

Potential of solar and wind power

1501. SHRI JAGAT PRAKASH NADDA: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

- (a) the potential of solar power in the country;
- (b) the potential of wind power in Himachal Pradesh; and
- (c) the special incentives available to hill States for popularizing solar and wind energy?

THE MINISTER OF NEW AND RENEWABLE ENERGY (DR. FAROOQ ABDULLAH): (a) The potential for solar power has been estimated for most parts of the country at around 30-50 MW per square kilometer of open, shadow free area covered with solar panels /collectors.

(b) Wind power potential of 20 MW at 50 meter height has been estimated in Himachal Pradesh.

(c) The government is providing several financial and fiscal incentives to promote setting up of solar and wind power projects throughout the country, including the hill States. These include concessional/nil customs and excise duties on specified equipments, components and materials, accelerated depreciation and preferential feed-in-tariffs/generation based incentive for grid connected projects, which depend upon project capacity and category.

In case of off-grid solar power plants/systems installed by government institutions/organizations in North-Eastern States, Uttarakhand, Himachal Pradesh, Jammu and Kashmir and border districts, Government is providing capital subsidy up to 90% of the benchmark cost of the systems upto 100 kW. For off-grid wind power plants, there is no special incentive for hill States.

Solar energy units in agricultural usage

1502. SHRI TARUN VIJAY: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

- (a) whether the efficiency of solar energy units in agricultural usage and its adaptation by the farmers has been on the rise;
- (b) if so, the details thereof, State-wise;

(c) the schemes to encourage cheap solar power in various States and the number of beneficiaries, State-wise;

(d) whether use of solar energy is costlier; and

(e) the details of the plans to make it more popular and cheaper?

THE MINISTER OF NEW AND RENEWABLE ENERGY (DR. FAROOQ ABDULLAH): (a) Yes, Sir.

(b) The farmers are adopting the solar pumps for irrigation purposes. The details of solar pumps installed in various States of the country are given in the Statement-I (*See* below).

(c) Under the Off-grid and Decentralized Solar Applications Scheme of Jawaharlal Nehru National Solar Mission, the Ministry provides a subsidy of 30% of the project cost ranging from Rs. 39/- to Rs. 81/- per watt peak for off-grid SPV systems/power plants depending on their capacity and configuration in general category States. In special category States, UT, Islands and districts with International Borders, CFA up to 90% of the project cost subject to a maximum of Rs. 243/- per watt peak is available for Central and State Government Ministries, Departments and other organizations, State Nodal Agencies and Local Bodies. The Ministry also provides a subsidy of 30% of cost of the project limited to Rs. 150 per watt peak for installation of micro/mini-grid SPV power plants of unit capacity up to 250 kWp.

The State-wise list of off-grid solar PV system installed in the country as on 31.01.2013 is given in the Statement-II (*See* below). 6.4 million sq. meters of solar thermal collector areas has been installed in the country.

(d) and (e) Yes Sir. The Ministry is providing a capital subsidy for installation of solar lanterns, home lights, street lights and power plants and solar water heating systems. Other incentives such as accelerated depreciation, no excise duty and concessional customs duty for imported items are also available for the manufacturer of solar photovoltaic system. The Ministry and State Nodal Agencies, Banks, NGOs, etc. are regularly organizing awareness and capacity building programmes, seminars, workshop and exhibitions for popularizing the solar PV Systems and solar hot water systems in the country.

Statement-I*State-wise Cumulative Installation of Solar Photovoltaic Pumps upto 31.01.2013*

Sl. No.	State/UT	Pumps (in Nos.)
1	2	3
1	Andaman and Nicobar	5
2	Andhra Pradesh	613
3	Arunachal Pradesh	18
4	Assam	45
5	Bihar	139
6	Chandigarh	12
7	Chhattisgarh	240
8	Delhi	90
9	Goa	15
10	Gujarat	85
11	Haryana	469
12	Himachal Pradesh	6
13	Jammu and Kashmir	39
14	Karnataka	551
15	Kerala	810
16	Madhya Pradesh	87
17	Maharashtra	239
18	Manipur	40
19	Meghalaya	19
20	Mizoram	37
21	Nagaland	3
22	Orissa	56
23	Puducherry	21

