

GOVERNMENT OF INDIA  
MINISTRY OF NEW AND RENEWABLE ENERGY  
**LOK SABHA**  
**UNSTARRED QUESTION NO. 704**  
TO BE ANSWERED ON 06.02.2020

**INSTALLED CAPACITY OF SOLAR AND WIND ENERGY**

+704. SHRI RAVINDRA KUSHWAHA

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

- (a) the details of the total capacity/installed capacity of solar and wind energy in the country, State/UT-wise;
- (b) the details of the programmes/schemes relating to the production of solar and wind energy in the country along with the targets set and achievements made thereunder during each of the last three years and the current year, State/UT-wise;
- (c) the details of the proposals received in this regard along with the funds allocated/released during the said period, State/UT-wise;
- (d) the details of the subsidy granted by the Government to the States/private companies for the said purpose;
- (e) whether the Government proposes to formulate any action plan for the grading of solar panels/ instruments available in the market; and
- (f) if so, the details thereof along with the scheme being formulated for the said purpose?

**ANSWER**

THE MINISTER OF STATE (I/C) FOR NEW & RENEWABLE ENERGY, POWER and MoS  
for SKILL DEVELOPMENT AND ENTREPRENEURSHIP

(SHRI R.K. SINGH)

(a) State/UT-wise details of total solar and wind energy capacity installed in the country are given at **Annexure-I**.

(b) In order to tap the vast potential of solar and wind energy, the Government has set a target of installing 100 GW of solar power and 60 GW of wind power capacity in the country by December 2022 by implementing various schemes as given in **Annexure-II**. No year-wise targets have been fixed. State/UT-wise details of solar and wind power capacity installed during each of the last three years and the current year are given at **Annexure-III**.

(c) Majority of Solar power projects are installed with private investments. Funds released by the Ministry under various solar power schemes in the country during last three years and current year are given below:-

| Year    | Total funds released<br>(Rs. Crore) |
|---------|-------------------------------------|
| 2016-17 | 2590.59                             |
| 2017-18 | 1889.93                             |
| 2018-19 | 2524.65                             |
| 2019-20 | 1751.07<br>(As on<br>30.01.2020)    |

While the Ministry does not make budgetary allocations state-wise, details of funds released on the basis of proposals received under some of the Solar Programmes during the last three years and the current year are given in **Annexure-IV**.

Majority of Wind power projects are also commissioned through private sector investment. A scheme providing Generation Based Incentive (GBI) existed up to March, 2017. The details GBI released for projects installed upto March 2017, during last three years and current year are given at **Annexure V**.

(d) The details of Central Financial Assistance as stipulated under different in solar energy schemes/programmes are given at **Annexure-VI**.

(e) & (f) The Bureau of Energy Efficiency (BEE) in consultation with the Ministry of New and Renewable Energy (MNRE) is working out a star labelling scheme for Solar Photovoltaic Panels.

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**ANNEXURE-I****ANNEXURE-I REFERRED TO IN REPLY TO PART (A) OF LOK SABHA UNSTARRED QUESTION NO. 704 FOR 06.02.2020****(I) GRID CONNECTED SOLAR POWER CAPACITY INSTALLED AS ON 31-12-2019**

| <b>Sr. No.</b> | <b>State/UT</b>   | <b>Solar Power Capacity (in MW)</b> |
|----------------|-------------------|-------------------------------------|
| 1              | Andaman & Nicobar | 12.19                               |
| 2              | Andhra Pradesh    | 3559.02                             |
| 3              | Arunachal Pradesh | 5.61                                |
| 4              | Assam             | 41.23                               |
| 5              | Bihar             | 149.35                              |
| 6              | Chandigarh        | 36.99                               |
| 7              | Chhattisgarh      | 231.35                              |
| 8              | Dadar & Nagar     | 5.46                                |
| 9              | Daman & Diu       | 16.56                               |
| 10             | Delhi             | 156.12                              |
| 11             | Goa               | 4.78                                |
| 12             | Gujarat           | 2763.55                             |
| 13             | Haryana           | 249.27                              |
| 14             | Himachal Pradesh  | 32.57                               |
| 15             | Jammu & Kashmir   | 19.30                               |
| 16             | Jharkhand         | 38.40                               |
| 17             | Karnataka         | 7274.92                             |
| 18             | Kerala            | 141.75                              |
| 19             | Lakshadweep       | 0.75                                |
| 20             | Madhya Pradesh    | 2237.48                             |
| 21             | Maharashtra       | 1663.42                             |
| 22             | Manipur           | 4.58                                |
| 23             | Meghalaya         | 0.12                                |
| 24             | Mizoram           | 1.52                                |
| 25             | Nagaland          | 1.00                                |
| 26             | Odisha            | 397.84                              |
| 27             | Pondicherry       | 5.51                                |
| 28             | Punjab            | 947.10                              |
| 29             | Rajasthan         | 4844.21                             |
| 30             | Sikkim            | 0.07                                |
| 31             | Tamil Nadu        | 3788.36                             |
| 32             | Telangana         | 3620.75                             |
| 33             | Tripura           | 9.41                                |
| 34             | Uttar Pradesh     | 1045.10                             |
| 35             | Uttarakhand       | 315.49                              |
| 36             | West Bengal       | 109.41                              |
|                | <b>Total</b>      | <b>33730.53</b>                     |

