

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO. 2141
TO BE ANSWERED ON 05.12.2016

POTENTIAL OF SMALL SCALE BIOGAS PLANTS

2141. SHRIMATI RAJANI PATIL:

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

- (a) whether Government has analysed the potential of small scale biogas plants in the country;
- (b) if so, the details thereof;
- (c) the details of number of small scale family type biogas plants installed during the current year, State-wise and the amount of funds spent during the year;
- (d) whether Government plans to promote advanced technologies for small scale biogas plants to be installed during the current year's target; and
- (e) if so, the details thereof?

ANSWER

MINISTER OF STATE FOR POWER, COAL, NEW & RENEWABLE ENERGY & MINES (SHRI PIYUSH GOYAL)

(a) & (b): Yes, Sir. According to an initial estimate based on the livestock census of 1981-82, the potential of small family type biogas plants was estimated at 12 million biogas plants in the country. The State-wise details of the estimated potential of biogas plants based on the cattle census of 1981-82 is given at **Annexure – I**.

(c): Under the National Biogas and Manure Management Programme (NBMMP), a total of 25562 small scale family type biogas plants have been installed during the current year, upto 31.10.2016. The State-wise details of achievements upto 31.10.2016 is given at **Annexure-II**. The status of funds released upto 31.10.2016 is given at **Annexure-III**.

(d) & (e): Yes, Sir. The guidelines of the scheme provides for inclusion of new innovative and cost effective advanced models of biogas plants which may be added for implementation in the Ministry of New and Renewable Energy (MNRE) approved models of small family type biogas plants category based on the merit of the technology development and their field worthiness that is acceptable by the end users. The details of MNRE approved designs and models of various family size biogas plants under the small scale biogas plants category is given at **Annexure-IV**.

ANNEXURE-I

ANNEXURE-I, REFERRED TO IN REPLY TO PARTS (a) & (b) OF THE RAJYA SABHA UNSTARRED QUESTION NO. 2141 FOR ANSWER ON 05.12.2016, REGARDING 'POTENTIAL OF SMALL SCALE BIOGAS PLANTS'.

State-wise details of the estimated potential of biogas plants based on the cattle census of 1981-82

Sl. No.	States/ Union Territories	Estimated potential (biogas plants in nos.)
1.	Andhra Pradesh	1065000
2.	Arunachal Pradesh	7500
3.	Assam	307000
4.	Bihar	733000
5.	Chhattisgarh	400000
6.	Delhi	12900
7.	Goa	8000
8.	Gujarat	554000
9.	Haryana	300000
10.	Himachal Pradesh	125000
11.	Jammu & Kashmir	128000
12.	Jharkhand	100000
13.	Karnataka	680000
14.	Kerala	150000
15.	Madhya Pradesh	1491000
16.	Maharashtra	897000
17.	Manipur	38000
18.	Meghalaya	24000
19.	Mizoram	5000
20.	Nagaland	6700
21.	Odisha	605000
22.	Punjab	411000
23.	Puducherry	4300
24.	Rajasthan	915000
25.	Sikkim	7300
26.	Tamil Nadu	615000
27.	Telangana (included in AP)	0
28.	Tripura	28000
29.	Uttar Pradesh	1938000
30.	Uttarakhand	83000
31.	West Bengal	695000
32.	A&N Islands	2200
33.	Chandigarh	1400
34.	Dadra & Nagar Haveli	2000
	Total :	12339300

ANNEXURE-II

ANNEXURE-II, REFERRED TO IN REPLY TO PART (c) OF THE RAJYA SABHA UNSTARRED QUESTION NO. 2141 FOR ANSWER ON 05.12.2016 REGARDING 'POTENTIAL OF SMALL SCALE BIOGAS PLANTS'.