1	2	3
24	Punjab	1857
25	Rajasthan	1701
26	Tamil Nadu	829
27	Tripura	151
28	Uttarakhand	26
29	Uttar Pradesh	575
30	West Bengal	48
TOTAL		8826

Statement-II*State-wise Cumulative Installation of SPV Systems upto 31.01.2013*

Sl. No.	State/UT	Solar Photovoltaic Systems				
		Lanterns	Home Lights	Street Lights	Pumps	Power Plants Stand alone
		Numbers				kWp
1	2	3	4	5	6	7
1	Andaman and Nicobar	6296	468	390	5	167
2	Andhra Pradesh	41360	8350	6454	613	781.595
3	Arunachal Pradesh	14433	14572	1071	18	17.1
4	Assam	1211	5870	98	45	910
5	Bihar	50117	6570	955	139	775.6
6	Chandigarh	1675	275	898	12	0
7	Chhattisgarh	3311	7254	2042	240	7132.72
8	Delhi	4807	0	301	90	82
9	Goa	1093	393	707	15	1.72

1	2	3	4	5	6	7
10	Gujarat	31603	9231	2004	85	374.6
11	Haryana	93853	52841	22018	469	689.25
12	Himachal Pradesh	23909	22586	8058	6	601.5
13	Jammu and Kashmir	43822	42133	5806	39	308.85
14	Jharkhand	23374	8403	620	0	480.9
15	Karnataka	7334	44439	2694	551	254.41
16	Kerala	54367	32934	1735	810	214.39
17	Lakshadweep	5289	0	1725	0	100
18	Madhya Pradesh	9444	3460	9198	87	1983
19	Maharashtra	68683	3442	8420	239	913.7
20	Manipur	4787	3865	928	40	216
21	Meghalaya	24875	7840	1273	19	50.5
22	Mizoram	9589	6801	431	37	241
23	Nagaland	6766	1045	271	3	380
24	Orissa	9882	5156	5834	56	84.515
25	Puducherry	1637	25	417	21	0
26	Punjab	17495	8620	5354	1857	281
27	Rajasthan	4716	124402	6852	1701	4013
28	Sikkim	22020	9543	489	0	365
29	Tamil Nadu	16818	7877	6350	829	609.77
30	Tripura	64282	32723	1199	151	35
31	Uttarakhand	64023	91307	8568	26	180.03
32	Uttar Pradesh	62015	205011	117380	575	3470.46

1	2	3	4	5	6	7
33	West Bengal	17662	138988	8726	48	889
34	Others	125797	24047	9150	0	4885
TOTAL		938345	930471	248416	8826	31488.61

Construction of roads in Himachal Pradesh

1503. SHRI P. BHATTACHARYA: Will the Minister of RURAL DEVELOPMENT be pleased to state:

(a) whether Government would fulfil the demand of the people for construction of roads Jalwari-Maghara, link road Jalwari- Kailu, link road Bakhuli-Nandla and road from Amboi to Tiproli in Chirgaon Tehsil in Shimla District of Himachal Pradesh;

(b) if so, the details thereof as these places are rural and hilly and most of people are growing apple and vegetables, for smooth transportation of these items roads connectivity is must for the interest of the farmers; and

(c) if not, the reason therefor?

THE MINISTER OF STATE IN THE MINISTRY OF RURAL DEVELOPMENT (SHRI LALCHAND KATARIA): (a) to (c) 'Rural road' is a State subject and Pradhan Mantri Gram Sadak Yojana (PMGSY) is a onetime special intervention of the Central Government to improve Rural Infrastructure through construction/ upgradation of roads. The Programme envisages single all-weather connectivity to all eligible unconnected habitations as per the Core Network with a population of 500 persons and above (as per 2001 census) in plain areas, 250 persons and above (as per 2001 census) in Hill States, the Tribal (Schedule V) areas, the Desert areas (as identified in the Desert Development Programme) and in the 82 Selected Tribal and Backward Districts under IAP (as identified by the Ministry of Home Affairs and Planning Commission). The road-wise status is as under:

- (i) **Jalwari-Maghara road:** There is no such alignment for road work from Jalwari to Maghara in the Core Network of Shimla district. Hence, this road is not eligible as per programme guidelines.