**(II) WIND POWER CAPACITY INSTALLED (as on 31-12.2019)**

| <b>S. No.</b> | <b>STATE</b>   | <b>Wind power Capacity (In MW)</b> |
|---------------|----------------|------------------------------------|
| 1.            | Andhra Pradesh | 4092.45                            |
| 2.            | Gujarat        | 7359.22                            |
| 3.            | Karnataka      | 4753.4                             |
| 4.            | Kerala         | 62.5                               |
| 5.            | Madhya Pradesh | 2519.89                            |
| 6.            | Maharashtra    | 5000.33                            |
| 7.            | Rajasthan      | 4299.72                            |
| 8.            | Tamil Nadu     | 9285.27                            |
| 9.            | Telangana      | 128.1                              |
| 10.           | Others         | 4.3                                |
|               | <b>Total</b>   | <b>37505.18</b>                    |

**ANNEXURE-II REFERRED TO IN REPLY TO PART (B) OF LOK SABHA  
UNSTARRED QUESTION NO. 704 FOR 06.02.2020**

**DETAILS OF EXISTING SCHEMES LAUNCHED UNDER NATIONAL SOLAR MISSION**

- i. Solar Park Scheme for setting up of over 50 Solar Parks and Ultra Mega Solar Power Projects targeting over 40,000 MW of solar power projects.
- ii. Scheme for setting up of Grid-Connected Solar PV Power Projects by the Central Public Sector Undertakings (CPSUs) and the Government of India organisations with Viability Gap Funding (VGF).
- iii. VGF Scheme for setting up of 5000 MW of Grid Connected Solar PV Power Projects through SECI, which has a separate component of 1000 MW for N-E states.
- iv. Installation of Grid Connected Solar Rooftop Power Plants.
- v. Off-Grid Solar PV Scheme.
- vi. Pradhan Mantri – Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM) Scheme to support farmers to set up small solar power projects and solar pumps for irrigation purpose.

**ANNEXURE-III****ANNEXURE-III REFERRED TO IN REPLY TO PART (B) OF LOK SABHA****UNSTARRED QUESTION NO. 704 FOR 06.02.2020****(I) Year wise Installed Capacity of Solar Power (in MW)**

| Sr. No. | State/UT          | Capacity Added during 2016-17 | Capacity Added during 2017-18 | Capacity Added during 2018-19 | Capacity Added during 2019-20 (up to Dec 2019) | Cumulative Capacity installed till 31.12.2019 |
|---------|-------------------|-------------------------------|-------------------------------|-------------------------------|--|---|
| 1       | Andaman & Nicobar | 1.46                          | 0.00                          | 5.17                          | 0.46   | 12.19   |
| 2       | Andhra Pradesh    | 1294.26                       | 328.24                        | 890.22                        | 473.34   | 3559.02                                       |
| 3       | Arunachal Pradesh | 0.00                          | 5.13                          | 0.00                          | 0.22   | 5.61  |
| 4       | Assam             | 11.78                         | 0.67                          | 9.95                          | 18.83  | 41.23   |
| 5       | Bihar             | 103.42                        | 33.93                         | 0.00                          | 6.90   | 149.35  |
| 6       | Chandigarh        | 10.52                         | 7.88                          | 9.51                          | 2.28   | 36.99   |
| 7       | Chhattisgarh      | 35.28                         | 102.49                        | 0.00                          | 0.00   | 231.35  |
| 8       | Dadar & Nagar     | 2.97                          | 2.49                          | 0.00                          | 0.00   | 5.46  |
| 9       | Daman & Diu       | 6.46                          | 0.15                          | 3.86                          | 2.09   | 16.56   |
| 10      | Delhi             | 25.99                         | 17.80                         | 57.32                         | 29.23  | 156.12  |
| 11      | Goa               | 0.71                          | 0.20                          | 2.98                          | 0.89   | 4.78  |
| 12      | Gujarat           | 130.19                        | 328.89                        | 852.13                        | 323.42   | 2763.55                                       |
| 13      | Haryana           | 66.01                         | 123.45                        | 7.67                          | 24.75  | 249.27  |
| 14      | Himachal Pradesh  | 0.53                          | 0.00                          | 21.95                         | 9.89   | 32.57   |
| 15      | J&K               | 0.36                          | 0.00                          | 13.47                         | 4.47   | 19.30   |
| 16      | Jharkhand         | 7.08                          | 2.39                          | 9.28                          | 3.45   | 38.40   |
| 17      | Karnataka         | 882.38                        | 3915.22                       | 1151.43                       | 1179.37  | 7274.92                                       |
| 18      | Kerala            | 61.15                         | 33.46                         | 30.65                         | 3.16   | 141.75  |
| 19      | Lakshadweep       | 0.00                          | 0.00                          | 0.00                          | 0.00   | 0.75  |
| 20      | Madhya Pradesh    | 80.67                         | 448.31                        | 534.81                        | 397.33   | 2237.48                                       |
| 21      | Maharashtra       | 66.61                         | 777.56                        | 394.36                        | 29.88  | 1663.42                                       |
| 22      | Manipur           | 0.03                          | 0.03                          | 3.38                          | 1.14   | 4.58  |
| 23      | Meghalaya         | 0.01                          | 0.01                          | 0.10                          | 0.00   | 0.12  |
| 24      | Mizoram           | 0.00                          | 0.10                          | 0.30                          | 1.02   | 1.52  |
| 25      | Nagaland          | 0.50                          | 0.50                          | 0.00                          | 0.00   | 1.00  |
| 26      | Odisha            | 12.50                         | 0.15                          | 315.16                        | 3.11   | 397.84  |
| 27      | Pondicherry       | 0.05                          | 0.08                          | 2.98                          | 2.37   | 5.51  |
| 28      | Punjab            | 388.89                        | 104.15                        | 0.00                          | 41.48  | 947.10  |
| 29      | Rajasthan         | 543.00                        | 518.49                        | 894.02                        | 1617.42  | 4844.21                                       |
| 30      | Sikkim            | 0.00                          | 0.00                          | 0.01                          | 0.06   | 0.07  |
| 31      | Tamil Nadu        | 630.01                        | 213.65                        | 666.65                        | 1213.14  | 3788.36                                       |
| 32      | Telangana         | 759.13                        | 2004.27                       | 300.84                        | 28.66  | 3620.75                                       |
| 33      | Tripura           | 0.09                          | 0.00                          | 0.00                          | 4.32   | 9.41  |
| 34      | Uttar Pradesh     | 193.24                        | 357.13                        | 265.69                        | 85.00  | 1045.10                                       |
| 35      | Uttarakhand       | 192.35                        | 24.79                         | 46.67                         | 8.74   | 315.49  |
| 36      | West Bengal       | 18.37                         | 11.06                         | 38.63                         | 33.46  | 109.41  |
|         | <b>TOTAL</b>      | <b>5525.98</b>                | <b>9362.63</b>                | <b>6529.20</b>                | <b>5549.87</b>                                 | <b>33730.53</b>                               |

