# GOVERNMENT OF INDIA MINISTRY OF NEW AND RENEWABLE ENERGY

### LOK SABHA

# **UNSTARRED QUESTION NO-2153**

TO BE ANSWERED ON-08.03.2018

#### DEVELOPMENT OF SOLAR CITIES

#### 2153. SHRI JAGDAMBIKA PAL

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

- (a) whether the Government proposes to develop solar cities in the country;
- (b) if so, the details thereof and the number of cities which have been selected/ identified by the Government to be developed as solar cities, State/UT-wise and the criteria/norms for identification/selection of those cities;
- (c) the details of the proposals received from various States and the funds allocated to the States/UTs/local bodies for the purpose and the amount spent therefor, State/UT-wise;
- (d) whether any task force has been set-up to monitor the programme and if so, the details thereof; and
- (e) whether the Government has signed any agreement/Memorandum of Understanding with any foreign country for the development and cooperation in new and renewable energy sector and if so, the details thereof?

#### **ANSWER**

# THE MINISTER OF STATE FOR NEW & RENEWABLE ENERGY AND POWER (I/C) (SHRI R.K. SINGH)

(a) & (b) The Ministry of New and Renewable Energy under its scheme, Development of Solar Cities, has approved/sanctioned 60 Cities upto 12th Five-year Plan period. The State/UT-wise details of all 60 Solar Cities are given in Annexure-I.

The criteria fixed for inclusion of cities is:

- (i) Cities/towns have population between 50,000 to 50 lakh including the floating population. The cities with less population, located in North-Eastern & Hilly States, Islands & Union Territories can also be considered, on case to case basis, on merit.
- (ii) At-least one city in each State be included and up to a maximum of seven cities in any one State.
- (c) The State/UT-wise details of proposals received, funds approved/sanctioned and released, so far, under Development of Solar Cities Programme are given in Annexure-II.
- (d) No, Madam.
- (e) The Ministry of New and Renewable Energy has signed Agreements/Memorandums of Understanding with various countries for the development and cooperation in new and renewable energy sector. The details of Agreements/Memorandums of Understanding signed are given in Annexure-III.

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## **Annexure-I**

Annexure-I refers to reply to part (a) & (b) of Lok Sabha unstarred Question No.2153 to be answered on 08-03-2018 regarding 'Development of Solar Cities' by SHRI JAGDAMBIKA PAL.

State-wise names of approved solar cities

Sr. No	States/UTs	Approved Solar Cities
		1. Vijayawada
1	Andhra Pradesh	2. Kakinada
		3. Narsapur Town
2	Assam	4. Guwahati
2	Assaill	5. Jorhat
3	Arunachal Pradesh	6. Itanagar
4	Bihar	7. Gaya
5	Chandigarh	8. Chandigarh
6	Chhattiagarh	9. Bilaspur
O	Chhattisgarh	10. Raipur
		11. Rajkot
7	Gujarat	12. Gandhinagar
		13. Surat
8	Goa	14. Panaji City
0	Hamisaa	15. Gurgaon
9	Haryana	16. Faridabad
10	Llimachal Dradach	17. Shimla
10	Himachal Pradesh	18. Hamirpur
4.4		19. Mysore
11	Karnataka	20. Hubli-Dharwad
12	Kerala	21. Thiruvananthapuram
12	Keraia	22. Kochi
		23. Nagpur
		24. Thane
		25. Kalyan-Dombivli
13	Maharashtra	26. Aurangabad
		27. Nanded
		28. Pune
		29. Shirdi
		30. Indore
		31. Gwalior
14	Madhya Pradesh	32. Bhopal
		33. Jabalpur
		34. Rewa
15	Manipur	35. Imphal
16	Mizoram	36. Aizawl
17	Negeland	37. Kohima
17	Nagaland	38. Dimapur
18	Delhi	39. New Delhi (NDMC area)
19	Odisha	40. Bhubaneswar

