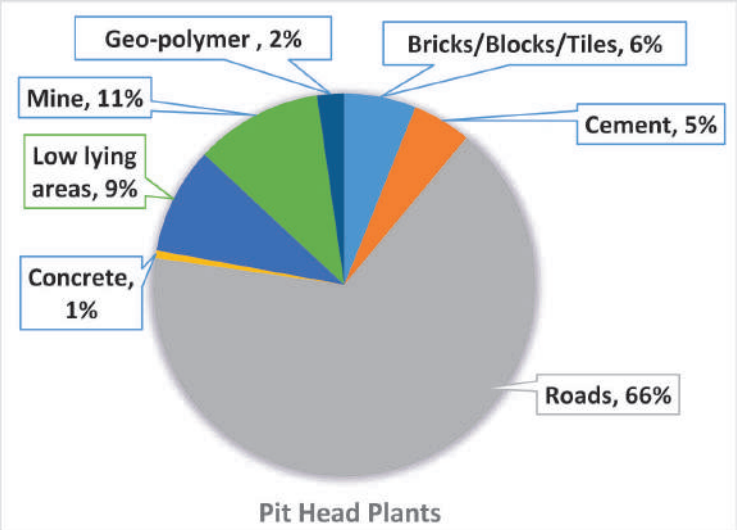


Figure 2.1

2.3.1 Fly Ash Utilization: Comparative Analysis between Pit Head and Non-Pit Head Thermal Power Plants

- Pit Head Plants are only 15% of the total number of thermal power plants (29 out of 189), however, accounts for a 24% of total fly ash generation (765.46 LMT).
- The overall fly ash utilization rate at Pit Head Thermal Power Plants is 89.36%. The utilization performance at non-pit head plants is 98.55% during the same period.

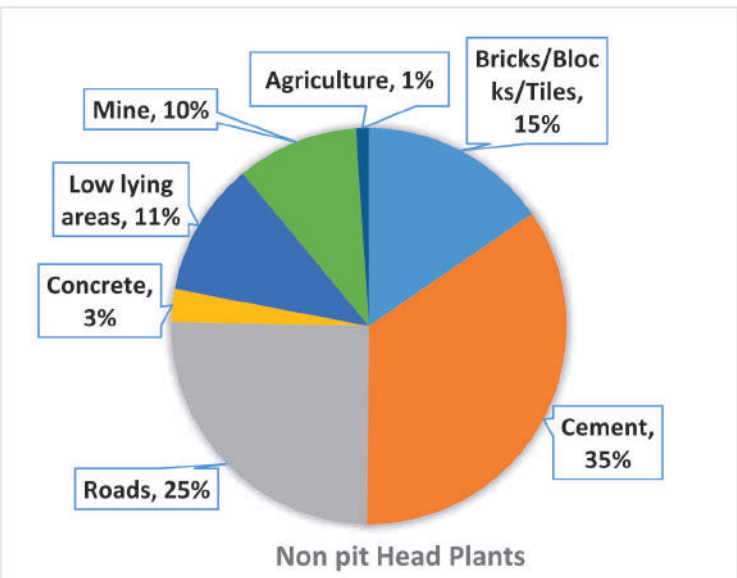


Figure 2.2

A closer examination of the utilization pattern reveals distinct differences in the sectoral distribution of fly ash usage between pit head and non-pit head plants.

2.3.2 Pit Head Plants:

The majority of ash utilization at Pit Head Plants is directed toward

- Road Construction (66%),
- Mine Filling (11%), and
- Reclamation of Low-Lying Areas (9%).

Utilization for cement manufacturing (5%) and brick production (6%) remains relatively low.

This trend is largely influenced by the geographical proximity of mines and large land areas around these plants, which makes bulk disposal through construction and filling activities more feasible. Moreover, these avenues are typically cost-bearing for the power producer, as the transportation and handling expenses are borne by the Thermal Power Plant (TPP) itself, making them less economically favorable despite their high volumetric capacity.

- Breakup of TPPs in different segments of percentage utilisation is as below:

Table 2.3

Sl no.	Pit Head Plants - Percentage Ash Utilisation	No. of TPPs
1	100 % and more than 100* % during the Year 2024-25	19
2	Between 80% to 100 % during the Year 2024-25	3
3	Between 60% to 80 % during the Year 2024-25	2
4	Less than 60 % during the Year 2024-25	5

Note:- Utilization of more than 100% indicates that, in addition to the current year ash generation, some legacy ash or pond ash has also been utilized.

2.3.3 Non-Pit Head Plants:

In contrast, Non-Pit Head Thermal Power Plants exhibit a utilization profile driven more by market-linked consumption as under.

- Cement Manufacturing (35%),
- Road Construction (25%), and
- Brick Production (15%)

While mine filling (10%) contribute relatively smaller shares.

These plants, often located near industrial and urban centres, benefit from proximity to cement and construction industries, resulting in higher-value utilization avenues. Additionally, in these cases, cement and brick manufacturers typically bear the cost of transportation, as they purchase or source fly ash for use as a raw material, making utilization both economically viable and environmentally beneficial.

2.3.4 Ash Utilization of TPPs under NTPC & DVC

Table 2.4

All figures are in LMT

Name of Plant	Type of Plant	No. of Plants	Installed Capacity (MW)	Coal Consumption	Total Ash Generation	Total Ash Utilization	% Utilization
1	2	3	4	5	6	7	8
NTPC	PH	12	29900	1514.98	552.14	573.20	103.81
	NPH	19	28490	1193.43	461.58	428.04	92.73
DVC	PH	-	-	-	-	-	-
	NPH	6	6540	278.82	128.50	132.59	103.18

CHAPTER-3
All INDIA - SECTOR WISE

3.1 Introduction

A total of 189 Thermal Power Plants, there are 46 Central sector TPPs, 65 State sector TPPs, and 78 Private sector TPPs. Among these, the Central and Private sector plants have better performance in ash utilization, achieving near-complete or even surplus utilization. In contrast, the State sector plants are lagging behind, indicating the need for focused efforts to improve ash management and enhance utilization practices in these plants.

Table 3.1

All figures are in LMT

Sector/Type	No of Plants	Installed Capacity (MW)	Coal Consumption	Total Ash Generation	Total Ash Utilization	% Utilization
1	2	3	4	5	6	7
Central	46	72330	3324.05	1209.31	1200.34	99.26
PH	17	33540	1720.66	571.01	594.38	104.09
NPH	29	38790	1603.39	638.30	605.97	94.93
State	65	69387.50	2472.81	994.49	878.14	88.30
PH	7	6820	283.78	109.12	32.73	30.00
NPH	58	62567.50	2189.03	885.37	845.41	95.49
Private	78	72341	3072.74	984.18	992.89	100.89
PH	5	6990	343.83	85.34	56.87	66.64
NPH	73	65351	2728.91	898.84	936.02	104.14
Grand Total	189	214058.50	8869.60	3187.98	3071.38	96.34

Note:- Utilization of more than 100% indicates that, in addition to the current year ash generation, some legacy ash or pond ash has also been utilized.

PH:- Pit Head, NPH:- Non- Pit Head

3.1.1 The Central Sector, with an installed capacity of 72330 MW, consumed 3,324.05 LMT of coal and generated 1,209.31 LMT of ash, contributing about 38% of total ash production. The Private Sector, despite having the, highest installed capacity at 72341 MW, generated a relatively lower ash quantity of 984.18 LMT, contributing about 31 % of total ash production. The State Sector, with coal consumption of 2,472.81 LMT, produced 994.49 LMT of ash, accounting for nearly 32% of the total ash generated.

3.1.2 In terms of utilization efficiency

a. The Private Sector exhibited the best performance, achieving 100.89% utilization, indicating complete utilization of the current year's ash along with partial clearance of residual ash from previous years. However, performance in ash utilization in Pit Head Plants is only 66.64% which needs focused improvement.

b. The Central Sector closely followed with an impressive 99.26% utilization, reflecting strong overall performance. Ash utilization at Pit Head Plants was particularly high at 104.09%. However, ash utilization at Non–Pit Head Plants requires improvement.

c. The State Sector recorded a comparatively lower ash utilization of 88.30%, underscoring the need for further improvements in operational and logistical efficiency. Ash utilization at State Sector Pit Head Plants remained particularly low at around 30%, necessitating concerted and focused efforts to significantly enhance utilization levels.

Avenue Wise Bifurcation

Table 3.2

All figures are in LMT

Sector	No of Plants	Installed Capacity (MW)	In Making of Fly Ash based/Brick/Blocks/Tiles etc. (LMT)	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 reclamation of low lying Area
1	2	3	4	5	6	7	8	9
Central	46	72330	92.83	210.76	708.88	25.72	0.00	63.89
State	65	69387.5	219.27	344.64	174.46	14.43	3.04	62.65
Private	78	72341	93.33	302.32	156.70	26.62	0.00	192.39
Grand Total	189	214058.5	402.35	846.75	1040.04	66.77	3.04	318.93

In Mining filling	In Agriculture/ wasteland development	In making of Ash and Geo-polymer based const material	In Mfg of sintered	In Const. of shoreline protection	In Export of Ash	In overburden dumps	Others
10	11	12	13	14	15	16	17
80.66	0.39	15.58	0.07	0.00	0.78	0.78	0.00
13.43	23.46	5.76	0.00	0.00	5.65	5.65	5.70
212.56	0.60	0.00	0.00	0.13	4.01	4.01	0.23
306.65	24.45	21.34	0.07	0.13	10.44	10.44	2.24

3.3 Central Sector TPPs- Avenue wise ash utilisation 2024-25

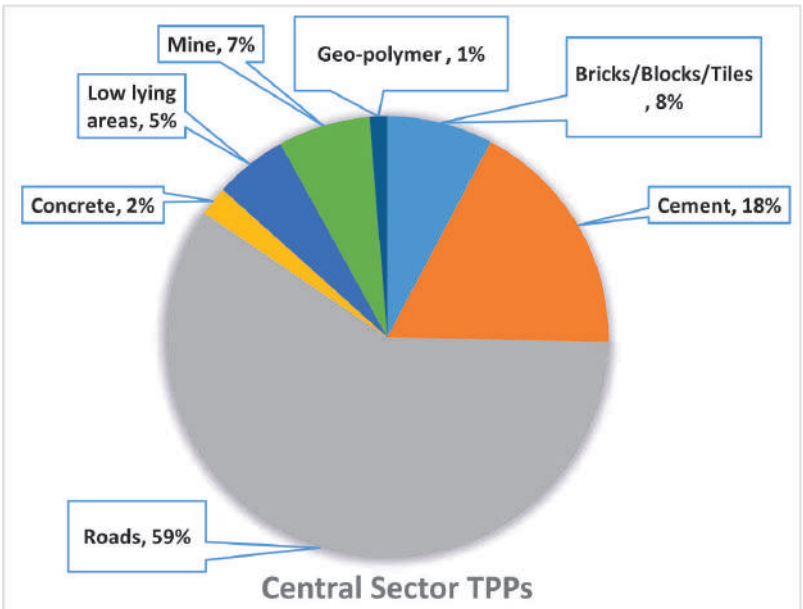


Figure 3.1

Central Sector (46 Plants)

3.3.1 Out of the 46 Central Sector Plants, 17 are Pit-head Stations, accounting for about 37% of the total plants but generating nearly 47% of the total ash.

3.3.2 The overall utilization in the Central Sector is 99.26%, indicating almost complete ash use.

- Road Construction (59%),
- Cement(18%) and
- Bricks/Blocks/Tiles(8%).

Other avenues include mine filling (7%), low-lying area reclamation (5%), and a small portion (2%) in concrete.

3.3.3 Among **Central Pithead Plants** major disposal is through

- Roads (73%),
- Mine Filling (8%) and
- Low-Lying Areas (7%).

Their utilization in cement (4%) and bricks (4%) remains relatively low.

3.3.4 Conversely, non-pithead plants have more diversified use —

- Roads(46%),
- Cement(31%), and
- Bricks(11%).

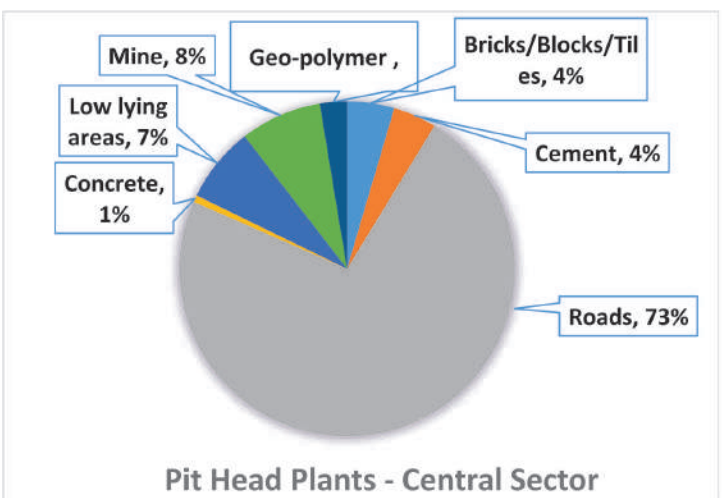


Figure 3.2

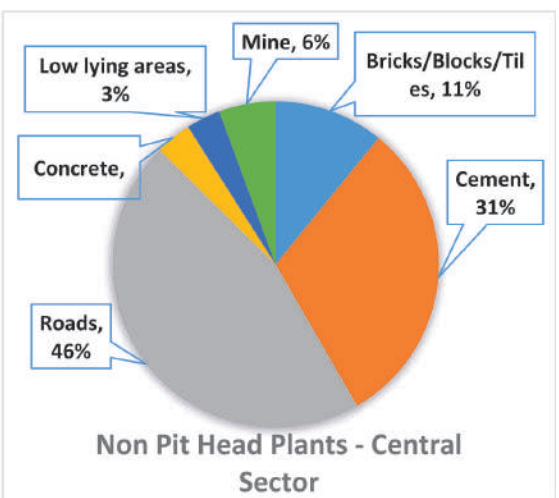


Figure 3.3

3.4 State Sector TPPs – Avenue wise ash utilisation 2024-25

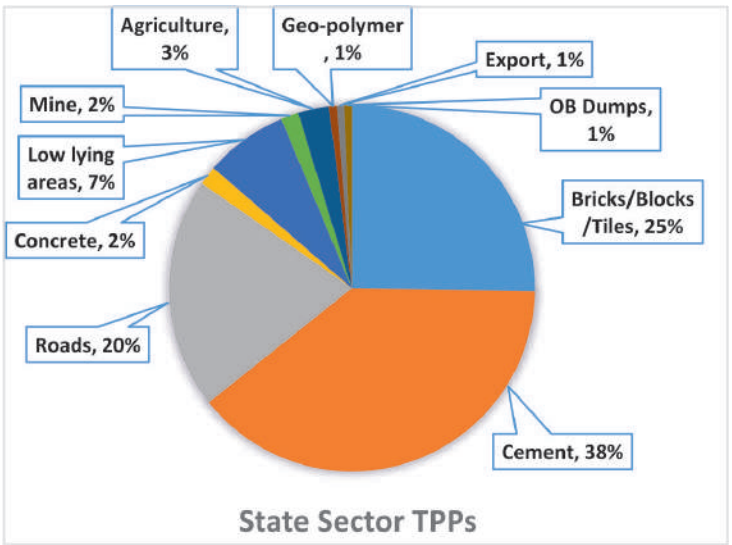


Figure 3.4

3.4.1. State Sector (65 Plants)

- State sector plants show a moderate utilization efficiency of 88.30%.
- They exhibit a distinctly higher reliance on cement (38%) and bricks/blocks/tiles (25%), together accounting for nearly two-thirds of total utilization.
- Road construction (20%) is another key avenue, while small portions are used in low-lying areas (7%) and mine backfilling (2%).

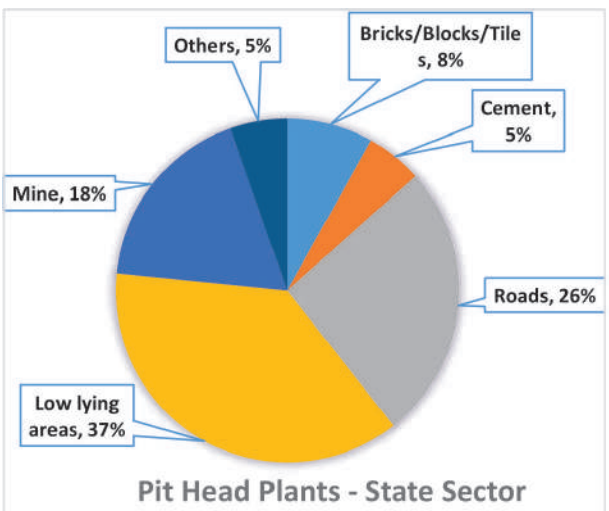


Figure 3.5

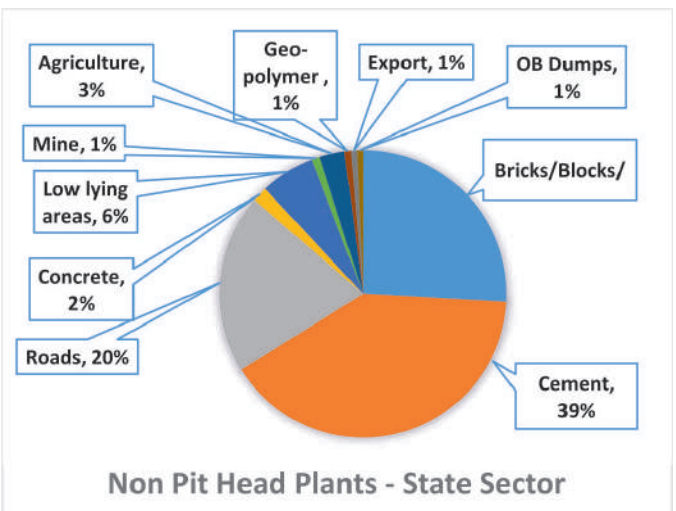


Figure 3.6

3.4.2 Among **State Pithead Plants** major disposal is through

- Low-Lying Areas (37%).
- Road (26%) and
- Mine filling (18%)

Their utilization in brick (8%) and others (5%) remains relatively low.

3.4.3 Conversely, Non-Pithead Plants have more diversified use

- Cement (39%),
- Bricks (25%), and
- Road (20%).

3.5 Private Sector TPPs – Avenue wise ash utilisation 2024-25

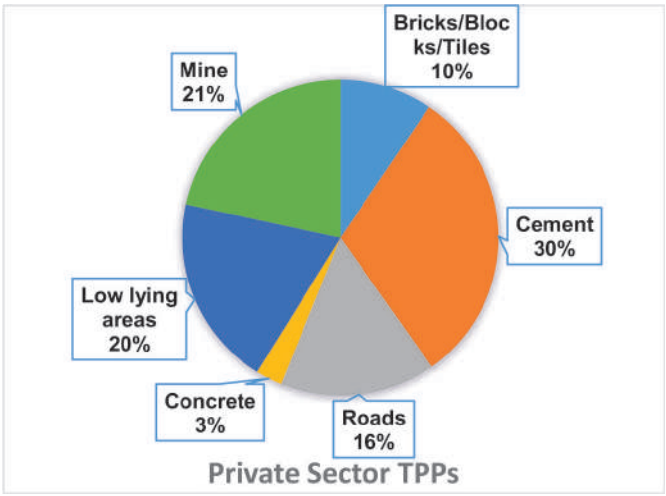


Figure 3.7

Private Sector (78 Plants)

3.5.1 Private sector plants exhibit an overall utilization rate of 100.89%, showing excellent performance. However, the pattern of utilization differs from the central sector —

- Cement(30%)
- Roads(16%), and
- Bricks(10%).

Notably, mine backfilling and low-lying area reclamation together account for a significant share (21% and 20%, respectively), reflecting the influence of captive mines and nearby land availability.

Among private sector plants, **pithead units** dispose a large share of ash through mine filling (37%) and low-lying areas (10%), while only 18% goes to roads. **Non-pithead private sector plants**, on the other hand, show higher utilization in cement (32%) and bricks (9%), but a smaller fraction (16%) in roads.

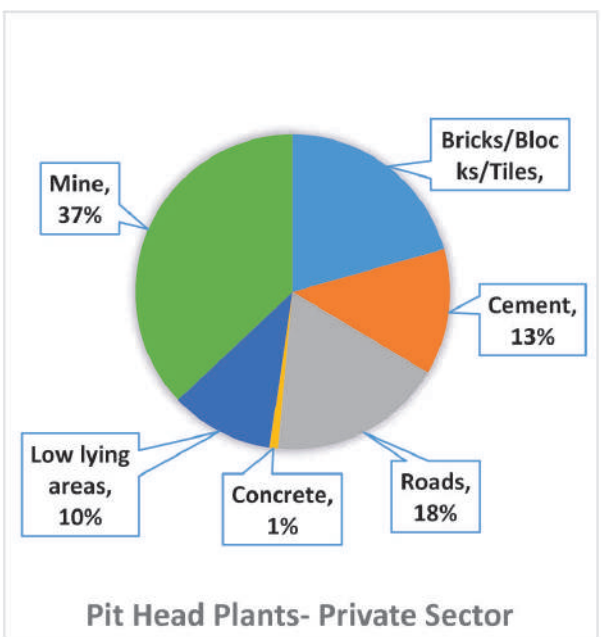


Figure 3.8

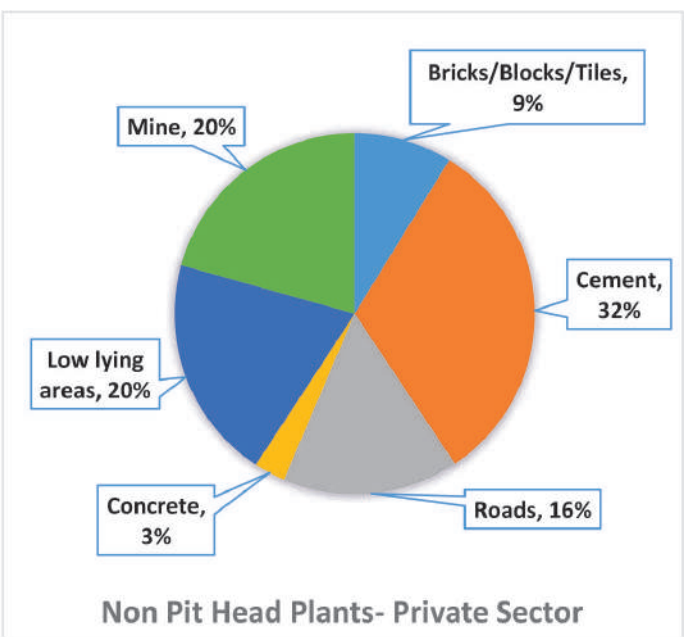


Figure 3.9

3.6 The avenue-wise ash utilization in percentage across major sectors by the Central, State, and Private Sector thermal power plants

Table 3.3

Sector	No of Plants	Bricks/ Blocks/ Tiles (%)	Cement (%)	Roads (%)	Concrete (%)	Low Lying Areas (%)	Mine (%)	Agriculture (%)	Geo-polymer (%)	OB Dumps (%)	Exports/ Others (%)
Central	46	8	18	59	2	5	7	0	1	0	0
PH	17	4	4	73	1	7	8	0	3	0	0
NPH	29	11	31	46	3	3	6	0	0	0	0
State	65	25	38	20	2	7	2	3	1	0	1/1
PH	7	8	5	26	0	37	18	0	0	0	0/5
NPH	58	25	39	20	2	6	1	3	1	0	1/1
Private	78	10	30	16	3	20	21	0	0	0	0
PH	5	21	13	18	1	10	37	0	0	0	0
NPH	73	9	32	16	3	20	20	0	0	0	0

CHAPTER-4
STATEWISE ASH GENERATION AND ITS UTILIZATION

4.1. The state-wise data on ash generation and utilization for 189 grid-connected thermal power plants, for which information was available, has been compiled and presented below for the year 2024–25.

Table 4.1

S. No.	Name of State	No. of Plants	Coal Consumed (LMT)	Ash Generation (LMT)	Ash Utilisation (LMT)	% Utilisation
1	Andhra Pradesh	9	505.07	181.88	186.00	102.27
2	Assam	1	29.81	10.60	8.63	81.48
3	Bihar	6	440.46	172.52	200.83	116.41
4	Chhattisgarh	24	1205.04	497.90	505.73	101.57
5	Gujarat	12	470.00	73.08	85.09	116.43
6	Haryana	5	211.71	85.14	88.38	103.80
7	Jharkhand	8	259.67	108.14	112.82	104.33
8	Karnataka	6	275.55	103.20	82.57	80.02
9	Maharashtra	19	937.56	330.79	279.43	84.48
10	MP	14	880.86	293.47	284.81	97.05
11	Odisha	7	597.89	253.93	220.65	86.90
12	Punjab	5	210.91	77.23	133.86	173.32
13	Rajasthan	10	418.80	132.73	116.22	87.55
14	Tamil Nadu	16	535.26	141.68	144.14	101.74
15	Telangana	10	371.00	155.10	118.77	76.57
16	UP	21	1033.09	370.52	296.66	80.07
17	West Bengal	16	486.93	200.07	206.79	103.36
	Grand Total	**189**	**8869.60**	**3187.98**	**3071.38**	**96.34**

Note:- Utilization of more than 100% indicates that, in addition to the current year ash generation, some legacy ash or pond ash has also been utilized.

4.2. The above data is also illustrated through bar charts below to provide a clearer visual representation.

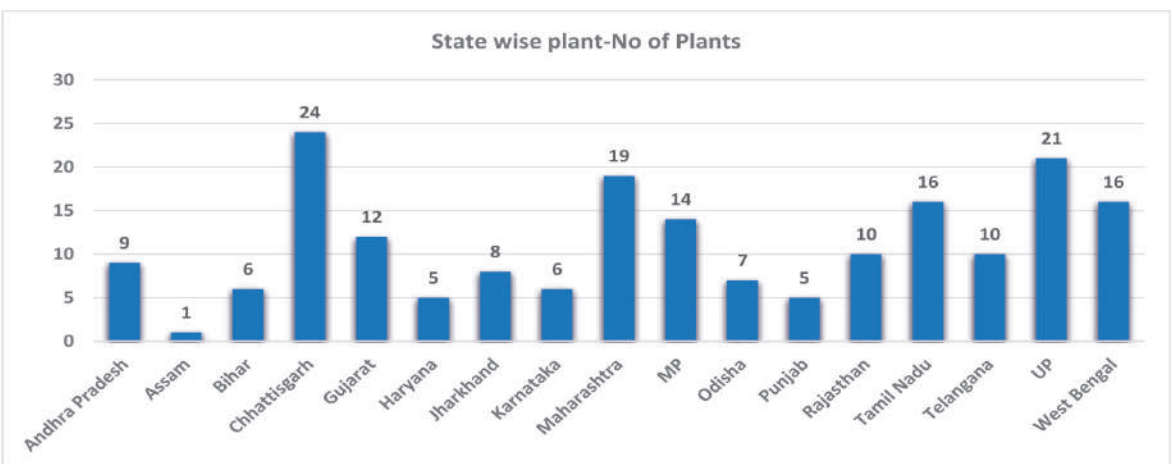


Figure 4.1

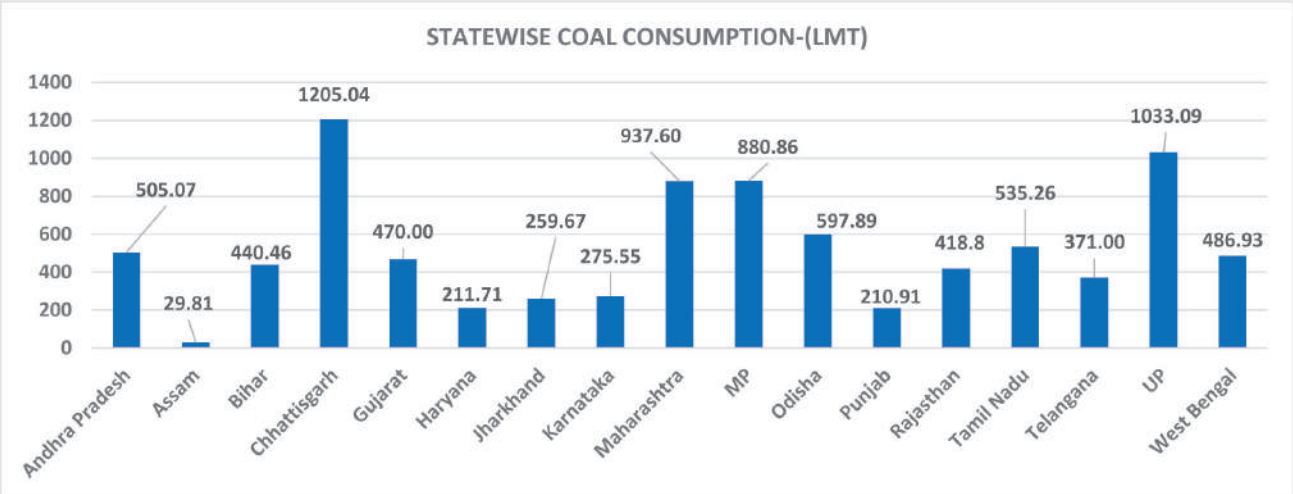
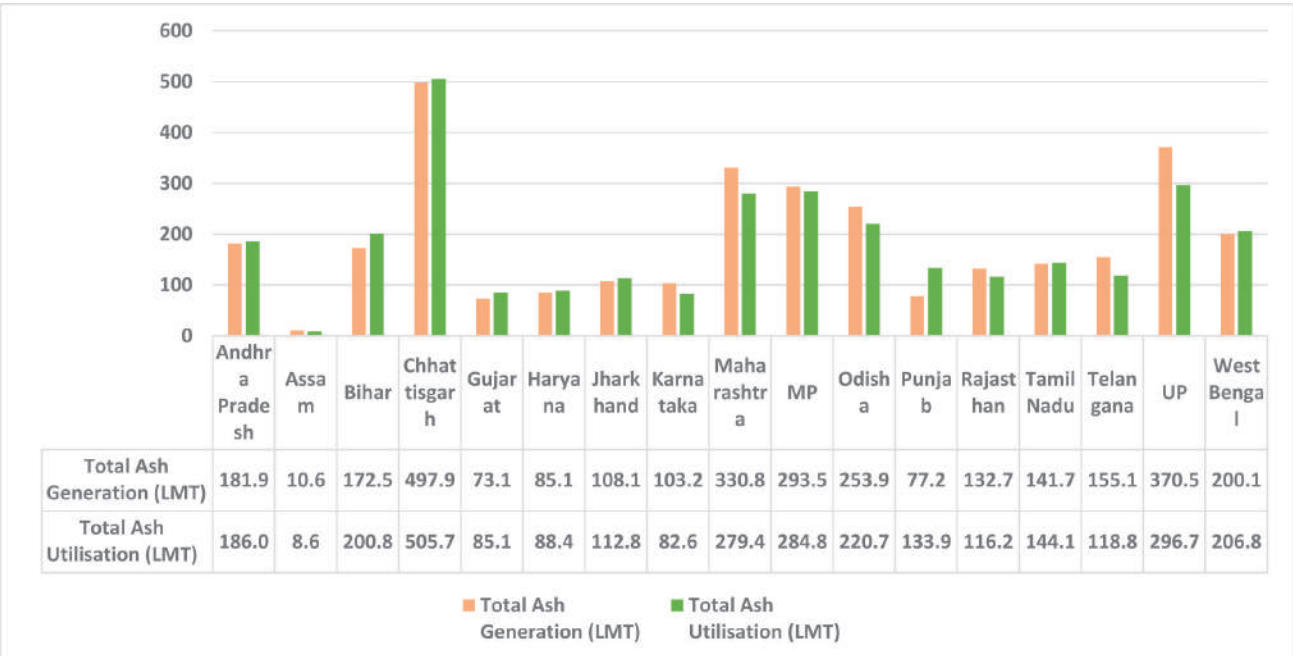


Figure 4.2



	Andhra Pradesh	Assam	Bihar	Chhattisgarh	Gujarat	Haryana	Jharkhand	Karnataka	Maharashtra	MP	Odisha	Punjab	Rajasthan	Tamil Nadu	Telangana	UP	West Bengal
Total Ash Generation (LMT)	181.9	10.6	172.5	497.9	73.1	85.1	108.1	103.2	330.8	293.5	253.9	77.2	132.7	141.7	155.1	370.5	200.1
Total Ash Utilisation (LMT)	186.0	8.6	200.8	505.7	85.1	88.4	112.8	82.6	279.4	284.8	220.7	133.9	116.2	144.1	118.8	296.7	206.8

Figure 4.3

4.3. State wise Ash Data - Bar Chart Representation

It may be seen from above table that:

(i) 13 states namely Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal have generated more than 10 Million-tonnes of fly ash each with **Chhattisgarh** having the highest **49.79 Million Tonnes** during the Year 2024-25.

(ii) During the Year 2024-25, States of Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Jharkhand, Punjab, Tamil Nadu and West Bengal have achieved fly ash utilization level of more than 100 %.

(iii) All States have utilized more than 75% of fly ash.

4.4. State wise table with Sector wise bifurcation with top fly ash utilization avenues (indicated as %) of overall utilization.