**(II) Cumulative Year wise Installed Capacity of Wind Power (in MW):**

| <b>STATE</b>   | <b>2016-17</b>  | <b>2017-18</b>  | <b>2018-19</b>  | <b>2019-20<br/>(as on<br/>31.12.2019)</b> |
|----------------|-----------------|-----------------|-----------------|---|
| Andhra Pradesh | 3618.85         | 3966.95         | 4090.45         | 4092.45                                   |
| Gujarat        | 5340.62         | 5613.42         | 6073.07         | 7359.22                                   |
| Karnataka      | 3751.40         | 4608.40         | 4694.9          | 4753.40                                   |
| Kerala         | 51.50           | 52.50           | 52.5            | 62.50                                     |
| Madhya Pradesh | 2497.79         | 2519.89         | 2519.89         | 2519.89                                   |
| Maharashtra    | 4771.33         | 4783.93         | 4794.13         | 5000.33                                   |
| Rajasthan      | 4281.72         | 4297.72         | 4299.72         | 4299.72                                   |
| Tamil Nadu     | 7861.45         | 8197.09         | 8968.905        | 9285.27                                   |
| Telangana      | 100.80          | 100.80          | 128.1           | 128.10                                    |
| Others         | 4.30            | 4.30            | 4.30            | 4.30                                      |
| <b>Total</b>   | <b>32279.76</b> | <b>34145.00</b> | <b>35625.96</b> | <b>37505.18</b>                           |

**ANNEXURE-IV****ANNEXURE-IV REFERRED TO IN REPLY TO PART (C) OF LOK SABHA  
UNSTARRED QUESTION NO. 704 FOR 06.02.2020****STATE/UT-WISE DETAILS OF FUNDS RELEASED FOR PROMOTION OF SOLAR  
ENERGY IN THE COUNTRY DURING EACH THE LAST THREE YEARS AND THE  
CURRENT YEAR****(I) PILOT-CUM-DEMONSTRATION PROJECT FOR DEVELOPMENT OF GRID-  
CONNECTED SOLAR PV POWER PLANTS ON CANAL BANKS AND CANAL TOPS****(Rs. in crore)**

| Sl. No. | State          | Implementing Agency       | Project Details    |                | Central Financial Assistance Released |             |              |
|---------|----------------|---------------------------|--------------------|----------------|---------------------------------------|-------------|--------------|
|         |                |                           | Project Type       | Capacity (MW)  | FY 2016-17                            | FY 2017-18  | FY 2018-19   |
| 1       | Andhra Pradesh | NREDCAP                   | CT                 | 1              | 0.32                                  | 0.00        | 1.27         |
| 2       |                | NREDCAP (APGENCO project) | CB                 | 5              | 1.50                                  | 0.00        | 4.50         |
| 3       | Gujarat        | SSNNL                     | CT & CB            | 10 & 15        | 10.32                                 | 0.00        | 31.22        |
| 4       | Karnataka      | KBJNL                     | CT                 | 10             | 3.39                                  | 0.00        | 14.68        |
| 5       | Kerala         | KSEB                      | CT&CB              | 2 & 1          | 1.21                                  | 0.00        | 4.00         |
| 6       | Punjab         | PEDA                      | CT                 | 20             | 3.00                                  | 0.00        | 6.15         |
| 7       | Uttar Pradesh  | Irrigation Deptt. (UP)    | CT                 | 3.5 & 2.5      | 0.00                                  | 0.00        | 3.26         |
| 8       | Uttarakhand    | UJVNL                     | CT & CB            | 1 & 19         | 6.30                                  | 0.00        | 17.70        |
| 9       | West Bengal    | WBSEDCL                   | CB                 | 10             | 4.80                                  | 0.00        | 7.20         |
|         |                | <b>Total</b>              | <b>CT &amp; CB</b> | <b>50 + 50</b> | <b>30.83</b>                          | <b>0.00</b> | <b>90.00</b> |



