generation capacity shall be from non-fossil fuel sources. Towards this aim, the Government has set a target of installing 175 GW of renewable energy capacity in the country by the year 2022 which includes 100 GW from solar, 60 GW from wind, 10 GW from Biomass and 5 GW from Small Hydro.

So far, as on 31 January 2020, a cumulative renewable energy capacity of 86.32 GW has been installed in the country. Further, an additional capacity of 35.09 GW is under various stages of implementation and 34.47 GW under various stages of bidding.

Promotion of new and renewable energy in Bihar

1408. PROF. MANOJ KUMAR JHA: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) whether Government has planned to achieve 175 GW of renewable energy capacity installed by the year 2022, if so, the details thereof;

(b) whether Government is taking any initiative in terms of renewable energy creation, if so, the details thereof from the year 2015-19, State-wise; and

(c) whether Government has taken any specific measures to introduce new and renewable energy in the State of Bihar, if so, the details regarding financial outlay and plan?

THE MINISTER OF STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI RAJ KUMAR SINGH): (a) The Government has set a target of installing 175 GW of renewable energy capacity in the country by the year 2022 which includes 100 GW from solar, 60 GW from wind, 10 GW from Biomass and 5 GW from Small Hydro. So far, as on 31.01.2020 a Total of 86.32 GW of renewable energy capacity has been installed in the country with an additional capacity of 35.09 GW under various stages of implementation and 34.47 GW under various stages of bidding.

(b) and (c) The major initiatives being taken by the Government to create renewable energy capacity in the country including the state of Bihar, *inter-alia*, include Permitting Foreign Direct Investment (FDI) up to 100 percent under the automatic route, strengthening of Power Purchase Agreements (PPAs), mandating requirement of Letter of Credit (LC) as payment security mechanism by distribution licensees for ensuring timely payments to RE generators, setting of Ultra Mega Renewable Energy Parks to

provide land and transmission on plug and play basis to investors, waiver of Inter State Transmission System (ISTS) charges and losses for inter-State sale of solar and wind power for projects to be commissioned by 31st December, 2022, notification of standard bidding guidelines to enable distribution licensee to procure solar and wind power at competitive rates in cost effective manner, declaration of trajectory for Renewable Purchase Obligation (RPO) up to the year 2022, laying of transmission lines under Green Energy Corridor Scheme for evacuation of Power in Renewable rich states, launching of new schemes such as Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM), Solar Rooftop Phase II, 12000 MW CPSU Scheme Phase II, etc.

The source-wise and state-wise details of renewable energy capacity addition in the country during the period 2015-19 i.e. April, 2015 to March 2019 are given in Statement (See below). A Total - of ₹ 21.45 crore has been released as Central Financial Assistance (CFA) to the various implementing agencies for development of renewable energy projects in the state of Bihar during the period 2015-19 *i.e.* April, 2015 to March, 2019.

Statement

Source-wise and State-wise renewable energy capacity addition made during the last Five years (01.04.2014 to 31.03.2019) (in MW)

Sl. No.	State/UT	Solar Power	Wind Power	Small Hydro Power	Bio-Mass	Waste to Energy	Total Installed Renew-able Energy Capacity
1	2	3	4	5	6	7	8
1.	Andhra Pradesh	3074.6	3344.35	20	23.56	10.91	6473.42
2.	Arunachal Pradesh	5.37	0	27.2	0	0	32.57
3.	Assam	22.4	0	0	0	0	22.4
4.	Bihar	142.45	0	0	20	0	162.45
5.	Chhattisgarh	224.25	0	24	10	0	258.25

1	2	3	4	5	6	7	8
6.	Goa	3.92	0	0	0	0	3.92
7.	Gujarat	1523.73	2707.58	45.7	21.9	1.11	4300.02
8.	Haryana	214.22	0	3.4	57.35	0	274.97
9.	Himachal Pradesh	22.68	0	221.71	0	0	244.39
10.	Jammu and Kashmir	14.83	0	31.5	0	0	46.33
11.	Jharkhand	18.94	0	0	3.1	0	22.04
12.	Karnataka	6064.57	2376.8	223	470.45	0	9134.82
13.	Kerala	138.57	17.4	63.6	0	0	219.57
14.	Madhya Pradesh	1486.58	2096.5	9.75	25	0	3617.83
15.	Maharashtra	1355.02	698.65	48.145	877.5	0	2979.315
16.	Manipur	3.44	0	0	0	0	3.44
17.	Meghalaya	0.12	0	1.5	0	0	1.62
18.	Mizoram	0.5	0	5	0	0	5.5
19.	Nagaland	1	0	1	0	0	2
20.	Odisha	365.23	0	0	5.28	0	370.51
21.	Punjab	889.16	0	17.35	27.45	1.2	935.16
22.	Rajasthan	2513.54	1514.7	0	4.95	0	4033.19
23.	Sikkim	0.01	0	0	0	0	0.01
24.	Tamil Nadu	2486.77	1699.32	0	122	0	4308.09
25.	Telangana	3486.29	128.1	11.95	0	0	3626.34
26.	Tripura	5.09	0	0	0	0	5.09
27.	Uttar Pradesh	931.01	0	0	104.25	8.19	1043.45
28.	Uttarakhand	301.76	0	34.5	5.12	0	341.38
29.	West Bengal	68.75	0	0.1	10.5	0	79.35
30.	Andaman and Nicobar Islands	6.63	0	0	0	0	6.63
31.	Chandigarh	32.72	0	0	0	0	32.72
32.	Dadar & Nagar Haveli	5.46	0	0	0	0	5.46

1	2	3	4	5	6	7	8
33	Daman and Diu	14.47	0	0	0	0	14.47
34	Delhi	121.74	0	0	0	36	157.74
35	Lakshadweep	0	0	0	0	0	0
36	Puducherry	3.11	0	0	0	0	3.11
	TOTAL	25548.93	14583.4	789.405	1788.41	57.41	42767.56

Capacity addition in renewable energy sector

1409. SHRI JOSE K. MANI: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) the details of additions to solar capacity and wind energy from 2016 to 2019, year -wise;

(b) whether exports of solar cells and modules have significantly decreased since 2017;

(c) the details of additional capacity required to reach 175 GW capacity by 2022; and

(d) whether Government plans to do away with ceilings at auctions as well as steps taken to counter payment delays?

THE MINISTER OF STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI RAJ KUMAR SINGH): (a) The years-wise details of capacity addition of solar and wind energy capacity in the country from 2015- 16 to 2018-19 are as under:

Year	Solar		Wind	
	During the year (MW)	Cumulative (MW)	During the year (MW)	Cumulative (MW)
2015-16	3018.89	6762.85	3423.05	26777.39
2016-17	5525.98	12288.83	5502.38	32279.76
2017-18	9362.63	21651.46	1865.24	34145.00
2018-19	6529.20	28180.66	1480.96	35625.96