

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
LOK SABHA
STARRED QUESTION NO. 361
TO BE ANSWERED ON 19/03/2020.

BIO-GAS PLANTS

+*361. SHRI SUMEDHANAND SARASWATI

Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state: -

- (a) the details of schemes formulated by the Government to explore the potential of bio-energy in the country along with the status of electricity generation through the said energy resources, State-wise;
- (b) whether the bio-energy plants in the rural areas of the country are functional or lying dysfunctional, the details thereof;
- (c) whether the Government proposes to increase the number of bio-gas plants in the country, if so, the details thereof and if not, the reasons therefor;
- (d) whether the Government is running/implementing any scheme to set up bio-gas plant in each house of the farmers of the country; and
- (e) if so, the details thereof and if not, the reasons therefor?

ANSWER

THE MINISTER OF STATE (I/C) FOR NEW & RENEWABLE ENERGY, POWER and MoS for
SKILL DEVELOPMENT AND ENTREPRENEURSHIP

(SHRI R.K. SINGH)

(a) to (e) A statement is laid on the Table of the House.

Statement referred to in reply to parts (a) to (e) of the Lok Sabha Starred Question No. 361 to be answered on 19.03.2020 regarding “Bio-gas Plants”

(a) : The Ministry of New and Renewable Energy (MNRE) is implementing the following schemes for harnessing Bio-Energy potential of the country, in form of Biogas, BioCNG and Power:

- (i) New National Biogas and Organic Manure Programme (NNBOMP);
- (ii) Biogas based Power Generation (Off-grid) and Thermal Energy Application Programme (BPGTP);
- (iii) Scheme to support promotion of Biomass based Cogeneration in Sugar Mills and Other Industries in the Country;
- (iv) Programme on Energy from Urban, Industrial, Agricultural Wastes/ Residues and Municipal Solid Waste.

Under the above schemes, MNRE provides Central Financial Assistance (CFA) and other fiscal incentives for setting up Bio-Energy projects/ plants besides providing support for programme implementation, publicity & information dissemination, training, R&D etc. The State / UT-wise details of the Bio-Energy projects installed for power/ electricity generation are given in **Annexure-I**.

(b): The technologies for recovery of Bio-energy in form of Biogas, BioCNG and Power are well established. With sustained supply of requisite quality feedstock and proper operation & maintenance of plants on regular basis, these plants function properly and efficiently. The Evaluation report of grid connected biomass power, bagasse cogeneration and Non-bagasse cogeneration in Industries scheme implemented during 12th Plan period which was submitted in December, 2017 indicated an overall functionality rate of about 83% for the surveyed Biomass and Waste to Energy plants. The state-wise details of operational and non-operational Biomass and Waste to Energy plants as per the above mentioned Evaluation Report are given in **Annexure-II**.

Further, as per an independent third party evaluation study conducted in Ten States for the National Biogas and Manure Management Programme (NBMMP), which was operational from 2012-13 to 2016-17 (12th Five Year Plan Period), an overall functionality rate of about 96.5 % has been observed for the surveyed biogas plants. The state/UT-wise details of operational and non-operational plants under the NBMMP have been given in **Annexure-III**.

(c) to (e): The Ministry of New and Renewable Energy has been implementing Central Sector Scheme, the New National Biogas and Organic Manure Programme (NNBOMP) for setting up small biogas plants, based on mainly cattle dung and other organic wastes mixed with it, for households including farmers in remote, rural and semi-urban areas of the country. Under the NNBOMP, a target of setting up 76,000 small biogas plants has been fixed for the current year, 2019-20. The State/UT-wise details of targets fixed for the current year are given in **Annexure-IV**.

Further, the MNRE has also been implementing two other schemes namely, Programme on Energy from Urban, Industrial, Agricultural Wastes/ Residues and Municipal Solid Waste and Biogas based Power Generation (Off-Grid) and Thermal energy applications Programme (BPGTP) for promotion of Biogas generation to increase the numbers of medium and large size biogas plants in the country. The State/ UT-wise details of the biogas plants installed in the country under these two schemes are given in **Annexure- V**.