Sr. No	States/UTs	Approved Solar Cities
		41. Amritsar
20	Punjab	42. Ludhiana
		43. SAS Nagar (Mohali)
		44. Ajmer
21	Rajasthan	45. Jaipur
		46. Jodhpur
22	Tamil Nadu	47. Coimbatore
23	Telangana	48. Mahbubnagar
24	Tripura	49. Agartala
		50. Dehradun
25	Uttarakhand	51. Haridwar & Rishikesh
		52. Chamoli-Gopeshwar
		53. Agra
26	Uttar Pradesh	54. Moradabad
		55. Allahabad
		56. Howrah
27	West Bengal	57. Madhyamgram
		58. New Town Kolkata
28	Jammu & Kashmir	59. Leh
29	Puducherry	60. Puducherry

## **Annexure-II**

Annexure-II refers to reply to part (c) of Lok Sabha unstarred Question No.2153 to be answered on 08-03-2018 regarding 'Development of Solar Cities' by Shri Jagdambika Pal.

State-wise proposals received, cumulative funds allocated and released so far including the current year (i.e. upto 28-02-2018) under "Development of Solar Cities Programme".

Sr. No	States/UTs	Cities for which proposals are received	Sanctioned/Approv ed Solar Cities	Funds sanctioned (In crore)	Funds Released (In crore)
1	Andhra Pradesh	Guntur, Vijayawada, Kakinada, Narsapur Town	Vijayawada, Kakinada, Narsapur Town	3.46	1.654
2	Assam	Guwahati, Jorhat, Tinsukhia, Dibrugarh, Silchar	Guwahati, Jorhat	0.94	0.25
3	Arunachal Pradesh	Itanagar	Itanagar	0.47	0.16
4	Bihar	Patna, Bhagalpur, Gaya, Muzaffarpur, Purnea	Gaya	0.00	0.00
5	Chandigarh	Chandigarh	Chandigarh	9.99	8.82
6	Chhattisgarh	Raipur, Bilaspur, Durg	Bilaspur, Raipur	3.40	0.24
7	Dadar & Nagar Haveli	Silvassa		0.00	0.00
8	Delhi	New Delhi (NDMC area)	New Delhi (NDMC area)	0.50	0.00
9	Goa	Panaji City, Envirous Goa	Panaji City	0.43	0.020
10	Gujarat	Rajkot, Gandhinagar, Surat	Rajkot, Gandhinagar, Surat	13.40	0.61
11	Haryana	Gurgaon, Faridabad	Gurgaon, Faridabad	3.46	0.35
12	Himachal Pradesh	Shimla, Hamirpur, Solan, Mandi, Dharamshala	Shimla, Hamirpur	3.40	1.79
13	Jammu & Kashmir	Jammu, Leh	Leh	0.00	0.00
14	Karnataka	Mysore, Hubli-Dharwad	Mysore, Hubli- Dharwad	10.36	0.87
15	Kerala	Thiruvananthapuram, Kochi	Thiruvananthapuram , Kochi	0.39	0.19
16	Madhya Pradesh	Indore, Gwalior, Bhopal, Jabalpur, Rewa	Indore, Gwalior, Bhopal, Jabalpur, Rewa	1.48	0.43
17	Maharashtra	Nagpur, Thane, Kalyan- Dombivli, Aurangabad, Nanded, Pune, Shirdi, Nasik, Navi Mumbai	Nagpur, Thane, Kalyan-Dombivli, Aurangabad, Nanded, Pune,	17.41	3.655