**(II) DEVELOPMENT OF SOLAR PARKS AND ULTRA MEGA SOLAR POWER PROJECTS**

(Rs. in Lakh)

| Sl. No. | State          | Solar Park                              | 2016-17        | 2017-18         | 2018-19        | 2019-20<br>(As on 31-12-2019) |
|---------|----------------|---|----------------|-----------------|----------------|-------------------------------|
| 1       | Andhra Pradesh | Ananthapuramu-I Solar Park              | 9.77           | 0.00            | 0.00           | 0.00                          |
| 2       |                | Kurnool Solar Park                      | 25.00          | 1793.81         | 0.00           | 1806.19                       |
| 3       |                | Kadapa Solar Park                       | 625.00         | 1400.00         | 3400.00        | 0.00                          |
| 4       |                | Ananthapuramu-II Solar Park             | 325.00         | 699.80          | 4100.00        | 0.00                          |
| 5       |                | Hybrid Solar Wind Park                  | 0.00           | 25.00           | 0.00           | 0.00                          |
| 6       |                | Ext Trans PGCIL-AP-I                    | 0.00           | 6000.00         | 0.00           | 4955.54                       |
| 7       |                | Ext Trans APTRANCO-AP II                | 0.00           | 0.00            | 2000.00        | 0.00                          |
| 8       |                | Ext Trans APTRANCO-Kurnool              | 0.00           | 6703.50         | 0.00           | 696.50                        |
|         |                | <b>Sub Total</b>                        | <b>984.77</b>  | <b>16622.11</b> | <b>9500.00</b> | <b>7458.23</b>                |
| 9       | Chhattisgarh   | Rajnandgaoun Solar Park                 | 15.00          | 0.00            | 0.00           | 0.00                          |
| 10      | Gujarat        | Ext Trans PGCIL-Radhnesada              | 0.00           | 413.00          | 2387.00        | 0.00                          |
| 11      | Karnataka      | Pavagada Solar Park                     | 7980.00        | 0.00            | 0.00           | 545.44                        |
| 12      |                | Ext Trans PGCIL-Pavagada                | 0.00           | 4000.00         | 4000.00        | 4000.00                       |
|         |                | <b>Sub Total</b>                        | <b>7995.00</b> | <b>4413.00</b>  | <b>6387.00</b> | <b>4545.44</b>                |
| 13      | Kerala         | Kasargod Solar Park                     | 200.00         | 0.00            | 0.00           | 0.00                          |
| 14      | Madhya Pradesh | Rewa Solar Park                         | 0.00           | 3883.51         | 0.00           | 0.00                          |
| 15      |                | Neemuch-Mandsaur Solar Park             | 25.00          | 0.00            | 2523.50        | 0.00                          |
| 16      |                | Ext Trans PGCIL-Rewa                    | 0.00           | 3000.00         | 0.00           | 3000.00                       |
|         |                | <b>Sub Total</b>                        | <b>225.00</b>  | <b>6883.51</b>  | <b>2523.50</b> | <b>3000.00</b>                |
| 17      | Maharashtra    | Sai Guru Solar Park (Pragat)            | 435.00         | 0.00            | 0.00           | 0.00                          |
| 18      |                | Patoda Solar Park (Paramount)           | 25.00          | 0.00            | 0.00           | 0.00                          |
| 19      |                | Dondaicha Solar Park                    | 25.00          | 0.00            | 600.00         | 0.00                          |
| 20      |                | Latur Solar Park                        | 0.00           | 0.00            | 10.00          | 0.00                          |
| 21      |                | Washim solar park                       | 0.00           | 0.00            | 15.00          | 0.00                          |
| 22      |                | Yavatmal Solar Park                     | 0.00           | 0.00            | 10.00          | 0.00                          |
| 23      |                | Kacharala solar park                    | 0.00           | 0.00            | 15.00          | 0.00                          |
|         |                | <b>Sub Total</b>                        | <b>485.00</b>  | <b>0.00</b>     | <b>650.00</b>  | <b>0.00</b>                   |
| 24      | Manipur        | Bukpi Solar Park                        | 0.00           | 0.00            | 0.00           | 10.00                         |
| 25      | Mizoram        | Vankal Solar Park                       | 0.00           | 0.00            | 0.00           | 10.00                         |
| 26      | Nagaland       | Nagaland Solar Park in Nagaland         | 0.00           | 0.00            | 0.00           | 10.00                         |
| 26      | Rajasthan      | Bhadla-III Solar Park                   | 450.00         | 1761.51         | 2827.65        | 0.00                          |
| 27      |                | Bhadla-IV Solar Park                    | 1525.00        | 3600.00         | 0.00           | 0.00                          |
| 28      |                | Phalodi-Pokaran Solar Park              | 25.00          | 0.00            | 1800.00        | 0.00                          |
| 29      |                | Fatehgarh Phase-1B Solar Park           | 25.00          | 0.00            | 0.00           | 0.00                          |
| 30      |                | Nokh Solar Park                         | 0.00           | 25.00           | 0.00           | 0.00                          |
| 31      |                | RVPN (Bh-II, Bh-III, Bh-IV solar parks) | 0.00           | 5027.10         | 0.00           | 5720.00                       |
| 32      |                | PGCIL (Bh-II, Bh-III, Bh-IV,            | 0.00           | 3000.00         | 3000.00        | 0.00                          |

| Sl. No.      | State         | Solar Park                                    | 2016-17         | 2017-18         | 2018-19         | 2019-20<br>(As on 31-12-2019) |
|--------------|---------------|---|-----------------|-----------------|-----------------|-------------------------------|
|              |               | Phalodi-Pokaran, Fatehgarh Ph-1B solar parks) |                 |                 |                 |                               |
|              |               | <b>Sub Total</b>                              | <b>2025.00</b>  | <b>13413.61</b> | <b>7627.65</b>  | <b>5720.00</b>                |
| 33           | Tamil Nadu    | Kadaladi Solar Park                           | 0.00            | 0.00            | 25.00           | 0.00                          |
| 34           | Uttar Pradesh | Ext Trans UPPTCL                              | 0.00            | 1719.15         | 0.00            | 0.00                          |
| 35           | Uttarakhand   | Solar park in Uttarakhand                     | 8.25            | 0.00            | 0.00            | 0.00                          |
| 36           | West Bengal   | Solar park in West Bengal                     | 25.00           | 0.00            | 0.00            | 0.00                          |
| <b>Total</b> |               |   | <b>11748.02</b> | <b>43051.38</b> | <b>26713.15</b> | <b>20753.67</b>               |