ANNEXURE-I**ANNEXURE-I, REFERRED TO IN REPLY TO PART (a) OF THE LOK SABHA STARRED QUESTION NO. 361 FOR ANSWERING ON 19/03/2020 ON “BIO-GAS PLANTS”**

Status of State / UT-wise Bio-Energy Projects installed for Power / Electricity Generation, as on 29.02.2020

Sr. No	State/ UT	Waste to Energy (in MW)	Biomass Power + bagasse Co-generation (in MW)	Biomass co-generation (non-bagasse) (in MW)	Biogas Power Generation (off- grid) Projects (MW_e)
1.	Andhra Pradesh	40.82	378.20	98.98	0.466
2.	Bihar	0	113.0	8.20	0
3.	Chhattisgarh	0.33	228.0	2.50	0
4.	Delhi	52.00	0	0	0
5.	Gujarat	11.275	65.30	12.0	0.02
6.	Haryana	4.00	121.40	84.26	0.135
7.	Himachal Pradesh	0	0	7.20	0
8.	Jharkhand	0	0	4.30	0
9.	Karnataka	7.80	1866.60	15.20	1.570
10	Kerala	0	0	0.72	0.124
11	Madhya Pradesh	15.40	93.00	12.35	0.095
12	Maharashtra	28.713	2499.70	16.40	0.825
13	Meghalaya	0	0	13.80	0
14	Odisha	0	50.40	8.82	0.006
15	Punjab	14.92	194.0	123.10	0.922
16	Rajasthan	3.00	119.30	2.00	0.0075
17	Tamil Nadu	10.45	969.0	28.55	1.971
18	Telangana	19.50	158.10	1.00	0.208
19	Uttar Pradesh	44.630	1957.5	158.01	0.758
20	Uttarakhand	1.89	73.00	57.50	0.073
21	West Bengal	0	300.0	19.92	0.060
	Total	254.73	9186.50	674.81	7.241

ANNEXURE-II**ANNEXURE-II, REFERRED TO IN REPLY TO PART (b) OF THE LOK SABHA STARRED QUESTION NO. 361 FOR ANSWERING ON 19/03/2020 ON “BIO-GAS PLANTS”**

Overall functionality status of Biomass and Waste to Energy Plants set-up during 12th Five Year Plan Period (2012-13 to 2016-17).

Functionality status - Biomass & Waste to Energy Plants						
Sl. No.	States	Total plants inspected (Numbers)	Non Operational plants (Numbers)	Operational plants (Numbers)	% of Non Operational plants	% of Operational plants
1	Chhattisgarh	4	0	4	0	100
2	Haryana	5	0	5	0	100
3	Karnataka	4	3	1	75	25
4	Maharashtra	6	0	6	0	100
5	Punjab	6	0	6	0	100
6	Rajasthan	1	0	1	0	100
7	Tamil Nadu	5	3	2	60	40
8	West Bengal	2	0	2	0	100
9	Uttar Pradesh	2	0	2	0	100
	Total	35	6	29	17%	83%

ANNEXURE-III**ANNEXURE-III, REFERRED TO IN REPLY TO PART (b) OF THE LOK SABHA STARRED QUESTION NO. 361 FOR ANSWERING ON 19/03/2020 ON “BIO-GAS PLANTS”**

Overall functionality status of Biogas Plants set-up during 12th Five Year Plan Period (2012-13 to 2016-17) under the National Biogas and Manure Management Programme (NBMMP).

Functionality status – Biogas Plants						
Sl. No.	States	Total plants inspected (Numbers)	Not Operating plants (Numbers)	Operating plants (Numbers)	% of Not-Operating plants	% of Operating plants
1	Assam	1345	129	1216	9.6%	90.4%
2	Chhattisgarh	539	46	493	8.5%	91.5%
3	Gujarat	487	7	480	1.4%	98.6%
4	Kerala	577	2	575	0.3%	99.7%
5	Maharashtra	2747	4	2743	0.1%	99.9%
6	Odisha	657	31	626	4.7%	95.3%
7	Punjab	1405	1	1404	0.1%	99.9%
8	Rajasthan	132	1	131	0.8%	99.2%
9	Sikkim	32	8	24	25%	75%
10	Telangana	947	85	862	9%	91%
	Total	8868	314	8554	3.5%	96.5%

ANNEXURE -IV**ANNEXURE-IV, REFERRED TO IN REPLY TO PART (c), (d) & (e) OF THE LOK SABHA STARRED QUESTION NO. 361 FOR ANSWERING ON 19/03/2020 ON “BIO-GAS PLANTS”**

State/UT-wise and State Programme Implementing Agency-wise (including KVIC & NDDDB) Physical Targets allocated for setting up of small biogas plants under NNBOMP during the year 2019-20.

