

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
LOK SABHA
STARRED QUESTION NO. 148
TO BE ANSWERED ON 30.07.2015

GREEN ENERGY CORRIDOR PROJECT

*148. SHRI CHANDRA PRAKASH JOSHI:

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

- (a) whether the Government plans to develop 'Green Energy Corridor' Project to facilitate the flow of renewable energy in the National Grid;
- (b) if so, the aims and the blueprint of the project including its estimated expenditure;
- (c) whether any external financial and technical assistance has been sought by the Government and if so, the details thereof;
- (d) the efforts being made by the Government to provide solar-based electricity in each house round the clock; and
- (e) whether any survey has been conducted to identify the areas appropriate for tapping solar energy and if so, the details thereof, State/UT-wise?

ANSWER

THE MINISTER OF STATE FOR POWER, COAL & NEW AND RENEWABLE ENERGY
(INDEPENDENT CHARGE) (SHRI PIYUSH GOYAL)

(a),(b),(c),(d)&(e): A statement is laid on the Table of the House.

Statement referred to in reply to parts (a),(b),(c),(d)& (e) of the Lok Sabha Starred Question No. 148 for answer on 30.07.2015 regarding Green Energy Corridor Project

(a): Yes, Madam.

(b): The Green Energy Corridor report prepared by the Power Grid Cooperation of India Ltd. (PGCIL) in December 2012 estimated transmission infrastructure requirement for the likely renewable power capacity in renewable resource rich States including Andhra Pradesh, Gujarat, Himachal Pradesh, Karnataka, Maharashtra, Rajasthan, Tamil Nadu and also Jammu & Kashmir. The study report estimated that the cost of transmission system strengthening both at Intra-state and Inter-state level would be around Rs. 40,000 crore, with around Rs 20,600 crore for creating intra state transmission network, around Rs 19000 crore for inter-state transmission and Rs. 234 crore for establishment of Renewable Energy Management Centers (REMCs). The Central Electricity Authority appraised PGCIL's estimates and suggested that around Rs 34,000 crore would be required to strengthen and develop renewable power evacuation and transmission infrastructure for the planned renewable power capacity addition up to 2017 and also for establishing REMCs.

(c): Yes, Madam. On 11 April 2013, KfW, Germany agreed to provide concessional loan of Euro 1 billion, over the next six years, to augment and strengthen power transmission infrastructure for evacuation of renewable power. In addition, GIZ, Germany has agreed to provide technical assistance of Euro 2 million for forecasting, balancing, market design and network management in connection with grid integration of renewable power. So far, KfW, Germany has signed loan agreements for soft loan with the Power Grid Corporation of India Ltd. for Euro 500 million; with the State of Tamil Nadu for Euro 76 million; and with state of Rajasthan for Euro 49 million.

(d): Solar power plants are being setup in both grid –connected and off-grid modes. Grid-connected solar power contributes in increasing availability of grid power in the country including for electrification of households. Under off-grid and decentralized solar application scheme the Ministry of New and Renewable Energy (MNRE) is promoting Solar Power packs to individual households.

(e): Yes Madam. MNRE has launched a nationwide Solar Radiation Resource Assessment (SRRA) station network for assessing solar potential in the country and to identify potential areas for harvesting the solar energy. This project is implemented in two phases. In Phase- I program, 51 SRRA stations and in Phase- II, 60 SRRA stations and 4 Advanced Measurement Stations *are* installed at selected locations spread all over the country. State-wise list of SRRA stations is given at Annexure –I.

Annexure -I referred to in reply to the part (e) of the Lok Sabha Starred Question No. 148 for answer on 30.07.2015 regarding Green Energy Corridor Project

