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3	Indian Oil Corporation Ltd.
4	State Bank of India
5	PTC Group
6	Integral Coach Factory
7	National Mineral Development Corp.
8	Nuclear Power Corporation
9	Bharat Earth Movers
10	Bharat Petroleum Corporation
11	The Hutti Gold Mines Co. Ltd.
12	Gas Authority of India Ltd.
13	Bharat Electronics Ltd.
14	Tide Water Oil Co. (India) Ltd.
15	Manganese Ore India Ltd.
16	Minerals and Metal Trading Corporation

Development of renewable energy technologies in NER

3514. SHRI THOMAS SANGMA : Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) whether Government is planning to support the development of renewable energy technologies to harness specialized sources available in the North Eastern Region (NER), such as forest biomass from trees, shrubs and weeds, micro wind generators atop buildings on hill slopes, hybrid hydro, solar and wind, etc;

(b) if so, the details thereof including the steps taken by the Ministry to launch joint programmers with other Ministries and international research organizations in this respect; and

(c) the progress made in development and dissemination of these new technologies for wider adoption by grid-connected and off-grid power developers?

THE MINISTER OF NEW AND RENEWABLE ENERGY (DR. FAROOQ ABDULLAH) : (a) and (b) Yes, Sir. The Government is already encouraging use of technologies for harnessing various renewable energy sources available in the country including the North Eastern Region (NER). Various programmes being implemented in this regard in the NER include those for deployment of Family Biogas plants based on cattle manure; SPV systems for lighting/electrification using solar energy; Micro-hydel/watermills for decentralised power generation using hydro power sources; Biomass Gasifiers for decentralised power generation using locally available biomass resources including bamboo chips; Aero-generators/hybrid systems for decentralized power generation using wind operated electricity generators in conjunction with other renewable power systems.

Ministry's own institutions C-WET and SEC are actively involved in wind and solar resource assessment/validation activities in the region. Biomass resource atlas for the country including NER has been prepared through IISc Bangalore. The Ministry has also supported research projects at IIT Guwahati and Institute of Advanced Study in Science & Technology, Guwahati in the area of hydrogen storage and Fuel Cells. Special Package project in association with DoNER and Planning Commission for electrification/lighting of 1483 villages of border districts of Arunachal Pradesh through solar home-lighting systems and small/ micro hydel plants is also being implemented since 2009.

(d) The progress made in deployment of grid power and off-grid renewable energy technologies in North Eastern Region is given in the Statement.

Statement

Details of grid-connected/off-grid and decentralised systems set up as on 30.06.2011 in North Eastern States

S.No.	States/UT	Small Hydro Power	Solar Power	Biogas Plants	Biomass Gasifiers	Solar Photovoltaic (SPV) Systems			Aerogen/ Remote Village	hybrid	Electrification systems	Village	Hamlet
				(rural)	(industrial)	SLS	HLS	SL	PP	Pumps			
			(Nos.)	(kW)	(kW)	(Nos.)	(Nos.)	(Nos.)	(kWp)	(Nos)	(kW)	(Nos)	(Nos)
1	Arunachal Pradesh	78.84	0.03	3132	1800		1071	10178	13937	17.10	15	6.80	297
2	Assam	27.11		88324		733	98	5870	1211	10.00	45	6.00	1688
3	Manipur	5.45		2128			928	3865	4787	2800	40	70.00	191
4	Meghalaya	31.03		7936		250	1273	7840	24875	58.50	5050	19	15.00 97
5	Mizoram	36.47		3920	200		431	5395	8331	109.00	37		20
6	Nagaland	28.67		5407	1480		271	720	6317	6.00	3		11
7	Sikkim	52.11		7691			212	4640	5200	17.73		15.50	13
8	Tripura	16.01		2882	1000		1199	26066	42360	25.57	151	2.00	60 715
Total		275.69	0.03	121420	4480	983	5483	64574	107018	263.90	310	115.30	2364 728

SLS-Street Lighting System; HLS=Home Lighting System; kW - Kilo watt; kWp- Kilowatt peak; S.L. Solar Lanterns; PP = Power plants