Sr. No	States/UTs	Cities for which proposals are received	Sanctioned/Approv ed Solar Cities	Funds sanctioned (In crore)	Funds Released (In crore)
			Shirdi		
18	Manipur	Imphal, Thoubal, Bishnupur, Jiribam	Imphal	0.49	0.040
19	Mizoram	Aizawl	Aizawl	2.99	2.53
20	Nagaland	Kohima, Dimapur	Kohima, Dimapur	0.96	0.24
21	Odisha	Berhampur, Bhubaneswar	Bhubaneswar	9.97	0.040
22	Puducherry	Puducherry	Puducherry	2.99	0.311
23	Punjab	Jalandhar, Amritsar, Ludhiana, SAS Nagar (Mohali)	Amritsar, Ludhiana, SAS Nagar (Mohali)	3.90	0.26
24	Rajasthan	Ajmer, Jaipur, Jodhpur, Kota	Ajmer, Jaipur, Jodhpur	0.94	0.03
25	Tamil Nadu	Coimbatore	Coimbatore	2.99	0.66
26	Telangana	Warangal, Mahbubnagar	Mahbubnagar	0.00	0.00
27	Tripura	Udaipur Nagar, Agartala, Sonamura Nagar	Agartala	2.96	1.37
28	Uttarakhand	Dehradun, Haridwar & Rishikesh, Chamoli– Gopeshwar	Dehradun, Haridwar & Rishikesh, Chamoli–Gopeshwar	1.37	0.32
29	Uttar Pradesh	Agra, Lucknow, Moradabad, Allahabad, Kanpur, Bareilly, Shikohabad, Greater Noida	Agra, Moradabad, Allahabad	1.49	0.66
30	West Bengal	Howrah, Madhyamgram, New Town Kolkata	Howrah, Madhyamgram, New Town Kolkata	1.50	0.42
	Total			101.64	25.92

# **Annexure-III**

Annexure-III refers to reply to part (e) of Lok Sabha unstarred Question No.2153 to be answered on 08-03-2018 regarding 'Development of Solar Cities' by SHRI JAGDAMBIKA PAL.

The details of agreement/Memorandum of Understanding (MoU) with foreign countries:

S,No.	Country	MINISTRY/DEPARTMENT INVOLVED	BRIEF OBJECTIVE(S)	YEAR OF INITIAL SIGNING AND VALIDITY AND VALIDITY PERIOD/TENURE (CLAUSE OF DURATION & TERMS AND CONDITIONS)
1.	INDIA- SEYCHELLES	MNRE and The Government of the Republic of Seychelles	To Strengthen, promote and develop renewable energy cooperation between two countries on the basis of equality and mutual benefit	11.03.2015 (Validity: Till Termination <b>)</b>
		Protocol on the Framework of Cooperation in the field of Blue Economy b/w The Gol & The Government of the Republic of Seychelles	To Cooperate in the field of Blue Economy on the basis of equality, reciprocity and mutual benefit	26.08. 2015 (Validity: 10 Years) Automatically Renew after 10 Years
2.	INDIA- NETHERLAND S	MNRE and Ministry of Economic Affairs Agriculture and Innovation of the Netherlands	To establish the basis for cooperative institutional relationship to encourage and promote technical bilateral cooperation on New and renewable energy issues on the basis of mutual benefit, equality and reciprocity	11 <sup>th</sup> February, 2014 (Validity: 5 Years) (Automatically renewed after 5 years)
3.	INDIA_UAE	MNRE and Ministry of Foreign Affairs of the United Arab Emirates on Renewable Energy Corporation	To collaborate in efforts to establish the basis for a framework through which extensive projects, investments, other forms of commercial endeavors, cooperation in R&D in Renewable and Clean Energy and knowledge Sharing platforms.	11 <sup>th</sup> February, 2016 Validly: Not Mentioned
4.	INDIA- MOZAMBIQUE	MNRE and THE REPUBLIC OF MOZAMBIQUE	To establish the basis for a cooperative institutional relationship to encourage and promote technical bilateral cooperation, investment promotion and partnership on new and renewable energy issues on the basis of mutual benefit, equality and reciprocity	05.08.2015 (Validity: 5 Years) Further renewable (Can be done by mutual written consent of the parties)

