

Waste Reduction Through a Scheme

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Abstract

The article focuses on the Gobardhan scheme as it addresses the issue of waste reduction & management. In the beginning, it gives a snap shot of the scheme. This is followed by the dimensions of the scheme in terms of environment & economy.

The article peeps into the status of bio gas installation till 2024 & the current status of registered plants as in the year 2024. The article aspires that the scheme expands & reaches to the masses while contributing to waste management. Simultaneously, it aspires economic growth to the beneficiaries & thereby ensuring the successful implementation of the scheme by the Ministry of Jal Shakti.

Keywords: Gobardhan, Jal Shakti, Waste Management.

INTRODUCTION

The GOBARDHAN scheme revolves around the pivots such as contribution of cattle waste-food waste, agricultural waste to biogas plant as these are provided under provisions in GOBARDHAN scheme.

The Galvanizing Organic Bio-Agro Initiative (GOBARDhan) is a scheme that covers the entire cluster of schemes, programmes & policies that promote the conversion of organic waste like cattle dung, agricultural waste, biogas, CBG and Bio CNG. The scheme is coordinated by the department of Drinking Water and Sanitation, Ministry of Jal Shakti.

The scheme promotes circular economy, eco-friendly fuels, effective waste management, protection of health and environment, reduction of Green House Gases (GHG) emission, increasing employment, saving foreign exchange, generation of organic manure and improving the savings.

The scheme promises to build 500 'waste to wealth' plants. These plants will include 200 compressed biogas plants, 75 plants in urban areas and 300 cluster based plants.

Literature at a snap shot¹⁻¹¹

As per the budget programme of 2023-24, proper fiscal support will be given for biomass collection and distribution of bio manure. To avoid taxes from

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being imposed on blended CNG, excise study has been exempted on GST-paid CNG.

The following steps were taken by the government to improve the performances in the sector under the scheme.

CBG plants were included in the list of activities meant for trading of carbon credits under the bilateral/cooperative approaches as on 17th February, 2023.

From 2nd February 2023, central excise duty was exempted from CNG blended CBG plants to prevent double taxation.

Fertiliser Control Order (FCO) amendment was also done regarding the sales of Fermented Organic Manure, Liquid Fermented Organic Manure for a period of three years

The Market Development Scheme (MDA) scheme was approved to promote the sale of FOM/ LFOM

The CBG-CGD synchronisation scheme was extended for a period of 10 years up to 2024

The National Bio-fuel Coordination Committee (NBCC) approved the phase wise introduction of mandatory 5% CBG blending to strengthen the production of CBG

The Unified Registration Portal for GOBARDhan was finally developed by the Department of Drinking Water and Sanitation. It was launched on June 1, 2023. This was done to properly register the CBG and biogas plants nationwide.

Until now, 536 CBG plants and 1193 Biogas plants have been registered on the portal. Functionality Assessment Module and Bank loan Module were also included to track important aspects of the plants.

The following table represents the number of biogas plants installed across all the states and union territories of the country as per the energy statistics of India as on 2024.

Table 1: Status of Biogas installation as in 20241-6

States / Union Territories	Biogas Plants	Waste to Energy(MW) (Energy production)
Andhra Pradesh	268628	29.20
Arunachal Pradesh	3621	NA
Assam	139414	NA
Bihar	130081	1.32
Chhattisgarh	60368	0.41
Goa	4245	NA
Gujarat	435862	25.93
Haryana	64056	7.57
Himachal Pradesh	47718	1.00
Jammu & Kashmir	3201	NA
Jharkhand	7890	NA
Karnataka	515243	13.85
Kerala	154349	0.23
Ladakh	0	NA
Madhya Pradesh	381237	12.19
Maharashtra	935480	43.70
Manipur	2128	NA
Meghalaya	11156	NA
Mizoram	5857	NA
Nagaland	7953	NA