State-wise list of SRRA stations and in Phase I and Phase- II

PHASE - I

Sl. No.	State	Station Name	Location	District
1.	Andhra Pradesh	Chilakapalem	Sri Sivani College of Engineering	Srikakulam
		Rajahmundry	Godavari Institute of Engineering & Technology	East Godavari
		Kadiri	Agricultural Research Station, Kadiri	Anantpur
		Tirupati	Sri Venkateswara University College of Engineering	Chittoor
		Guruzala	Vagdevi College of Pharmacy	Guntur
		Guntur	Acharya Nagarjuna University	
2.	Telangana	Medak	Govt. Polytechnic College for Women	Medak
3.	Chhattisgarh	Bilaspur	Chhattisgarh Energy Educational Park	Bilaspur
4.	Gujarat	Santalpur	66KV Substation-GETCO	Patan
			(Shifted to Charanka in 08/2014)	
		Charanka	Gujarat Solar Park	
		Bhogat	132 KV Sub Station -Enercon	Jamnagar
		Jambua	132 KV Sub Station-GETCO	Vadodara
		Keshod	220 KV Sub Station-GETCO	Junagadh
		Vartej	220KV Substation- GETCO	Bhavnagar
		Idar	132 KV substation-GETCO	Sabarkantha
		Kotada Pitha	33/66 KV Substation-	Amreli
			Sri Ram Lietnar	
		Chandrodi	66/33KV Substation-	Kutch
			Veer Energy & Infrastructure	
Tharad	220 KV substation- GETCO	Banaskantha		
Sadodar	220KV Substation- Enercon	Jamnagar		
Gandhi Nagar	Germi 1 MW solar power plant, PDU campus,	Gandhi Nagar		
5.	Haryana	Gurgaon	National Institute of Solar Energy	Gurgaon
6.	Jammu & Kashmir	Leh	Energy Park , Ladakh Renewable Energy Development Agency	Leh
7.	Karnataka	Bellary	KREDL Sogi wind farm (Shifted to Haveri on 13.06.2015)	Bellary
		Haveri	Horticulture Research Extension Station (UHS), Devihosur	Haveri
		Belgaum	KREDL Mavinhunda wind farm (Shifted to Gokak on 18.04.2015)	Belagavi
		Gulbarga	Visvesvaraya Technological University	Gulbarga
		Bijapur	110/33/11 KV Substation-KPTCL/KIADB	Bijapur

		Chitradurga	220/66/11KV Substation-KPTCL	Chitradurga
8.	Madhya Pradesh	Mandsaur	33/11KV Substation (Shifted to Gwalior in 10/2014)	Mandsaur
		Gwalior	College of Agriculture	Gwalior
		Rajgarh	220/132/33 KV Substation	Rajgarh
		Neemuch	33/11 KV Sub Station- MPPKVV(Shifted to Sitamau on 27.01.2015)	Neemuch
		Sitamau	Solar Power Plant(Sun Edison)	Mandsaur
9.	Maharashtra	Karad	Govt. College of Engineering	Satara
		Shegaon	Solar Research Centre - SGIARC	Buldana
		Pandharpur	SVERI College of Engineering	Solapur
10.	Rajasthan	Amarsagar	220 KV GSS	Jaisalmer
		Kota	Rajasthan Technical University	Kota
		Bodana	132 KV GSS	Jaisalmer
		Mathania	132KV GSS	Jodhpur
		Sirohi	220 KV GSS (shifted to Abu Rd in 06/2013)	Sirohi
		Abu Road	Solar Power plant, Brahma kumaris Shantivan campus	
		Phalodi	220KV GSS	Jodhpur
		Balotra	220 KV GSS	Barmer
		Ratangarh	220 KV GSS	Churu
		Ajmer	Govt. Mahila Engineering College	Ajmer
		Jodhpur	IIT -Jodhpur	Jodhpur
		Pokhran	132KV GSS	Jaisalmer
Bagora	132 KV GSS	Jalore		
11.	Tamil Nadu	Chennai	National Institute of Wind Energy	Chennai
		Karaikudi	Central Electro Chemical Research Institute	Sivaganga
		Ramanathapuram	Syed Ammal Engineering College	Ramanathapuram
		Kayathar	NIWE Wind Turbine Research Station	Thoothukudi
		Erode	Kongu Engineering college	Erode
		Trichy	National Institute of Technology, CEESAT	Trichy
		Vellore	VIT University, CO ₂ laboratory	Vellore
12.	Puducherry	Puducherry	Women's Polytechnic College	Puducherry

PHASE - II

S. no.	State	Station Name	Location of Commissioning	District
1.	Andaman & Nicobar (UT)	Port Blair	Central Agricultural Research Institute	South Andaman
2.	Andhra Pradesh	Kadapa	Global College of Engineering & Technology	Kadapa
3.	Telangana	Mahbubnagar	Jayaprakash Narayan College of Engineering	Mahbubnagar
		Warangal	Warangal Institute of Technology	Warangal