11.	INDIA- THAILAND	MNRE and The Ministry of Energy Government of Kingdom of Thailand		26 <sup>th</sup> June, 2007 (Validity: 5 Years) (Automatically renewed for period of 5 years)
10.	INDIA- SCOTLAND	MNRE and The Government of Scotland	To establish New and Renewable Energy Corporation Between Ministry of New and Renewable Energy, Government of India and	14.10.2009 (Validity: Till termination)
9.	INDIA- MAURITIUS	MNRE and Ministry of Public Utilities Government of Republic of Mauritius	To Develop and promote the economic and scientific technical cooperation in the field of non-conventional energy sources	21.11.2003 (Validity: 5 Years) (Automatically (Renewed after another 5 Years)
8.	INDIA- CUBA	MNRE and The Government of The Republic of Cuba for the Biennium	To establish the cooperation in the RE, R&D of mutual interest, exchange of Scientist to Share experience in Workshops, Seminars & Training of Cuba Scientists	24 <sup>th</sup> May, 2007 (Validity: Till Termination
7.	INDIA- CANADA	MNRE and The University of Saskatchewan, Canada	To establish Strengthen cooperation in research, design and development of new and renewable energy technologies	28.03.2008 (Validity: Not mentioned
6.	INDIA- DOMINICAN REPUBLIC	MNRE and The Ministry of Energy and Mines Government of the Dominican Republics		17.02.2015 (Validity: Till termination
5.	INDIA- FRANCE	MNRE and The Ministry of Ecology, Sustainable Development and Energy of the French Republic	To establish the basis for a cooperative institutional relationship to encourage and promote technical bilateral cooperation on new and renewable energy issues on the basis of mutual benefit, equality and reciprocity	10.04.2015 (Validity: 5 Years) (MOU can be renewed by mutual consent of the parties

12.	INDIA- GERMANY	MNRE and The Federal Ministry of Economic Cooperation & Development of Federal Republic of Germany	To establish the cooperation in the field of Solar Rooftop, Development of Solar parks and Solar Zones and Solar Off-grid application to improve the access to clean and sustainable energy	05.10.2015 (Validity: 5 Years <b>)</b>
		Solar Energy Center (SEC), MNRE and Fraunhofer Institut fur Solare Energiesysteme (FISE)	To implement research/demonstration/pil ot projects between SEC & FISE in mutually identified areas.	11.04.2013 (Validity: 5 years) (Renewed automatically for similar period of 5 years)
13.	INDIA- CHILE	MNRE and The National Energy Commission of the Republic of Chile	To establish the basis of cooperative institutional relationship to encourage and promote technical bilateral cooperation on new and renewable energy issues on the basis of mutual benefit, equality and reciprocity	17.03.2009 (Validity: Till termination)
14.	INDIA- DENMARK	MNRE and The Ministry of Climate and Energy , Government of Kingdom of Denmark	To establish New and Renewable Energy Cooperation between Danish and Indian entities with aim of developing new and renewable energy technologies	06.02.2008 (Validity: Till Termination)
15.	INDIA- FINLAND	MNRE and The Ministry of Employment and the Economy of the Government of the Republic of Finland	institutional cooperation to	15.10.2014 (Validity: 5 Years <b>)</b>
16.	INDIA- ITALY	MNRE and The Ministry of Environment, Land and sea of the Republic of Italy	To establish new and renewable energy cooperation between Italian and Indian entities with the Aim of Developing new and renewable energy technologies	15.02.2007 (Validity: Till revoked by the consent Parties)
17.	India- Philippines	MNRE and The Department of Physics, republic of Philippines	To establish cooperation in research, design and demonstration of renewable energy technologies; Solar Photovoltaic, Solar Heating, Biogas, Biomass, Geo-thermal, Small Hydro, Wind, Waste to Energy, Tidal Ocean and other Renewable Sources	05.10.2007 (Validity: 3 years, Extendable for 2 year at a time till termination) Extension is provide till 5 <sup>th</sup> October, 2015 Regarding further extension of MoU beyond 5 <sup>th</sup> October, 2015, A fresh MoU