**(III) FUNDS RELEASED UNDER 300 MW DEFENCE SCHEME TO DEFENCE ESTANLISHMENTS**

| SI.No    | Year                          | Expenditure incurred<br>(Rs. in Crores) |
|----------|-------------------------------|---|
| <b>1</b> | 2016-17                       | 24.35                                   |
| <b>2</b> | 2017-18                       | 52.36                                   |
| <b>3</b> | 2018-19                       | 60.084                                  |
| <b>4</b> | 2019-20<br>(as on 31-10-2019) | 8.81                                    |
|          | <b>Total</b>                  | <b>145.60</b>                           |

**(IV) GRID CONNECTED SOLAR ROOFTOPS****(Rs. in Crore)**

| Sl. No. | State/UTs            | 2016-17         | 2017-18         | 2018-19         | 2019-20                          |
|---------|----------------------|-----------------|-----------------|-----------------|----------------------------------|
|         |                      | Released amount | Released amount | Released amount | Released amount as on 31.12.2019 |
| 1       | Andhra Pradesh       | 9.15            | 4.82            | 44.95           |                                  |
| 2       | Assam                | 38.46           | 0.00            |                 | 9.24                             |
| 3       | Andaman & Nicobar    | 0.53            | 7.00            |                 |                                  |
| 4       | Chhattisgarh         | 5.50            | 3.30            |                 | 2.67                             |
| 5       | Delhi                | 19.47           | 21.40           |                 |                                  |
| 6       | Gujarat              | 17.43           | 23.18           | 169.19          | 71.65                            |
| 7       | Goa                  | 0.00            | 0.00            |                 |                                  |
| 8       | Haryana              | 16.22           | 0.00            | 11.74           | 13.06                            |
| 9       | J& K                 | 3.68            | 0.00            |                 | 6.53                             |
| 10      | Jharkhand            | 12.71           | 0.00            |                 | 2.30                             |
| 11      | Kerala               | 4.05            | 9.41            |                 |                                  |
| 12      | Karnataka            | 2.52            | 0.00            |                 |                                  |
| 13      | Lakshadweep          | 0.46            | 0.00            |                 |                                  |
| 14      | Madhya Pradesh       | 31.96           | 3.14            |                 |                                  |
| 15      | Maharashtra          | 23.18           | 0.00            | 77.13           |                                  |
| 16      | Odisha               | 0.86            | 1.61            |                 |                                  |
| 17      | Puduchchery          | 1.10            | 0.00            | 0.10            |                                  |
| 18      | Punjab               | 4.50            | 0.00            | 10.71           | 5.50                             |
| 19      | Rajasthan            | 14.79           | 11.68           | 21.36           |                                  |
| 20      | Tamil Nadu           | 69.67           | 0.00            |                 |                                  |
| 21      | Telangana            | 20.12           | 2.72            | 18.25           | 20.23                            |
| 22      | Tripura              | 0.00            | 0.70            |                 |                                  |
| 23      | Uttarakhand          | 25.97           | 27.09           |                 | 7.67                             |
| 24      | Uttar Pradesh        | 1.16            | 2.32            | 7.52            |                                  |
| 25      | West Bengal          | 0.17            | 6.30            | 4.08            | 13.38                            |
| 26      | Chandigarh           | 6.72            | 1.73            | 18.76           |                                  |
| 27      | Manipur              | 8.11            | 0.00            |                 | 4.15                             |
| 28      | Himachal Pradesh     | 5.43            | 0.00            | 9.76            |                                  |
| 29      | Arunachal Pradesh    | 0.00            | 14.06           |                 |                                  |
| 30      | Mizoram              | 0.00            | 4.54            |                 |                                  |
| 31      | Meghalaya            |                 |                 |                 | 3.47                             |
| 32      | PSU/Govt Departments | 74.74           | 16.75           | 19.67           | 20.83                            |
| 33      | SECI                 | 250.00          | 3.68            | 33.56           | 81.81                            |
| 34      | NISE                 | 0.00            | 2.38            |                 |                                  |
| 35      | TERI                 | 0.00            | 0.13            |                 |                                  |
| 36      | others (NFDC)        | 9.38            | 0.00            |                 |                                  |
|         | <b>Total</b>         | <b>678.01</b>   | <b>167.93</b>   | <b>446.77</b>   | <b>262.49</b>                    |

**(V) OFF-GRID SPV SCHEME****STATE-WISE DETAILS OF FUNDS RELEASED FOR SOLAR OFF GRID APPLICATIONS  
FOR THE LAST THREE YEARS AND CURRENT YEAR (UPTO 31.10.2019)****(Rs in Lakhs)**