The State-wise status of family type biogas plants installed under the National Biogas and Manure Management Programme (NBMMP) during the current year, 2016-17 (upto 31.10.2016)

Sl. No.	Name of State	Achievement (upto 31.10.2016)
1.	Andhra Pradesh	3537
3.	Assam	4720
5.	Chhattisgarh	333
6.	Goa	26
7.	Gujarat	522
8.	Haryana	169
9.	Himachal Pradesh	44
11.	Jharkhand	21
12.	Karnataka	1833
13.	Kerala	549
14.	Madhya Pradesh	1386
15.	Maharashtra	5125
17.	Mizoram	58
19.	Odisha	403
20.	Punjab	1032
21.	Rajasthan	220
23.	Tamil Nadu	42
24.	Telangana	3541
25.	Tripura	40
26.	Uttar Pradesh	382
27.	Uttarakhand	660
28.	KVIC	874
29.	BDTC, PAU, Ludhiana	45
Total :		25562*

[* Figs. are being firmed up.]

ANNEXURE-III

ANNEXURE-III, REFERRED TO IN REPLY TO PART (c) OF THE RAJYA SABHA UNSTARRED QUESTION NO. 2141 FOR ANSWER ON 05.12.2016 REGARDING 'POTENTIAL OF SMALL SCALE BIOGAS PLANTS'.

State-wise details of funds released under National Biogas and Manure Management Programme (NBMMP), during the current year 2016-17 (upto 31.10.2016)

(Rs. in crores)		
Sl. No.	States/UTs	2016-17 (upto 31.10.2016)
1.	Andhra Pradesh	6.55
2.	Assam	8.26
3.	Chhattisgarh	1.65
4.	Gujarat	0.16
5.	Himachal Pradesh	0.08
6.	Madhya Pradesh	5.00
7.	Punjab	0.82
8.	Telangana	12.19
9.	Uttarakhand	0.99
Total		35.73

ANNEXURE-IV

ANNEXURE-IV, REFERRED TO IN REPLY TO PARTS (d) & (e) OF THE RAJYA SABHA UNSTARRED QUESTION NO. 2141 FOR ANSWER ON 05.12.2016 REGARDING 'POTENTIAL OF SMALL SCALE BIOGAS PLANTS'.

Details of MNRE approved standard models of Biogas Plants under the family size capacity (1 M³ to 6 M³ per day).

Sl. No.	Biogas Plant Models*	Specifications/MNRE's letter No./ BIS code
1.	Fixed Dome Biogas Plants: (i) Deenbandhu fixed dome model with Brick masonry construction. (ii) Deenbandhu ferro-cement model with in-situ technique. (iii) Prefabricated RCC fixed dome model. (iv) Solid-state Deenbandhu fixed dome design with brick masonry construction	IS 9478:1989 of the BIS, New Delhi Code of Practices (Second Revision) MNRE's letter No.13-11/99-BG dated 05.03.1999 MNRE's letter No.13-10/96-BG dated 10.01.2002 MNRE's O.M. No. 13-5/2016-BG (NBMMP) dated 07.11.2016
2.	Floating Dome Design Biogas Plants: (i) KVIC floating steel metal gasholder with brick masonry digester. (ii) KVIC floating type plant with Ferro-Cement digester and FRP gas holder. (iii) Pragati Model Biogas Plants.	IS 9478:1989 of the BIS, New Delhi Code of Practices (Second Revision) IS-12986:1990 of BIS, New Delhi Code of practice, New Delhi. IS 9478:1989 of the BIS, New Delhi Code of Practices (Second Revision)
3.	Prefabricated model Biogas Plants: (i) Prefabricated Reinforced Cement Concrete (RCC) digester with KVIC type floating gas holder.	MNRE's letter No.13-1/2007-BE dated 29.02.2008. Also, MNRE standard specification for pre-fabricated biogas plants conveyed vide O.M. No. 18-1/2014-BE (NBMMP), Dated- 26.11.2014.
4.	Bag Type Biogas Plants (Flexi model)	MNRE's letter No.7-39/89-BG dated 14.07.1995

* New innovative and cost effective models of plants may be added depending upon the technology development and their field worthiness and acceptance.