Table 4.2

State and Sector	Installed Capacity (MW)	Total Ash Generation (LMT)	Total Ash Utilization (LMT)	% Age Utilization	Top Ash Utilization Avenues (in %)					
Andhra Pradesh	**13190**	**181.88**	**186.00**	**102.27**	**Cement**	**37.19**	**Road**	**33.96**	**Bricks**	**21.09**
Central	2000	33.45	35.15	105.08	Road	76.44	Bricks	12.02	Cement	8.57
Private	4580	48.42	52.69	108.82	Cement	41.22	Road	30.94	Bricks	12.66
State	6610	100.01	98.16	98.16	Cement	45.27	Bricks	28.86	Road	20.37
Assam	**750**	**10.60**	**8.63**	**81.48**	**Cement**	**80.55**	**Road**	**12.92**	**Bricks**	**5.02**
Central	750	10.60	8.63	81.48	Cement	80.55	Road	12.92	Bricks	5.02
Bihar	**9070**	**172.52**	**200.83**	**116.41**	**Road**	**75.63**	**Cement**	**19.65**	**Low Lying Area**	**3.15**
Central	9070	172.52	200.83	116.41	Road	75.63	Cement	19.65	Low Lying Area	3.15
Chhattisgarh	**23493**	**497.90**	**505.73**	**101.57**	**Road**	**36.42**	**Mine**	**30.78**	**Low Lying Area**	**19.76**
Central	7680	152.90	163.89	107.18	Road	71.34	Low Lying Area	13.02	Bricks	5.13
Private	12973	290.38	296.43	102.08	Mine	49.43	Low Lying Area	22.10	Road	14.74
State	2840	54.61	45.41	83.16	Road	51.91	Low Lying Area	28.78	Bricks	5.89
Gujarat	**16092**	**73.08**	**85.09**	**116.43**	**Bricks**	**34.21**	**Cement**	**28.53**	**Concrete**	**16.12**
Private	10682	28.62	31.02	108.40	Cement	32.76	Road	21.28	Concrete	20.21
State	5410	44.46	54.07	121.60	Bricks	45.83	Cement	26.11	Concrete	13.78
Haryana	**5330**	**85.14**	**88.38**	**103.80**	**Cement**	**57.23**	**Bricks**	**21.30**	**Concrete**	**11.90**
Central	1500	22.33	18.49	82.79	Concrete	37.48	Bricks	33.36	Cement	25.83
Private	1320	21.66	21.64	99.91	Cement	88.47	Bricks	7.06	Concrete	4.47
State	2510	41.15	48.25	117.25	Cement	55.24	Bricks	23.06	Road	14.60
Jharkhand	**5570**	**108.14**	**112.82**	**104.33**	**Road**	**48.02**	**Cement**	**24.36**	**Low Lying Area**	**14.64**
Central	3320	68.32	68.66	100.50	Road	78.91	Cement	15.83	Low Lying Area	2.30
Private	1830	34.17	35.89	105.03	Cement	45.80	Mine	21.26	Low Lying Area	19.09
State	420	5.65	8.27	146.37	Low Lying Area	97.80	Cement	2.19	Bricks	0.01

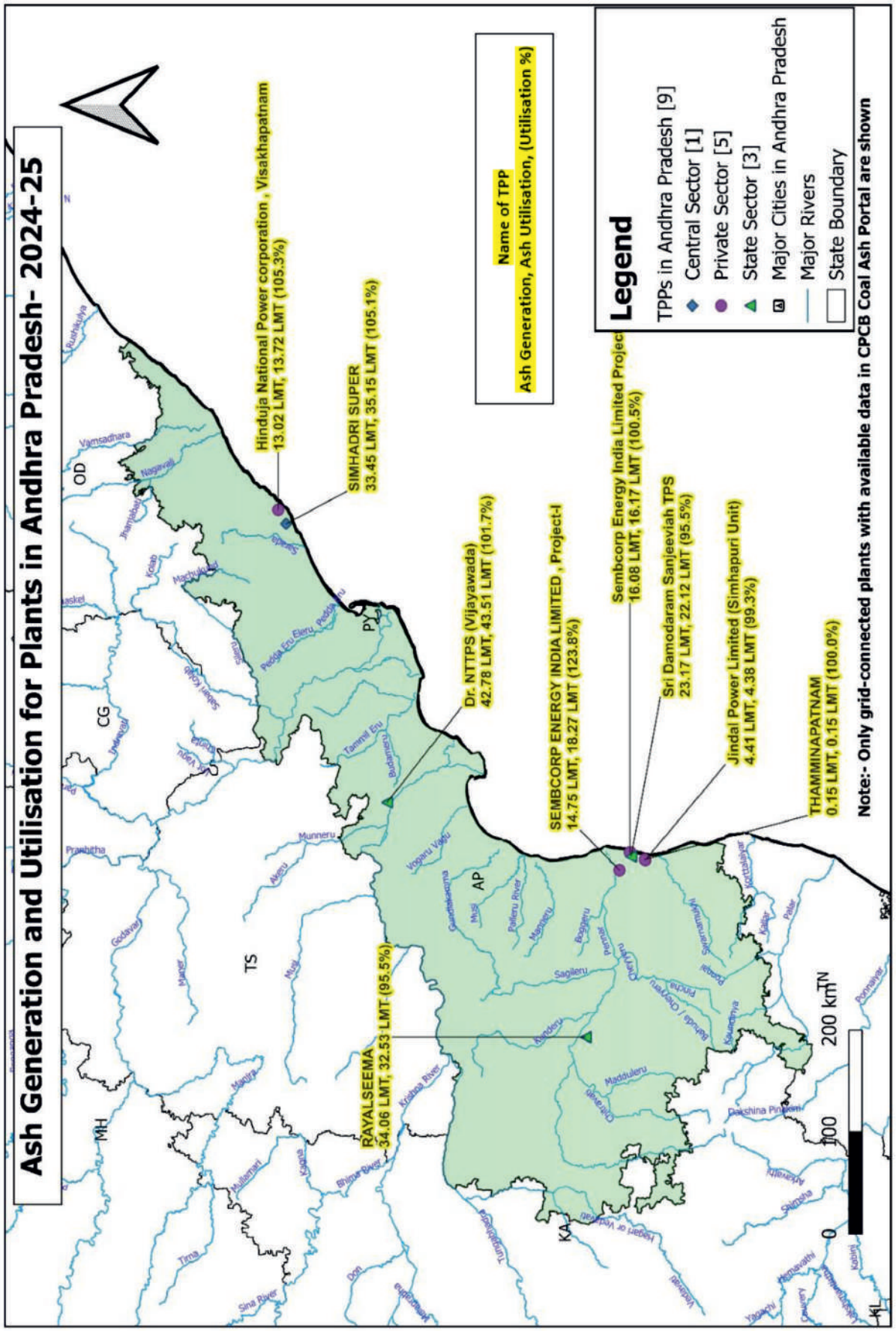
State and Sector	Installed Capacity (MW)	Total Ash Generation (LMT)	Total Ash Utilization (LMT)	% Age Utilization	Top Ash Utilization Avenues (in %)					
Karnataka	**9480**	**103.20**	**82.57**	**80.02**	**Cement**	**55.90**	**Bricks**	**40.06**	**Concrete**	**2.05**
Central	2400	28.45	23.18	81.47	Cement	62.66	Bricks	30.21	Concrete	5.49
Private	2060	3.58	3.61	100.63	Cement	58.08	Bricks	16.52	Road	13.76
State	5020	71.17	55.79	78.40	Cement	52.96	Bricks	45.67	Road	1.37
Maharashtra	**22350**	**330.79**	**279.43**	**84.48**	**Bricks**	**31.83**	**Cement**	**24.14**	**Low Lying Area**	**13.02**
Central	3640	55.02	52.58	95.57	Road	27.35	Cement	25.22	Bricks	24.79
Private	8510	120.68	131.28	108.79	Cement	26.75	Low Lying Area	26.62	Bricks	23.91
State	10200	155.09	95.57	61.62	Bricks	46.57	Cement	19.98	Road	13.04
MP	**21170**	**293.47**	**284.81**	**97.05**	**Road**	**38.53**	**Mine**	**23.84**	**Cement**	**20.22**
Central	8280	120.24	107.14	89.11	Road	51.95	Mine	18.51	Cement	13.08
Private	8320	119.35	97.85	81.99	Mine	45.57	Cement	27.60	Low Lying Area	14.80
State	4570	53.88	79.82	148.13	Road	61.59	Cement	20.75	Low Lying Area	7.66
Odisha	**9890**	**253.93**	**220.65**	**86.90**	**Road**	**53.86**	**Low Lying Area**	**21.08**	**Bricks**	**9.90**
Central	4600	109.16	103.66	94.97	Road	74.82	Mine	17.86	Low Lying Area	6.02
Private	3550	106.60	110.48	103.64	Road	35.32	Low Lying Area	35.23	Bricks	18.57
State	1740	38.17	6.51	17.05	Road	34.63	Other	27.11	Low Lying Area	20.73
Punjab	**5680**	**77.23**	**133.86**	**173.32**	**Road**	**39.57**	**Cement**	**33.95**	**Agriculture**	**15.42**
Private	3380	53.82	59.47	110.50	Cement	52.55	Road	29.31	Low Lying Area	6.08
State	2300	23.41	74.38	317.79	Road	47.76	Agriculture	27.74	Cement	19.07
Rajasthan	**10530**	**132.73**	**116.22**	**87.55**	**Cement**	**66.88**	**Bricks**	**25.97**	**Road**	**3.62**
Central	250	2.03	2.03	100.00	Bricks	52.89	Cement	29.29	Mine	17.82
Private	2700	21.16	17.65	83.41	Cement	68.57	Bricks	29.86	Low Lying Area	1.43
State	7580	109.54	96.54	88.12	Cement	67.36	Bricks	24.69	Road	4.33

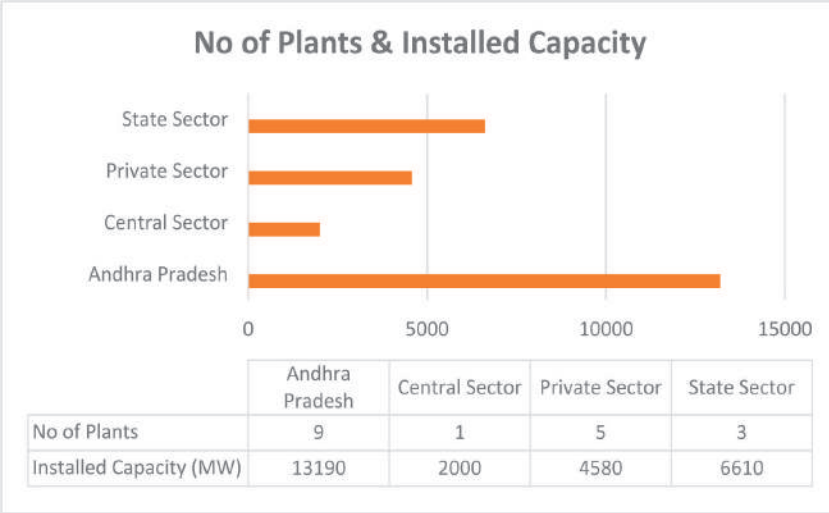
State and Sector	Installed Capacity (MW)	Total Ash Generation (LMT)	Total Ash Utilization (LMT)	% Age Utilization	Top Ash Utilization Avenues (in %)					
Tamil Nadu	**13799**	**141.68**	**144.14**	**101.74**	**Cement**	**43.25**	**Road**	**27.44**	**Bricks**	**26.68**
Central	5890	59.29	63.39	106.92	Road	45.26	Cement	26.62	Bricks	23.54
Private	3589	7.34	7.81	106.42	Cement	46.92	Bricks	39.32	Road	9.15
State	4320	75.04	72.93	97.18	Cement	57.31	Bricks	28.05	Road	13.91
Telangana	**9442.5**	**155.10**	**118.77**	**76.57**	**Road**	**28.63**	**Bricks**	**28.21**	**Cement**	**23.96**
Central	4200	69.43	59.76	86.08	Road	48.71	Bricks	18.10	Geo-polymer	14.63
State	5242.5	85.67	59.00	68.87	Bricks	38.44	Cement	37.30	Mine	10.30
UP	**24735**	**370.52**	**296.66**	**80.07**	**Road**	**40.03**	**Cement**	**37.46**	**Low Lying Area**	**12.88**
Central	12110	182.14	170.86	93.81	Road	57.38	Cement	24.35	Concrete	5.87
Private	6810	97.25	95.92	98.63	Cement	54.49	Road	21.03	Low Lying Area	18.99
State	5815	91.13	29.88	32.79	Cement	57.73	Low Lying Area	34.67	Bricks	5.77
West Bengal	**13487**	**200.07**	**206.79**	**103.36**	**Cement**	**37.16**	**Road**	**28.40**	**Low Lying Area**	**12.32**
Central	6640	123.43	122.08	98.91	Road	44.45	Cement	26.26	Mine	18.49
Private	2037	31.15	31.15	100.00	Cement	80.92	Low Lying Area	12.09	Bricks	3.31
State	4810	45.50	53.56	117.72	Cement	36.58	Low Lying Area	31.32	Export of ash to other countries	10.54
Grand Total	**214058.5**	**3187.98**	**3071.38**	**96.34**	**Road**	**33.86**	**Cement**	**27.57**	**Bricks**	**13.10**

4.5. To provide a better understanding of ash utilization patterns, the data for each state has been segregated, and the locations of thermal power plants (TPPs) have been plotted on GIS-based maps. Each plant location is marked with details of ash generation, ash utilization, and the percentage of utilization for the year 2024–25. Additionally, the maps and accompanying data present the overall ash generation and utilization, categorized by sector (State, Central, and Private), along with an avenue-wise breakdown of ash utilization. The state-wise data is provided in detail on the subsequent page.

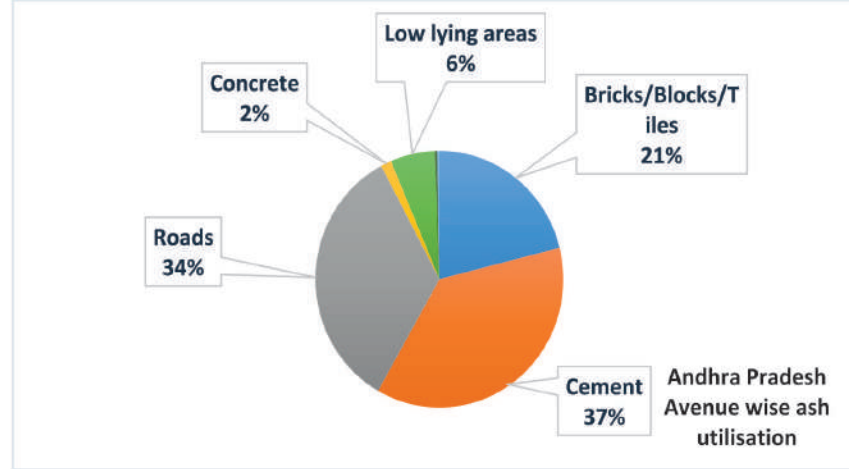
1. Andhra Pradesh (Available data: 9 Plants)- Total Capacity (13190 MW)

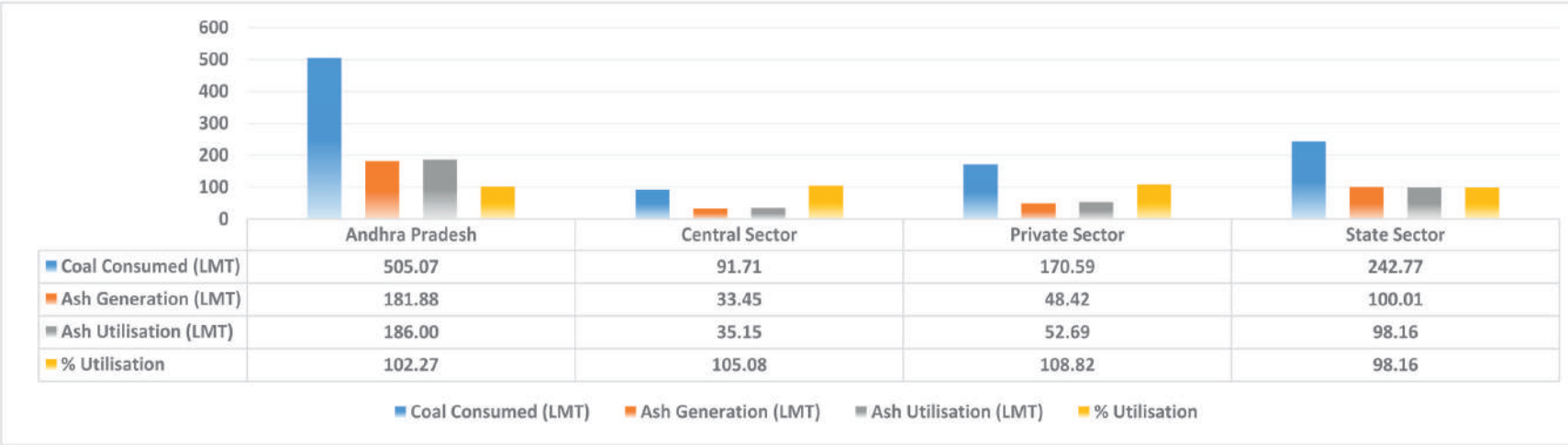
1 No-Central Sector , 3 Nos-State Sector & 5 Nos-Private Sector





	Andhra Pradesh	Central Sector	Private Sector	State Sector
No of Plants	9	1	5	3
Installed Capacity (MW)	13190	2000	4580	6610





	Andhra Pradesh	Central Sector	Private Sector	State Sector
Coal Consumed (LMT)	505.07	91.71	170.59	242.77
Ash Generation (LMT)	181.88	33.45	48.42	100.01
Ash Utilisation (LMT)	186.00	35.15	52.69	98.16
% Utilisation	102.27	105.08	108.82	98.16

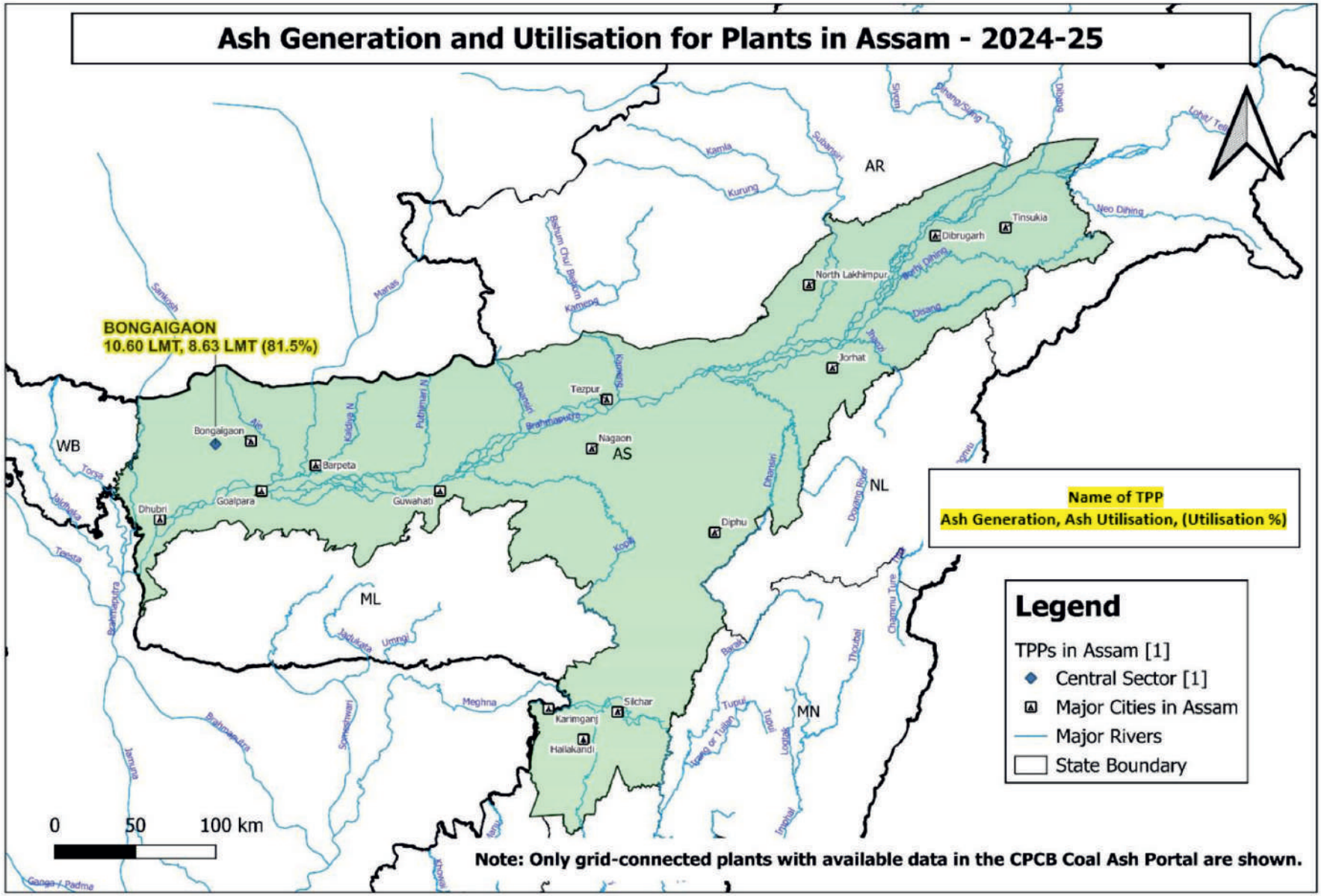
AP Charts & Table

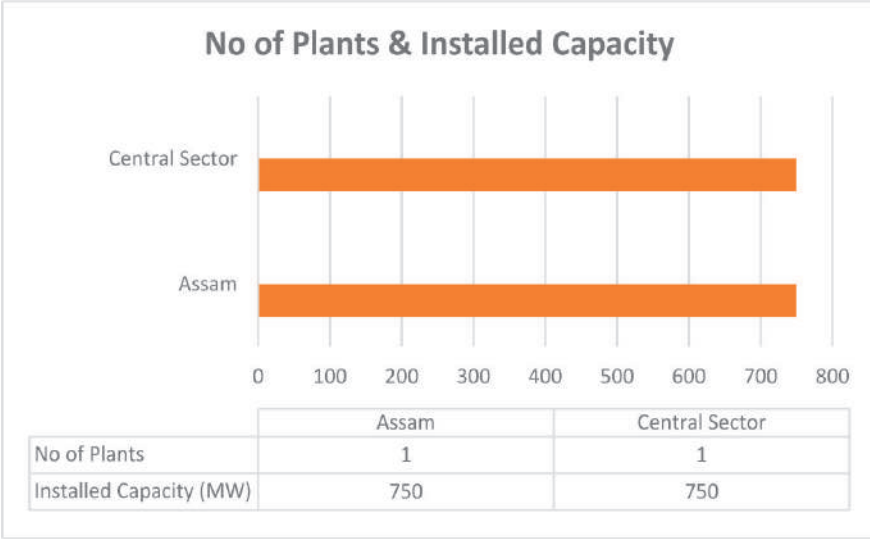
Observations:

- Over all Ash utilisation is more than 100% indicates uses of legacy ash/Pond ash also.
- All sectors have achieved near or more than 100% ash utilisation.
- Majority of ash is being used in construction, cement, roads and bricks.
- Road projects remain the primary driver of ash utilisation, highlighting the importance of infrastructure development in managing ash disposal.

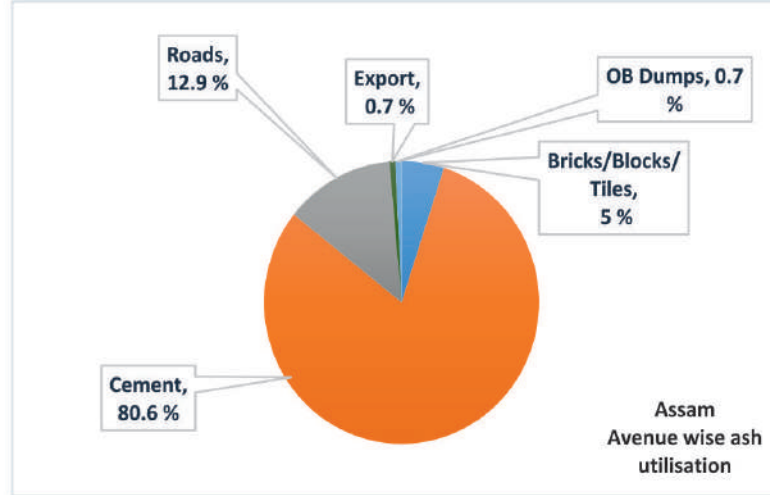
2. Assam (Available data: 1 Plants) -Total Capacity (750 MW)

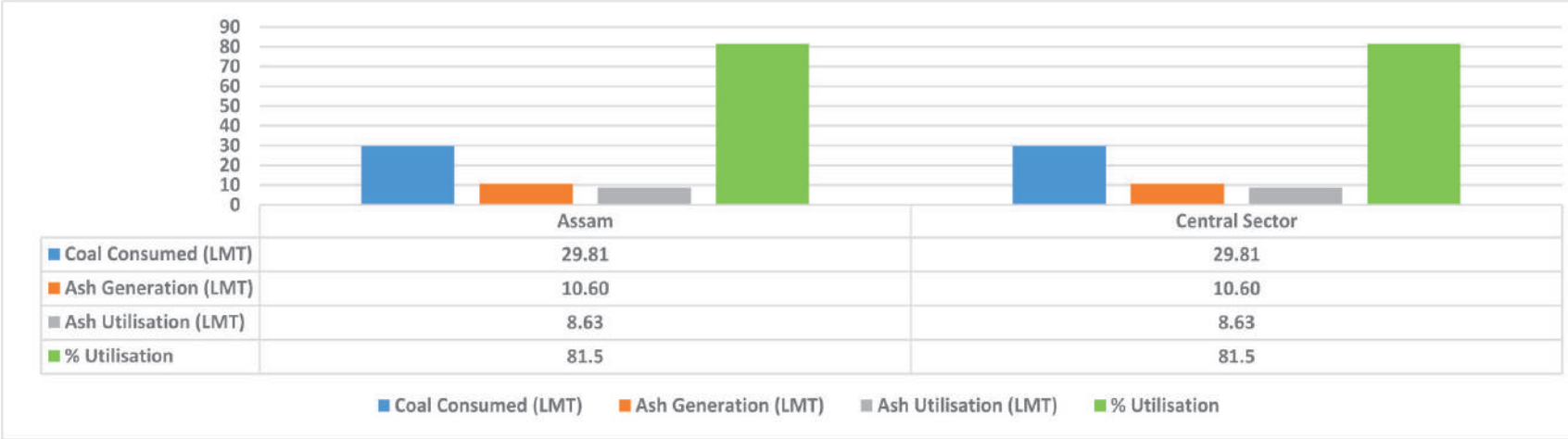
1 No-Central sector





	Assam	Central Sector
No of Plants	1	1
Installed Capacity (MW)	750	750





	Assam	Central Sector
Coal Consumed (LMT)	29.81	29.81
Ash Generation (LMT)	10.60	10.60
Ash Utilisation (LMT)	8.63	8.63
% Utilisation	81.5	81.5

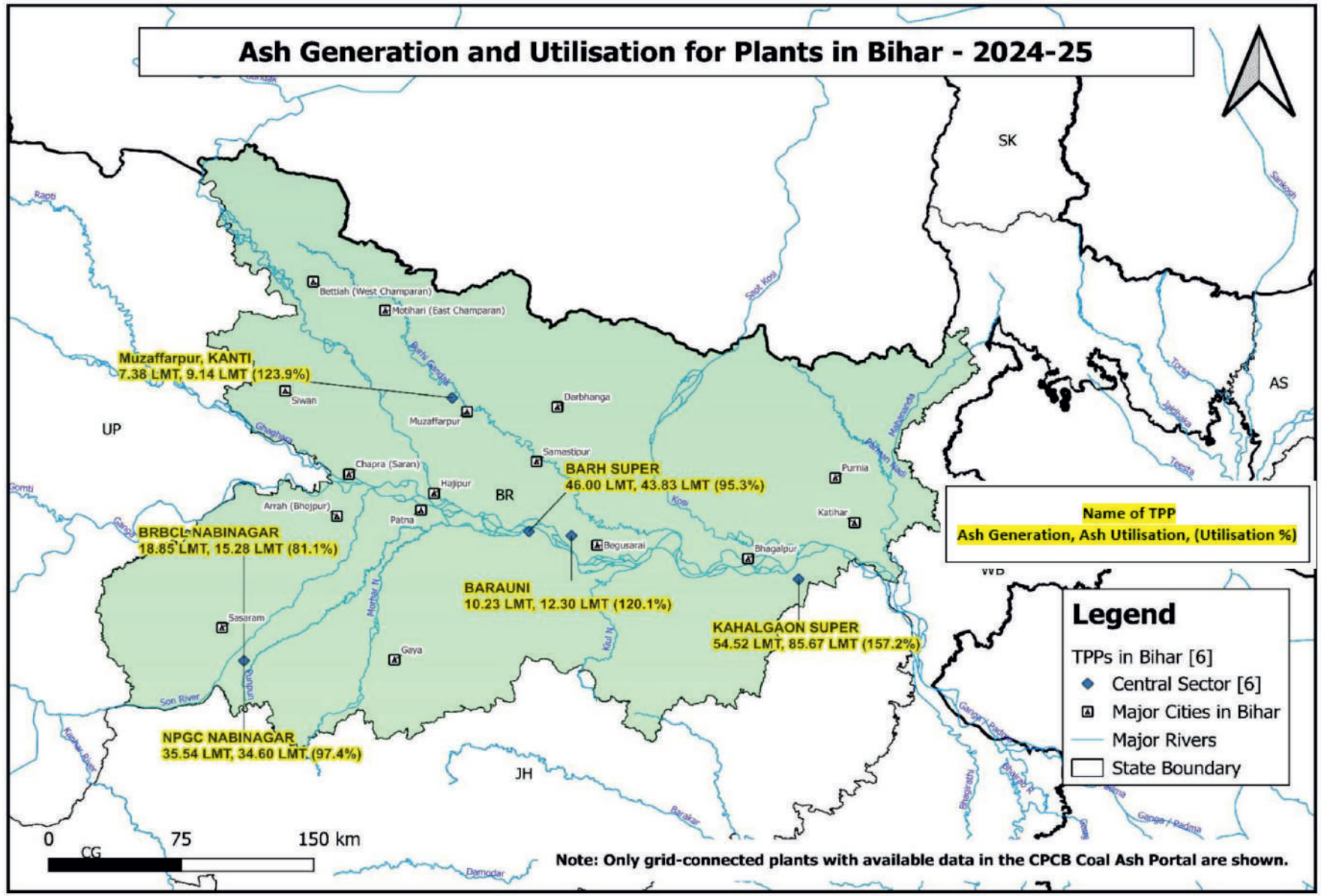
AP Charts & Table

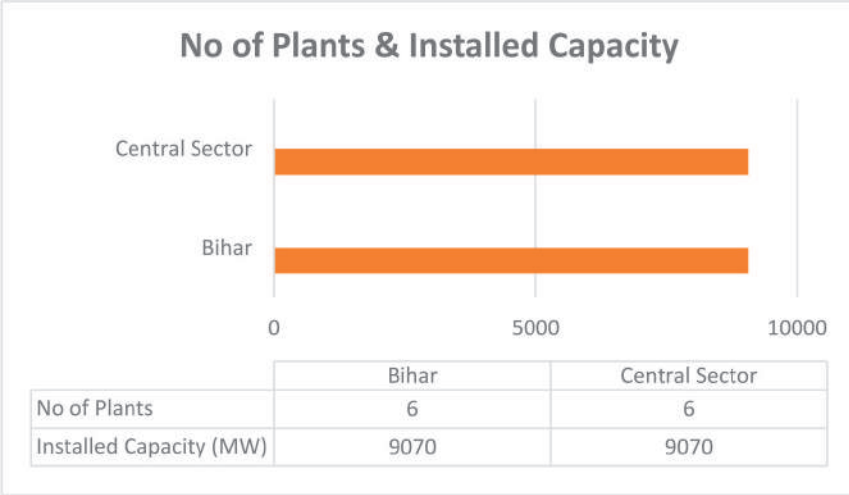
Observations:

- Over all Ash utilisation is less than 100%.
- Majority of ash is being used in cement & roads.
- A significant 80.6% of ash is utilized by the cement industry.

