

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO. 933
ANSWERED ON 11/02/2025

INCENTIVES TO INCREASE INVESTMENTS IN RENEWABLE ENERGY SECTOR

933. SHRI MILIND MURLI DEORA

Will the Minister of New and Renewable Energy be pleased to state:

- (a) the details regarding the total amount of Investments made by domestic and foreign Government entities, private companies and Foreign Institutional Investors (FIIs) over the last five years into the country's renewable energy sector;
- (b) the details regarding the total amount of investments made in solar, wind, hydro, tidal, nuclear and geothermal sources of energy over the last five years, State-wise, especially in Maharashtra; and
- (c) whether Government has considered introducing incentives to above specified investors in order to increase investments into country's renewable energy sector, if so, details thereof?

ANSWER

THE MINISTER OF STATE FOR NEW & RENEWABLE ENERGY AND POWER
(SHRI SHRIPAD YESSO NAIK)

(a) At present, most of the renewable energy projects in the country are being set up by private sector developers.

As per REN21 Renewable 2024 the report, following are the details of year wise investments made during calendar years 2019, 2020, 2021, 2022 & 2023.

Year	Average Investment in Renewable Energy Sector of India (in USD Bn)
2019	8.5
2020	7.0
2021	11.9
2022	12.2
2023	12.4

(b)As per the yearly capacity additions data of CEA and average technology-wise cost/MW data from investment report of IREDA, an amount of approx. INR 3.75 Lakh Crores has been invested in the country across solar, wind, hydro and nuclear energy projects during the last 5 financial years.

Out of the said investment, investment in the state of Maharashtra is estimated as approx. INR 0.26 Lakh Crores.

Details about state-wise approx. investments during last five (5) years, technology-wise and cost estimate/MW are annexed at **Annexure-A**.

The Government of India has introduced various measures to boost investments in the renewable energy sector, focusing on creating an enabling environment for the entire ecosystem. Details of major initiatives taken by Government are at **Annexure-B**.

Annexure referred to the reply of part (b) of the Rajya Sabha Unstarred Question No. 933 to be answered on 11/02/2025