			as identified through mutual discussions and also to undertake collective efforts for the preparation and effective implementation of a "Programme for Cooperation"	was proposed from Philippines
18.	India- Australia	MNRE and The Department of Resources, Energy and Tourism, Government of Australia	To identify areas of mutual interest cooperation for development of new and renewable energy technologies, systems, sub-systems, devices, components, etc. and monitoring and evaluating cooperation activities with the indicative scope of areas of cooperation like Solar, Hydrogen/Fuel Cells, Geo-thermal, Small Hydro, Clean Energy related services and any other area as mutually agreed.	05.02.2010 (Validity: Till Termination or revoked)
19.	India- Bangladesh	MNRE and Power Division, Ministry of Power, Energy and Mineral Resources, Government of People's Republic of Bangladesh	To establish the basis for a cooperative institutional relationship to encourage and promote technical bilateral cooperation on new and renewable energy issues on the basis of mutual benefit, equality and reciprocity.	6 <sup>th</sup> September, 2011  Validity: (open ended)  The MoU will enter into force on the date of signing and shall remain in force unless revoked by the consent of the parties.
20.	India-Belarus	MNRE and The State Committee on Science and Technology of the Republic of Belarus	With the aim of developing NRE technologies and decide upon project proposal related to design and development of various NRE technologies such as but not restricted to SE, WE, BE SHP.	14 <sup>th</sup> November, 2012  Validity: (open ended) (The MoU will enter into force on the date of signing and shall remain in force unless revoked by the consent of the Parties.)
21.	India-Egypt	MNRE and Ministry of Electricity and Energy of the Arab Republic of Egypt  Egypt is member of ISA	To collaborate in efforts in the field of RE pursued on the basis of equality and joint benefit as mutually agreed upon by the Parties, taking into	20.01.11 (5 YEARS) (The MoU shall remain in force for 5 years after which it shall be renewed

			account their expertise and their development needs	automatically
22.	India-Iran	MNRE and Ministry of Power of the Islamic Republic of Iran	To establish the basis for a cooperative institutional relationship to encourage and promote technical bilateral cooperation on NRE issues	(Open ended) (Shall remain in force unless either of the parties decide to terminate
23.	India-Malaysia	MNRE and The Ministry of Energy, Green Technology and Water of the Government of Malaysia.  Prospective member of ISA	To encourage and promote cooperation in renewable energy but not limited to Biomass and Biogas; Micro and Pico Hydropower, solar Energy including thermal and photovoltaic; Energy from domestic and agriculture waste; and Wind Power.	7 <sup>th</sup> November, 2012  Validity: 3 years. Thereafter, it will be automatically extended for a further period of 2 years.  As on date valid up to 6.11.2017
24.	India- RWANDA	MNRE And Ministry of Infrastructure, Government of the Republic of Rwanda  Rwanda has signed the Framework Agreement of ISA	To promote bilateral cooperation on new and renewable energy issues on the basis of mutual benefit, equality and reciprocity.	Validity: (open ended)  The MoU will enter into force on the date of signing and shall remain in force unless revoked by the Parties with mutual consent
25.	India- SWEDEN	MNRE and Ministry of Enterprise, Energy and Communications	Bilateral cooperation between the participants on new and Renewable Energy	19.04.2010 (Open ended) Still in force
26.	India- URUGUAY	MNRE and the Government of Uruguay	To establish the basis for a cooperative institutional relationship to encourage and promote bilateral cooperation on NRE issues  However there is no article on Areas of Cooperation and Modalities of Cooperation which normally other MoU have in the form of articles.	25 <sup>th</sup> February, 2011  Validity: (Open ended)  (the MoU will enter into force on the date of signing and shall remain in force unless revoked by the consent of the parties.)
27.	India- ICELAND	MNRE and Ministry of Industry of the Republic of Iceland	In the field of Geothermal Energy	Signed on 9 <sup>th</sup> October, 2007 at New Delhi
28.	India-	MNRE and Ministry of	To encourage and	Signed on 2 <sup>nd</sup>