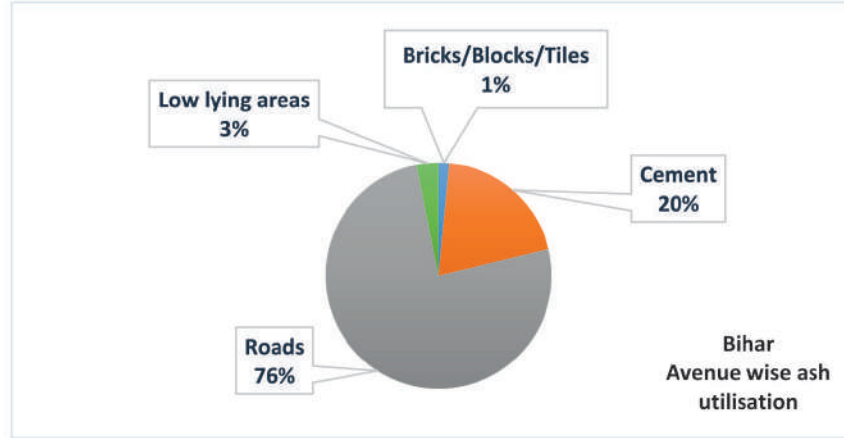
3. Bihar (Available data: 6 Plants)-Total Capacity (9070 MW)

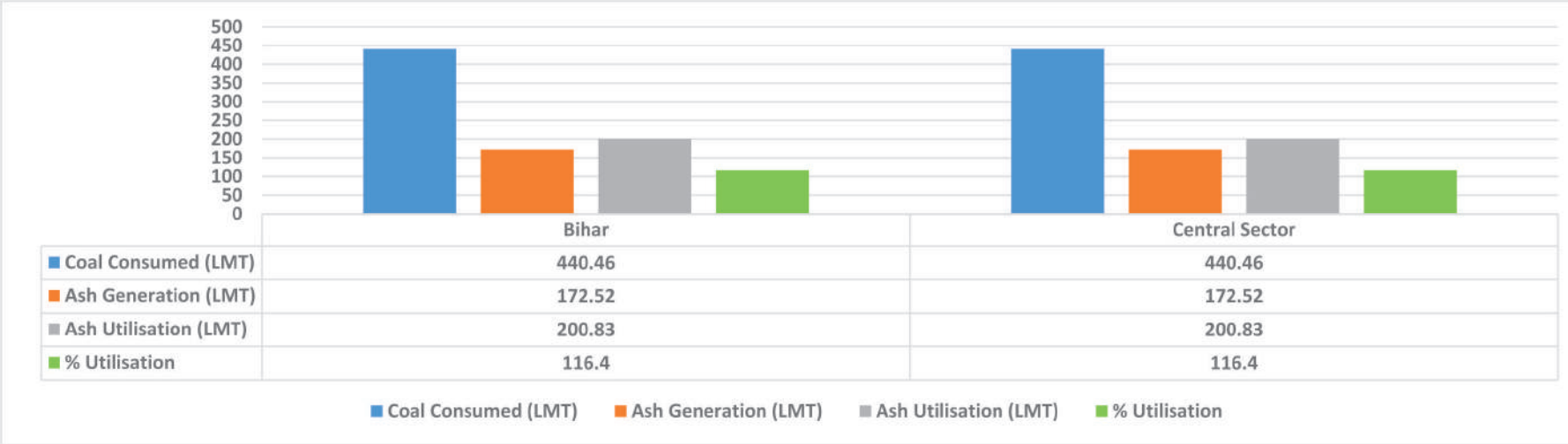
6 Nos-Central sector





	Bihar	Central Sector
No of Plants	6	6
Installed Capacity (MW)	9070	9070





	Bihar	Central Sector
Coal Consumed (LMT)	440.46	440.46
Ash Generation (LMT)	172.52	172.52
Ash Utilisation (LMT)	200.83	200.83
% Utilisation	116.4	116.4

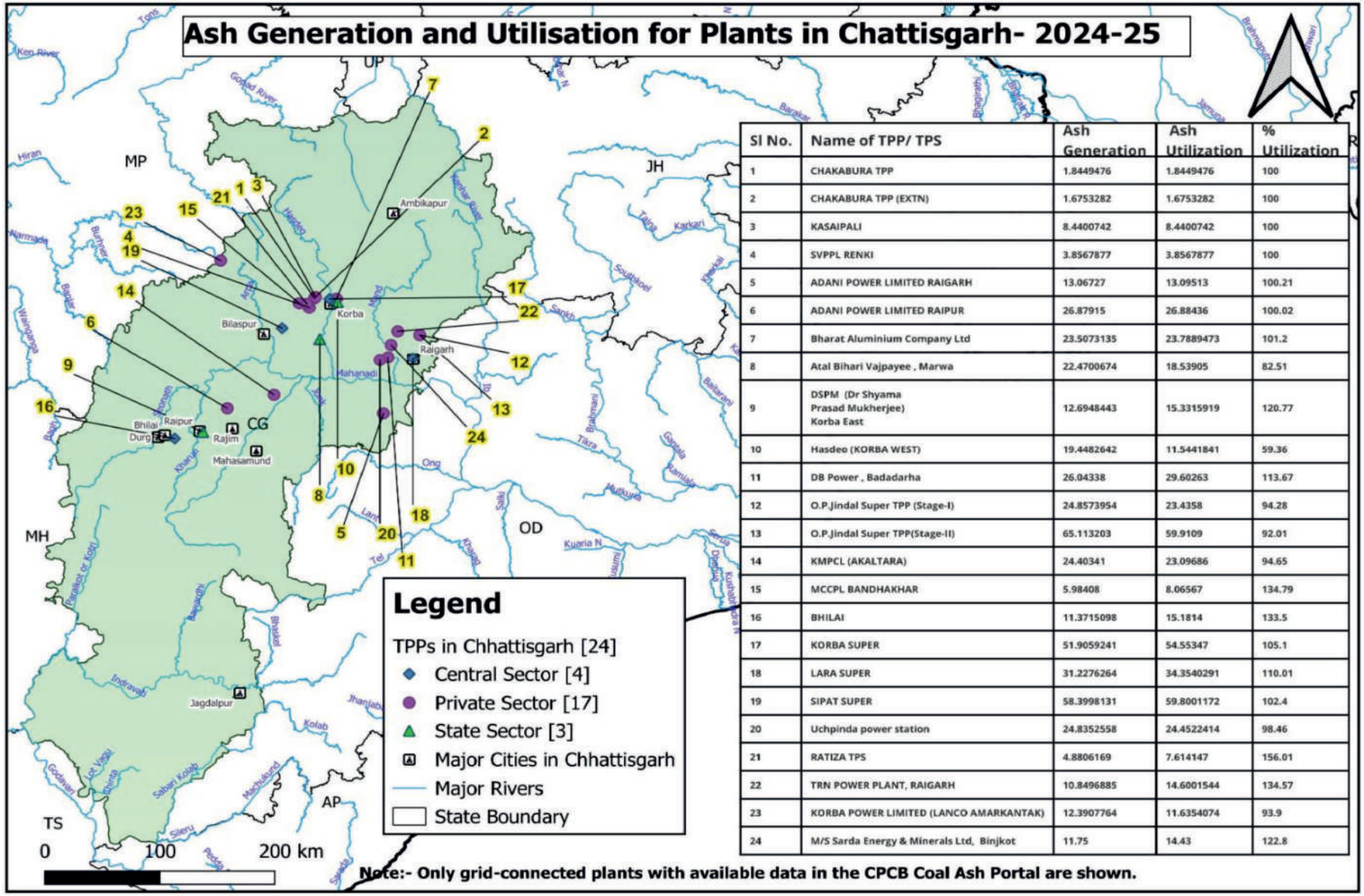
BR Charts & Table

Observations:

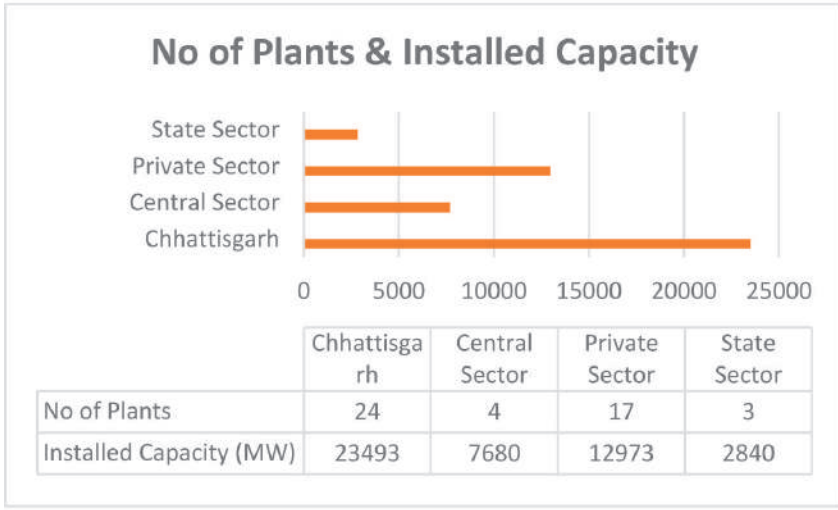
- Over all Ash utilisation is more than 100% indicates uses of legacy ash/Pond ash also.
- Majority of ash is being used in roads & cement.

4. Chhattisgarh (Available data: 24 Plants)-Total Capacity (23493 MW)

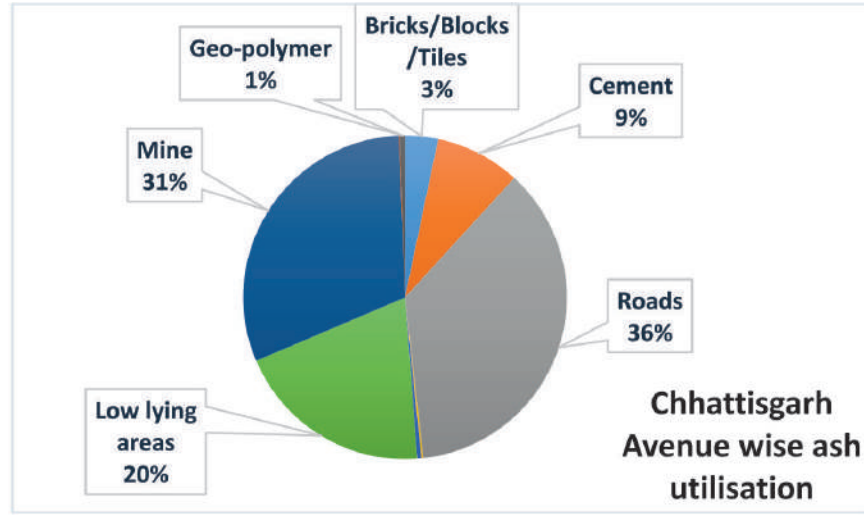
4 Nos-Central sector, 3 Nos-State Sector & 17 Nos-Private Sector



Sl No.	Name of TPP/ TPS	Ash Generation	Ash Utilization	% Utilization
1	CHAKABURA TPP	1.8449476	1.8449476	100
2	CHAKABURA TPP (EXTN)	1.6753282	1.6753282	100
3	KASAIPALI	8.4400742	8.4400742	100
4	SVPPL RENKI	3.8567877	3.8567877	100
5	ADANI POWER LIMITED RAIGARH	13.06727	13.09513	100.21
6	ADANI POWER LIMITED RAIPUR	26.87915	26.88436	100.02
7	Bharat Aluminium Company Ltd	23.5073135	23.7889473	101.2
8	Atal Bihari Vajpayee , Marwa	22.4700674	18.53905	82.51
9	DSPM (Dr Shyama Prasad Mukherjee) Korba East	12.6948443	15.3315919	120.77
10	Hasdeo (KORBA WEST)	19.4482642	11.5441841	59.36
11	DB Power , Badadarha	26.04338	29.60263	113.67
12	O.P.Jindal Super TPP (Stage-I)	24.8573954	23.4358	94.28
13	O.P.Jindal Super TPP(Stage-II)	65.113203	59.9109	92.01
14	KMPCL (AKALTARA)	24.40341	23.09686	94.65
15	MCCPL BANDHAKHAR	5.98408	8.06567	134.79
16	BHILAI	11.3715098	15.1814	133.5
17	KORBA SUPER	51.9059241	54.55347	105.1
18	LARA SUPER	31.2276264	34.3540291	110.01
19	SIPAT SUPER	58.3998131	59.8001172	102.4
20	Uchpinda power station	24.8352558	24.4522414	98.46
21	RATIZA TPS	4.8806169	7.614147	156.01
22	TRN POWER PLANT, RAIGARH	10.8496885	14.6001544	134.57
23	KORBA POWER LIMITED (LANCO AMARKANTAK)	12.3907764	11.6354074	93.9
24	M/S Sarda Energy & Minerals Ltd, Binjkot	11.75	14.43	122.8



	Chhattisgarh	Central Sector	Private Sector	State Sector
No of Plants	24	4	17	3
Installed Capacity (MW)	23493	7680	12973	2840



	Chhattisgarh	Central Sector	Private Sector	State Sector
Coal Consumed (LMT)	1205.04	406.69	675.24	123.11
Ash Generation (LMT)	497.90	152.90	290.38	54.61
Ash Utilisation (LMT)	505.73	163.89	296.43	45.41
% Utilisation	101.6	107.2	102.1	83.2

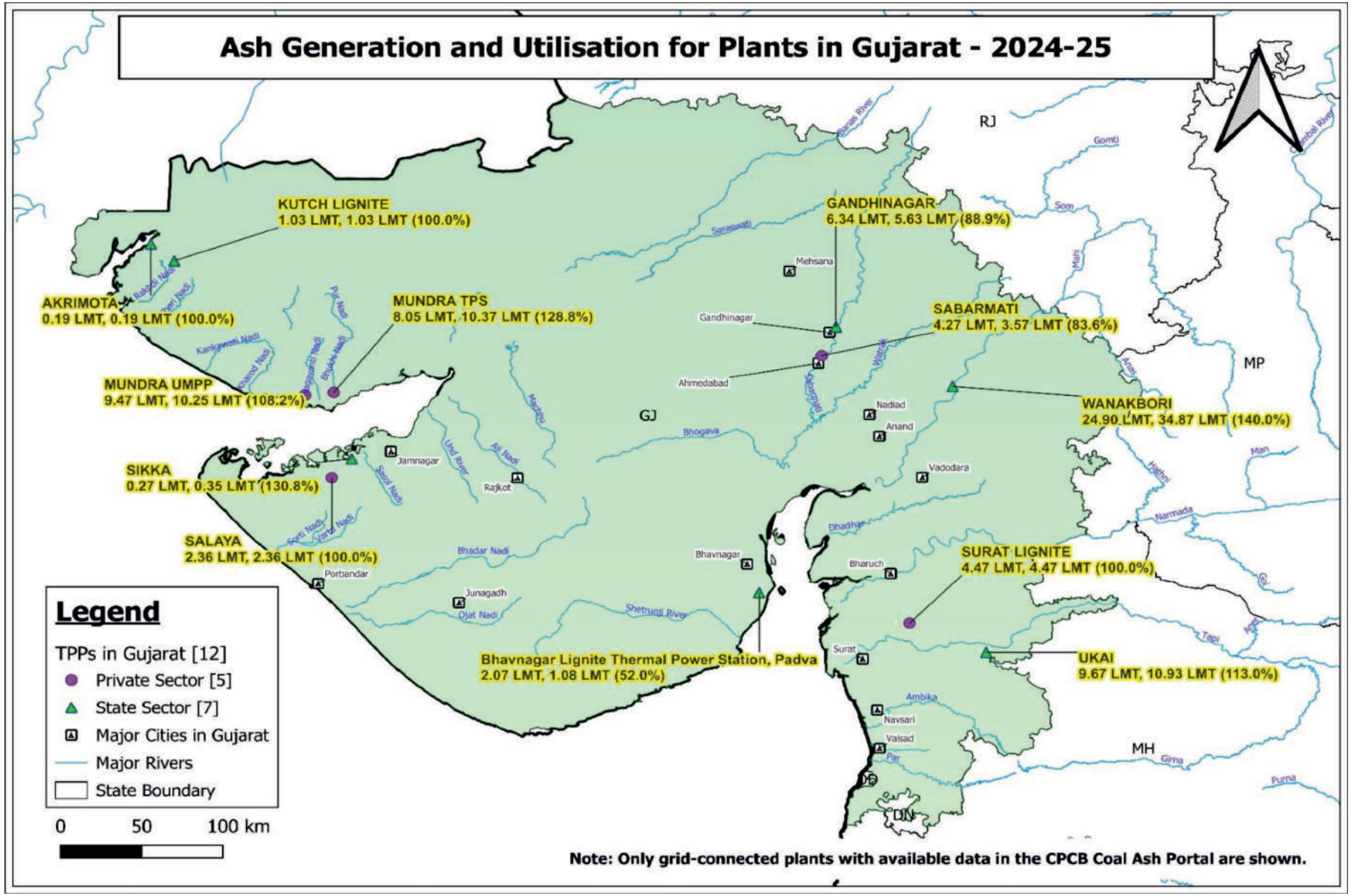
CG Charts & Table

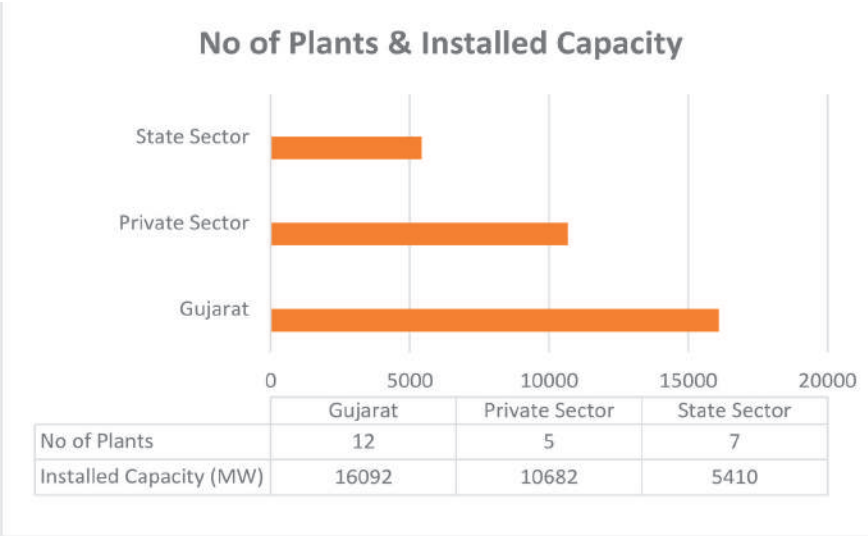
Observations:

- Over all Ash utilisation is more than 100% indicates uses of legacy ash/Pond ash also.
- Majority of ash is being used in roads, mine & low lying area.
- State Sector utilisation is low as compare to Central & Private sector.

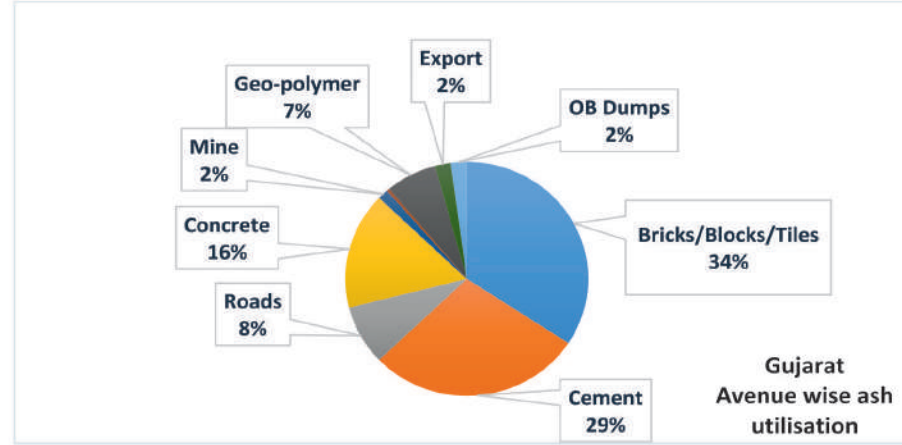
5. Gujarat (Available data: 12 Plants)-Total Capacity (16092 MW)

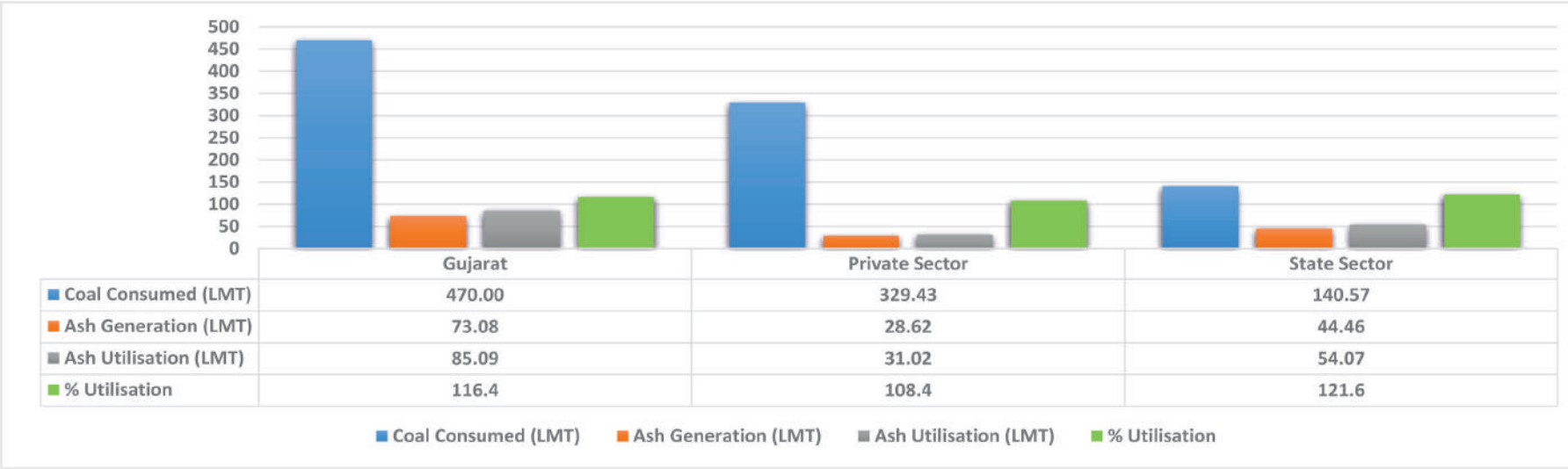
7 Nos-State Sector & 5 Nos-Private Sector





	Gujarat	Private Sector	State Sector
No of Plants	12	5	7
Installed Capacity (MW)	16092	10682	5410





	Gujarat	Private Sector	State Sector
Coal Consumed (LMT)	470.00	329.43	140.57
Ash Generation (LMT)	73.08	28.62	44.46
Ash Utilisation (LMT)	85.09	31.02	54.07
% Utilisation	116.4	108.4	121.6

GJ Charts & Table

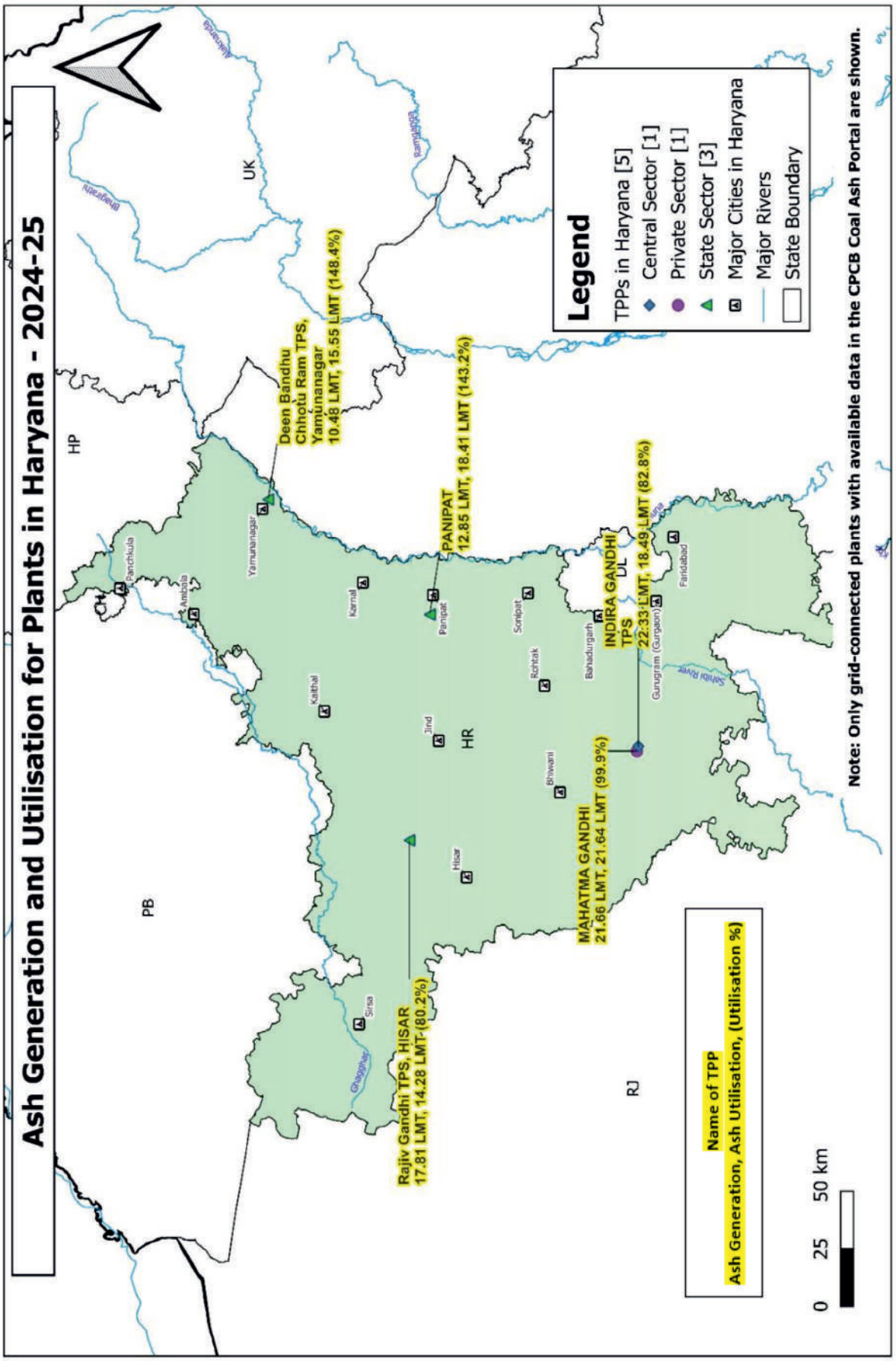
Observations:

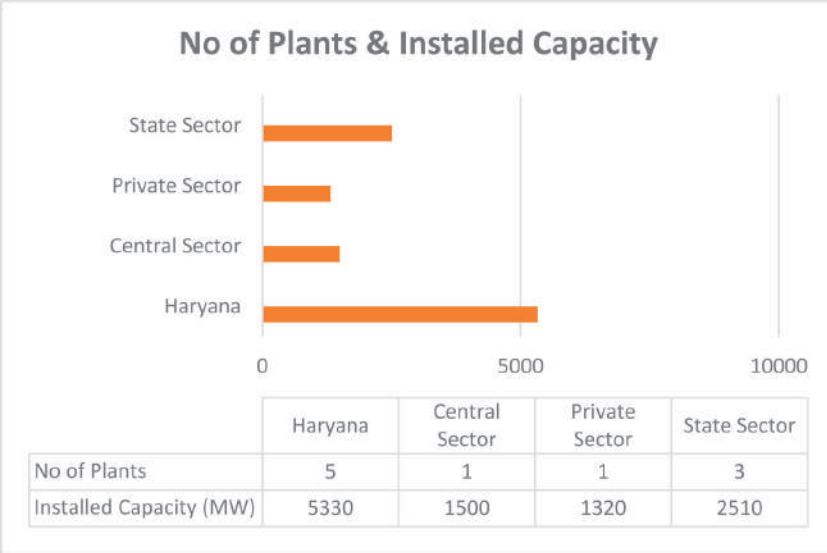
- Over all Ash utilisation is more than 100% indicates uses of legacy ash/Pond ash also.
- Majority of ash is being used in Bricks industries, Cement & Concrete.

6.

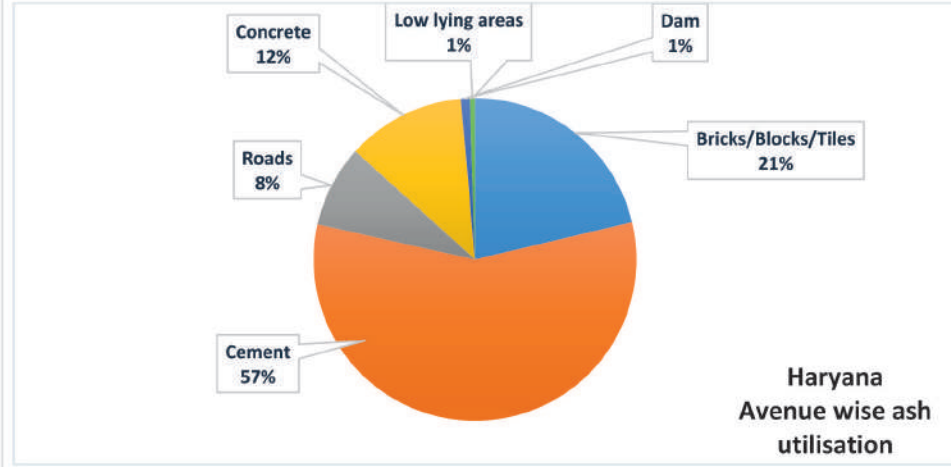
6. Haryana (Available data: 5 Plants)-Total Capacity (5330 MW)

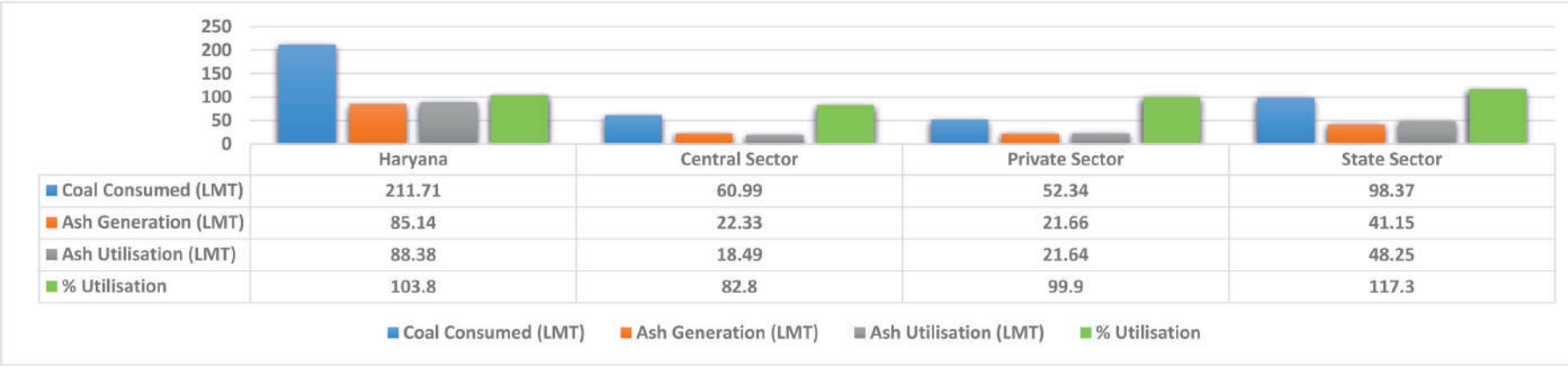
1 No-Central sector, 3 Nos-State Sector & 1 No-Private Sector





	Haryana	Central Sector	Private Sector	State Sector
No of Plants	5	1	1	3
Installed Capacity (MW)	5330	1500	1320	2510





	Haryana	Central Sector	Private Sector	State Sector
Coal Consumed (LMT)	211.71	60.99	52.34	98.37
Ash Generation (LMT)	85.14	22.33	21.66	41.15
Ash Utilisation (LMT)	88.38	18.49	21.64	48.25
% Utilisation	103.8	82.8	99.9	117.3

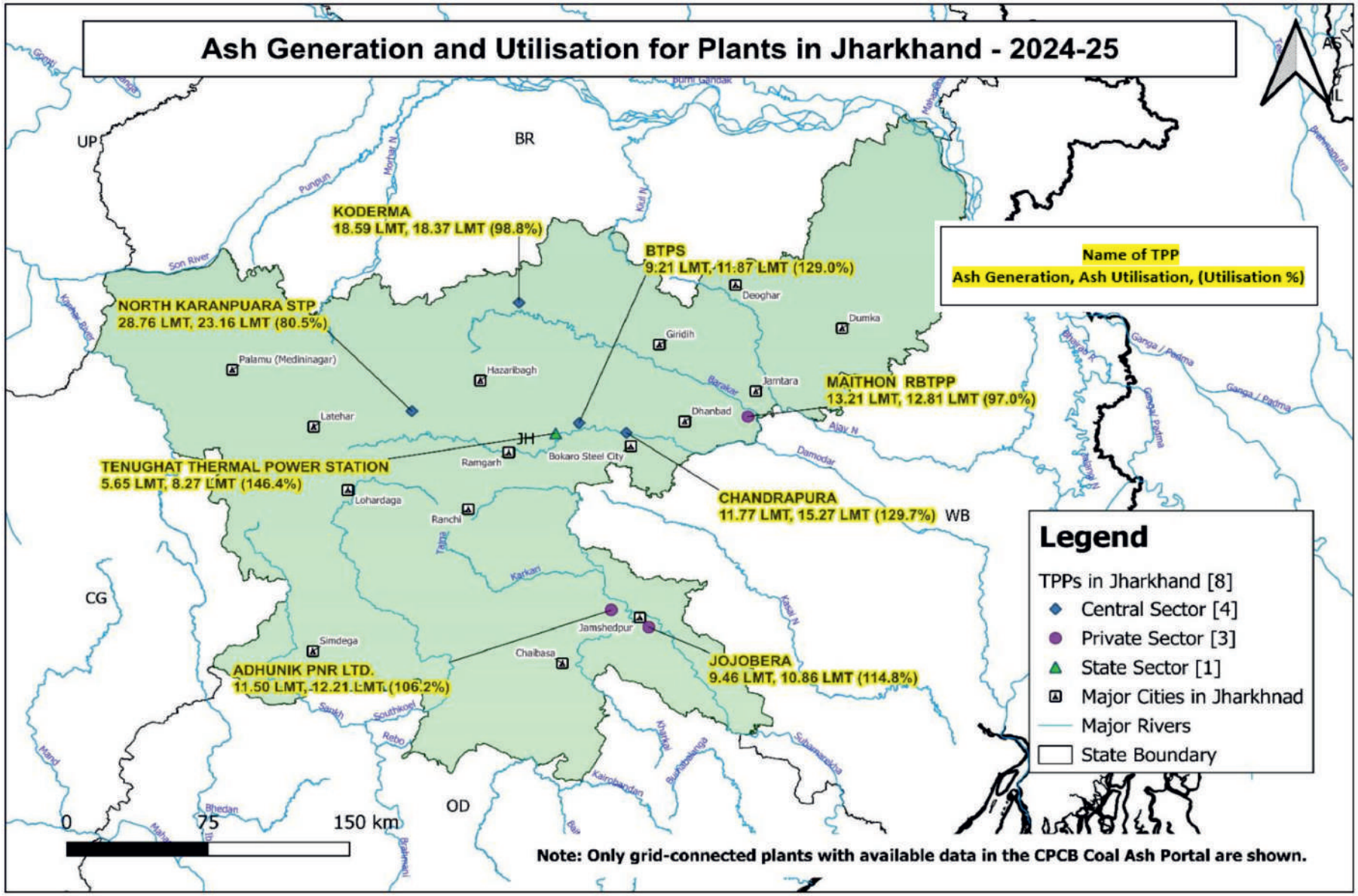
HR Charts & Table

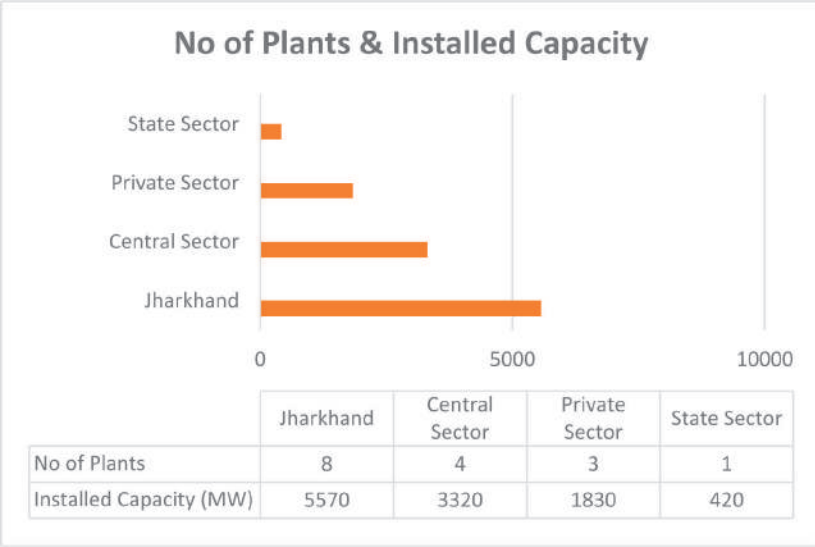
Observations:

- Over all Ash utilisation is more than 100% indicates uses of legacy ash/Pond ash also.
- Majority of ash is being used in Cement & Concrete Bricks industries.
- Cement sector is the primary consumer of fly ash, indicating strong industrial linkage.
- The Central Sector shows comparatively lower utilisation and needs focused efforts.

