

**GOVERNMENT OF INDIA  
NON-CONVENTIONAL ENERGY SOURCES  
LOK SABHA**

UNSTARRED QUESTION NO:470

ANSWERED ON:22.02.2006

HARNESSING OF NON-CONVENTIONAL ENERGY SOURCES

Barad Shri Jashubhai Dhanabhai;Mandal Shri Sanat Kumar

**Will the Minister of NON-CONVENTIONAL ENERGY SOURCES be pleased to state:**

:

- (a) whether any estimates have been made by the Government to ascertain the potential of energy generation through non-conventional energy sources in the country;
- (b) if so, the details thereof, State-wise;
- (c) the details of non-conventional energy sources projects and schemes currently in action;
- (d) whether certain foreign institutions are providing assistance for the same;
- (e) if so, the details thereof, project-wise, scheme-wise; and
- (f) the States and Union Territories which have the potential for harnessing non-conventional energy sources?

**Answer**

MINISTER OF STATE OF THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (INDEPENDENT CHARGE) (SHRI VILAS MUTTEMWAR)

(a), (b) & (c): Yes, Sir. State-wise details of estimated potential of non-conventional energy sources and cumulative achievement under grid interactive renewable electricity as on 31.12.2005 are given in Annexure.

(d) & (e): A grant of around of US\$ 3.5 million from the United Nations Development Programme (UNDP) and the Federal Republic of Germany is being provided for a project titled `Renewable Energy for Rural Livelihoods` being implemented under the United Nations Country Cooperation Framework-II. The World Bank has also provided a loan of US\$ 130 million apart from a Global Environment Facility grant of US\$ 5 million to the Indian Renewable Energy Development Agency (IREDA) for small hydro power and energy efficiency & conservation projects.

(f): A list of States and Union Territories having potential for harnessing non-conventional energy sources is given in the Annexure.

State-wise details of estimated potential of non-conventional energy sources and cumulative achievement under grid interactive renewable electricity as on 31-12-2005.

Sl.No. STATES/UTs Wind Small Bagasse Energy from Cumulative  
Power@ Hydro Cogen- Wastes (MSW) Estimated Installed  
Power eration Potential Capacity

(MW) (MW) (MW) (MW) (MW) (MW)

1	Andhra Pradesh	8275	255	200	123	8853	623.57
2	Arunachal Pradesh	0	1059	0	0	1059	34.48
3	Assam	0	118	5	8	131	2.23
4	Bihar	0	194	200	62	456	45.92
5	Chhatisgarh	0	58	0	20	78	39.01
6	Goa	0	3	5	0	8	0.07
7	Gujarat	9675	157	200	112	10144	312.06
8	Haryana	0	30	0	23	53	69.76
9	Himachal Pradesh	0	1625	0	1	1626	119.09
10	Jammu & Kashmir	0	170	0	10	180	110.26
11	Jharkhand	0	1207	0	0	1207	4.13
12	Karnataka	6620	653	300	151	7724	990.25
13	Kerala	875	467	10	37	1389	87.37
14	Madhya Pradesh	5500	336	25	92	5953	82.33
15	Maharashtra	3650	599	1000	287	5536	901.69
16	Manipur	0	106	0	2	108	5.45

17	Meghalaya	0	182	0	2	184	30.71
18	Mizoram	0	190	0	2	192	14.96
19	Nagaland	0	181	0	0	181	20.47
20	Orissa	1700	157	25	22	1904	7.37
21	Punjab	0	65	150	45	260	143.43
22	Rajasthan	5400	27	10	62	5499	344.62
23	Sikkim	0	203	0	0	203	35.60
24	Tamil Nadu	3050	339	350	151	3890	2785.44
25	Tripura	0	10	0	2	11	17.11
26	Uttar Pradesh	0	267	1000	176	1443	138.19
27	Uttaranchal	0	1478	0	5	1483	75.50
28	West Bengal	450	183	10	147	790	100.40
29	Andaman & Nicobar	0	6	0	0	6	5.52
30	Chandigarh	0	0	0	6	6	0.00
31	Dadar & Nagar Haveli	0	0	0	0	0	0.00
32	Daman & Diu	0	0	0	0	0	0.00
33	Delhi	0	0	0	131	131	0.07
34	Lakshwadeep	0	0	0	0	0	0.65
35	Pondicherry	0	0	10	3	13	0.63
		0	1020				
	Biomass Potential		16000	#			
	Industrial Waste Potential		1020				
	Total	45195	10324	3500	2700	77720	7148.34
	@ \$						

@ For sites having wind power density greater than 250 w/sq.m. at 50 m hub height, wind farms requiring land @12ha/MW; and area availability for setting up of wind farms @3% of the total potential area

\$ Aggregate potential of surveyed sites, although potential is placed at around 15,000 MW

# Aggregate potential from surplus agricultural residues only. In addition, the range of solar isolation in the country is 4-7 kWh/sq.m./day, whose tapping for grid-interactive power currently is not economically viable. However, SPV home-lightingsystems for remote / isolated applications are being deployed alongwith solar thermal hot water systems, wherever feasible and cost effective.