S.No.	States/Uts	2024					2023					2022					2021					2020					Total	
		Small Hydro	Wind Power	Solar Power	Nuclear	Large Hydro	Small Hydro	Wind Power	Solar Power	Nuclear	Large Hydro	Small Hydro	Wind Power	Solar Power	Nuclear	Large Hydro	Small Hydro	Wind Power	Solar Power	Nuclear	Large Hydro	Small Hydro	Wind Power	Solar Power	Nuclear	Large Hydro		
1	Andhra Pradesh	0.0	0.0	254.0	0.0	0.0	9.6	0.0	737.1	0.0	0.0	0.0	0.0	477.1	0.0	0.0	0.0	29.4	2965.1	0.0	0.0	0.0	14.0	2622.3	0.0	0.0	7108.6	
2	Arunachal Pradesh	0.0	0.0	0.7	0.0	0.0	16.0	0.0	2.1	0.0	0.0	0.0	0.0	5.4	0.0	0.0	0.0	0.0	1.5	0.0	2700.0	0.0	0.0	1.5	0.0	2700.0	5427.1	
3	Assam	0.0	0.0	41.3	0.0	0.0	0.0	0.0	150.0	0.0	0.0	0.0	0.0	331.9	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0	0.0	96.4	0.0	0.0	628.6	
4	Bihar	0.0	0.0	231.8	0.0	0.0	0.0	0.0	11.3	0.0	0.0	0.0	0.0	52.0	0.0	0.0	0.0	0.0	40.2	0.0	0.0	0.0	0.0	64.3	0.0	0.0	399.5	
5	Chhatisgarh	0.0	0.0	1317.9	0.0	0.0	0.0	0.0	2153.7	0.0	0.0	0.0	0.0	364.4	0.0	0.0	0.0	0.0	105.8	0.0	0.0	0.0	0.0	0.6	0.0	0.0	3942.3	
6	Goa	0.0	0.0	85.0	0.0	0.0	0.0	0.0	32.7	0.0	0.0	0.0	0.0	62.0	0.0	0.0	0.0	0.0	13.3	0.0	0.0	0.0	0.0	4.3	0.0	0.0	197.2	
7	Gujarat	0.0	12206.6	21451.6	22400.0	0.0	18.0	5387.9	10372.7	0.0	0.0	53.6	4531.8	13550.8	0.0	0.0	109.9	7142.1	7415.5	0.0	0.0	61.2	10279.2	2542.3	0.0	0.0	117523.1	
8	Haryana	0.0	0.0	2232.8	0.0	0.0	0.0	0.0	592.7	0.0	0.0	0.0	0.0	2191.9	0.0	0.0	0.0	0.0	1045.6	0.0	0.0	0.0	0.0	138.1	0.0	0.0	6206.0	
9	Himachal Pradesh	0.0	0.0	38.7	0.0	162.0	124.8	0.0	56.7	0.0	0.0	144.0	0.0	129.4	0.0	3087.0	196.8	0.0	50.5	0.0	999.0	407.2	0.0	51.3	0.0	0.0	5447.4	
10	Jammu & Kashmir/Laddakh	202.0	0.0	80.0	0.0	0.0	26.8	0.0	12.6	0.0	0.0	-13.3	0.0	63.0	0.0	0.0	44.0	0.0	7.5	0.0	0.0	11.6	0.0	22.8	0.0	0.0	457.0	
11	Jharkhand	0.0	0.0	282.8	0.0	0.0	0.0	0.0	85.3	0.0	0.0	0.0	0.0	94.7	0.0	0.0	0.0	0.0	72.1	0.0	0.0	0.0	0.0	29.7	0.0	0.0	564.4	
12	Karnataka	0.0	5072.6	1516.4	0.0	0.0	0.0	1148.4	3253.0	0.0	0.0	0.0	1346.1	1034.7	0.0	405.0	0.0	1036.0	388.5	0.0	0.0	208.0	669.9	5927.1	0.0	0.0	22005.6	
13	Kerala	80.0	7.0	1306.8	0.0	0.0	192.0	0.0	1991.3	0.0	68.9	100.0	0.0	428.9	0.0	0.0	64.0	0.0	575.1	0.0	0.0	0.0	70.0	18.2	0.0	0.0	4902.1	
15	Madhya Pradesh	0.0	0.0	5966.5	0.0	0.0	192.0	2270.8	421.0	0.0	0.0	0.0	0.0	866.2	0.0	0.0	30.4	0.0	1177.1	0.0	0.0	0.0	0.0	2091.8	0.0	0.0	13015.7	
16	Maharashtra	9.6	1366.1	7633.9	0.0	0.0	0.0	0.0	10459.4	0.0	0.0	12.0	87.5	1536.2	0.0	0.0	0.0	0.0	2440.9	0.0	0.0	32.0	1443.4	935.8	0.0	0.0	25956.7	
17	Manipur	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	7.1	0.0	0.0	0.0	0.0	8.9	0.0	0.0	24.2	
18	Meghalaya	180.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	182.0	
19	Mizoram	0.0	0.0	11.5	0.0	0.0	72.0	0.0	100.6	0.0	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0	6.6	0.0	0.0	199.9	
20	Nagaland	0.0	0.0	0.6	0.0	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.7	
21	Odisha	0.0	0.0	212.3	0.0	0.0	72.0	0.0	9.7	0.0	0.0	144.0	0.0	128.6	0.0	110.7	192.0	0.0	26.3	0.0	0.0	0.0	0.0	23.5	0.0	0.0	919.0	
22	Punjab	0.0	0.0	785.1	0.0	0.0	0.0	0.0	336.0	0.0	0.0	20.4	0.0	588.9	0.0	0.0	0.0	0.0	103.0	0.0	0.0	0.0	0.0	214.9	0.0	0.0	2048.1	
23	Rajasthan	0.0	16.8	21459.4	0.0	0.0	0.0	6066.2	22454.2	0.0	0.0	0.0	0.0	33196.4	0.0	0.0	0.0	189.7	3251.7	0.0	0.0	0.0	0.0	9556.2	0.0	0.0	96190.5	
24	Sikkim	0.0	0.0	11.8	0.0	0.0	24.0	0.0	0.1	0.0	0.0	0.0	0.0	13.7	0.0	1017.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	1066.8	
25	Tamil Nadu	0.0	4104.6	7374.7	0.0	0.0	0.0	1055.6	8346.3	0.0	0.0	0.0	1808.3	2698.6	0.0	0.0	2125.9	2829.6	0.0	0.0	0.0	2348.0	6714.3	0.0	0.0	39405.8		
26	Telangana	0.0	0.0	460.7	0.0	0.0	0.0	0.0	727.8	0.0	0.0	0.0	0.0	2794.7	0.0	0.0	0.0	0.0	1662.2	0.0	0.0	0.0	0.0	143.6	0.0	0.0	5788.9	
27	Tripura	0.0	0.0	4.3	0.0	0.0	0.0	0.0	13.6	0.0	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	21.9	0.0	0.0	49.7	
28	Uttar Pradesh	0.0	0.0	2025.6	0.0	0.0	0.0	0.0	1354.0	0.0	0.0	0.0	0.0	2040.8	0.0	0.0	192.0	0.0	3138.8	0.0	0.0	0.0	0.0	805.5	0.0	0.0	9556.5	
29	Uttarakhand	0.0	0.0	0.0	0.0	540.0	0.0	0.0	10.0	0.0	1080.0	36.0	0.0	967.1	0.0	0.0	0.0	0.0	262.8	0.0	891.0	0.0	0.0	52.5	0.0	0.0	3839.3	
30	West Bengal	0.0	0.0	70.5	0.0	0.0	0.0	0.0	69.9	0.0	0.0	0.0	0.0	16.8	0.0	0.0	0.0	0.0	177.1	0.0	0.0	0.0	0.0	193.7	0.0	0.0	527.9	
31	Andaman & Nicobar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	85.2	0.0	0.0	0.0	0.0	2.3	0.0	0.0	89.7	
32	Chandigarh	0.0	0.0	34.2	0.0	0.0	0.0	0.0	17.6	0.0	0.0	0.0	0.0	46.0	0.0	0.0	0.0	0.0	23.1	0.0	0.0	0.0	0.0	29.2	0.0	0.0	150.0	
33	Dadar & Nagar Haveli/Daman & Diu	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	103.5	0.0	0.0	0.0	0.0	27.0	0.0	0.0	132.7	
34	Delhi	0.0	0.0	191.3	0.0	0.0	0.0	0.0	35.7	0.0	0.0	0.0	0.0	83.5	0.0	0.0	0.0	0.0	139.1	0.0	0.0	0.0	0.0	191.4	0.0	0.0	640.8	
35	Lakshadweep	0.0	0.0	8.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	9.2	
36	Pondicherry	0.0	0.0	71.9	0.0	0.0	0.0	0.0	109.2	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	19.1	0.0	0.0	0.0	0.0	11.9	0.0	0.0	233.0	
	All India	471.6	22773.7	75166.3	22400.0	702.0	763.2	15928.9	63919.0	0.0	1148.9	496.8	7773.7	63802.6	0.0	4619.7	829.2	10523.1	28143.9	0.0	4590.0	720.0	14824.5	32550.3	0.0	2700.0	374847.2	