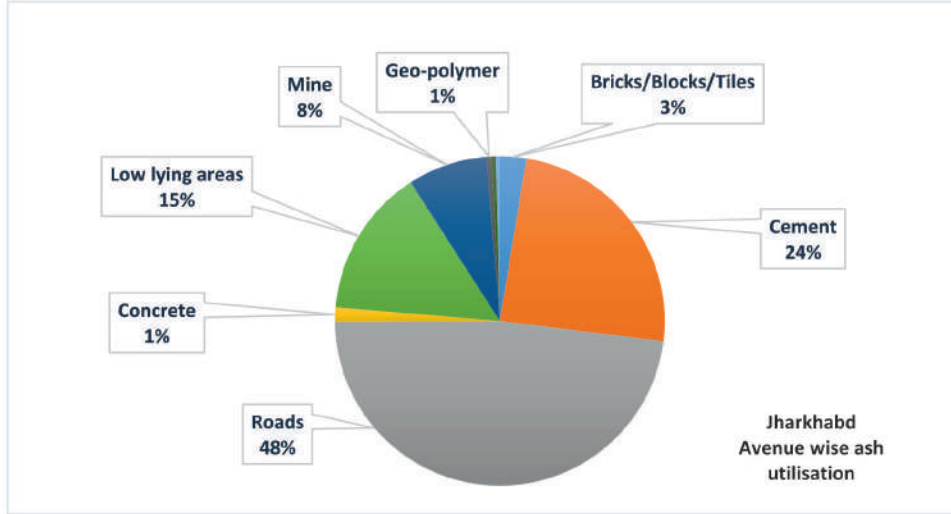
7. Jharkhand (Available data: 8 Plants)-Total Capacity (5570 MW)

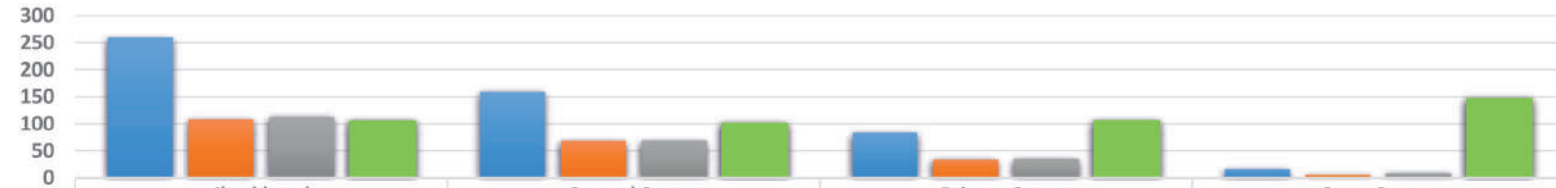
4 Nos-Central sector, 1Nos-State Sector & 3 Nos-Private Sector





	Jharkhand	Central Sector	Private Sector	State Sector
No of Plants	8	4	3	1
Installed Capacity (MW)	5570	3320	1830	420





	Jharkhand	Central Sector	Private Sector	State Sector
Coal Consumed (LMT)	259.67	159.00	83.84	16.83
Ash Generation (LMT)	108.14	68.32	34.17	5.65
Ash Utilisation (LMT)	112.82	68.66	35.89	8.27
% Utilisation	104.3	100.5	105	146.4

Coal Consumed (LMT) Ash Generation (LMT) Ash Utilisation (LMT) % Utilisation

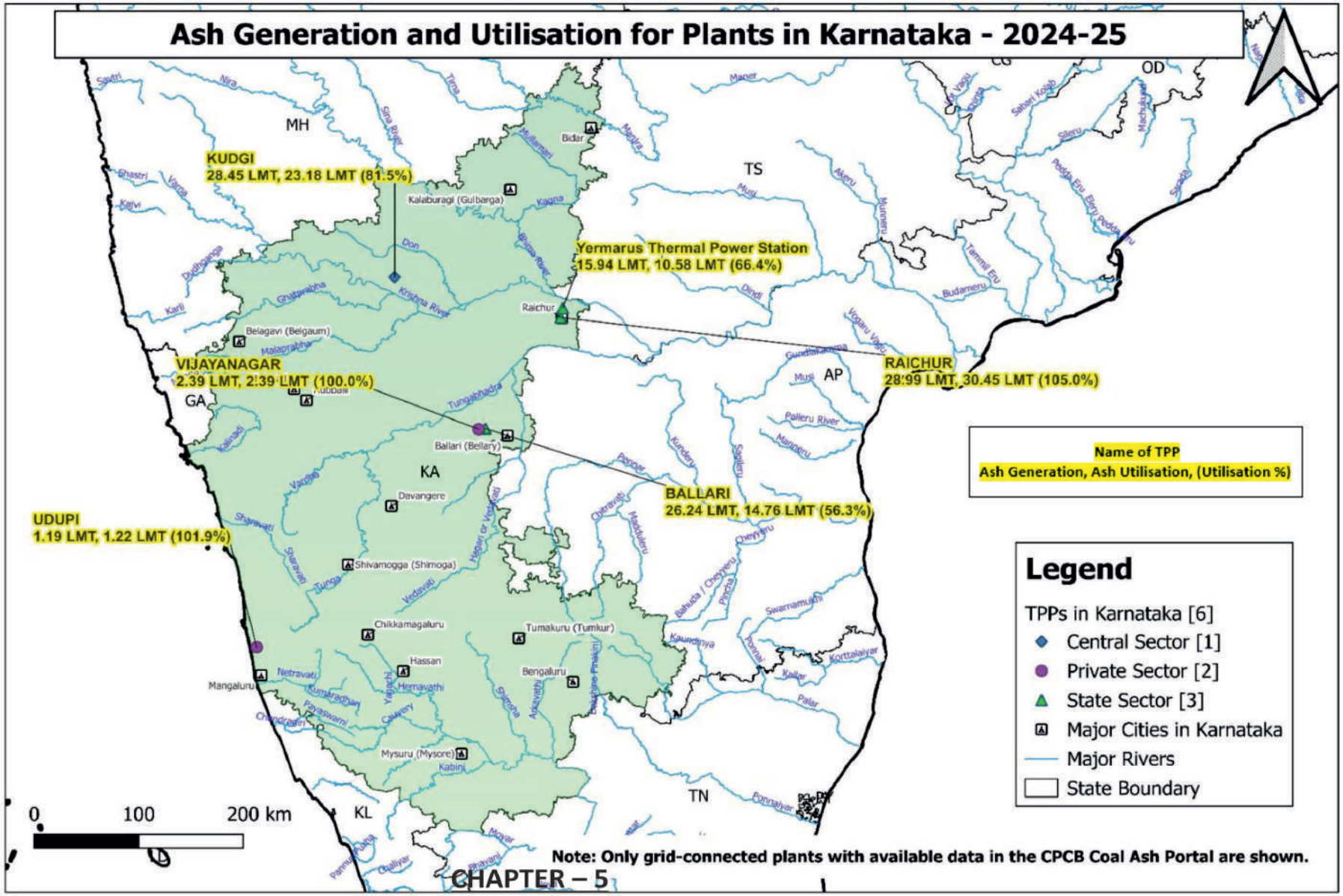
JH Charts & Table

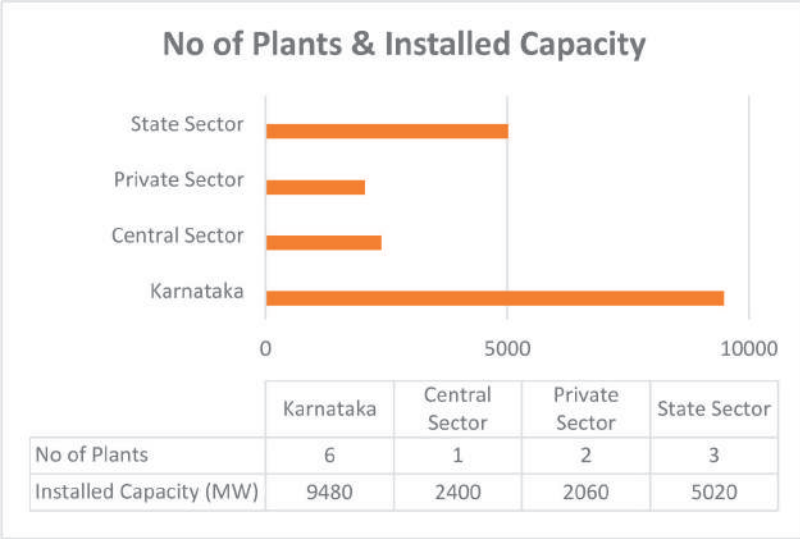
Observations:

- Over all Ash utilisation is more than 100% indicates uses of legacy ash/Pond ash also.
- Majority of ash is being used in Roads, Cement & low lying area.

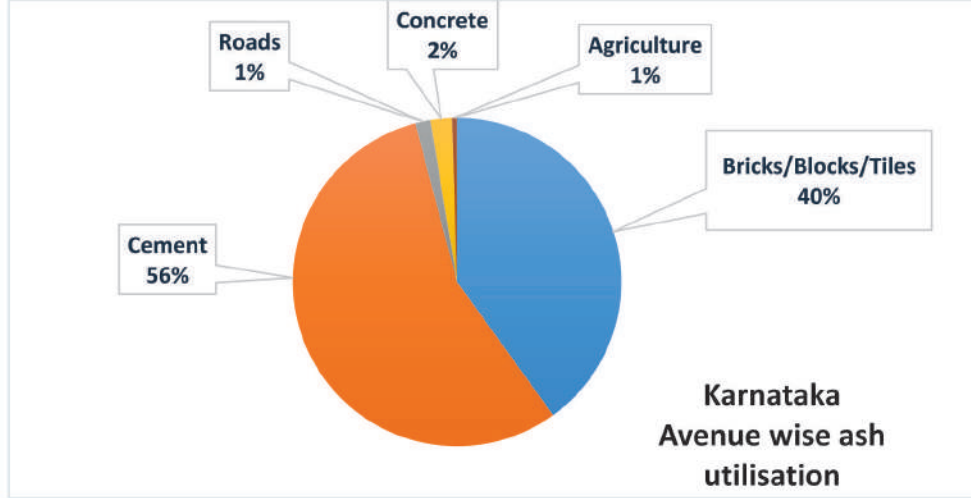
8. Karnataka (Available data: 6 Plants)-Total Capacity (9480 MW)

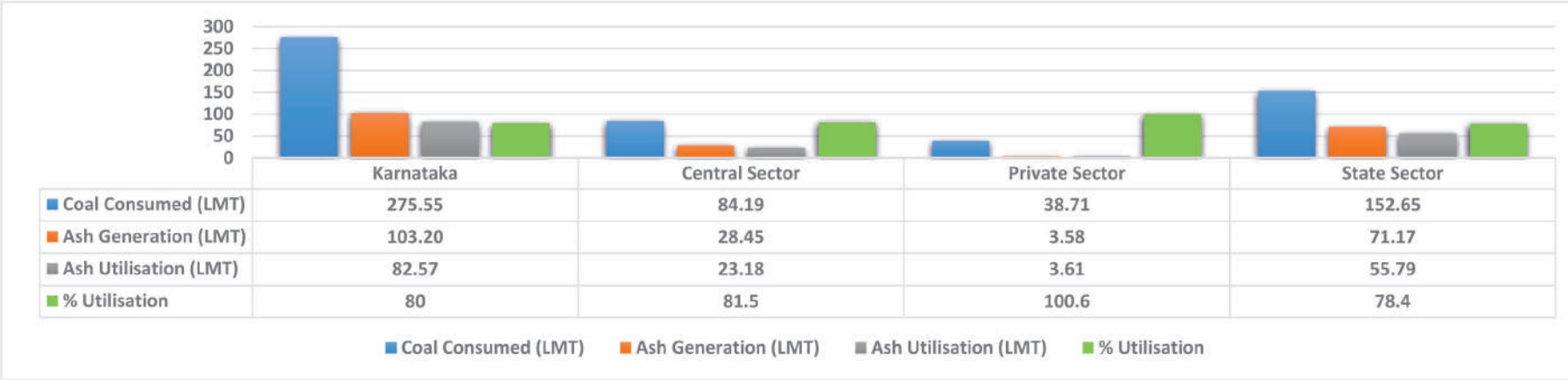
1 No- Central sector, 3 Nos-State Sector & 2 Nos-Private Sector





	Karnataka	Central Sector	Private Sector	State Sector
No of Plants	6	1	2	3
Installed Capacity (MW)	9480	2400	2060	5020





	Karnataka	Central Sector	Private Sector	State Sector
Coal Consumed (LMT)	275.55	84.19	38.71	152.65
Ash Generation (LMT)	103.20	28.45	3.58	71.17
Ash Utilisation (LMT)	82.57	23.18	3.61	55.79
% Utilisation	80	81.5	100.6	78.4

Coal Consumed (LMT) Ash Generation (LMT) Ash Utilisation (LMT) % Utilisation

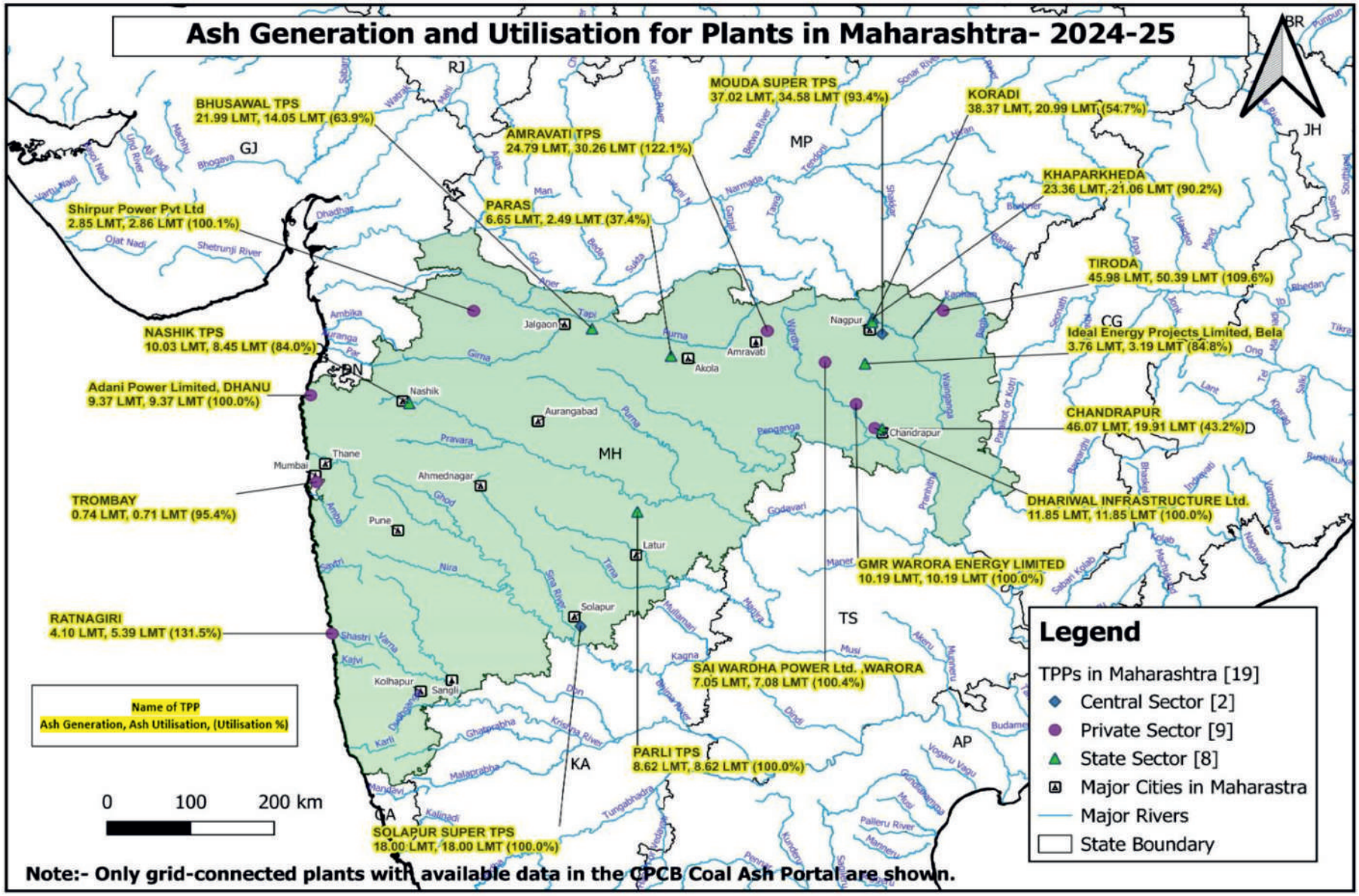
KN Charts & Table

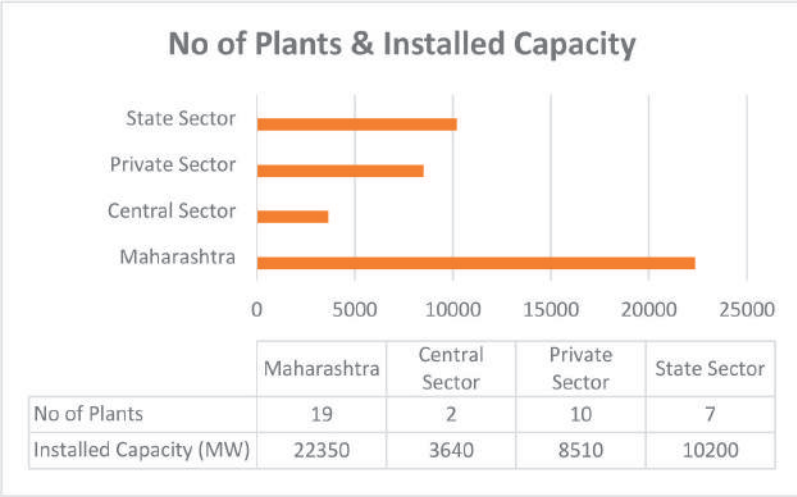
Observations:

- Over all Ash utilisation is less than 100%.
- Majority of ash is being used in Cement & Bricks industries.
- Ash utilization in Central Sector TPPs & State Sector TPPs shows comparatively lower utilisation and needs focused efforts.
- Private Sector TPPs achieving 100% utilization, indicates uses of legacy ash/Pond ash also.

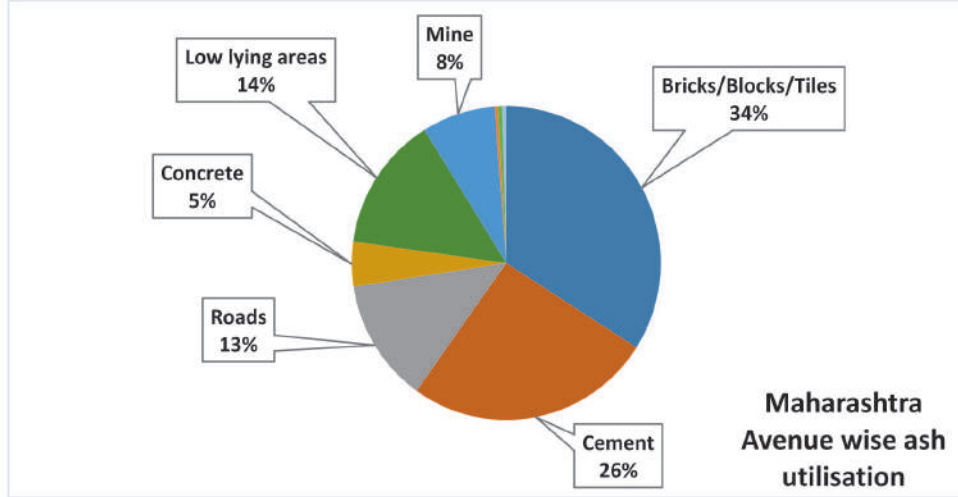
9. Maharashtra (Available data: 19 Plants)-Total Capacity (22350 MW

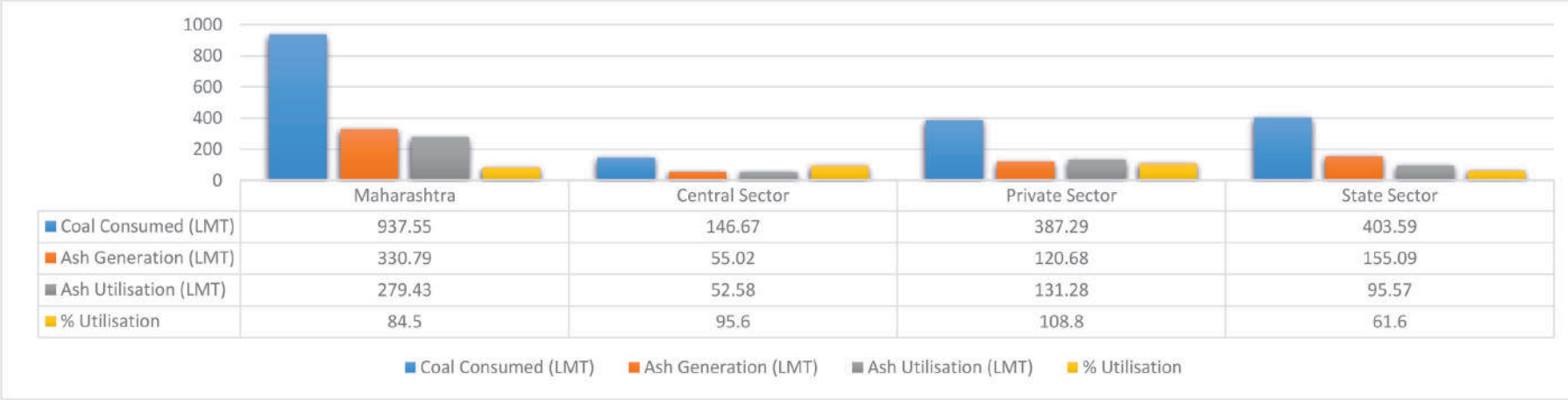
2 Nos-Central sector, 7 Nos-State Sector & 10 Nos-Private Sector





	Maharashtra	Central Sector	Private Sector	State Sector
No of Plants	19	2	10	7
Installed Capacity (MW)	22350	3640	8510	10200





	Maharashtra	Central Sector	Private Sector	State Sector
Coal Consumed (LMT)	937.55	146.67	387.29	403.59
Ash Generation (LMT)	330.79	55.02	120.68	155.09
Ash Utilisation (LMT)	279.43	52.58	131.28	95.57
% Utilisation	84.5	95.6	108.8	61.6

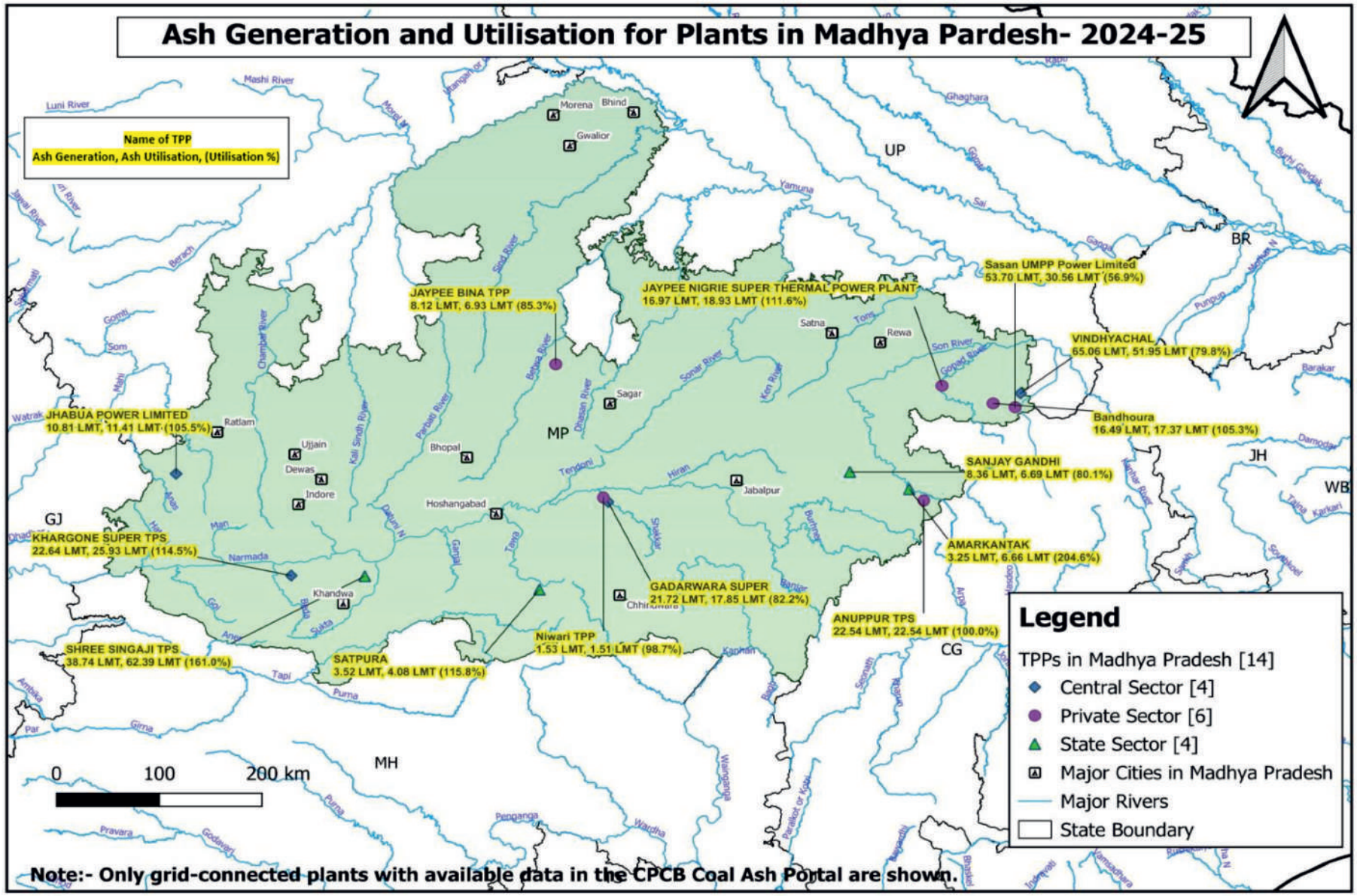
MH Charts & Table

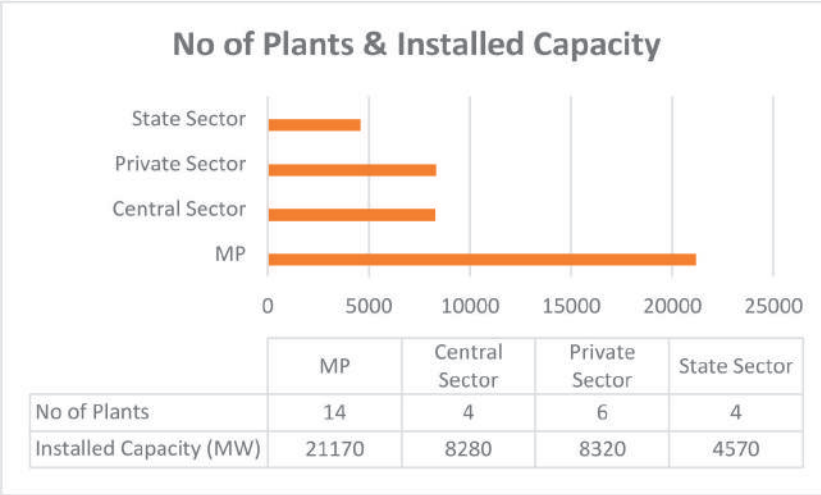
Observations:

- Over all Ash utilisation is less than 100%.
- Majority of ash is being used in Bricks industries, Cement, low lying Area & Roads.
- Ash utilization percentage in central sector TPPs & state sector TPPs is low as compared to private sector TPPs. Private Sector TPPs achieving more than 100% utilization, indicates uses of legacy ash/Pond ash also.
- The State Sector needs significant improvement, with the lowest utilization at 61.6%.