	INDONESIA	Energy and Mineral Resources of the Republic of Indonesia	promote bilateral technical cooperation on new and renewable energy on the basis of mutual benefit, equality and reciprocity	November, 2015 Valid for 5 years
29.	India- MONGOLIA	MNRE and Ministry of Energy of the Government of Mongolia	To encourage and promote bilateral technical cooperation on new and renewable energy on the basis of mutual benefit, equality and reciprocity.	Signed on 17th May, 2015 Valid for 5 years
30.	India- MEXICO	MNRE and Secretariat of Energy of the United Mexican States	In the field of New and Renewable Energy	Signed on 17 <sup>th</sup> April, 2008 at Mexico City
31.	India- MYANMAR	MNRE and The Ministry of Education of the Government of the Republic of the Union of Myanmar	To encourage and promote bilateral cooperation on new and renewable energy on the basis of mutual benefit, equality and reciprocity.	29 <sup>th</sup> August, 2016 at New Delhi
32.	India- SPAIN	MNRE and Ministry of Industry, Tourism and Trade of the Kingdom of Spain	To collaborate in the field of New and Renewable Energy	MoU signed on 2017
33.	India-Spain (PROGRAMM E OF COOPERATIO N	MNRE and Centre for the Development of Industrial Technology, Spain	Indo-Spanish Programme for Industrial R&D Cooperation in the field of Renewable Energy (pp. 667 – 673/corr.)	Programme signed on 23 <sup>rd</sup> November, 2011
34.	Índia- USA	MNRE and The Department of Energy of the Government of the USA	MoU on PEACE through Clean Energy  To foster cooperation between India and USA in the area of renewable energy to Facilitate Clean Energy Access.	,
35.	India -USA	MOU between MNRE and The Department of Energy, USA on Cooperation in the field of Biofuel.	The purpose of this MOU is to a framework of cooperation covering scientific, policy, technical aspects of production conversion, utilization, distribution and marketing of biofuels in sustainable and environment friendly manner in accordance with national priorities and soceio-economic development strategic and goals.	Signed on 3 <sup>rd</sup> February, 2009
36.	India-USA (PARTNERSHI	India US Collaboration	It focuses on new private sector investment,	Signed on 31/07/2012

37.	P TO ADVANCE CLEAN ENERGY (PACE) PROGRAMME )	MNRE-The Competent Belgian Authorities at	accelerating innovation on clean energy, to strengthen national institutions in the field of renewable energy, cooperation on innovation, incubation, testing facilities, knowledge sharing and exchange of ideas etc.  To establish the basis for cooperative institutional	29 <sup>th</sup> September, 2015
		Federal and Regional Level for Energy	relationship to encourage and promote technical bilateral cooperation on new and renewable energy issues on the mutual benefit, equality and reciprocity	(Validity: 5 Years)
38.	India-Portugal	MNRE-The Ministry of Economy of Portuguese Republic on RE	-	07.01.2017
39.	India- Myanmar	MNRE-Ministry of Education of the Government of Republic of Myanmar	To establish basis for cooperative institutional relationship to encourage and promote bilateral technical cooperation on new and renewable Energy on the basis of mutual benefit	MoU signed on August, 2016
40.	India-China	MoU for Enhanced Cooperation in the Field of Renewable Energy between India and China		Signed on 23 <sup>rd</sup> June, 2013
41.	India-Portugal	MoU between Ministry of New and Renewable Energy and The Ministry of Economy of the Portuguese Republic on Renewable Energy	The MoU aims to promote the establishment of the basis for a cooperative institutional relationship and to encourage programmes and activities between the signatories in the field of renewable energy.	Signed on: 6 <sup>th</sup> January, 2017 (New Delhi)
42.	India-Peru	MoU between The Ministry of New and Renewable Energy and The Ministry of Energy and Mining of the Republic of Peru on Indi-Peru Cooperation.		June, 2017 (Copy is yet to be received from MEA)
43.	India-Russia	MoU between Solar Energy Cooperation of India and Russian Energy Agency, Regarding construction of Solar power Plants in Republic of India	The Parties agreed to cooperation in good faith to realize the potential projects in India of construction of large-stage photovoltaic power plants (PVP) during year 2016-22.  To Setup the 500 MW in	Signed on: 24 <sup>th</sup> December, 2015