			& Science	
4.	Arunachal Pradesh	Itanagar	Arunachal Pradesh Energy Development Agency campus	Papum Pare
		Pasighat	Arunachal Pradesh Energy Development Agency campus	East Siang
5.	Assam	Silchar	National Institute of Technology	Cachar
		Tezpur	Tezpur University	Sonitpur
6.	Bihar	Aurangabad	Kirishi Vigyan Kendra ,Siris	Aurangabad
		Muzaffarpur	Muzaffarpur Institute of Technology	Muzaffarpur
		Purnea	Millia Institute of Technology	Purnea
7.	Chandigarh (UT)	Chandigarh	University Institute of Engineering and Technology	Chandigarh
8.	Chhattisgarh	Ambikapur	Rajmohini Devi Agricultural University	Ambikapur
9.	Dadra & Nagar Haveli	Silvassa	Dr.BBA Government Polytechnic(Shifted to Panaji)	Silvassa
10.	Goa	Panaji	National Institute of Technology, Ponda	North Goa
11.	Gujarat	Surat	S.V.National Institute of Technology	Surat
12.	Haryana	Murthal	Deenabandhu Chhotu Ram University of Science & Technology	Sonepat
13.	Himachal Pradesh	Solan	Dr. Y.S. Parmar University of Agriculture & Forestry	Solan
		Palampur	College of Agriculture	Kangra
14.	Jammu & Kashmir	Kargil	10kW solar power plant,Kurbathang	Kargil
		Katra	Shri Mata Vaishno Devi University	Reasi
15.	Jharkhand	Deoghar	Birla Institute of Technology	Deoghar
		Jamshedpur	National Institute of Technology	East Singhbhum
		Ranchi	Central University of Jharkhand (new campus)	Ranchi
16.	Karnataka	Mysore	NIE Institute of Technology	Mysore
17.	Kerala	Alappuzha	College of Engineering & Management	Alappuzha
		Kannur	Govt. Engineering College	Kannur
18.	Madhya Pradesh	Indore	Devi Ahalya Vishwa Vidyalaya	Indore
		Jabalpur	Shri Ram Institute of Science and Technology	Jabalpur
		Khandwa	BM College of Agriculture	Khandwa
		Rewa	Rewa Engineering College	Rewa
19.	Maharashtra	Bhandara	Manohar Bhai Patel Institute of Engineering and Technology	Bhandara
		Jalgaon	Govt.College of Engineering	Jalgaon
		Shahada	D.N. Patel College of Engineering	Nandurbar
		Nashik	Sandip Institute of Technology &	Nashik

			Research Centre	
		Osmanabad	Terna College of Engineering	Osmanabad
		Wardha	Mahatma Gandhi Institute for Rural Industrialization	Wardha
20.	Manipur	Imphal	Manipur Renewable Energy Development Agency campus.	Imphal
21.	Meghalaya	Tura	Don Bosco College	West Garo Hills
22.	Mizoram	Aizawl	Power House	Aizawl
23.	Nagaland	Kohima	Municipal Council Convention Centre	Kohima
24.	Odisha	Bargarh	Padmashree Krutartha Acharya College of Engineering	Bargarh
		Bhubaneswar	Apex Institute of Technology and Management	Khordha
		Similiguda	Samantha Chandrasekar Institute of Technology & Management	Koraput
		Rourkela	National Institute Technology	Sundergarh
25.	Punjab	Talwandi Sabo	Guru Kashi University	Bathinda
		Kapurthala	Sardar Swaran Singh National Institute of Renewable Energy	Kapurthala
26.	Rajasthan	Jaipur	Suresh Gyan Vihar University	Jaipur
27.	Sikkim	Gangtok	Sikkim Armed Police campus, Pangthang	East Sikkim
28.	Tamil Nadu	Tiruvallur	Prathyusha Institute of Technology and Management	Tiruvallur
29.	Tripura	Agartala	National Institute of Technology	West Tripura
30.	Uttar Pradesh	Banda	Kalicharan Nigam Institute of Technology	Banda
		Gorakhpur	Madan Mohan Malaviya University of Technology	Gorakhpur
		Kanpur	Indian Institute of Pulses Research	Kanpur
		Moradabad	Moradabad Institute of Technology	Moradabad
		Sultanpur	Kamala Nehru Institute of Technology	Sultanpur
31.	Uttarakhand	Dehradun	University of Petroleum & Energy Studies	Dehradun
		Nainital	Birla Institute of Applied Science	Nainital
32.	West Bengal	Murshidabad	Dumkal Institute of Engineering & Technology	Murshidabad
		Howrah	Indian Institute of Engineering Science & Technology	Kolkatta
		Jalpaiguri	Govt. Engineering College	Jalpaiguri