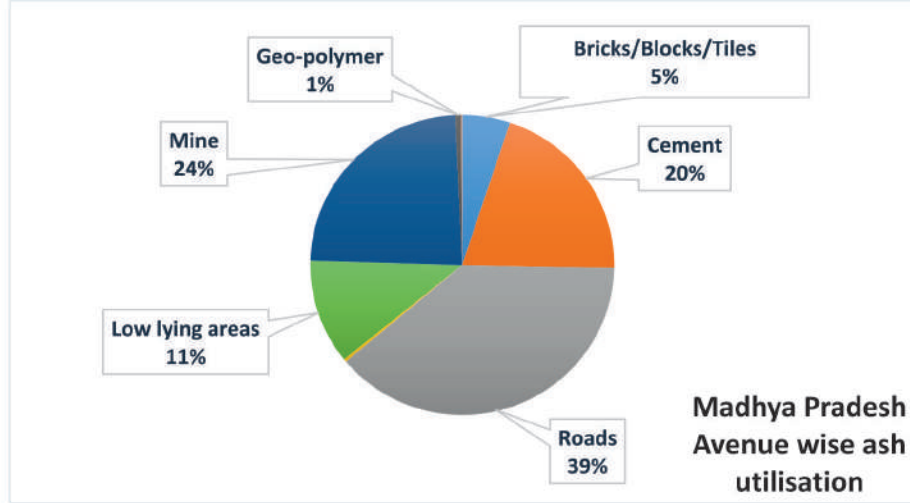
10. Madhya Pradesh (Available data: 14 Plants)-Total Capacity (21170 MW

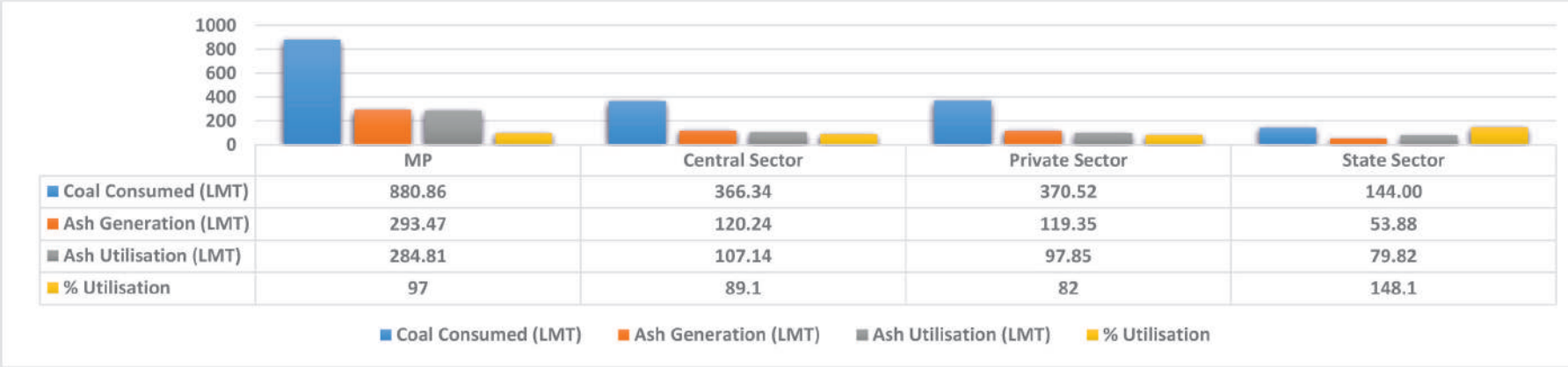
4 Nos-Central sector, 4 Nos-State Sector & 6 Nos-Private Sector





	MP	Central Sector	Private Sector	State Sector
No of Plants	14	4	6	4
Installed Capacity (MW)	21170	8280	8320	4570





	MP	Central Sector	Private Sector	State Sector
Coal Consumed (LMT)	880.86	366.34	370.52	144.00
Ash Generation (LMT)	293.47	120.24	119.35	53.88
Ash Utilisation (LMT)	284.81	107.14	97.85	79.82
% Utilisation	97	89.1	82	148.1

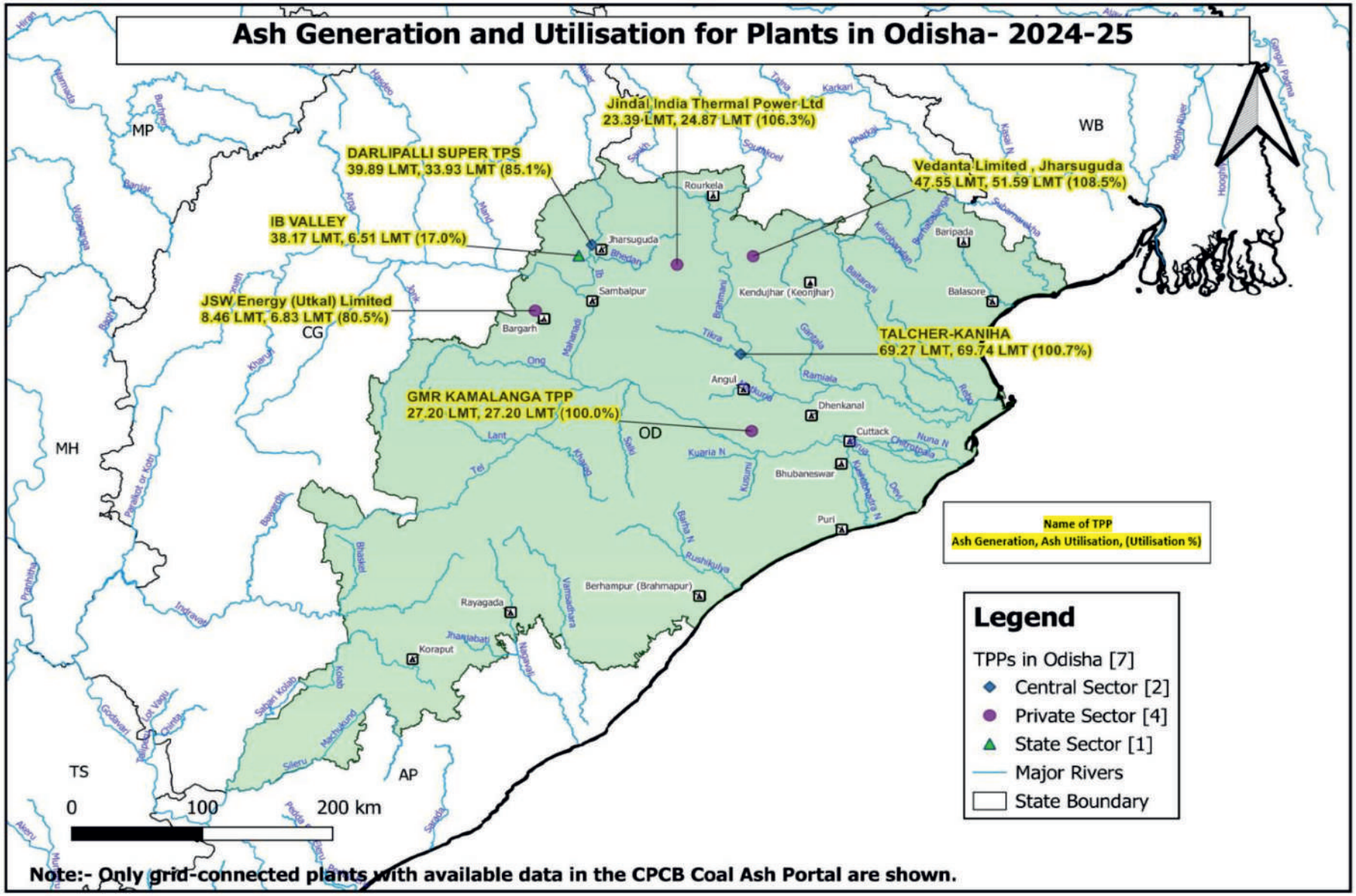
MP Charts & Table

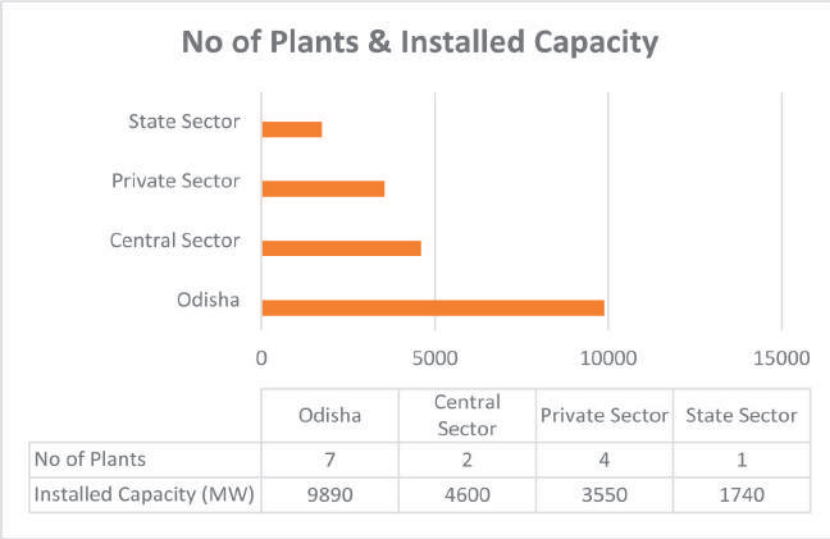
Observations:

- Over all Ash utilisation is less than 100%.
- Majority of ash is being used in Roads, Mine, Cement & low lying Area.
- Ash utilization percentage in Private Sector TPPs & Central Sector TPPs is low as compared to State TPPs.
- State Sector TPPs achieving more than 100% utilization, indicates uses of legacy ash/Pond ash also.
- Private sector performance is weakest in terms of percentage utilization 82%.

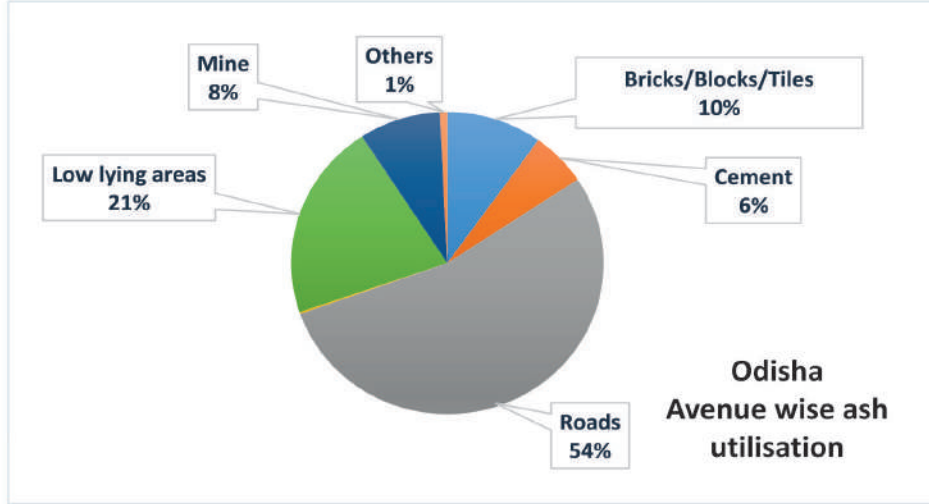
11. Odisha (Available data: 7 Plants)-Total Capacity (9890 MW)

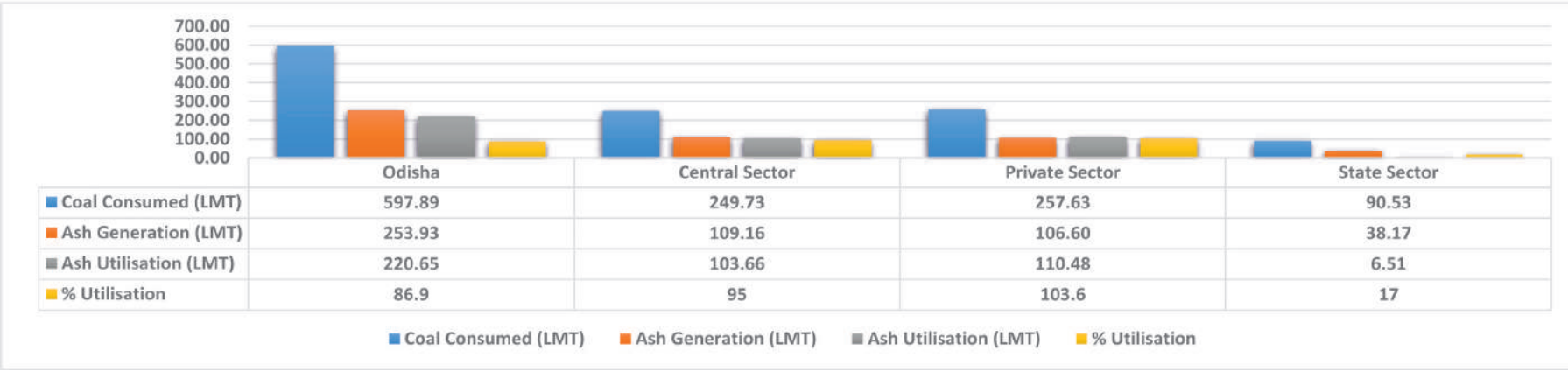
2 Nos-Central sector, 1 No-State Sector & 4 Nos-Private Sector





	Odisha	Central Sector	Private Sector	State Sector
No of Plants	7	2	4	1
Installed Capacity (MW)	9890	4600	3550	1740





	Odisha	Central Sector	Private Sector	State Sector
Coal Consumed (LMT)	597.89	249.73	257.63	90.53
Ash Generation (LMT)	253.93	109.16	106.60	38.17
Ash Utilisation (LMT)	220.65	103.66	110.48	6.51
% Utilisation	86.9	95	103.6	17

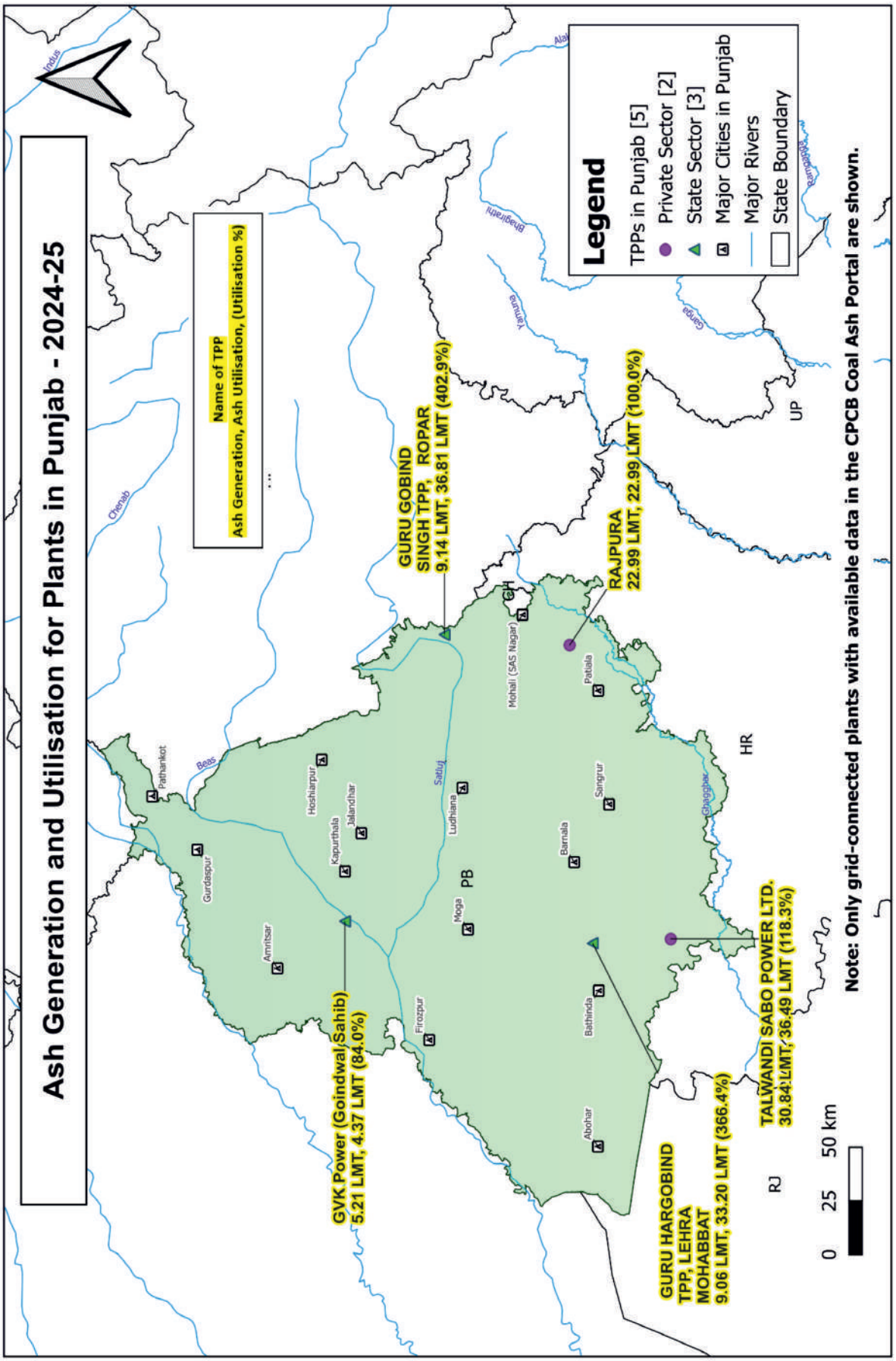
OD Charts & Table

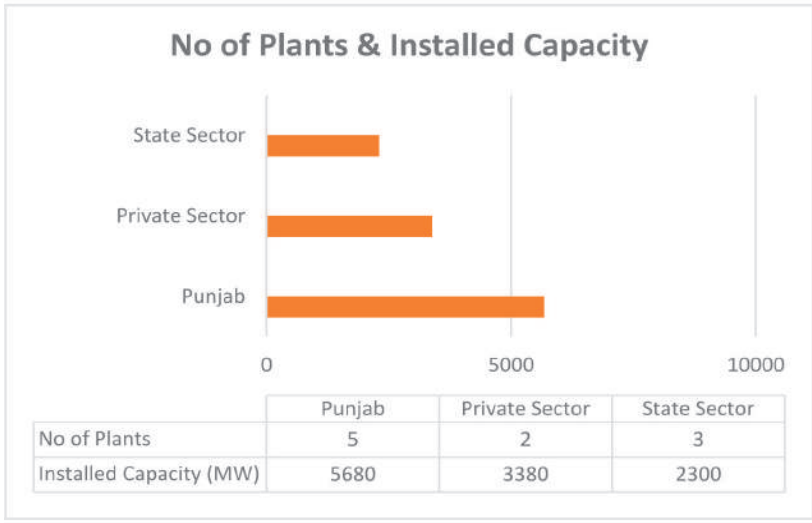
Observations:

- Over all Ash utilisation is less than 100%.
- Majority of ash is being used in Roads, low lying Area & Bricks industries.
- Ash utilization percentage of State Sector, Central Sector TPPs is low as compared to Private Sector TPPs.
- Private Sector TPPs achieving more than 100% utilization, indicates uses of legacy ash/Pond ash also.

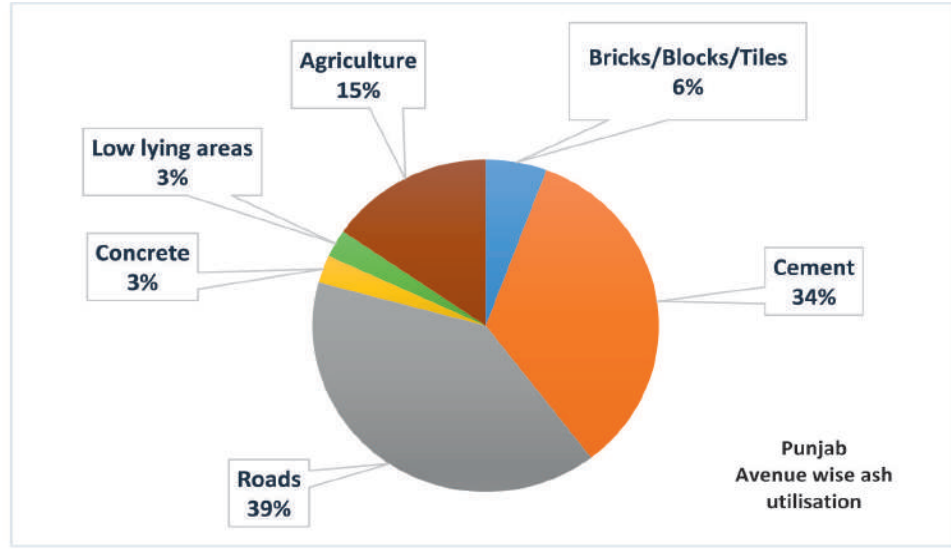
12. Punjab (Available data: 5 Plants)- Total Capacity (5680 MW)

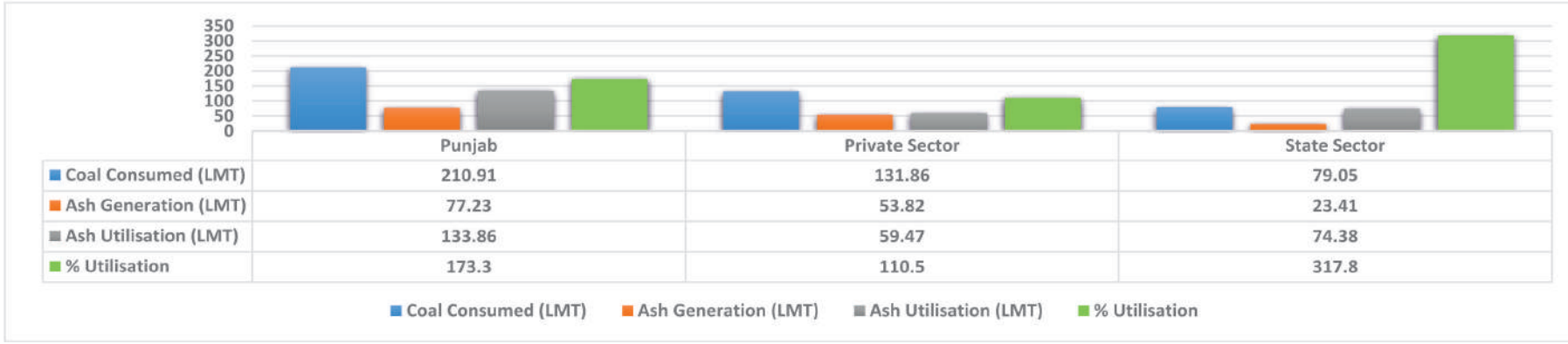
3 Nos-State Sector & 2 Nos-Private Sector





	Punjab	Private Sector	State Sector
No of Plants	5	2	3
Installed Capacity (MW)	5680	3380	2300





	Punjab	Private Sector	State Sector
Coal Consumed (LMT)	210.91	131.86	79.05
Ash Generation (LMT)	77.23	53.82	23.41
Ash Utilisation (LMT)	133.86	59.47	74.38
% Utilisation	173.3	110.5	317.8

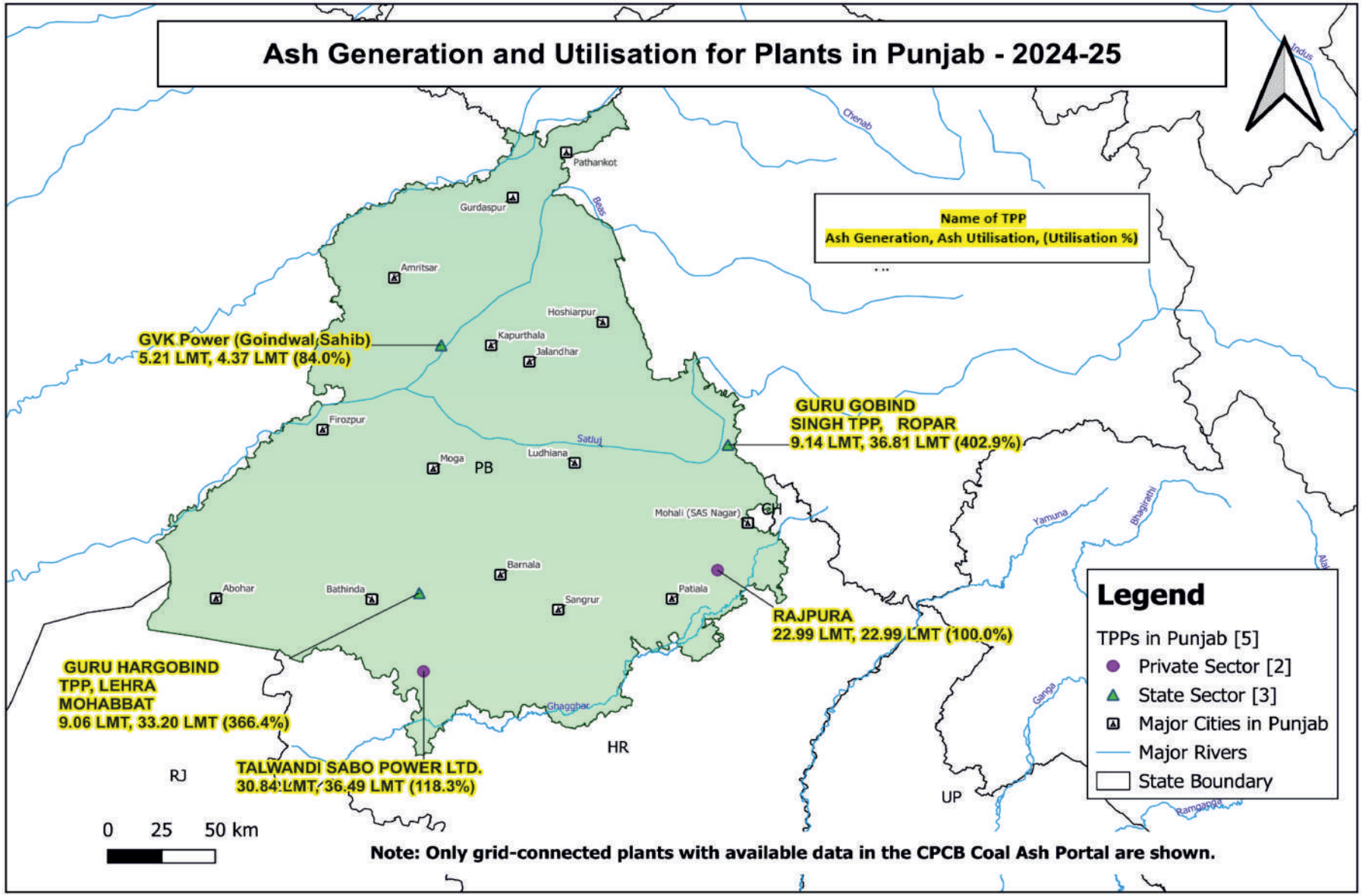
PB Charts & Table

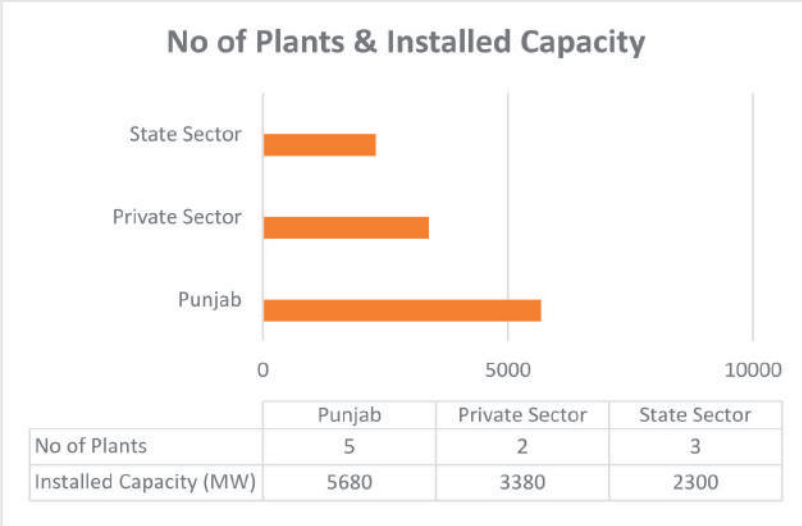
Observations:

- Over all Ash utilisation is more than 100% indicates uses of legacy ash/Pond ash also.
- Majority of ash is being used in Roads, Cement & Agriculture.
- Only Private Sector & State Sector TPPs in Punjab.
- The ash utilization performance of all sectors is virtuous.

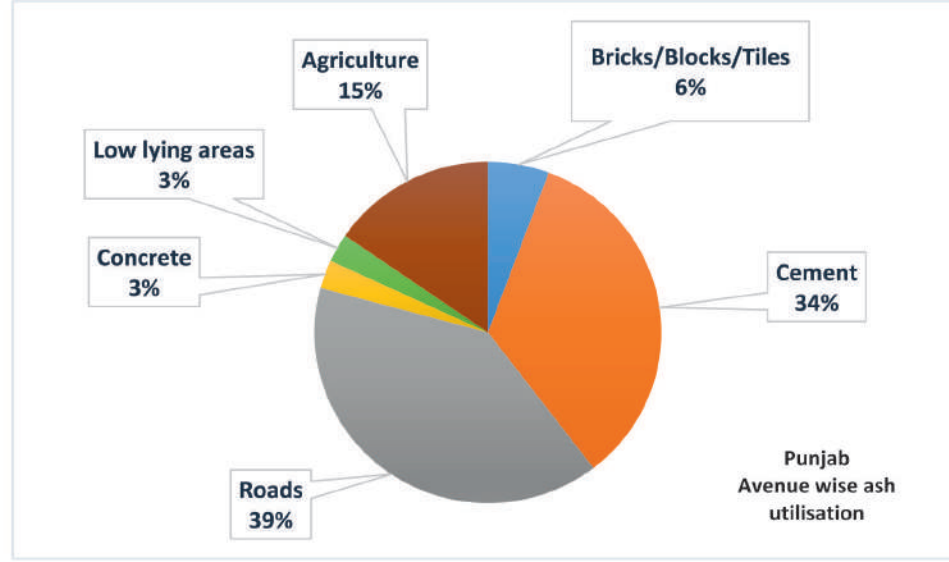
13. Rajasthan (Available data: 10 Plants)-Total Capacity (10530 MW)

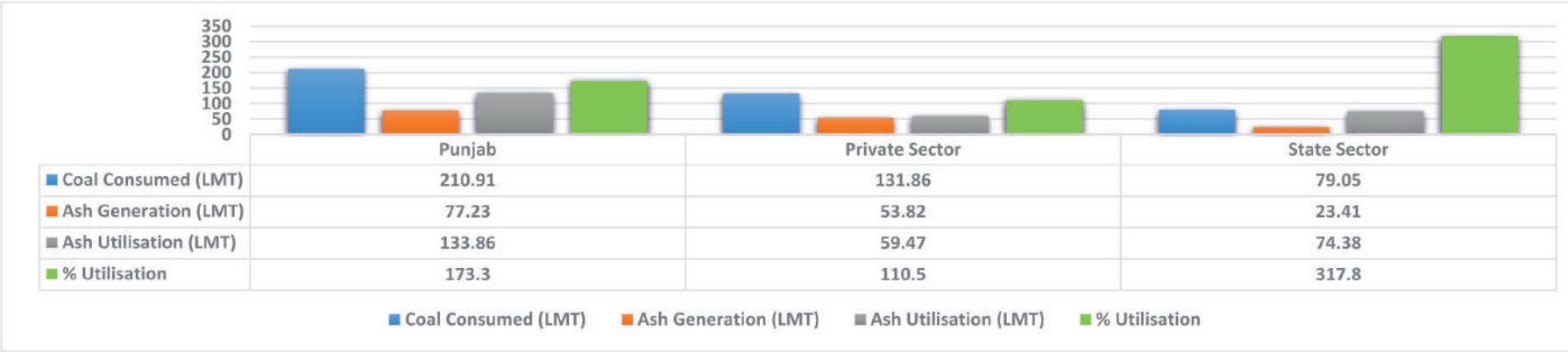
1 No-Central sector, 6 Nos-State Sector & 3 Nos-Private Sector





	Punjab	Private Sector	State Sector
No of Plants	5	2	3
Installed Capacity (MW)	5680	3380	2300





	Punjab	Private Sector	State Sector
Coal Consumed (LMT)	210.91	131.86	79.05
Ash Generation (LMT)	77.23	53.82	23.41
Ash Utilisation (LMT)	133.86	59.47	74.38
% Utilisation	173.3	110.5	317.8

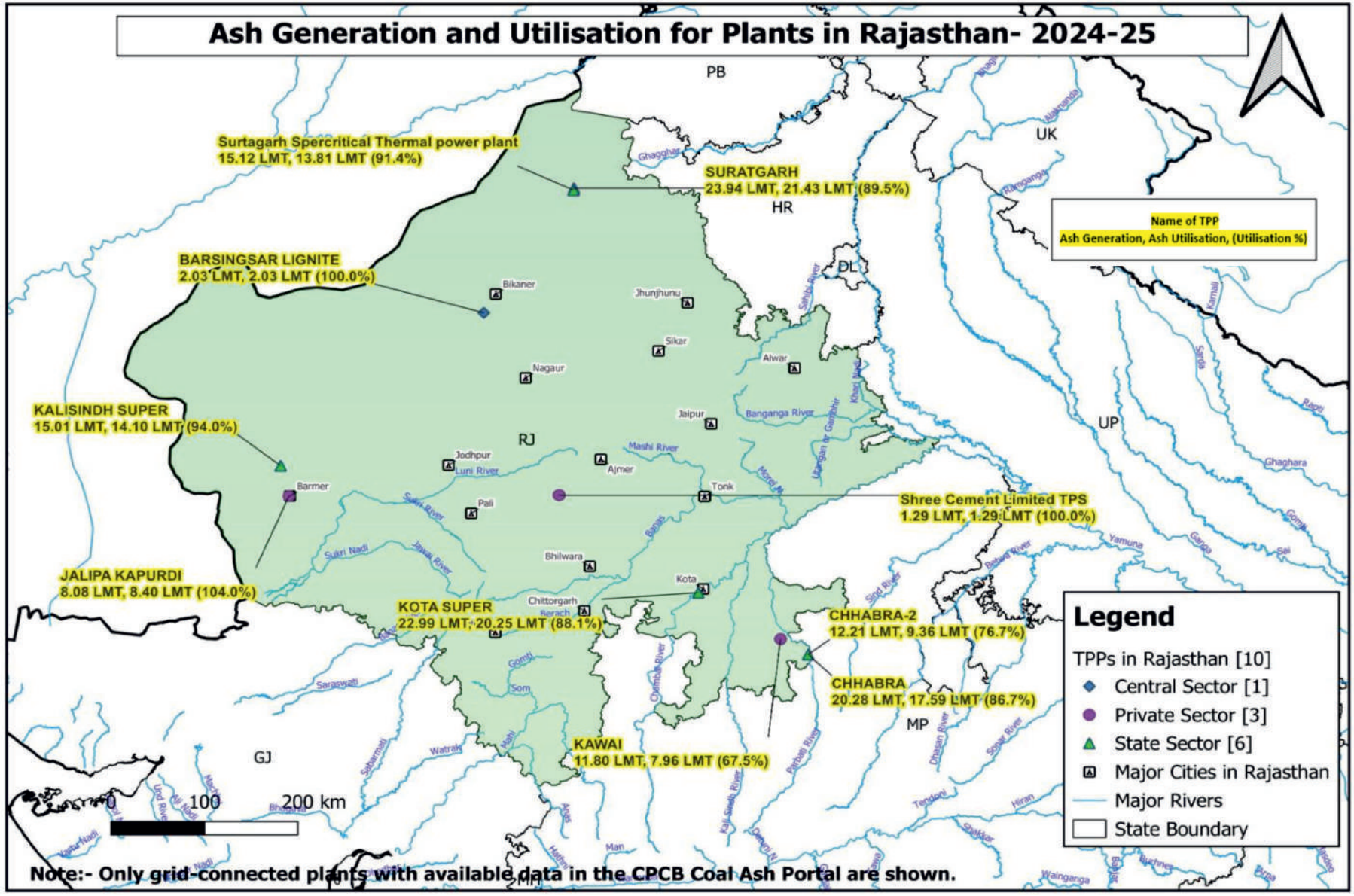
RJ Charts & Table

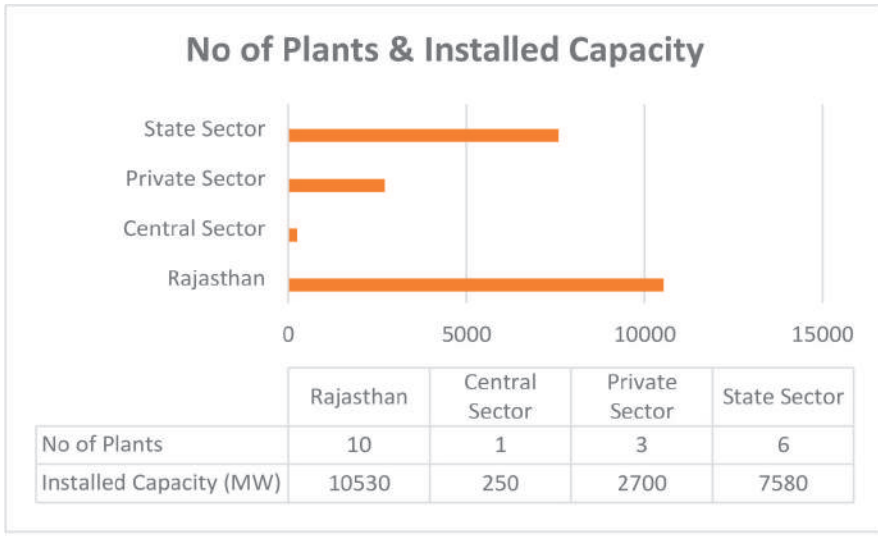
Observations:

- Over all Ash utilisation is less than 100%.
- Majority of ash is being used in Cement & Bricks industries.
- Ash utilization percentage in Private Sector TPPs & State Sector TPPs is low as compared to Central Sector TPPs.
- Central Sector TPPs achieving 100% utilization.
- The Private Sector & State Sector needs significant improvement with the lowest utilization.