| <b>States/UTs</b>   | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> | <b>2019-20</b> |
|---|----------------|----------------|----------------|----------------|
| Andhra Pradesh  | 3953           | 12397          | 11648          | 0              |
| Arunachal Pradesh   | 694            | 770            | 0              | 1701           |
| Assam   | 1358           | 981            | 0              | 1575           |
| Bihar   | 0              | 0              | 526            | 37             |
| Chhattisgarh  | 6549           | 15486          | 9113           | 0              |
| Delhi   | 0              | 0              | 0              | 0              |
| Gujarat   | 2608           | 2622           | 0              | 0              |
| Haryana   | 0              | 0              | 65             | 0              |
| Himachal Pradesh  | 2650           | 1339           | 1829           | 809            |
| Jammu & Kashmir   | 2466           | 0              | 1053           | 0              |
| Jharkhand   | 0              | 555            | 0              | 499            |
| Karnataka   | 3901           | 0              | 1484           | 959            |
| Kerala  | 2359           | 779            | 150            | 0              |
| Lakshadweep   | 0              | 397            | 0              | 0              |
| Madhya Pradesh  | 66             | 6917           | 2847           | 0              |
| Maharashtra   | 0              | 0              | 613            | 3477           |
| Manipur   | 442            | 652            | 0              | 1231           |
| Meghalaya   | 1354           | 816            | 157            | 0              |
| Mizoram   | 1354           | 1633           | 0              | 0              |
| Nagaland  | 1501           | 884            | 206            | 1325           |
| Odisha  | 1700           | 867            | 735            | 1017           |
| Puducherry  | 0              | 0              | 0              | 0              |
| Punjab  | 0              | 0              | 1323           | 713            |
| Rajasthan   | 6711           | 8951           | 3033           | 0              |
| Sikkim  | 282            | 0              | 274            | 0              |
| Tamil Nadu  | 207            | 0              | 0              | 0              |
| Telangana   | 0              | 2337           | 0              | 0              |
| Tripura   | 1372           | 203            | 0              | 0              |
| Uttarakhand   | 373            | 555            | 0              | 1087           |
| Uttar Pradesh   | 1896           | 2670           | 2554           | 4517           |
| West Bengal   | 0              | 0              | 0              | 0              |
| Chandigarh  | 0              | 0              | 0              | 0              |
| Others (CEL, REIL,<br>NABARD, Regional<br>Rural Banks, NGOs,<br>etc.) and other Channel<br>Partners | 11266          | 26614          | 22784          | 0              |
| <b>Total</b>  | <b>55065</b>   | <b>88425</b>   | <b>60393</b>   | <b>18945</b>   |

**(VI) VIABILITY GAP FUNDING RELEASED UNDER CPSU SCHEME AS ON  
31.10.2019**

(Rs. in Crore)

| Sl. No. | State                | Name CPSU/Govt. Orgn.                                   | Capacity (MW) | 16-17         | 17-18         | 18-19        | 19-20       |
|---------|----------------------|---|---------------|---------------|---------------|--------------|-------------|
| 1       | Andhra Pradesh       | NTPC Ltd.   | 250           | 125.00        |               |              |             |
| 2       |                      | Rashtriya Ispat Nigam Ltd.                              | 5             | 2.50          | 2.50          |              |             |
|         | <b>Sub-total</b>     |   | <b>255</b>    | <b>127.50</b> | <b>2.50</b>   |              |             |
| 3       | Dadra & Nagar Haveli | Dadra & Nagar Haveli Power Distribution Corporation Ltd | 3             |               | 1.50          |              |             |
| 4       | Goa                  | ONGC  | 1.00          |               |               |              | 0.50        |
| 5       | Gujarat              | ONGC  | 5.00          |               |               |              | 2.50        |
| 6       | Madhya Pradesh       | NTPC Ltd.   | 229.5         | 82.50         | 114.80        |              |             |
| 7       | Rajasthan            | NTPC Ltd.   | 180           | 180.00        |               |              |             |
| 8       | Tamil Nadu           | Bharat Heavy Electricals Ltd.(BHEL)                     | 5             | 2.50          | 2.50          |              |             |
| 9       |                      | Bharat Heavy Electricals Ltd.(BHEL)                     | 7.5           |               |               | 7.50         |             |
| 10      |                      | NHPC Limited  | 50            |               | 12.50         | 12.50        |             |
| 11      |                      | Neyveli Lignite Corporation (NLC)                       | 130           |               | 48.80         | 48.80        |             |
|         | <b>Sub-total</b>     |   | <b>192.5</b>  | <b>2.50</b>   | <b>63.80</b>  | <b>68.80</b> |             |
| 12      | Telangana            | Bharat Heavy Electricals Ltd.(BHEL)                     | 1.5           | 0.80          | 0.80          |              |             |
| 13      | Uttar Pradesh        | Bharat Heavy Electricals Ltd.(BHEL)                     | 2.5           |               |               | 2.50         |             |
| 14      |                      | GAIL (India) Limited                                    | 5.76          |               | 1.40          | 1.40         |             |
| 15      |                      | Scooters India Ltd.                                     | 1             | 0.30          | 0.30          |              |             |
|         | <b>Sub-total</b>     |   | <b>9.26</b>   | <b>0.30</b>   | <b>1.70</b>   | <b>3.90</b>  |             |
| 16      | Uttarakhand          | Bharat Heavy Electricals Ltd.(BHEL)                     | 5             |               |               | 5.0          |             |
|         |                      | <b>Total</b>  | <b>881.76</b> | <b>393.50</b> | <b>184.94</b> | <b>77.69</b> | <b>3.00</b> |

**(VII) VIABILITY GAP FUNDING (VGF) RELEASED UNDER VGF SCHEME****(Rs. in Crore)****(As on 31.10.2019)****(a) 750 MW**

| <b>Sl. No.</b> | <b>States</b>  | <b>Capacity (MW)</b> | <b>Financial Year 2016-17</b> | <b>Financial Year 2017-18</b> | <b>Financial Year 2018-19</b> | <b>Financial Year 2019-20</b> |
|----------------|----------------|----------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| 1              | Gujarat        | 50                   | 6.08                          | 1.04                          | 2.08                          |                               |
| 2              | Karnataka      | 10                   |                               |                               |                               | 10.48                         |
| 3              | Madhya Pradesh | 370                  | 43.01                         | 12.72                         | 51.47                         | 6.60                          |
| 4              | Maharashtra    | 45                   | 1.40                          | 0.67                          | 11.17                         | 2.70                          |
| 5              | Rajasthan      | 575                  | 66.23                         | 29.06                         | 82.77                         | 4.55                          |
| 6              | Tamilnadu      | 10                   |                               |                               | 1.34                          | 1.35                          |
|                | <b>Total</b>   | <b>1060</b>          | <b>116.72</b>                 | <b>43.49</b>                  | <b>148.83</b>                 | <b>25.68</b>                  |