States / Union Territories	Biogas Plants	Waste to Energy(MW) (Energy production)
Odisha	271848	NA
Punjab	187980	15.37
Rajasthan	72906	3.83
Sikkim	9044	NA
Tamil Nadu	224083	24.65
Telangana	316727	14.47
Tripura	3744	NA
Uttar Pradesh	441306	98.47
Uttarakhand	365352	9.22
West Bengal	1216	4.48
Andaman & Nicobar	97	NA
Chandigarh	169	NA
Dadar & Nagar Haveli	681	NA
Daman & Diu	0	NA
Delhi	578	NA
Lakshadweep	0	NA
Puducherry	17541	NA
Total	50,91,759	306

As per the Ministry of Jal Shakti, Department of Drinking Water & Sanitation\GOBARdhan scheme, the following table shows the number of registered CBG/Bio CNG Plants.

Table 2: Status of registered plants in India¹⁻⁶

State/UT	Yet to start construction	Construction in progress	Completed	Functional	Total
A & N Islands	0	0	0	0	0
Andhra Pradesh	0	0	1	1	2
Arunachal Pradesh	0	0	0	0	0
Assam	14	1	4	20	39
Bihar	3	13	13	8	37
Chandigarh	0	0	0	0	0
Chhattisgarh	19	80	1	280	380
D & N Haveli and Daman & Diu	0	0	0	0	0
Delhi	0	0	0	0	0
Goa	0	2	0	0	2
Gujarat	5	5	2	41	53
Haryana	5	14	1	15	35
Himachal Pradesh	8	1	2	7	18
Jammu & Kashmir	0	5	4	11	20

State/UT	Yet to start construction	Construction in progress	Completed	Functional	Total
Jharkhand	0	18	1	27	46
Karnatka	16	6	1	62	85
Kerala	1	5	3	19	28
Ladakh	0	0	0	0	0
Lakshadweep	0	0	0	0	0
Madhya Pradesh	2	55	28	99	184
Maharashtra	8	19	15	9	51
Manipur	1	0	0	0	1
Meghalaya	0	0	0	0	0
Mizoram	0	0	0	0	0
Nagaland	1	0	0	0	1
Odisha	0	0	0	0	0
Puducherry	0	0	0	2	2
Punjab	1	2	1	22	26
Rajasthan	3	15	2	10	30
Sikkim	0	0	0	0	0
Tamil and Nadu	1	14	9	16	40
Telangana	0	1	1	34	36
Tripura	0	0	0	16	16
Uttar Pradesh	9	17	6	99	131
Uttarakhand	0	3	5	14	22
West Bengal	2	9	1	7	19
Total	22	285	101	819	1304

For Waste to energy plants, financial assistance is provided by MNRE. MNRE provides a capital subsidy of Rs. 1 crore per 12000 cubic metres of biogas per day. For CBG, a subsidy of Rs. 4 crore (40 millions) for 4800 kg CBG per day is provided.

DISCUSSION

It can be seen that regarding generating energy from waste, the state of Uttar Pradesh leads the list with 98.4 Mega-Watts (MW) production followed by the state of Maharashtra with 43.7 Mega-Watts (MW) productions.

Similarly, the lowest two states with waste to energy production are Chhatisgarh with 0.41 MW & Kerala with 0.23 MW.

Further, regarding the status of registered Bio-gas plants, Chhatisgarh leads the list among the states with 380 plants & that is way ahead from

the state of Madhya Pradesh with 184 plants. This shows the link between the efforts of the previous state government with the promotion of cow dung.

CONCLUSION

The GOBARDHAN scheme has a long way to go as evident from the energy production from waste & the status of registered bio gas plants. There is wide variation among the states as some states have yet to start the energy production initiate the process of registered bio gas plants.

As the numbers of domesticated live stocks continue to reduce across states, other states should follow the steps of Chhatisgarh regarding improving the registered number of bio gas plants. Similarly, emulating the efforts of the state of Uttar Pradesh regarding energy production from waste by other states would help the nation to galvanize the scheme.

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Conflict of Interest

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