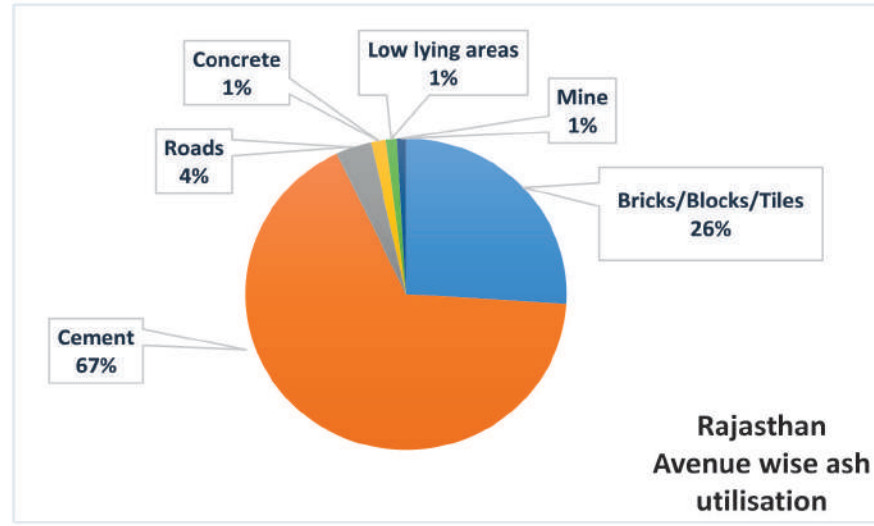
14. Tamil Nadu (Available data: 16 Plants)-Total Capacity (13799 MW)

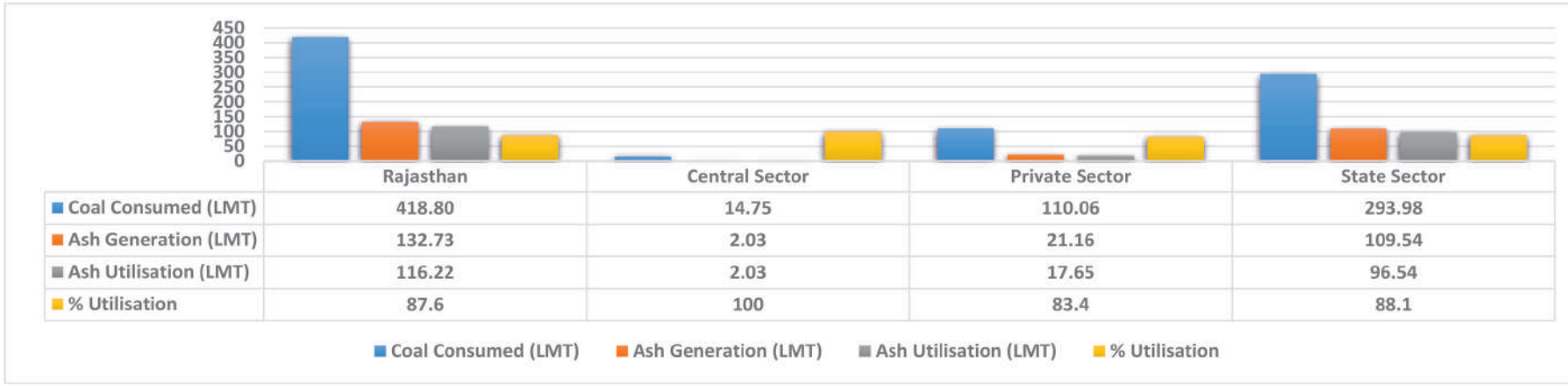
6 Nos-Central sector, 5 Nos-State Sector & 5 Nos-Private Sector





	Rajasthan	Central Sector	Private Sector	State Sector
No of Plants	10	1	3	6
Installed Capacity (MW)	10530	250	2700	7580





	Rajasthan	Central Sector	Private Sector	State Sector
Coal Consumed (LMT)	418.80	14.75	110.06	293.98
Ash Generation (LMT)	132.73	2.03	21.16	109.54
Ash Utilisation (LMT)	116.22	2.03	17.65	96.54
% Utilisation	87.6	100	83.4	88.1

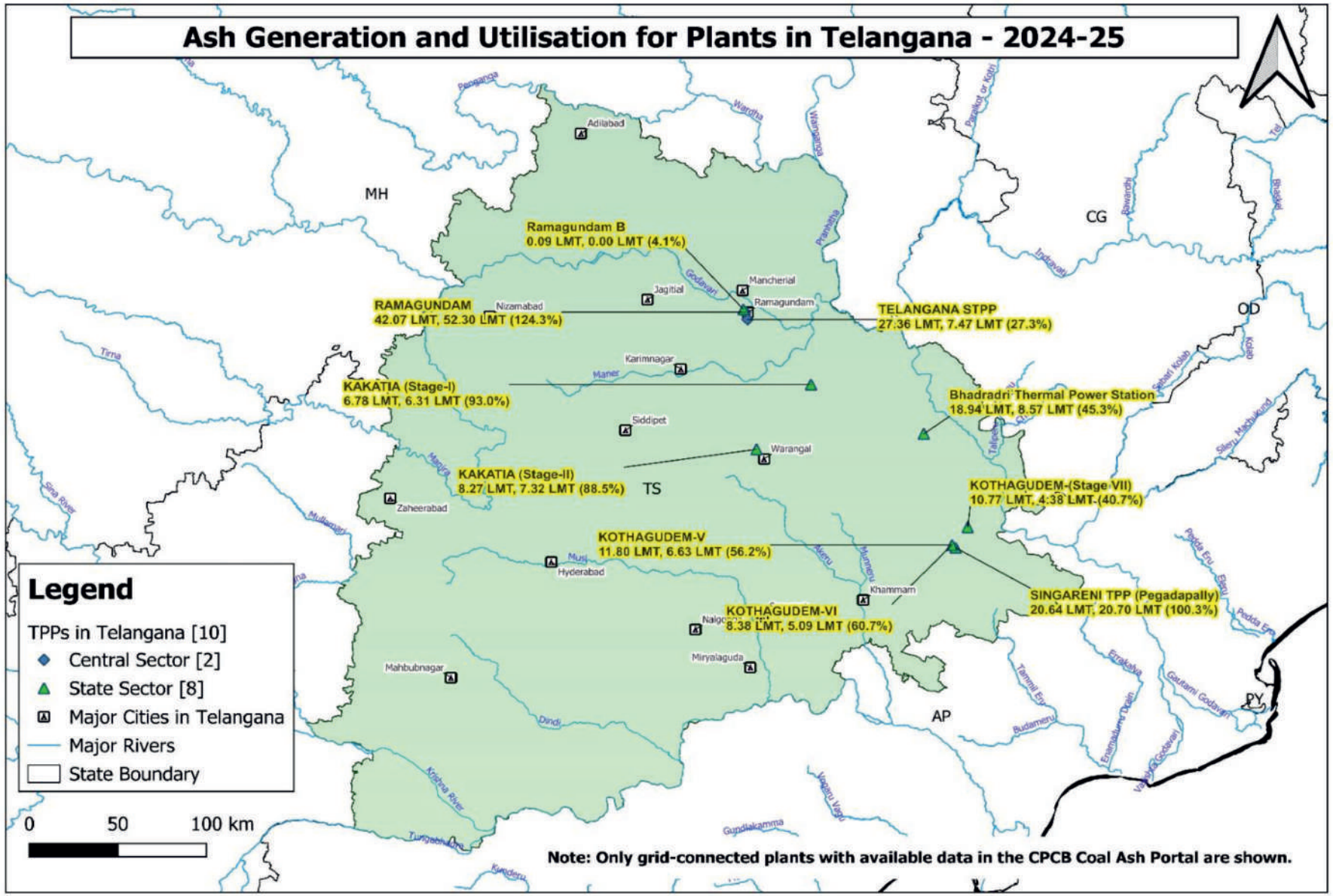
TN Charts & Table

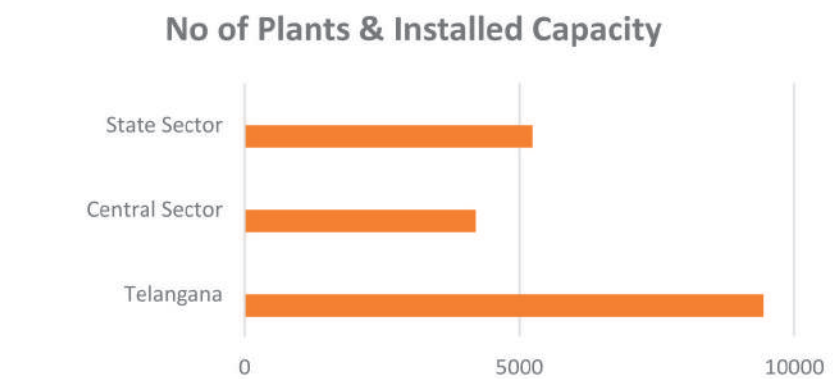
Observations:

- Over all Ash utilisation is less than 100%.
- Majority of ash is being used in Cement & Bricks industries.
- Ash utilization percentage in Private Sector TPPs & State Sector TPPs is low as compared to Central Sector TPPs.
- Central Sector TPPs achieving 100% utilization.
- The Private Sector & State Sector needs significant improvement with the lowest utilization.

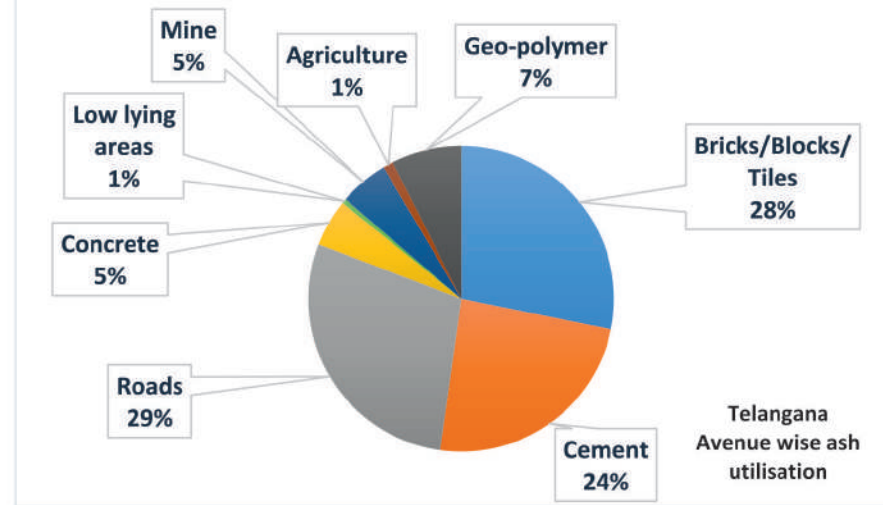
15. Telangana (Available data: 10 Plants)-Total Capacity (9442.5 MW)

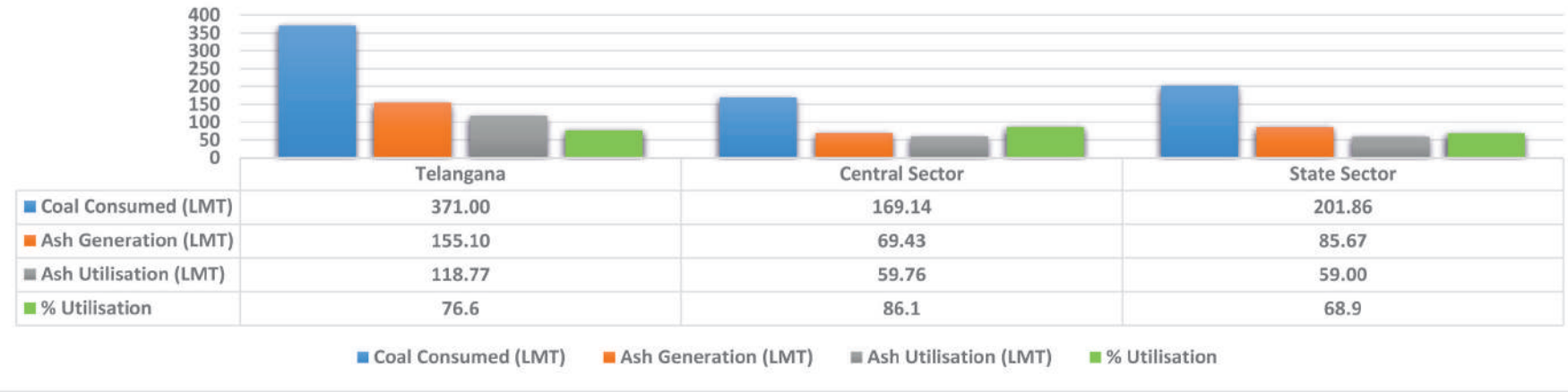
2 Nos-Central sector & 8 Nos-State Sector





	Telangana	Central Sector	State Sector
No of Plants	10	2	8
Installed Capacity (MW)	9442.5	4200	5242.5





	Telangana	Central Sector	State Sector
Coal Consumed (LMT)	371.00	169.14	201.86
Ash Generation (LMT)	155.10	69.43	85.67
Ash Utilisation (LMT)	118.77	59.76	59.00
% Utilisation	76.6	86.1	68.9

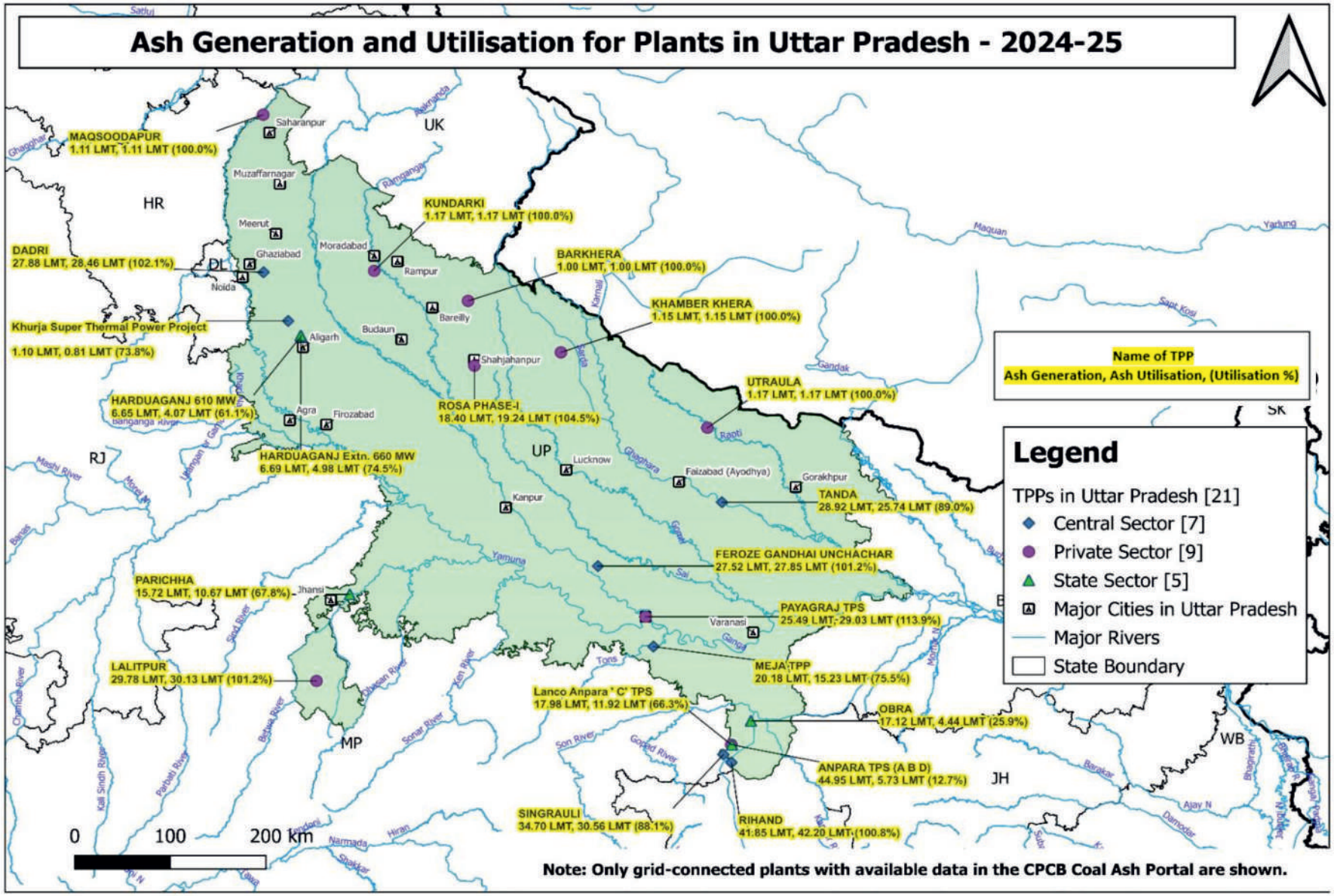
TLG Charts & Table

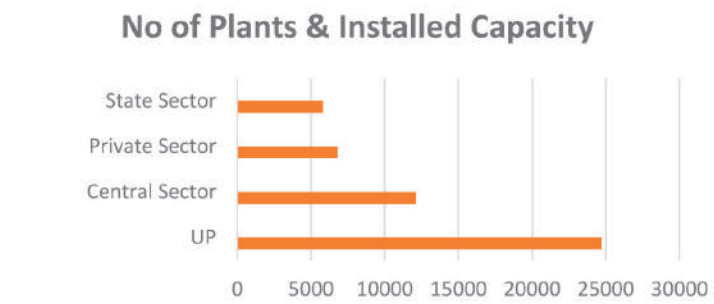
Observations:

- Over all Ash utilisation is less than 100%.
- Majority of ash is being used in Roads, Bricks industries & Cement.
- The ash utilization percentage is low in both Central Sector and State Sector TPPs.

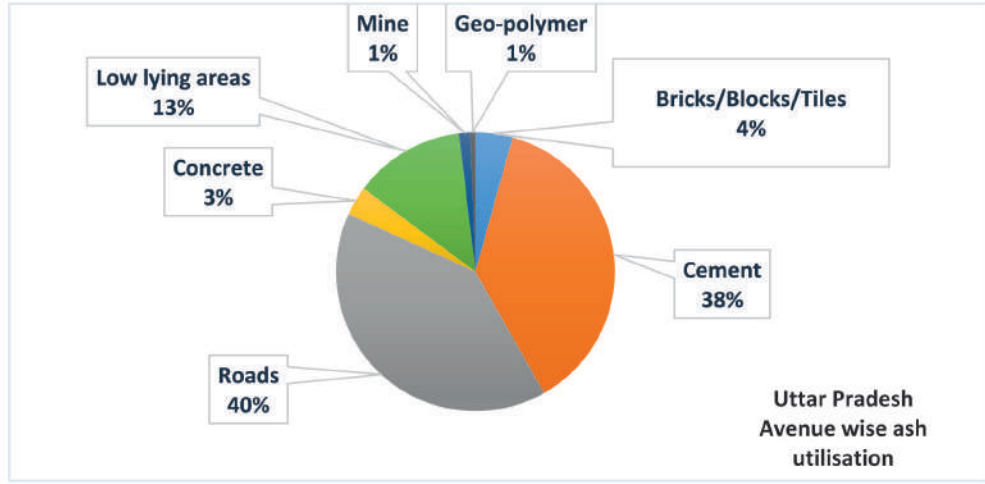
16. Uttar Pradesh (Available data: 21 Plants)-Total Capacity (24735 MW)

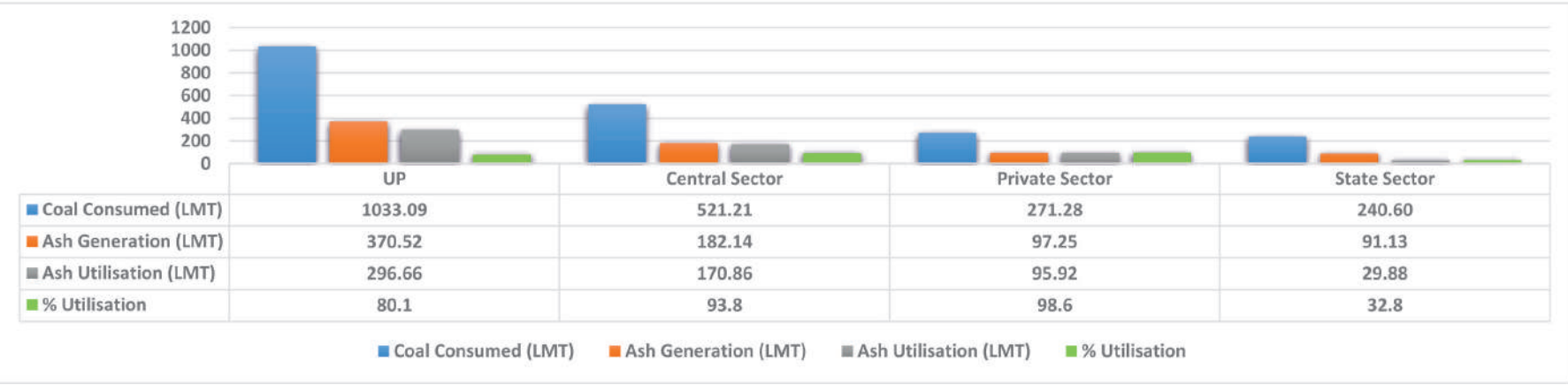
7 Nos-Central sector, 5 Nos-State Sector & 9 Nos-Private Sector





	UP	Central Sector	Private Sector	State Sector
No of Plants	21	7	9	5
Installed Capacity (MW)	24735	12110	6810	5815





	UP	Central Sector	Private Sector	State Sector
Coal Consumed (LMT)	1033.09	521.21	271.28	240.60
Ash Generation (LMT)	370.52	182.14	97.25	91.13
Ash Utilisation (LMT)	296.66	170.86	95.92	29.88
% Utilisation	80.1	93.8	98.6	32.8

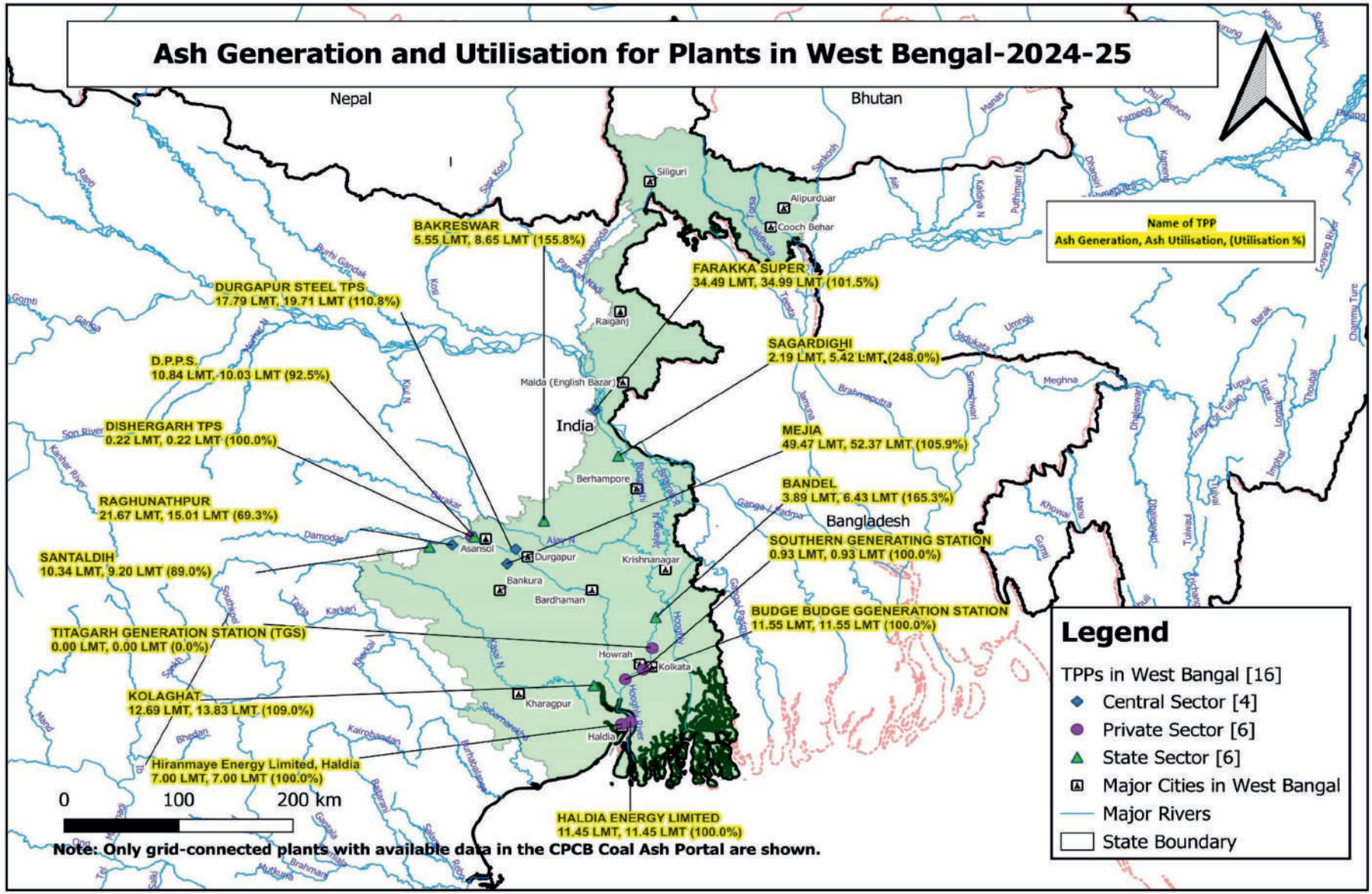
UP Charts & Table

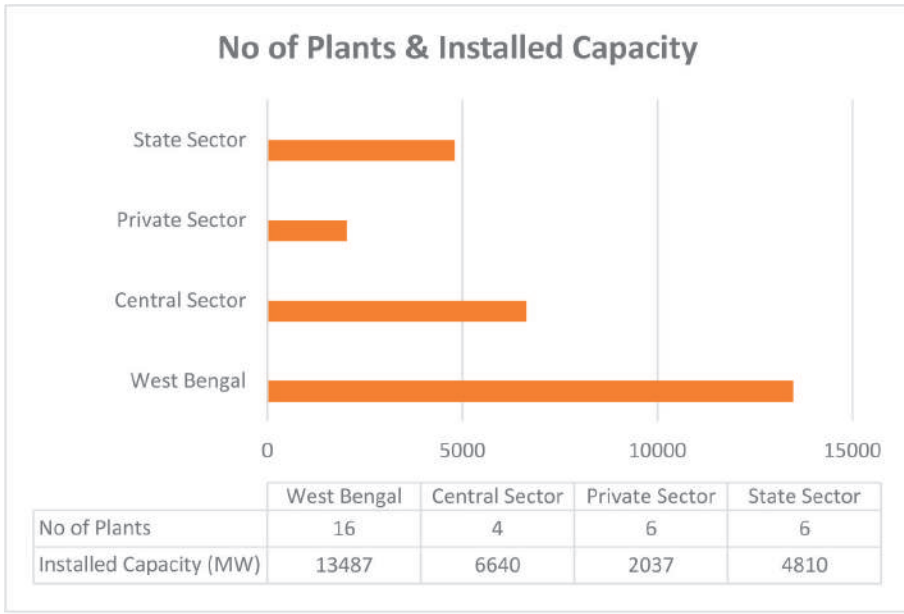
Observations:

- Over all Ash utilisation is less than 100%.
- Majority of ash is being used in Roads, Cement & Low lying Area.
- The ash utilization percentage is low in All Sector TPPs
- The ash utilization performance of state sector TPPs is very poor i.e 32.8% and needs to have focused approach in Ash utilization in order to achieve the targets for ash disposal in light of MoEF & CC Notification dated 31.12.2025.

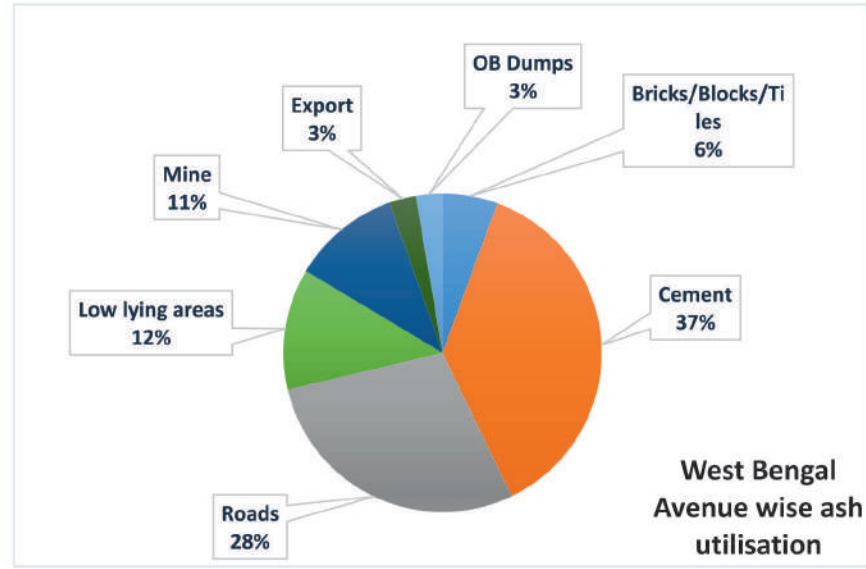
17. West Bengal (Available data: 16 Plants)-Total Capacity (13487 MW)

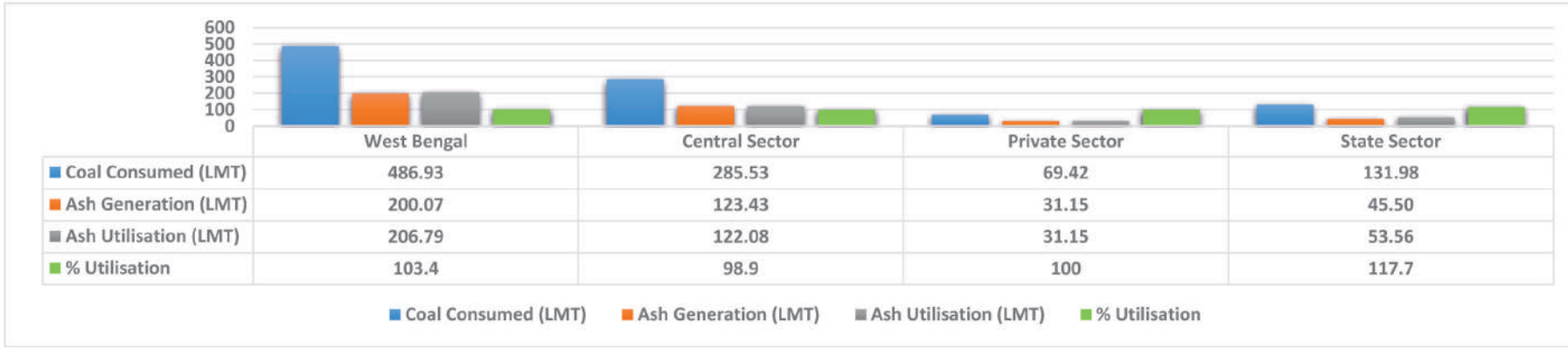
4 Nos-Central sector, 6 Nos-State Sector & 6 Nos-Private Sector





	West Bengal	Central Sector	Private Sector	State Sector
No of Plants	16	4	6	6
Installed Capacity (MW)	13487	6640	2037	4810





	West Bengal	Central Sector	Private Sector	State Sector
Coal Consumed (LMT)	486.93	285.53	69.42	131.98
Ash Generation (LMT)	200.07	123.43	31.15	45.50
Ash Utilisation (LMT)	206.79	122.08	31.15	53.56
% Utilisation	103.4	98.9	100	117.7

WB Charts & Table

Observations:

- Over all Ash utilisation is more than 100% indicates uses of legacy ash/Pond ash also.
- Majority of ash is being used in cement, Roads & Mine.
- Ash utilization percentage performance of State Sector TPPs is better as compared to Central & Private Sector TPPs.

CHAPTER – 5
ASH Based products and Innovation stories (by NTPC)

5.1. Over the years, fly ash has evolved from being considered a waste to becoming a valuable resource material. When managed properly, fly ash contributes to sustainable infrastructure, reduces carbon emissions, and conserves natural resources such as topsoil and sand. In India, power utilities, research institutes, and industries have developed several innovations in ash utilization, demonstrating that "waste-to-wealth" is achievable. NTPC, the largest power generator in India, has played a leading role in promoting and scaling up such initiatives.

5.2 Innovations in Utilization of Fly Ash: Construction and Building Materials

Table 5.1

1	**Cement :** Fly ash is widely used as a supplementary cementitious material in the production of cement and concrete. When mixed with cement, fly ash reacts with calcium hydroxide released during the hydration of cement to form additional calcium silicate hydrate (C–S–H), which enhances the strength and durability of the concrete. The use of fly ash improves workability, reduces permeability, and increases resistance to chemical attacks such as sulfate and alkali-silica reactions.	
2	**Fly Ash Bricks, Blocks, Tiles:** Fly ash is a key ingredient in the production of fly ash bricks, which are an eco-friendly alternative to traditional clay bricks. These bricks are made by mixing fly ash with lime, gypsum, and sand, followed by compression and curing. Fly ash bricks have uniform shape and smooth surfaces, high strength, and better thermal insulation compared to conventional bricks. Additionally, their manufacturing process saves topsoil. Fly ash is increasingly used in the manufacture of ceramic tiles, mosaic tiles, and paving blocks. When mixed with other materials such as cement, sand, and additives, it produces strong, durable, and aesthetically pleasing tiles. These fly ash-based tiles are cost-effective, lightweight, and offer better resistance to wear and weathering.	