Sl. No.	State/ UT	State / UT PIA	Target (Numbers of biogas plants)			Total Nos. of Biogas Plants
			General	S.C.	S.T.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Andhra Pradesh	NREDCAP	2500	500	1000	4000
2	Arunachal Pradesh	APEDA	100	-	100	200
3	Assam	FDA (S F)	4000	400	600	5000
4	Bihar	RDD	500	500	-	1000
5	Chhattisgarh	CREDA	3000	1000	1500	5500
6	Goa	Agri Deptt.	200	100	-	300
7	Gujarat	GAIC Ltd.	1000	600	1000	2600
8	Haryana	Agriculture Deptt.	1500	300	200	2000
		RDD	800	400	--	1200
9	Himachal Pradesh	RDD	200	100	100	400
10	J & K	RDD	200	100	100	400
11	Jharkhand	RDD	300	200	200	700
12	Karnataka	RDPRD	6000	700	300	7000
13	Kerala	Agriculture Deptt.	1000	100	--	1100
		RDD	800	400	200	1400
14	Madhya Pradesh	MPSAIDC	4000	800	1000	5800
15	Maharashtra	RDD	6500	1200	800	8500
16	Manipur	RDD	100	--	100	200
17	Meghalaya	MNREDA	100	--	400	500
18	Mizoram	DA & V	100	--	300	400
19	Nagaland	RDD	100	--	200	300
20	Odisha	OREDA	800	400	300	1500
21	Punjab	PEDA	4000	500	--	4500
22	Puducherry	RDD	200	--	--	200
23	Rajasthan	RDD	2500	400	400	3300
24	Sikkim	SREDA	100	--	200	300
25	Tamil Nadu	RDPRD	500	300	200	1000
26	Telangana	RDD	500	300	200	1000
27	Tripura	TREDA	100	200	200	500
28	Uttar Pradesh	UPNEDA	1000	500	--	1500
29	Uttarakhand	UREDA	400	100	--	500
		RDD	600	100	100	800
30	West Bengal	RDD	500	100	200	800
31	A & N Island	RDPRD	--	100	100	200
32	Dadar & Nagar H.	RDPRD	--	100	100	200
33	All States	KVIC	5000	1200	1000	7200
34	All States	NDDDB, Anand	3000	500	500	4000
		Total	52200	12200	11600	76000

ANNEXURE-V, REFERRED TO IN REPLY TO PART (c) to (e) OF THE LOK SABHA STARRED QUESTION NO. 361 FOR ANSWERING ON 19/03/2020 ON “BIO-GAS PLANTS”

State-wise details of installed capacity and numbers of Waste-to-Energy plants set up for generation of Biogas, Bio-CNG and Power in the country, and plants set up under Biogas Power Generation (Off-grid) & Thermal energy applications Programme (BPGTP), as on 29.02.2020.

Sl.No.	Name of State/UTs	Biogas generation	Bio-CNG generation	Power generation (based on Biomethanation and Thermal Technologies)	Biogas Power/thermal energy gen.
		(A)	(B)	(C)	(D)
	State/UT	<i>M³/day</i> (No. of plants)	<i>Kg/day</i> (No. of plants)	<i>MW</i> (No. of plants)	<i>MWe</i> (No. of plants)
1	Andhra Pradesh	90,540 (7)	-	40.82(15)	0.466(33)
2	Bihar	12,000 (1)	-	-	-
3	Chhattisgarh	-	-	0.33 (1)	-
4	Delhi	-	-	52.00 (3)	-
5	Gujarat	24,800(4)	28338 (5)	11.275 (10)	0.020 (01)
6	Haryana	-	4250 (3)	4.0 (2)	0.135(02)
7	Himachal Pradesh	12,000 (1)	-	-	-
8	Karnataka	58,060 (3)	9521 (3)	7.8(5)	1.570(66)
9	Kerala	2,760 (1)	-	-	0.124(38)
10	Madhya Pradesh	27,014 (5)	1,200 (1)	15.4 (3)	0.095(9)
11	Maharashtra	1,09636 (10)	27,723 (4)	28.713 (15)	0.826(43)
13	Odisha	-	-	-	0.006(01)
12	Punjab	34800 (5)	1,847 (1)	14.92(7)	0.922(32)
13	Rajasthan	-	4,000 (2)	3.0 (1)	0.0075(01)
14	Tamil Nadu	1,50218 (28)	-	10.45(6)	1.971(38)
15	Telangana	37,100 (5)	-	19.5(4)	0.208(5)
16	Uttar Pradesh	62,320 (6)	2,000 (1)	44.63 (22)	0.758(40)
17	Uttarakhand	67,260 (5)	5,880 (2)	1.89 (2)	0.073(10)
18	West Bengal	14,000(2)	-	-	0.060(01)
	Total	7,02,508 (83)	84,759 (22)	254.73 (96)	7.242 (320)