Annexure referred to the reply of part (c) of the Rajya Sabha Unstarred Question No. 933 to be answered on 11/02/2025

The Government of India has taken several steps and initiatives to promote and accelerate renewable energy capacity in the country to realize the commitment of 500 GW non-fossil energy capacity by 2030. These include, inter-alia, the following:

- Ministry of New & Renewable Energy (MNRE) has issued Bidding Trajectory for issuance of RE power procurement bids of 50 GW/annum by Renewable Energy Implementing Agencies (REIAs) [REIAs: Solar Energy Corporation of India Limited (SECI), NTPC Limited, NHPC Limited, SJVN Limited] from FY 2023-24 to FY 2027-28.
- Foreign Direct Investment (FDI) has been permitted up to 100 percent under the automatic route.
- Inter State Transmission System (ISTS) charges have been waived for inter-state sale of solar and wind power for projects to be commissioned by 30th June 2025, for Green Hydrogen Projects till December 2030 and for offshore wind projects till December 2032.
- To boost RE consumption, Renewable Purchase Obligation (RPO) followed by Renewable Consumption Obligation (RCO) trajectory has been notified till 2029-30. The RCO which is applicable to all designated consumers under the Energy Conservation Act 2001 will attract penalties on non-compliance. RCO also includes specified quantum of consumption from Decentralized Renewable Energy sources.
- Project Development Cell for attracting and facilitating investments has been set up.
- Standard Bidding Guidelines for tariff based competitive bidding process for procurement of Power from Grid Connected Solar, Wind, Wind-Solar Hybrid and Firm & Dispatchable RE (FDRE) projects have been issued.
- Schemes such as Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM), PM Surya Ghar Muft Bijli Yojana, National Programme on High Efficiency Solar PV Modules, National Green Hydrogen Mission, Viability Gap Funding (VGF) Scheme for Offshore Wind Energy Projects have been launched.
- Scheme for setting up of Solar Parks and Ultra Mega Solar Power projects is being implemented to provide land and transmission to RE developers for installation of RE projects at large scale.

- Laying of new transmission lines and creating new sub-station capacity has been funded under the Green Energy Corridor Scheme for evacuation of renewable power.
- Electricity (Rights of Consumers) Rules, 2020 has been issued for net-metering up to five hundred Kilowatt or up to the electrical sanctioned load, whichever is lower.
- “National Repowering and Life Extension Policy for Wind Power Projects, 2023” has been issued.
- “Strategy for Establishments of Offshore Wind Energy Projects” has been issued indicating a bidding trajectory of 37 GW by 2030 and various business models for project development.
- The Offshore Wind Energy Lease Rules, 2023 have been notified vide Ministry of External Affairs notification dated 19th December 2023, to regulate the grant of lease of offshore areas for development of offshore wind energy projects.
- Standard & Labelling (S&L) programs for Solar Photovoltaic modules and Grid-connected Solar Inverters have been launched.
- To augment transmission infrastructure needed for steep RE trajectory, transmission plan has been prepared till 2030.
- “The Electricity (Late Payment Surcharge and related matters) Rules (LPS rules) have been notified.
- Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022, has been notified on 06th June 2022 with objective of ensuring access to affordable, reliable, and sustainable green energy for all. Green Energy Open Access is allowed to any consumer with contract demand of 100 kW or above through single or multiple single connection aggregating Hundred kW or more located in same electricity division of a distribution licensee.
- Green Term Ahead Market (GTAM) has been launched to facilitate sale of Renewable Energy Power through exchanges.
- Government has issued orders that power shall be dispatched against Letter of Credit (LC) or advance payment to ensure timely payment by distribution licensees to RE generators.