	Fly ash can be utilized in making building panels, wall boards, and partition boards by blending it with gypsum, lime, and fibers. These panels are lightweight, fire-resistant, and provide good sound and thermal insulation. Fly ash panels serve as an excellent substitute for traditional gypsum boards or concrete panels NTPC has set up fly ash brick plants at many of its stations. About **60 million bricks** are produced annually and used in plant and township construction. Carbon-cured and aerated bricks made with fly ash are lightweight, durable, and absorb CO_2 during curing. As per MoEF&CC directives, NTPC stations reserve at least 20% of total fly ash for brick and block manufacturers, issuing the material free of cost.	
3	**Lightweight Aggregates** Fly ash can be used to produce lightweight aggregates through processes such as sintering or pelletization. These aggregates are used in lightweight concrete, which is ideal for structural components where weight reduction is important, such as high-rise buildings and precast panels. The resulting concrete offers good thermal insulation, fire resistance, and ease of handling, while utilizing fly ash helps minimize environmental waste.	
4	**Concrete:** Fly ash is extensively used as a partial replacement for cement in concrete. When added to concrete, it improves workability, reduces water demand, and enhances long-term strength and durability. Use of ultra-fine fly ash (UFA) enables high-strength concrete exceeding 100 MPa, suitable for demanding infrastructure.	

5	**Geopolymer Concrete:** Geopolymers made from fly ash are an innovative class of eco-friendly construction materials. In these materials, fly ash reacts with alkaline solutions such as sodium hydroxide and sodium silicate to form a geopolymeric binder that replaces traditional cement. Fly ash geopolymers exhibit superior strength, durability, and chemical resistance, along with significantly lower CO_2 emissions. They are increasingly being explored for use in precast elements, pavements, and structural applications as a sustainable alternative to ordinary Portland cement. IIT Delhi demonstrated geopolymer concrete with around 70% CO_2 reduction, and NTPC has built demonstration roads at Ramagundam, Rihand, Kahalgaon, and Farakka using this technique.	

5.3 Innovations in Utilization of Fly Ash: Agriculture and Land Reclamation

Table 5.2

1	**Soil Amendment:** Controlled application of fly ash improves soil texture, porosity, and nutrient content, especially in barren or degraded lands. NTPC, in collaboration with the Indian Institute of Soil Science (IISS), Bhopal, is running a long-term project on the "Use of Fly Ash in Agriculture for Sustainable Crop Production and Environmental Protection."
2	**Mine Void Filling:** Stabilized fly ash slurry is used to reclaim abandoned mine voids, improving land usability and enabling green belt development.

5.4 Innovations in Utilization of Fly Ash and Bottom Ash : Infrastructure and Transportation

Table 5.3

1	**Roads and Embankments:** In road construction, fly ash is used to improve the strength and stability of sub-base and embankments. When mixed with soil and lime, fly ash enhances the load-bearing capacity and reduces swelling in expansive soils. It acts as a stabilizing agent that helps in reducing the thickness of pavement layers and overall construction cost. Fly ash can also be used in asphalt paving and as a filler material	 Ash supply to Road projects from NTPC stations

	NTPC supplies ash to **NHAI and State Government projects**, with over **20 million tonnes** utilized annually. The Ministry of Environment, Forest and Climate Change mandates that TPPs bear transportation cost within 300 km for government road projects, encouraging large-scale adoption.	
2	Calcutta Electric Supply Corporation Limited(CESC), in collaboration with SDG Consultants and with technical guidance from Jadavpur University, Kolkata, has developed an innovative process technology for the use of coal bottom ash as a partial replacement of natural sand in concrete, particularly for road works and allied infrastructure. The technology has been successfully validated through pilot projects executed at: • Dhariwal Infrastructure Limited (DIL), Chandrapur, Maharashtra, and • Budge Budge Generating Station (BBGS), South 24-Parganas, West Bengal, In the form of concrete roads designed for heavy commercial vehicle traffic. In addition, precast concrete blocks manufactured using this technology were deployed for shore protection works at the intake pump house of Haldia Energy Limited (HEL), Purba Midnapore, West Bengal, located along the banks of the River Hooghly. The innovation has been granted patents in the joint names of CESC Limited and SDG Consultants by: • the Patent Office, Government of India, on 7 October 2022, and • the Republic of South Africa, on 29 November 2023.	

5.5 Transport and Handling Innovations

Efficient and sustainable transport of fly ash is critical for achieving 100% utilization across diverse industrial sectors and distant markets. NTPC and associated industries have implemented multiple innovations in logistics to minimize environmental impact, reduce costs, and ensure reliable supply chains for fly ash movement. Key advancements include:

Rail Transport in Bulk Wagons

NTPC uses BOXN and BTAP wagon rakes (≈3,500 t per rake) to move fly ash to distant cement plants—e.g., from Rihand to Maihar, from Kahalgaon to the Northeast, and from Mouda to Gulbarga.

Under the Special Freight Train Operator (SFTO) scheme, NTPC owns three BTAP rakes, ensuring closed, environment-friendly transport at low cost.

Inland Waterways (Barge Transport)

In partnership with the Inland Waterways Authority of India (IWAI), NTPC carried out pilot shipments of fly ash from Kahalgaon (Bihar) to Pandu (Assam) via the Ganga–Brahmaputra route (~2,000 km). Barge transport offers lower carbon emissions and cost per tonne-km for long distances.

Electric Vehicle (EV) Bulkers

Hindalco's Aditya Aluminium (Odisha) has deployed electric bulkers with on-site charging stations for fly ash transport, cutting CO_2 emissions by ~3,500 t per year. This demonstrates the feasibility of decarbonized logistics.

Pneumatic Conveying & Slurry Systems

Thermal power plants use dense-phase pneumatic systems for dry ash and high-concentration slurry disposal (HCSD) pipelines for bottom or mixed ash. These enclosed systems reduce dust, water loss, and environmental risks.

Policy Incentives & Freight Subsidies

The Ministry of Railways offers up to 40% freight concession for fly ash transport. Ash loading facilities have been developed at multiple NTPC plants including Rihand, Kahalgaon, Ramagundam, Mouda, Simhadri, and Korba, with others under installation.

5.6 New Research and Development Initiatives

NTPC has undertaken several research and development initiatives in collaboration with leading scientific institutions. These projects aim to convert fly ash into high-performance, commercially viable products that can support sustainable construction and circular economy objectives. Key initiatives currently under implementation or demonstration include:

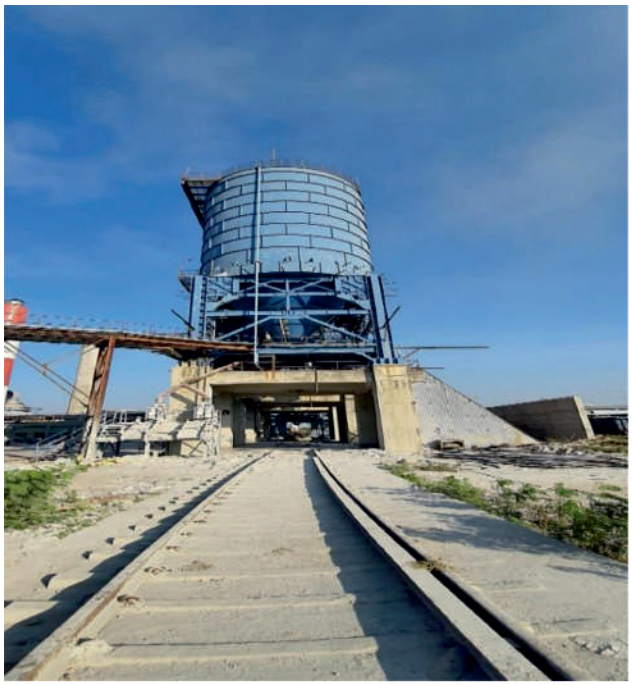
Geo-Polymer Concrete Roads: Demonstration roads performing well at NTPC stations; being extended to township and CSR projects.

Lightweight Aggregates: Commercial plant under commissioning at Sipat.

Gypsum Vermiculate Plaster (GVP): Joint R&D with CSIR-CBRI for internal plaster applications using fly ash.

Nano Concrete Aggregate (NACA): Winner of NTPC's "Grand Challenge on Ash Utilization Ideas 2018"; demonstrated through a 1-BHK two-storey house at NTPC Simhadri.

FLY ASH SILOS, NTPC SIPAT



HAPTER – 6
MoEF&CC Notification related Clarifications

6.1. Based on various representations received and discussions held with TPPs and other stakeholders, the Central Electricity Authority (CEA) has observed that certain policy-related issues require further clarification. These include matters such as ash transportation by rail, the 300 km transportation limit, utilization of ash beyond 100%, management of legacy ash, and related aspects under the Ministry of Power's (MoP) Ash Utilization Guidelines and the Ministry of Environment, Forest and Climate Change (MoEF&CC) Ash Notification dated 31.12.2021 and its subsequent amendments. Accordingly, CEA's interpretation and views on some of these key policy matters are outlined below.

I. Legacy Ash

Legacy ash refers to ash that had been deposited in ash ponds or dykes prior to the issuance of the notification, **excluding ash temporarily stored during ongoing operations**.

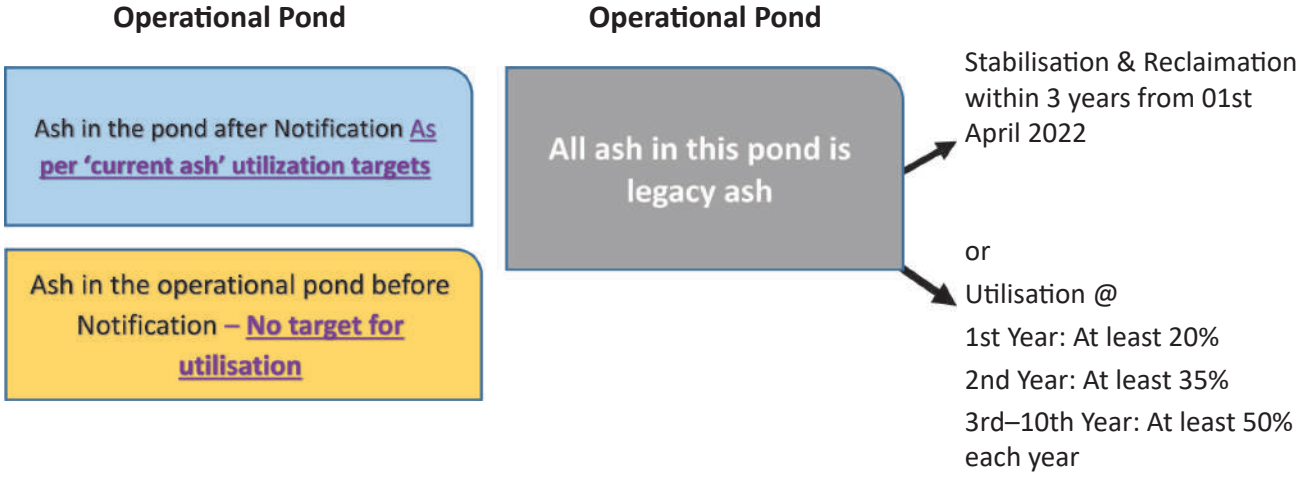
As per the provisions, 100% utilization of legacy ash is to be achieved within a period of ten years, i.e., by 2032. The **minimum** annual utilization targets, **based on the total annual ash generation, are set as follows:**

- at least 20% of **annual ash generated from** legacy ash in the first year,
- 35% of **annual ash generated from** legacy ash in the second year, and
- a minimum of 50% of **annual ash generated from** legacy ash in each subsequent year from the third to the tenth year.

Example – If annual ash generation for a TPP is say 10 LMT , then a minimum of 2 LMT (20%) of legacy ash must be utilised in first year , 3.5 LMT (35%) of Legacy ash must be utilised in 2nd year and a minimum of 5 LMT must be utilised in the 3rd year.

Exemptions from these requirements may apply if the ash pond or dyke has been fully stabilized and reclaimed through activities such as greenbelt development, plantation, or installation of solar or wind power projects. Such stabilization and reclamation must be duly certified by the respective State Pollution Control Board (SPCB) or Pollution Control Committee (PCC). The deadline for obtaining reclamation certification is within three years from 1 April 2022.

The above provisions have also been depicted as below :



II. Utilisation of ash beyond 100%

As per the notification, current ash refers to the ash generated during the reporting period. Therefore, the percentage utilization of current ash cannot theoretically exceed 100%. However, in many instances, thermal power plants (TPPs) also utilize ash stored in operational ash ponds that existed prior to the notification dated 31.12.2021 (depicted as yellow in the chart above). This practice leads to reported utilization levels exceeding 100% in the current operational cycles.

III. 300 KM Transportation limit

As per the notification, the 300 km provision does not restrict a Thermal Power Plant (TPP) from transporting or supplying fly ash beyond this distance. A TPP may supply ash to any user located beyond 300 km as stated in notification. The 300 km range defines the area within which specific users—such as construction agencies involved in road laying, road and flyover embankments, shoreline protection structures in coastal districts and dams and mine operators, are mandated to utilize fly ash when it is made available to them by a TPP.

IV. Transportation by rail: The MoEF&CC notification or MoP Guidelines does not prohibit or restrict the mode of transportation (road, rail, etc.).

6.2. To access the Ash Notification-2021 and its subsequent amendments, Ministry of Coal's Standard Operating Procedures (SoPs) for mine allocation, Fly Ash Mission Minutes of Meeting, CLWG (Central Level Working Group) Minutes of Meeting, Joint Committee Minutes under the Chairmanship of CPCB, and the Ministry of Power Guidelines dated 15.03.2024 e.t.c, please click on the link provided below.

https://cpcb.nic.in/fly-ash-management-and-utilization/

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Annexure-1

List of 189 Thermal Power Plants

Sl no.	Name of Power Utility	Name of TPP/ TPS	State	Sector	PH/NPH	Capacity (MW)	Latitude	Longitude
1	A.P.G.E.N.C.O.	Dr. NTTPS (Vijayawada)	Andhra Pradesh	State	NPH	2560	16.59945	80.53667
2	A.P.G.E.N.C.O.	Rayalseema	Andhra Pradesh	State	NPH	1650	14.70157	78.45818
3	ACB (India) Ltd.	Chakabura TPP	Chhattisgarh	Private	NPH	30	22.38895	82.5549
4	ACB (India) Ltd.	Chakabura TPP (Extn.)	Chhattisgarh	Private	NPH	30	22.39159	82.55601
5	ACB (India) Ltd.	Kasaipali	Chhattisgarh	Private	NPH	270	22.39825	82.56457
6	ACB (India) Ltd.	SVPPL Renki	Chhattisgarh	Private	NPH	63	22.30998	82.51317
7	Adani Electricity Mumbai Limited	Adani Power Limited, Dhanu	Maharashtra	Private	NPH	500	19.98107	72.74518
8	Adani Power Limited	Adani Power Limited Raigarh	Chhattisgarh	Private	NPH	600	21.4424	83.1627
9	Adani Power Limited	Adani Power Limited Raipur	Chhattisgarh	Private	NPH	1370	21.44965	81.85342
10	Adani Power Limited	Kawai	Rajasthan	Private	NPH	1320	24.75847	76.73138
11	Adani Power Limited	Mundra TPS	Gujarat	Private	NPH	4620	22.83952	69.72133
12	Adani Power Limited	Tiroda	Maharashtra	Private	NPH	3300	21.40683	79.93091
13	Adani Power Limited Udupi	Udupi	Karnataka	Private	NPH	1200	13.16058	74.8037
14	Adhunik Power & Natural Resources Limied	Adhunik PNR Ltd.	Jharkhand	Private	NPH	540	22.84166	86.05453
15	Bajaj Energy Limited	Barkhera	UP	Private	NPH	90	28.45427	79.8063
16	Bajaj Energy Limited	Khamber Khera	UP	Private	NPH	90	27.99849	80.82671
17	Bajaj Energy Limited	Kundarki	UP	Private	NPH	90	28.69109	78.7838
18	Bajaj Energy Limited	Maqsoodapur	UP	Private	NPH	90	30.13383	77.46159
19	Bajaj Energy Limited	Utraula	UP	Private	NPH	90	27.31752	82.4184
20	Bharat Aluminium Company Limited	Bharat Aluminium Company Ltd	Chhattisgarh	Private	NPH	600	22.39	82.74
21	C.S.P.G.C.L.	Atal Bihari Vajpayee , Marwa	Chhattisgarh	State	NPH	1000	22.05	82.61
22	C.S.P.G.C.L.	"DSPM (Dr Shyama Prasad Mukherjee) Korba East"	Chhattisgarh	State	NPH	500	21.24662	81.65727
23	Calcutta Electric Supply Company Limited	Budge Budge Generation Station	West Bengal	Private	NPH	750	22.46689	88.13829
24	Calcutta Electric Supply Company Limited	Southern Generating Station	West Bengal	Private	NPH	135	22.54901	88.29173
25	Calcutta Electric Supply Company Limited	Titagarh Generation Station	West Bengal	Private	NPH	240	22.73167	88.3716

Sl no.	Name of Power Utility	Name of TPP/ TPS	State	Sector	PH/NPH	Capacity (MW)	Latitude	Longitude
26	Coastal Gujarat Power Limited	Mundra Umpp	Gujarat	Private	NPH	4000	22.82278	69.55278
27	D.V.C.	BTPS	Jharkhand	Central	NPH	500	23.78444	85.88055
28	D.V.C.	Chandrapura	Jharkhand	Central	NPH	500	23.7376	86.1273
29	D.V.C.	Durgapur Steel Thermal Power Station	West Bengal	Central	NPH	1000	23.58556	87.20861
30	D.V.C.	Koderma	Jharkhand	Central	NPH	1000	24.39008	85.56108
31	D.V.C.	Mejia	West Bengal	Central	NPH	2340	23.46028	87.13472
32	D.V.C.	Raghunathpur	West Bengal	Central	NPH	1200	23.62222	86.66389
33	DB Power Limited	DB Power , Badadarha	Chhattisgarh	Private	NPH	1200	21.91104	83.18794
34	Dhariwal Infrastructure Ltd.	Dhariwal Infrastructure Ltd.	Maharashtra	Private	NPH	600	20.01081	79.20362
35	Essar Power	Salaya	Gujarat	Private	NPH	1200	22.3049	69.7101
36	Gujarat State Electricity Corporation Limited	Gandhinagar	Gujarat	State	NPH	630	23.24972	72.67389
37	Gujarat State Electricity Corporation Limited	Sikka	Gujarat	State	NPH	500	22.42222	69.82694
38	Gujarat State Electricity Corporation Limited	Ukai	Gujarat	State	NPH	1110	21.21083	73.55722
39	Gujarat State Electricity Corporation Limited	Wanakbori	Gujarat	State	NPH	2270	22.8775	73.35973
40	Gmr Kamalanga Energy Ltd.	Gmr Kamalanga TPP	Odisha	Private	NPH	1050	20.5316	85.1607
41	Gmr Warora Energy Limited	Gmr Warora Energy Limited	Maharashtra	Private	NPH	600	20.27961	78.97651
42	Punjab State Power Corporation Limited	GVK Power (Goindwal Sahib)	Punjab	State	NPH	540	31.35909	75.13947
43	" Haryana Power Generation Corporation Limited"	Rajiv Gandhi TPS, Hisar	Haryana	State	NPH	1200	29.4	79.85
44	H.P.G.C.L.	Panipat	Haryana	State	NPH	710	29.3975	76.87556
45	H.P.G.C.L.	"Deen Bandhu Chhotu Ram TPS, Yamunanagar"	Haryana	State	NPH	600	30.10847	77.32522
46	Haldia Energy Limited	Haldia Energy Limited	West Bengal	Private	NPH	600	22.1026	88.1794
47	Hinduja National Power corporation Ltd	Hinduja National Power corporation , Visakhapatnam	Andhra Pradesh	Private	NPH	1040	17.67351	83.2164
48	Hiranmaye Energy Limited	Hiranmaye Energy Limited, Haldia	West Bengal	Private	NPH	300	22.08363	88.10484
49	IL & FS Tamil Nadu Power Company Ltd.	IL & FS Tamil Nadu Power Plant	Tamil Nadu	Private	NPH	1200	11.52616	79.75176

Sl no.	Name of Power Utility	Name of TPP/ TPS	State	Sector	PH/NPH	Capacity (MW)	Latitude	Longitude
50	India Power Corporation Ltd.	Dishergarh Power Station	West Bengal	Private	NPH	12	79.75176	86.85309
51	Jai Prakash Power Ventures Ltd.	Jaypee Bina Tpp	MP	Private	NPH	500	24.17634	78.19634
52	Jai Prakash Power Ventures Ltd.	Jaypee Nigrie Super Thermal Power Plant	MP	Private	NPH	1320	24.14516	81.91415
53	Jhabua Power Limited	Jhabua Power Limited	MP	Central	NPH	600	22.91591	74.68688
54	Jhabua Power Limited	Mahatma Gandhi	Haryana	Private	NPH	1320	28.48925	76.3557
55	Jindal India Thermal Power Ltd	Jindal India Thermal Power Ltd	Odisha	Private	NPH	1200	21.748	84.593
56	Jindal India Power Ltd	Shirpur Power Pvt Ltd	Maharashtra	Private	NPH	300	21.08591	74.51052
57	Jindal India Power Ltd	O.P.Jindal Super TPP (Stage-I)	Chhattisgarh	Private	NPH	1000	22.10444	83.45111
58	Jindal India Power Ltd	O.P.Jindal Super TPP(Stage-II)	Chhattisgarh	Private	NPH	2400	22.10444	83.45111
59	Jsw Energy Limited	Ratnagiri	Maharashtra	Private	NPH	300	17.29644	73.21236
60	K.P.C.L	Ballari	Karnataka	State	NPH	1700	15.19361	76.72111
61	K.P.C.L	Raichur	Karnataka	State	NPH	1720	16.212	77.34393
62	K.P.C.L	Yermarus Thermal Power Station	Karnataka	State	NPH	1600	16.29582	77.35811
63	Ksk Mahanadi Power Company Limited	KMPCL (Akaltara)	Chhattisgarh	Private	NPH	1800	21.5732	82.2403
64	Lalitpur Power Generation Company Limited	Lalitpur	UP	Private	NPH	1980	24.64876	78.47516
65	M.P.P.G.C.L.	Sanjay Gandhi	MP	State	NPH	1340	23.305	81.06416
66	M.P.P.G.C.L.	Satpura	MP	State	NPH	500	22.06974	78.17924
67	M.P.P.G.C.L.	Shree Singaji TPS	MP	State	NPH	2520	22.09764	76.53194
68	M.S.P.G.C.L.	Chandrapur	Maharashtra	State	NPH	2920	20.00667	79.28917
69	M.S.P.G.C.L.	Khaparkheda	Maharashtra	State	NPH	1340	21.28194	79.115
70	M.S.P.G.C.L.	Koradi	Maharashtra	State	NPH	2190	21.2378	79.11251
71	M.S.P.G.C.L.	Paras	Maharashtra	State	NPH	500	20.72191	76.81155
72	M.S.P.G.C.L.	Parli TPS	Maharashtra	State	NPH	750	18.90583	76.54333
73	Maruti Clean Coal and Power Limited	MCCPL Bandhakhar	Chhattisgarh	Private	NPH	300	22.34355	82.42779
74	MB Power Limited	Anuppur TPS	MP	Private	NPH	1250	23.06326	81.78127
75	Moxie Power Generation Ltd.	Mutiara	Tamil Nadu	Private	NPH	1200	8.906438	78.14113
76	MPL	Maithon RB TPP	Jharkhand	Private	NPH	1050	23.82102	86.75994
77	Nabha Power Limited	Rajpura	Punjab	Private	NPH	1400	30.48398	76.59395
78	NLC Tamilnadu Power Limited	NTPL Tuticorin Thermal Power Project	Tamil Nadu	Central	NPH	1000	8.76163	78.16887
79	NTPC Limited	Barauni	Bihar	Central	NPH	720	25.466	85.987
80	NTPC Limited	Barh Super	Bihar	Central	NPH	2640	25.48724	85.74767
81	NTPC Limited	Bhilai	Chhattisgarh	Central	NPH	500	21.18393	81.42365

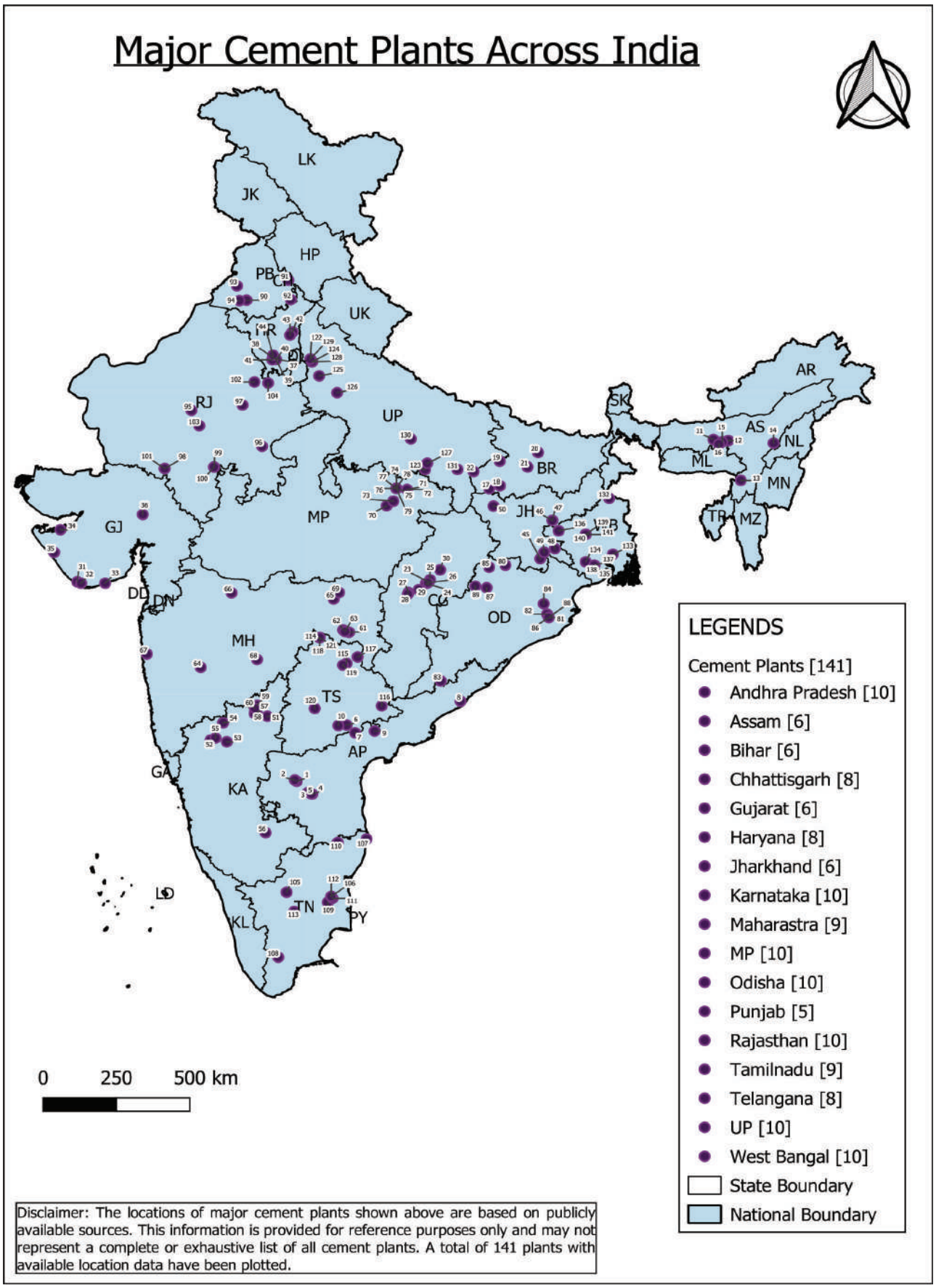
Sl no.	Name of Power Utility	Name of TPP/ TPS	State	Sector	PH/NPH	Capacity (MW)	Latitude	Longitude
82	NTPC Limited	Bongaigaon	Assam	Central	NPH	750	26.4545	90.3445
83	NTPC Limited	Brbcl Nabinagar	Bihar	Central	NPH	1000	22.25	82.35
84	NTPC Limited	Dadri	UP	Central	NPH	1820	28.59955	77.6083
85	NTPC Limited	Gadarwara Super	MP	Central	NPH	1600	22.921	78.7778
86	" Aravali Power Corporation Pvt Ltd. (NTPC-JV)"	Indira Gandhi TPS	Haryana	Central	NPH	1500	28.48578	76.37682
87	NTPC Limited	Muzaffarpur, Kanti	Bihar	Central	NPH	390	26.19493	85.30444
88	NTPC Limited	Khargone Super TPS	MP	Central	NPH	1320	22.05694	75.84389
89	NTPC Limited	Kudgi	Karnataka	Central	NPH	2400	16.4968	75.84265
90	NTPC Limited	Meja TPP	UP	Central	NPH	1320	25.1458	81.9406
91	NTPC Limited	Mouda Super TPS	Maharashtra	Central	NPH	2320	21.1047	79.235
92	NTPC Limited	NPGC Nabinagar	Bihar	Central	NPH	1980	24.776	84.158
93	NTPC Limited	Simhadri Super	Andhra Pradesh	Central	NPH	2000	17.59694	83.08751
94	NTPC Limited	Solapur Super TPS	Maharashtra	Central	NPH	1320	17.55458	75.98327
95	NTPC Limited	Tanda	UP	Central	NPH	1760	26.58916	82.60062
96	NTPC Limited	Telangana STPP	Telangana	Central	NPH	1600	18.71714	79.47353
97	NTPC Limited	Feroze Gandhai Unchachar	UP	Central	NPH	1550	25.91508	81.32707
98	NTPC Limited	Vallur	Tamil Nadu	Central	NPH	1500	13.2371	80.3023
99	OPG Power Generation Private Limited	OPG Power Generation Private Limited	Tamil Nadu	Private	NPH	414	13.43988	80.09873
100	P.S.P.C.L.	Guru Hargobind TPP, Lehra Mohabbat	Punjab	State	NPH	920	30.25897	75.16912
101	P.S.P.C.L.	Guru Gobind Singh TPP, Ropar	Punjab	State	NPH	840	31.04222	76.58389
102	Prayagraj Power Generation Company Limited	Payagraj TPS	UP	Private	NPH	1980	25.4358	81.84631
103	Rattan India Power Limited	Amravati TPS	Maharashtra	Private	NPH	1350	21.07276	77.90246
104	RKM Thermal Power Pvt Ltd.	Uchpinda Power Station	Chhattisgarh	Private	NPH	1440	21.88766	83.12067
105	Rosa Power Supply Company Limited	Rosa Phase-I	UP	Private	NPH	1200	27.82314	79.91594
106	RRVUNL	Chhabra	Rajasthan	State	NPH	1000	24.62056	77.03611
107	RRVUNL	Chhabra-2	Rajasthan	State	NPH	1320	24.6212	77.0364
108	RRVUNL	Kalisindh Super	Rajasthan	State	NPH	1200	26.04556	71.25361
109	RRVUNL	Kota Super	Rajasthan	State	NPH	1240	25.17139	75.815
110	RRVUNL	Suratgarh	Rajasthan	State	NPH	1500	29.18253	74.02238
111	Singareni Collieries Company Limited	Singareni TPP (Pegadapally)	Telangana	State	NPH	1200	17.54149	80.63444
112	SEL	Jindal Power Limited (Simhapuri Unit)	Andhra Pradesh	Private	NPH	600	14.2073	80.08636
113	SEPC Power Private Limited	SEPC Power Private Limited	Tamil Nadu	Private	NPH	525	8.4556	77.54538

Sl no.	Name of Power Utility	Name of TPP/ TPS	State	Sector	PH/NPH	Capacity (MW)	Latitude	Longitude
114	Spectrum Coal And Power Limited	Ratiza Tps	Chhattisgarh	Private	NPH	100	22.34001	82.49279
115	The Tata Power Company Limited	Jojobera	Jharkhand	Private	NPH	240	22.75583	86.24917
116	The Tata Power Company Limited	Trombay	Maharashtra	Private	NPH	750	19.0025	72.89833
117	T.S.G.E.N.C.O.	Bhadradri Thermal Power Station	Telangana	State	NPH	1080	18.143	80.4422
118	T.S.G.E.N.C.O.	Kakatia (Stage-I)	Telangana	State	NPH	1100	18.38389	79.82833
119	T.S.G.E.N.C.O.	Kakatia (Stage-II)	Telangana	State	NPH	0	18.02808	79.55191
120	T.S.G.E.N.C.O.	Kothagudem-(Stage VII)	Telangana	State	NPH	800	17.65261	80.69486
121	T.S.G.E.N.C.O.	Kothagudem-V	Telangana	State	NPH	1000	17.556	80.6144
122	T.S.G.E.N.C.O.	Kothagudem-VI	Telangana	State	NPH	0	17.556	80.6144
123	T.S.G.E.N.C.O.	Ramagundam B	Telangana	State	NPH	62.5	18.76972	79.4493
124	"Tenughat Vidhyut Nigam Limited "	Tenughat Thermal Power Station	Jharkhand	State	NPH	420	23.73212	85.75897
125	Talwandi Sabo Power Ltd.	Talwandi Sabo Power Ltd.	Punjab	Private	NPH	1980	25.15021	75.8425
126	Tamilnadu Power Generation Corporation Ltd.	Mettur - I	Tamil Nadu	State	NPH	840	11.77118	77.83
127	Tamilnadu Power Generation Corporation Ltd.	Mettur - II	Tamil Nadu	State	NPH	600	11.77154	77.82243
128	Tamilnadu Power Generation Corporation Ltd.	North Chennai-I	Tamil Nadu	State	NPH	1830	13.24626	80.32053
129	Tamilnadu Power Generation Corporation Ltd.	North Chennai-II	Tamil Nadu	State	NPH	0	13.24626	80.32053
130	Tamilnadu Power Generation Corporation Ltd.	Tuticorin Thermal Power Station	Tamil Nadu	State	NPH	1050	8.762475	78.17639
131	THDC India Limited	"Khurja Super Thermal Power Project "	UP	Central	NPH	660	28.14367	77.91071
132	Thermal Powertech Corporation Of India Limited	Sembcorp Energy India Limited Project-I	Andhra Pradesh	Private	NPH	1320	14.4426	79.98646
133	Thermal Powertech Corporation Of India Limited	Sembcorp Energy India Limited Project-II	Andhra Pradesh	Private	NPH	1320	14.35085	80.15141
134	Torent Power Ltd.	Sabarmati	Gujarat	Private	NPH	362	23.07	72.59
135	Trn Energy Pvt Ltd	TRN Power Plant, Raigarh	Chhattisgarh	Private	NPH	600	22.13103	83.26389
136	U.P.R.V.U.N.L.	Harduaganj 610 Mw	UP	State	NPH	1265	28.0049	78.0617
137	U.P.R.V.U.N.L.	Harduaganj Extn. 660 Mw	UP	State	NPH	0	28.01	78.0552
138	U.P.R.V.U.N.L.	Obra	UP	State	NPH	1000	24.44472	82.97806