**(b) 2000 MW VGF Scheme**

| <b>Sl.No.</b> | <b>States</b> | <b>Capacity (MW)</b> | <b>Financial Year 2018-19</b> | <b>Financial Year 2019-20</b> |
|---------------|---------------|----------------------|-------------------------------|-------------------------------|
| 1             | AP            | 300                  | 96.87                         | 96.87                         |
| 2             | Chhattisgarh  | 100                  | 29.50                         | 5.90                          |
| 3             | Karnataka     | 150                  | 55.12                         | 55.12                         |
| 4             | Maharashtra   | 270                  | 53.38                         | 31.23                         |
| 5             | Uttar Pradesh | 165                  | 38.74                         | 31.59                         |
|               | <b>Total</b>  | <b>985</b>           | <b>273.61</b>                 | <b>220.71</b>                 |

**(c) 5000 MW VGF Scheme**

| <b>Sl.No.</b> | <b>States</b> | <b>Capacity (MW)</b> | <b>Financial Year 2018-19</b> | <b>Financial Year 2019-20</b> |
|---------------|---------------|----------------------|-------------------------------|-------------------------------|
| 1             | Gujarat       | 250                  | 191.63                        |                               |
| 2             | Maharashtra   | 210                  |                               | 25.50                         |
| 3             | Odisha        | 270                  |                               | 14.77                         |
|               | <b>Total</b>  | <b>730</b>           | <b>191.63</b>                 | <b>40.27</b>                  |

**ANNEXURE-V REFERRED TO IN REPLY TO PART (C) OF LOK SABHA  
UNSTARRED QUESTION NO. 704 FOR 06.02.2020**

**Funds released under GBI Scheme for wind power projects to IREDA from 2016-  
17 to 2019-20 (till 31.1.2020)**

| <b>Years</b> | <b>Rs. ( in Crore)</b>        |
|--------------|-------------------------------|
| 2016-17      | 488.95 + 891.182 (Bond Money) |
| 2017-18      | 750                           |
| 2018-19      | 950                           |
| 2019-20      | 920                           |
| <b>Total</b> | <b>4000.132</b>               |

**ANNEXURE-VI REFERRED TO IN REPLY TO PART (D) OF LOK SABHA  
UNSTARRED QUESTION NO. 704 FOR 06.02.2020**

**SUBSIDIES AND INCENTIVES BEING PROVIDED AS CENTRAL FINANCIAL  
ASSISTANCE (CFA) FOR INSTALLATION OF VARIOUS SOLAR AND WIND  
PROGRAMMES.**

**A. GRID-INTERACTIVE RENEWABLE POWER PROGRAMMES:**

|   |  |   |
|---|--|---|
| <b>1. Wind Power Projects.</b>  |  |   |
| Wind Projects   |  | Accelerated depreciation benefits upto 40%  |
| <b>2. Solar Power Projects.</b>   |  |   |
| a) Solar PV Power projects under Jawaharlal Nehru National Solar Mission (JNNSM) Phase-II, Batch-I of total 750 MW with Viability Gap Funding (VGF) support from National Clean Energy Fund (NCEF). | Minimum Project Capacity 10 MW<br><br>Maximum Project Capacity 50 MW | VGF support up to 30% of Project Cost limited or maximum of Rs.2.50 Cr/MW whichever is less, based on reverse bidding process for power producers.  |
| b) Grid Connected Rooftop Solar PV Power Projects in residential, institutional and social sector   | Benchmark of Rs 60 to 70 per watt depending upon the capacity.       | Central Financial Assistance (CFA) up to 30% of benchmark cost for the General Category States/UTs and up to 70% of benchmark cost for Special Category States/UTs, i.e. North Eastern States including Sikkim, Uttarakhand, Himachal Pradesh, Jammu & Kashmir and Lakshadweep, Andaman & Nicobar Islands is provided to consumers for installation of grid connected solar rooftop projects. Incentives are also provided for promotion of roof top SPV power in Government sector. No subsidy is provided for commercial and industrial establishments in private sector. |
| c) Grid connected Solar PV Power Projects by Central Public Sector Undertakings (CPSUs).  | Total size of the scheme 1000MW.                                     | VGF support to the CPSUs/Govt. Of India Organisations at a fixed rate of Rs.1 crore/MW for projects where domestically produced cells and modules are used and Rs. 0.50 crores/MW in cases where domestically produced modules are used.  |
| d) Grid-connected Solar PV Power plants on Canal Banks and Canal Tops   | 1 MW to 10 MW  | Rs 1.5 Crore/MW for Canal Bank and Rs 3.0 Crore/MW for Canal Top Projects, subject to 30% of the project cost in both the cases.  |
| e) Solar Park Scheme  | --   | 25 lakh per Solar park for preparation of Detailed Project Report(DPRs).  |