44	India langu	Mall areas DEA MEDO	the year 2016-17 (Pilot Project as per Government Scheme Norms)	Oimed and Ooth
44.	India-Japan	MoU among DEA, NEDO, VIOM, MeiTY, MNRE, GTL Infrastructure	The objectives of this project are to contribute to the efficient use of energy and the protection of environment in India by installing PV Power Generation.	Signed on: 30 <sup>th</sup> April, 2012( Renew on 6 <sup>th</sup> August, 2014)
45.	India-Japan	MoU signed between MNRE and Japan Bank for International Cooperation (JBIC)	To Development of Renewable Energy Projects, Including Canal-Top, Solar Power projects in pan India.	Signed on: 1 <sup>st</sup> September, 2014
46.	India-Guyana	MoU signed between MNRE and Ministry of Public Infrastructure of Guyana	Desiring to establish Cooperation between Indian and Guyanese entities with the aim of developing New and Renewable Energy Technologies	Signed on: 30 <sup>th</sup> January, 2018
47.	India-Italy	MoU signed between MNRE and the Ministry of Environment of the Italian Republic	The objective of the MoU is to confirm the commitment of the Parties to collaborate in the field of new and renewable energy with special attention to technologies and/or resources based on wind energy, solar energy, small hydropower and biomass, innovation in the field of energy (i.e. storage) and their promotion and use.	Signed on: 30 <sup>th</sup> October, 2017
48.	India-Fiji	MoU between MNRE and the Ministry of Infrastructure and Transport, Fiji	MoU is to establish the basis for a cooperative institutional relationship to encourage and promote bilateral technical cooperation on new and renewable energy specially in the field of Capacity building, Solar Energy, Biomass/Bio-Energy and Small Hydro Energy, on the basis of mutual benefit, equality and reciprocity between the Parties.	Signed on: 24 <sup>th</sup> May, 2017
49.	India-Greece	MoU between MNRE and the Ministry of Environment and Energy of Hellenic Republic	The objective of the Memorandum of Understanding (MoU) is to establish the basis for a cooperative institutional relationship to encourage and promote bilateral	Signed on: 27 <sup>th</sup> November, 2017

			technical cooperation on new and renewable energy especially in the field of Capacity Building, Solar Energy, Wind Energy, Biomass/Bio-Energy and Small Hydro Energy, on the basis of mutual benefit, equality and reciprocity between the Parties.	
50.*	India-USA*	MoU between India and USA for Collaboration on Solar Energy Research and development		Signed on: 23 <sup>rd</sup> November, 2009
51.*	India-USA*	Mou between India and USA on Cooperation in the Area of Wind Energy		Signed on 23 <sup>rd</sup> November, 2009
52.*	India-Russia*	MoU for cooperation for geologic survey, exploration and production of hydrocarbons onshore and on the continental shelf of the Russian Federation		24 <sup>th</sup> December, 2015
53.*	India-Russia*	MoU in the field of investment cooperation in the Russian Far East between Tata Power Company Limited ad Ministry for Development of Russian Far East.`		Signed on: 24 <sup>th</sup> December, 2015
54.*	India-Rwanda*	MoU between India and Rwanda for Solar Electrification of 35 Schools in Rwanda		Signed on: 15 <sup>th</sup> February, 2012

Note: \* mentioned MoUs did not have record in Ministry of New and Renewable Energy