Sl no.	Name of Power Utility	Name of TPP/ TPS	State	Sector	PH/NPH	Capacity (MW)	Latitude	Longitude
139	U.P.R.V.U.N.L.	Parichha	UP	State	NPH	920	25.51417	78.76
140	W.B.P.D.C.L	Bakreswar	West Bengal	State	NPH	1050	23.82861	87.45167
141	W.B.P.D.C.L	Sagardighi	West Bengal	State	NPH	1600	24.37889	88.09556
142	" Sai Wardha Power Generation Private Ltd"	Sai Wardha Power Ltd., Warora	Maharashtra	Private	NPH	540	20.74564	78.59093
143	Korba (Lanco Amarkantak) Power Limited	Korba Power Limited (Lanco Amarkantak)	Chhattisgarh	Private	NPH	600	22.68222	81.75322
144	Vedanta Limited	Vedanta Limited, Jharsuguda	Odisha	Private	NPH	600	21.8171	85.1557
145	JSW Energy Limited	Vijayanagar	Karnataka	Private	NPH	860	15.18422	76.66267
146	D.P.L	D.P.P.S.	West Bengal	State	NPH	550	23.69189	86.85513
147	Meenakshi Energy Limited	Thamminapatnam	Andhra Pradesh	Private	NPH	300	14.21308	80.09098
148	W.B.P.D.C.L	Bandel	West Bengal	State	NPH	270	22.99556	88.40361
149	W.B.P.D.C.L	Kolaghat	West Bengal	State	NPH	840	22.41667	87.87083
150	W.B.P.D.C.L	Santaldih	West Bengal	State	NPH	500	23.60222	86.46833
151	JSW Energy Limited	JSW Energy (Utkal) Limited	Odisha	Private	NPH	700	21.39146	83.55051
152	MAHAGENCO	Bhusawal TPS	Maharashtra	State	NPH	1870	20.97893	75.88253
153	SKS Power Generation Ltd. Binjkot	M/S Sarda Energy & Minerals Ltd, Binjkot	Chhattisgarh	Private	NPH	600	22.01585	83.21184
154	RRVUNL	Surtagarh Spercritical Thermal power plant	Rajasthan	State	NPH	1320	29.3276	73.8995
155	Mahan Energen Limited	Bandhoura	MP	Private	NPH	1200	23.995	82.41256
156	BLA Power Pvt.Ltd.	Niwari TPP	MP	Private	NPH	90	22.9601	78.7301
157	"M.S.P.G.C.L. "	Nashik TPS	Maharashtra	State	NPH	630	19.977292	73.866646
158	APGENCO	Sri Damodaram Sanjeeviah TPS	Andhra Pradesh	State	NPH	2400	14.341575	80.114264
159	Ideal Energy Projects Limited	Bela TPS	Maharashtra	Private	NPH	270	20.80399	79.05533
160	Shree Cement Limited	Shree Cement Limited TPS	Rajasthan	Private	NPH	300	26.0439	74.2338
161	C.S.P.G.C.L.	Hasdeo (Korba West)	Chhattisgarh	State	PH	1340	22.35945	82.75006
162	"Gujarat Mineral Development Corporation Limited"	Akrimota	Gujarat	State	PH	250	23.76978	68.64545
163	Gujarat State Electricity Corporation Limited	Bhavnagar Lignite Thermal Power Station, Padva	Gujarat	State	PH	500	21.5849	72.2221
164	Gujarat State Electricity Corporation Limited	Kutch Lignite	Gujarat	State	PH	150	23.66389	68.78361

Sl no.	Name of Power Utility	Name of TPP/ TPS	State	Sector	PH/NPH	Capacity (MW)	Latitude	Longitude
165	Gujarat Industries Power Company Limited	Surat Lignite	Gujarat	Private	PH	500	21.39441	73.10693
166	Korba Power Limited	Lanco Anpara ' C' TPS	UP	Private	PH	1200	24.20488	82.78325
167	Madhya Pradesh Power Generating Company Limited	Amarkantak	MP	State	PH	210	23.16444	81.63805
168	NLC India Limited	Barsingsar Lignite	Rajasthan	Central	PH	250	27.81917	73.20778
169	N.L.C.LTD	Neyveli - II Expn	Tamil Nadu	Central	PH	500	11.55778	79.44195
170	N.L.C.LTD	Neyveli - I Expn	Tamil Nadu	Central	PH	420	11.59278	79.47139
171	N.L.C.LTD	Neyveli New Thermal Power Station	Tamil Nadu	Central	PH	1000	11.59278	79.47139
172	N.L.C.LTD	Neyveli - II	Tamil Nadu	Central	PH	1470	11.55778	79.44195
173	NTPC Limited	Darlipalli Super TPS	Odisha	Central	PH	1600	21.8825	83.95861
174	NTPC Limited	Farakka Super	West Bengal	Central	PH	2100	24.77294	87.8963
175	NTPC Limited	Kahalgaon Super	Bihar	Central	PH	2340	25.23717	87.26723
176	NTPC Limited	Korba Super	Chhattisgarh	Central	PH	2600	22.38627	82.68142
177	NTPC Limited	Lara Super	Chhattisgarh	Central	PH	1600	21.90718	83.3979
178	NTPC Limited	North Karanpuara STP	Jharkhand	Central	PH	1320	23.8365	85.00941
179	NTPC Limited	Ramagundam	Telangana	Central	PH	2600	18.75556	79.46043
180	NTPC Limited	Rihand	UP	Central	PH	3000	24.0293	82.79022
181	NTPC Limited	Singrauli	UP	Central	PH	2000	24.10464	82.705
182	NTPC Limited	Sipat Super	Chhattisgarh	Central	PH	2980	22.13216	82.2907
183	NTPC Limited	Talcher-Kaniha	Odisha	Central	PH	3000	21.09662	85.07393
184	NTPC Limited	Vindhyachal	MP	Central	PH	4760	24.09701	82.67365
185	Reliance Power Limited	Sasan UMPP Power Limited	MP	Private	PH	3960	23.96556	82.625
186	RWPL	Jalipa Kapurdi	Rajasthan	Private	PH	1080	25.75001	71.38329
187	Taqa Neyveli Power Company Private Limited	TAQA Neyveli Power Plant Cuddalore	Tamil Nadu	Private	PH	250	11.7447	79.76802
188	Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited	Anpara Tps (A B D)	UP	State	PH	2630	24.20444	82.78912
189	O.P.G.C.L.	Ib Valley	Odisha	State	PH	1740	21.80256	83.86306

Annexure-2


Major Cement Plants Across India
LK
JK
HP
PB
UK
HR
RJ
UP
SK
AR
AS
NL
ML
MN
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MZ
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GJ
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0
250
500 km
LEGENDS
Cement Plants [141]
Andhra Pradesh [10]
Assam [6]
Bihar [6]
Chhattisgarh [8]
Gujarat [6]
Haryana [8]
Jharkhand [6]
Karnataka [10]
Maharastra [9]
MP [10]
Odisha [10]
Punjab [5]
Rajasthan [10]
Tamilnadu [9]
Telangana [8]
UP [10]
West Bangal [10]
State Boundary
National Boundary
Disclaimer: The locations of major cement plants shown above are based on publicly available sources. This information is provided for reference purposes only and may not represent a complete or exhaustive list of all cement plants. A total of 141 plants with available location data have been plotted.

List of 141 Cement Plants Plotted Above

As on 20.10.2025

Sl no.	Cement Plant	Location
1	UltraTech Cement Ltd (Andhra Pradesh Cement Works)	Tadipatri, Anantapur, Andhra Pradesh
2	Penna Cement Industries Ltd (Boyareddypalli Plant)	Anantapur, Andhra Pradesh
3	Dalmia Cement (Bharat) Ltd	Kadapa, Andhra Pradesh
4	Zuari Cement Ltd	Yerraguntla, Kadapa, Andhra Pradesh
5	The India Cements Ltd (Yerraguntla Plant)	Yerraguntla, Kadapa, Andhra Pradesh
6	Anjani Portland Cement Ltd	Nalgonda (border of AP/Telangana), Andhra Pradesh
7	Bhavya Cements Ltd	Guntur, Andhra Pradesh
8	Andhra Cements Company Ltd (Visakha Cement Works)	Visakhapatnam, Andhra Pradesh
9	KCP Ltd (Cement Unit-II)	Muktyala, Krishna District, Andhra Pradesh
10	Sagar Cements Ltd	Mattampally, Suryapet (AP/Telangana border), Andhra Pradesh
11	Topcem Amingaon Cement Plant, Amingaon (Guwahati)	Kamrup, Assam
12	Alsthom Industries / Dalmia Cement, Baghjap (Morigaon)	Morigaon, Assam
13	Barak Valley Cements, Badarpur Plant	Karimganj, Assam
14	Cement Corporation of India, Bokajan	Karbi Anglong, Assam
15	Star Cement, Guwahati (Sonapur)	Kamrup, Assam
16	Purbachal Cement, Sarutari	Kamrup, Assam
17	Dalmia DSP (formerly Kalyanpur Cement), Banjari	Bunjar / Rohtas district, Bihar
18	Shree Cement, Aurangabad Plant	Aurangabad district, Bihar
19	Buxar Cement Plant (JK Cement)	Buxar district, Bihar
20	Samastipur Cement Plant (Duraton Samastipur)	Samastipur district, Bihar
21	Patliputra Cement Plant (UltraTech)	Patliputra , Bihar
22	Kanodia Cement, Bhabua Plant	Bhabua, Kaimur district, Bihar
23	Shree Cement Raipur Cement Plant	Raipur, Chhattisgarh
24	UltraTech Cement, Hirmi Cement Works	Hirmi, Chhattisgarh
25	Ambuja Cements, Bhatapara Plant	Rawan / Bhatapara, Chhattisgarh
26	UltraTech Rawan Cement Plant	Rawan, Chhattisgarh
27	ACC Jamul Cement Plant	Jamul, Chhattisgarh
28	Jaypee Bhilai Cement Plant	Bhilai, Chhattisgarh
29	Cement Corporation of India, Mandhar Cement Plant	Mandhar, Chhattisgarh
30	Cement Corporation of India, Akaltara (grinding plant)	Akaltara, Chhattisgarh

Sl no.	Cement Plant	Location
31	Siddhi Cement Sutrapada Cement Plant	Sutrapada, Gujarat, Gujarat
32	Ambuja Cement Plant, Kodinar (Ambujanagar)	Junagadh district, Gujarat
33	UltraTech Gujarat Cement Works	Amreli district, Gujarat
34	Shree Digvijay Cement – Sikka Cement Plant	Sikka, Gujarat, Gujarat
35	Saurashtra Cement Ranavav Cement Plant	Porbandar, Gujarat, Gujarat
36	JK Lakshmi, Kalol Cement Plant	Gandhinagar district, Gujarat
37	JK Cement – Jhajjar Cement Plant	Jhajjar, Haryana
38	JK Lakshmi Cement – Jharli Cement Plant	Jhajjar, Haryana
39	UltraTech Cement – Jhajjar (Jharli)	Jhajjar, Haryana
40	Wonder Cement – Jhajjar Cement Plant	Jhajjar, Haryana
41	Nuvoco Vistas Bhiwani Cement Plant	Bhiwani, Haryana
42	Shree Cement – Panipat Cement Plant	Panipat, Haryana
43	UltraTech Panipat Cement Plant	Panipat, Haryana
44	Cement Corporation of India – Charkhi Dadri Cement Plant	Charkhi Dadri, Haryana
45	ACC Chaibasa Cement Works	Jhinkpani, West Singhbhum, Jharkhand
46	ACC Sindri Cement Works (Grinding Unit)	Sindri, Dhanbad, Jharkhand
47	Dalmia Cement (Bharat) Ltd – Bokaro Cement Manufacturing Works	Gorabali, Bokaro Industrial Area, Jharkhand
48	Nuvoco Vistas – Jojobera Cement Plant	Jojobera, East Singhbhum, Jharkhand
49	Shree Cement Ltd – Jharkhand Cement Plant	Hansda-Burudih, Seraikela Kharsawan, Jharkhand
50	Japla Cement Factory	Japla, Palamu, Jharkhand
51	ACC Wadi Cement Plant	Wadi, Kalaburagi, Karnataka
52	Dalmia Cement Bharat Ltd	Yadwad, Belagavi, Karnataka
53	UltraTech Nrupathunga Cement Plant	Nrupathunga, Bagalkot, Karnataka
54	Shree Cement Ltd (Kodla Plant)	Kodla, Bagalkot, Karnataka
55	JK Cement Works	Muddapur, Bagalkot, Karnataka
56	Heidelberg Cement India Ltd	Tumakuru, Karnataka
57	Cement Corporation of India Ltd (Kurkunta)	Kurkunta, Kalaburagi, Karnataka
58	Vasavadatta Cement (BK Birla Group)	Sedam, Kalaburagi, Karnataka
59	Kalburgi Cement Pvt Ltd (Bharathi Cement)	Chatrasala, Kalaburagi, Karnataka
60	Orient Cement Ltd (Chittapur Plant)	Chittapur, Kalaburagi, Karnataka
61	UltraTech Cement Ltd (Awarpur Works)	Awarpur, Chandrapur, Maharastra
62	UltraTech Cement Ltd (Chanda Works)	Ghugus, Chandrapur, Maharastra
63	Ambuja Cement Ltd (Maratha Works)	Upparwahi, Chandrapur, Maharastra
64	Shree Cement Ltd (Pune Grinding Unit)	Patas, Pune, Maharastra
65	RCCPL Pvt Ltd (Butibori Plant)	Butibori, Nagpur, Maharastra
66	Orient Cement Ltd (Jalgaon Plant)	Jalgaon, Jalgaon, Maharastra
67	Penna Cement Industries Ltd (Kangaon)	Kangaon, Raigad, Maharastra
68	The India Cements Ltd (Parli Unit)	Parli, Beed, Maharastra

Sl no.	Cement Plant	Location
69	UltraTech Cement Ltd (Nagpur Unit)	Nagpur, Nagpur, Maharastra
70	ACC Ametha Cement Plant	Ametha, Khandwa, MP
71	Bela Cement Works (UltraTech Cement Ltd.)	Jaypeepuram, Rewa, MP
72	Jaypee Rewa Cement Plant	Jaypeepuram, Rewa, MP
73	Maihar Cement Plant (MP Birla Group)	Sarlanagar, Maihar, Satna, MP
74	Birla Vikas Cement (MP Birla Group)	Satna, MP
75	KJS Cement Ltd.	Satna, MP
76	Prism Cement Plant	Rajdeep, Rewa Road, Satna, MP
77	Reliance Cement Co. Pvt. Ltd. (Maihar Cement)	Bharouli, Satna, MP
78	Sidhi Cement Works (UltraTech Cement Ltd.)	Bharatpur, Sidhi, MP
79	Vikram Cement Plant (UltraTech Cement Ltd.)	Khor, Neemuch, MP
80	OCL India Rajgangpur Cement Plant	Rajgangpur, Sundargarh, Odisha
81	Ambuja Cements Odisha Cement Plant	Near Cuttack, Odisha
82	Dalmia Cement Kapilas Cement Plant	Amiyajhari, Jajpur, Odisha
83	Toshali Cement Ampavalli Cement Plant	Ampavalli, Koraput, Odisha
84	Jajpur Cements Pvt. Ltd.	Kalinganagar, Jajpur, Odisha
85	Shiva Cement Ltd.	Kutra, Sundargarh, Odisha
86	Odisha Cement Plant (Shree Cement Ltd.)	Near Cuttack, Odisha
87	Visaka Cement Works	Sambalpur, Odisha
88	JK Lakshmi Cement Ltd.	Near Cuttack, Odisha
89	Bargarh Cement Works	Bargarh, Odisha
90	UltraTech Bathinda Cement Plant	Bathinda, Punjab
91	Ambuja Cements Ropar Cement Plant	Lodhimajra, Rupnagar, Punjab
92	Asia Fine Cements Rajpura Cement Plant	Rajpura, Punjab
93	Bajaj Cement Factory	Faridkot, Punjab
94	Ambuja Fly Ash Cement Plant	Bathinda, Punjab
95	UltraTech Cement Kharia Khangar Plant	Kharia Khangar, Pali, Rajasthan
96	ACC Lakheri Cement Plant	Lakheri, Bundi, Rajasthan
97	Shree Cement Jaipur Plant	Jaipur, Rajasthan
98	JK Lakshmi Cement Plant	Sirohi, Rajasthan
99	Nuvoco Vistas Chittor Cement Plant	Chittorgarh, Rajasthan
100	Wonder Cement Plant	Nimbahera, Chittorgarh, Rajasthan
101	JK Cement Works Gotan	Gotan, Nagaur, Rajasthan
102	UltraTech Cement Neem Ka Thana Plant	Neem Ka Thana, Sikar, Rajasthan
103	Wonder Cement Parewar Plant	Parewar, Jaisalmer, Rajasthan
104	UltraTech Cement Kotputli Plant	Kotputli, Alwar, Rajasthan
105	India Cements Sankari West Plant	Sankari, Salem, Tamilnadu
106	Ramco Cements Alathiyur Plant	Alathiyur, Ariyalur, Tamilnadu
107	India Cements Athipattu Plant	Athipattu, Chennai, Tamilnadu

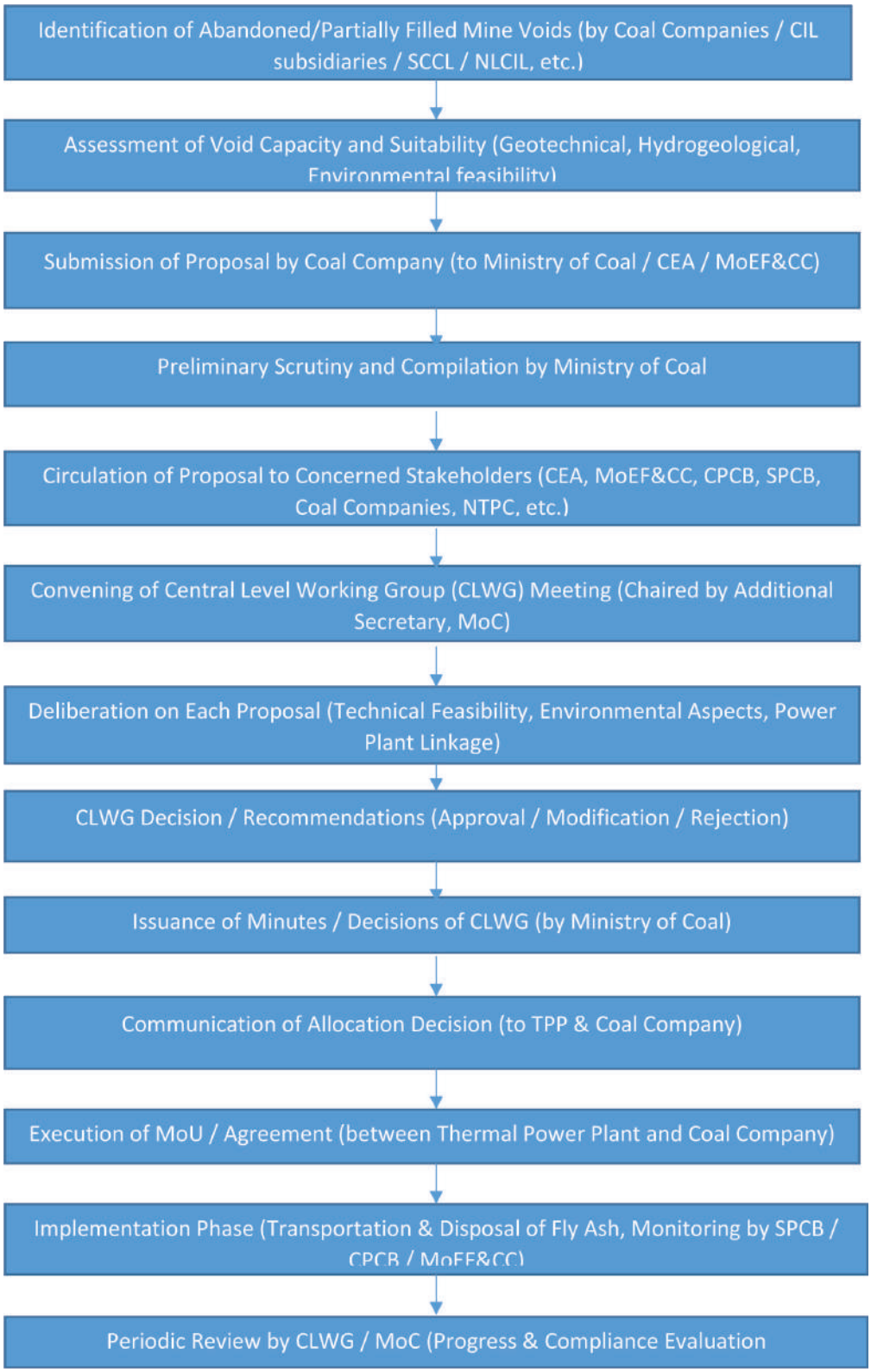
Sl no.	Cement Plant	Location
108	Tamil Nadu Cement Corporation (TANCEM)	Alangulam, Virudhunagar, Tamilnadu
109	TANCEM Ariyalur Cement Plant	Ariyalur, Ariyalur, Tamilnadu
110	L&T Arakonam Cement Plant	Arakonam, Vellore, Tamilnadu
111	UltraTech Cement Reddipalayam Plant	Reddipalayam, Ariyalur, Tamilnadu
112	UltraTech Cement Alathiyur Plant	Alathiyur, Ariyalur, Tamilnadu
113	Chettinad Cement Puliyur Plant	Puliyur, Karur, Tamilnadu
114	UltraTech Cement (Basundhara Plant)	Basundhara, Adilabad, Telangana
115	Penna Cement Industries Ltd	Mancherial, Telangana
116	Vasavadatta Cement (BK Birla Group)	Kothagudem, Telangana
117	Shree Cement Ltd – Telangana Plant	Sirpur, Komaram Bheem, Telangana
118	Orient Cement Ltd (Adilabad Plant)	Adilabad, Telangana
119	Lafarge India Cement Plant	Ramagundam, Telangana
120	Chettinad Cement Plant	Hyderabad (Grinding Unit), Telangana
121	Cement Corporation of India (CCI)	Basundhara, Adilabad, Telangana
122	UltraTech Dadri Cement Plant	Salarpur Khadar, Gautam Buddh Nagar, UP
123	Jaypee Sadwa Khurd Cement Plant	Sadwa Khurd, Prayagraj, UP
124	Kanodia Cement Sikandarabad Plant	Sikandarabad, Bulandshahr, UP
125	Wonder Cement Aligarh Plant	Aligarh, Aligarh, UP
126	Shree Cement Etah Plant	Etah, Etah, UP
127	JK Cement Prayagraj Plant	Prayagraj, Prayagraj, UP
128	UltraTech Cement Sikandrabad Plant	Sikandrabad, Bulandshahr, UP
129	Ambuja Cement Dadri Plant	Dadri, Gautam Buddh Nagar, UP
130	Visaka Cement Raebareli Plant	Raebareli, Raebareli, UP
131	Chunar Cement Factory	Chunar, Mirzapur, UP
132	UltraTech Sonar Bangla Cement Works	Dhalo, Murshidabad, West Bangal
133	Ambuja Cements Sankrail Plant	Sankrail, Howrah, West Bangal
134	ACC Kharagpur Cement Plant	Kharagpur, Paschim Medinipur, West Bangal
135	JSW Cement Salboni Plant	Salboni, Paschim Medinipur, West Bangal
136	Shree Cement Purulia Plant	Purulia, West Bangal
137	OCL India Medinipur Plant	Medinipur, Paschim Medinipur, West Bangal
138	Visaka Cement Salboni Plant	Salboni, Paschim Medinipur, West Bangal
139	Bharat Hi-Tech Cement Pvt. Ltd.	Durgapur, Paschim Bardhaman, West Bangal
140	Barak Valley Cements	Durgapur, Paschim Bardhaman, West Bangal
141	Bharat Hi-Tech Cement Pvt. Ltd.	Durgapur, Paschim Bardhaman, West Bangal

Note : Additionally, the Department for Promotion of Industry and Internal Trade (DPIIT) maintains a nationwide list of cement plants, which can be accessed at:

https://eaindustry.nic.in/cement/report1.asp

Annexure-3

Procedure for allocation of abandoned mine Void by CLWG for the disposal of fly ash



List of Various coal mines allotted to different TPPs (As per data available in CEA through MoC)

A. List of mines allotted to different TPPs through CLWG meetings

Sl.No.	Company/ Subsidiary	Name of Mine	Total TPPS	Name of TPPS	CLWG/ Non- CLWG	Void Volume allocated (Lakh Cubic meter)
1	MCL	Jagannath OC, Quarry IV	2	M/s Vedanta Limited	CLWG	64.3
				JITPL	CLWG	60
2	ECL	Parbelia Colliery (UG),	1	DVC- RTPS	CLWG	3.5
3	ECL	Dubeswari (UG)	1	DVC- RTPS	CLWG	1
4	ECL	Nasramuda (UG)	1	DVC- RTPS	CLWG	1.09
5	ECL	Kunustoria (UG)	1	DVC- DSTPS	CLWG	2
6	ECL	Ningha Mines (UG)	1	DVC- DSTPS	CLWG	10
7	ECL	Pandebeshwar Mines (UG)	1	DVC- DSTPS	CLWG	2.5
8	ECL	Satgram Incline Colliery (UG)	1	DVC-MTPS	CLWG	0.01
9	SECL	Dugga	1	NTPC, Darlipalli	CLWG	32.33
10	SECL	Bishrampur OC	1	NTPC Darlipalli	CLWG	3.29
11	SECL	Manikpur, western quarry (Korba OC)	1	NTPC Darlipalli	CLWG	0
12	SECL	Baiga OCM, Sohagpur area	1	Amarkantak TPS (MPPGCL)	CLWG	5.0
13	SECL	Trench ABCD, Sharda OCM	1	Amarkantak TPS (MPPGCL)	CLWG	8.0
14	SECL	Trench-3 patch, Sharda OCM	1	Amarkantak TPS (MPPGCL)	CLWG	11.0
15	SECL	Mini OCM - Dry patch & SISF Base camp of Govinda Mine, J&K area	1	M/S M B Power (MP)	CLWG	25.0
16	NCL	Gorbi minePit-1	2	NTPC- Singrauli	CLWG	60
17	NCL	Gorbi mine (Pit – 2)	2	NTPC Vindhyachal	CLWG	80
				NTPC- Singrauli	CLWG	

Sl.No.	Company/ Subsidiary	Name of Mine	Total TPPS	Name of TPPS	CLWG/ Non- CLWG	Void Volume allocated (Lakh Cubic meter)
18	NCL	Gorbi mine (Pit – 3)	1	Anpara Thermal Project- UPRVUNL	CLWG	130
19	NCL	Krishnashila				
	1	NTPC- Singrauli	CLWG			
20	CCL	Dakra-Bukbuka mine	1	NTPC (Patratu TPP)	CLWG	325
21	WCL	Sarni (UG)	1	MPPGCL- STPS	CLWG	4.5
22	ECL	Spot 1, 2 & 3 of Madhabpur OC	1	DVC- DSTPS	CLWG	15

Note:-

1. As indicated at Serial No. 19, the estimated life span of the mine is 7 years, extending up to 2030
2. As per the decisions recorded in the Minutes of the 11th Meeting of the Central Level Working Group, NTPC Darlipali has been approved to utilize 40 LCM of void space in Manikpur Mine, SECL, for fly ash disposal, from the void space allocated to NTPC-Sipat and NTPC-Korba TPPs.
3. It has also been approved that NTPC Darlipali will utilize 4 LCM of void space in Bishrampur Mine, SECL, for fly ash disposal, from the void space allocated to NTPC-Sipat , NTPC Korba and NTPC-Lara TPPs.

B. List of mine allotted to various TPPs prior to CLWG

Sl.No.	Company/ Subsidiary	Name of Mine	Total TPPS	Name of TPPS	CLWG/ Non- CLWG	Void Volume allocated (Lakh Cubic meter)
1	MCL	South Balanda Q-2 & 3	1	TTPS (NTPC)	Non- CLWG	147.3
2	MCL	Jagannath OC, Quarry IV	2	Bhusan steel	Non- CLWG	0
				TFL	Non- CLWG	105.8
3	MCL	Jagannath OC, Quarry VII	1	TTPS (NTPC)	Non- CLWG	39.6
4	MCL	Jagannath OC, Quarry VIII	1	TTPS (NTPC)	Non- CLWG	178
5	MCL	Bharatpur	1	Nalco	Non- CLWG	139
6	MCL	South Balanda Q-I	1	NBVL	Non- CLWG	8.83
7	ECL	Pusai	1	MPL, Maithon	Non- CLWG	12
8	ECL	Lachipur	1	DVC- DSTPS	Non- CLWG	3.5
9	ECL	Naba Kajora	1	DVC- DSTPS	Non- CLWG	4
10	SECL	Surakachhar 3&4 pit (Korba CG)	1	NTPC, Korba	Non- CLWG	3.29
11	SECL	ShardaOC (OPQR patch)	2	Amarkantak TPS (MPPGCL)	Non- CLWG	1.6
				M/S M B Power (MP)	Non- CLWG	9.19
12	SECL	Jamuna OC (Anuppur MP)	1	M/S M B Power (MP)	Non- CLWG	12.00
13	SECL	Dugga	4	NTPC Korba	Non- CLWG	42.66
				NTPC Sipat	Non- CLWG	48.9
				NTPC Lara	Non- CLWG	26.25
				Atal Bihari Vajpaye Thermal Power station, Mandwa	Non- CLWG	16.41
14	SECL	Bishrampur OC	4	NTPC Korba	Non- CLWG	4.35
				NTPC Sipat	Non- CLWG	4.99
				NTPC Lara	Non- CLWG	2.68
				Atal Bihari Vajpaye Thermal Power station, Mandwa	Non- CLWG	1.67
15	SECL	Chahai	1	Amarkantak TPS (MPPGCL)	Non- CLWG	1.5

Sl.No.	Company/ Subsidiary	Name of Mine	Total TPPS	Name of TPPS	CLWG/ Non- CLWG	Void Volume allocated (Lakh Cubic meter)
16	SECL	Domnara OC	4	DB Ltd.	Non- CLWG	0.208907
				SKS Power generation	Non- CLWG	0.1044534
				TRN Energy Pvt. Ltd	Non- CLWG	0.1044534
				MSP Steel & power ltd.	Non- CLWG	0.00766
				Singhal Enterprises Pvt. Ltd.	Non- CLWG	0.00452
17	SECL	Manikpur, western quarry (Korba OC)	6	NTPC Korba	Non- CLWG	105.00
				CSPGCL	Non- CLWG	105.00
				Balco	Non- CLWG	16.86
				NTPC sipat	Non- CLWG	28.88
				ACB India	Non- CLWG	2.61
				Lanco	Non- CLWG	5.81
				Maruti clean coal	Non- CLWG	5.81
18	BCCL	Murlidih (Cluster-XIII)	1	Chandrapura Thermal Power plant (CTPP), DVC	Non- CLWG	1.5
19	NCL	Gorbi minePit-1	1	NTPC Vindhyachal	Non- CLWG	140

List of mines that are suitable/available/ will be available in next 3 years for the disposal of fly ash

Sl.no	Name of the Subsidiary	Name of mine	Type of Mine	Remarks
1.	ECL	Khas Kajore	UG	Mines available for Fly/ Bottom Ash Filling
2.	ECL	Jambad	UG	
3.	ECL	Parascole East	UG	
4.	ECL	Central Kajore	UG	
5.	WCL	Dhorwasa	OC	
6.	ECL	Lakhimata Colliery	UG	Mines available in next 3 yrs for Fly/Bottom ash filling
7.	ECL	Siduli Colliery	UG	
8.	ECL	Chora Pit 7 & 9	UG	
9.	ECL	Chora Pit 10	UG	
10.	ECL	Lower Kenda Colliery	UG	
11.	WCL	Sarni	UG	Mine already available for Fly/Bottom ash disposal
12.	CCL (CIL)	Dakra Bukbuka	OC	Mine will be available in 3yrs for Fly Ash disposal. Mine will be available for fly ash disposal from 2027-28 onwards. Presently mine is in operation
13.	SECL	Kusmunda OCP	OC	Mines available for Fly/ Bottom Ash Filling
14.	SECL	Baroud OCP	OC	

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