|   |  |   |
|---|--|---|
|   |  | 20 Lkch per MW or 30% of the project cost including Grid-connectivity cost, whichever is lower.   |
| f) Solar PV scheme for Defence Establishments                             | --   | Tender issued before 17/02/2017- VGF support is 2.50 cr/MW<br>Tender issued after 17/02/2017- Rs 1.1 crore / MW for all capacities.   |
| g) Pradhan Mantri- Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM) | <p><b>Component A:</b><br/>Setting up of 10,000 MW of Decentralized Ground/Stilt Mounted Grid Connected Solar or other Renewable Energy based Power Plants</p> <p><b>Component B:</b><br/>Installation of 17.50 Lakh Stand-alone Solar Pumps</p> <p><b>Component C:</b><br/>Solarisation of 10 Lakh Grid Connected Agriculture Pumps</p> | <p>Procurement Based Incentive (PBI) to the DISCOMs @ 40 paise/kWh or Rs.6.60 lakhs/MW/year, whichever is lower, for buying solar/ other renewable power under this scheme. The PBI will be given to the DISCOMs for a period of five years from the Commercial Operation Date of the plant. Therefore, the total PBI that shall be payable to DISCOMs will be Rs. 33 Lakh per MW.</p> <p>CFA of 30% of the benchmark cost or the tender cost, whichever is lower, of the stand-alone solar Agriculture pump will be provided.</p> <p>However, in North Eastern States, Sikkim, Jammu &amp; Kashmir, Himachal Pradesh and Uttarakhand, Lakshadweep and A&amp;N Islands, CFA of 50% of the benchmark cost or the tender cost, whichever is lower, of the stand-alone solar pump will be provided.</p> <p>CFA of 30% of the benchmark cost or the tender cost, whichever is lower, of the solar PV component will be provided. However, in North Eastern States, Sikkim, Jammu &amp; Kashmir, Himachal Pradesh and Uttarakhand, Lakshadweep and A&amp;N Islands, CFA of 50% of the benchmark cost or the tender cost, whichever is lower, of the solar PV component will be provided.</p> |
| h) Concentrated Solar Thermal (CST)                                       |  | <p>Subsidy rate: @ 20% of the bench mark cost or actual cost whichever is less to all beneficiaries in all states</p> <p>@ 40% of the bench mark cost or actual cost whichever is less to Non-profit making bodies and institutions in special category states, viz., NE states, Sikkim, J&amp;K, Himachal Pradesh, Uttarakhand and islands.</p>  |

|   |  | The benchmark cost of the different CST technologies is given in table below:  |                         |  |  |      |   |       |   |       |   |       |                                   |       |
|---|--|--|-------------------------|--|--|------|---|-------|---|-------|---|-------|-----------------------------------|-------|
|   |  | <table border="1"> <thead> <tr> <th>Type of Solar Collector</th> <th>Benchmark Cost of Collector Area(Rs/m<sup>2</sup>)</th> </tr> </thead> <tbody> <tr> <td>Concentrator with manual tracking (dish solar cookers)</td> <td>7000</td> </tr> <tr> <td>Solar collector systems for direct heating and drying and non-imagine/ Compound Parabolic Concentrators (NIC/CPC)</td> <td>12000</td> </tr> <tr> <td>CSTs with single axis tracking (including Scheffler dish)</td> <td>15000</td> </tr> <tr> <td>CSTs with single axis tracking, solar grade mirror, reflector and evacuated tube collectors</td> <td>18000</td> </tr> <tr> <td>CST based on double axis tracking</td> <td>20000</td> </tr> </tbody> </table> | Type of Solar Collector | Benchmark Cost of Collector Area(Rs/m <sup>2</sup> ) | Concentrator with manual tracking (dish solar cookers) | 7000 | Solar collector systems for direct heating and drying and non-imagine/ Compound Parabolic Concentrators (NIC/CPC) | 12000 | CSTs with single axis tracking (including Scheffler dish) | 15000 | CSTs with single axis tracking, solar grade mirror, reflector and evacuated tube collectors | 18000 | CST based on double axis tracking | 20000 |
| Type of Solar Collector   | Benchmark Cost of Collector Area(Rs/m <sup>2</sup> ) |  |                         |  |  |      |   |       |   |       |   |       |                                   |       |
| Concentrator with manual tracking (dish solar cookers)  | 7000   |  |                         |  |  |      |   |       |   |       |   |       |                                   |       |
| Solar collector systems for direct heating and drying and non-imagine/ Compound Parabolic Concentrators (NIC/CPC) | 12000  |  |                         |  |  |      |   |       |   |       |   |       |                                   |       |
| CSTs with single axis tracking (including Scheffler dish)   | 15000  |  |                         |  |  |      |   |       |   |       |   |       |                                   |       |
| CSTs with single axis tracking, solar grade mirror, reflector and evacuated tube collectors                       | 18000  |  |                         |  |  |      |   |       |   |       |   |       |                                   |       |
| CST based on double axis tracking   | 20000  |  |                         |  |  |      |   |       |   |       |   |       |                                   |       |

**(B) Off-Grid scheme:-**

| Scheme   | Coverage with target   | Benefit available   |
|--|--|---|
| i) Off-grid Solar PV Schemes                                     | <p>a) 3 lakh Solar Street Lights / 100 MW aggregate capacity solar power packs under off-grid Ph-III programme</p> <p>b) 25 lakh Solar Study lamps under off-grid Ph-III programme</p> <p>c) Solar Study lamps under 70 lakh Solar Study lamps scheme</p> <p>d) 3.04 lakh Solar Street light under AJAY Ph-II Scheme</p> | <p>CFA up to 30% and 90% of the project cost for general category and special category States respectively.</p> <p>CFA up to 85% of the lamp cost.</p> <p>Student contribution Rs 100/- per lamp and balance to be paid as CFA.</p> <p>CFA up to 75% of the project cost.</p> |
| ii) Off-Grid and Decentralized Solar Thermal Applications Scheme | <p>Concentrating Solar Thermal Technology for Community Cooking, Process Heat and Space Heating &amp; Cooling Applications in Industrial, Institutional and Commercial Establishments target to achieve 90,000 m<sup>2</sup> of collector area</p>   | <p>20% /40% of the project cost.</p>  |