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**STANDING COMMITTEE ON ENERGY**

**(2021-22)**

**SEVENTEENTH LOK SABHA**

**MINISTRY OF NEW AND RENEWABLE ENERGY**

**[Action-taken by the Government on observations/recommendations contained in Seventeenth Report (17<sup>th</sup> Lok Sabha) on the subject 'Action Plan for Achievement of 175 GW Renewable Energy Target']**

**TWENTY-EIGHTH REPORT**



**LOK SABHA SECRETARIAT  
NEW DELHI**

*July, 2022/ Sravana, 1944 (Saka)*

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*Presented to Lok Sabha on 2<sup>nd</sup> August, 2022*

*Laid in Rajya Sabha on 2<sup>nd</sup> August, 2022*



**LOK SABHA SECRETARIAT  
NEW DELHI**

*July, 2022/ Sravana, 1944 (Saka)*

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**COMPOSITION OF THE STANDING COMMITTEE ON ENERGY  
(2021-22)**

**LOK SABHA**

**Shri Rajiv Ranjan Singh *alias* Lalan Singh - Chairperson**

2. Shri Gurjeet Singh Auja
3. Shri Devendra Singh Bhole
4. Shri Harish Dwivedi
5. Shri Sanjay Haribhau Jadhav
6. Shri Kishan Kapoor
7. Dr. A. Chella Kumar
8. Shri Sunil Kumar Mondal ^
9. Shri Uttam Kumar Reddy Nalamada
10. Shri Ashok Mahadeorao Nete
11. Shri Praveen Kumar Nishad
12. Shri Velusamy P.
13. Shri Parbatbhai Savabhai Patel
14. Shri Gyaneshwar Patil@
15. Shri Jai Prakash
16. Shri Dipsinh Shankarsinh Rathod
17. Shri Gnanathiraviam S.
18. Shri Bellana Chandra Sekhar
19. Shri Shivkumar C. Udasi
20. Vacant\*\*
21. Vacant#

**RAJYA SABHA**

22. Shri Ajit Kumar Bhuyan
23. Shri Rajendra Gehlot \*
24. Shri Muzibulla Khan
25. Shri Maharaja Sanajaoba Leishemba
26. Shri S. Selvaganabathy \*
27. Dr. Sudhanshu Trivedi
28. Shri K.T.S. Tulsi
29. Vacant\$
30. Vacant &
31. Vacant^^

## SECRETARIAT

1.	Dr. Ram Raj Rai	Joint Secretary
2.	Shri R.K. Suryanarayanan	Director
3.	Shri Kulmohan Singh Arora	Additional Director
4.	Ms. Deepika	Committee Officer

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*^ Nominated as Member of the Committee w.e.f. 01.12.2021 vice Smt. Sajda Ahmed.*

*@ Nominated as Member of the Committee w.e.f. 07.02.2022 vice Shri Ramesh Chander Kaushik.*

*\*\* Shri Akhilesh Yadav ceased to be Member of the Committee consequent upon his resignation from membership of the Lok Sabha on 22.03.2022.*

*# Vacant since constitution of the Committee.*

*\* Nominated as Member of the Committee w.e.f. 11.11.2021.*

*\$ Shri Jugalsinh Lokhandwala resigned from the membership of the Committee on 02.12.2021.*

*& Shri T.K.S. Elangovan ceased to be Member of the Committee consequent upon his retirement from the Rajya Sabha on 29.06.2022.*

*^^ Shri Sanjay Seth ceased to be Member of the Committee consequent upon his retirement from the Rajya Sabha on 04.07.2022.*

## INTRODUCTION

I, the Chairperson, Standing Committee on Energy, having been authorized by the Committee to present the Report on their behalf, present this Twenty-Eighth Report on action-taken by the Government on observations/recommendations contained in Seventeenth Report (17<sup>th</sup> Lok Sabha) on the subject 'Action Plan for Achievement of 175 GW Renewable Energy Target'.

2. The Seventeenth Report was presented to the Lok Sabha on 19<sup>th</sup> March, 2021 and was laid on table of the Rajya Sabha on the same day. Replies of the Government to the observations/recommendations contained in this Report were received on 21<sup>st</sup> January, 2022.

3. The Report was considered and adopted by the Committee at their sitting held on 26<sup>th</sup> July, 2022.

4. An Analysis of action-taken by the Government on the observations/recommendations contained in the Seventeenth Report (17<sup>th</sup> Lok Sabha) of the Committee is given at Appendix-II.

5. For facility of reference and convenience, the observations and recommendations of the Committee have been printed in bold letters in the body of the Report.

**New Delhi  
26<sup>th</sup> July, 2022  
Sravana 4, 1944 (Saka)**

**Rajiv Ranjan Singh *alias* Lalan Singh  
Chairperson,  
Standing Committee on Energy**

## CHAPTER - I

This Report of the Standing Committee on Energy deals with action-taken by the Ministry of New and Renewable Energy on observations/recommendations contained in the Seventeenth Report (Seventeenth Lok Sabha) of the Committee (2020-21) on the subject 'Action Plan for Achievement of 175 GW Renewable Energy Target'.

2. The Seventeenth Report was presented to the Lok Sabha on 19<sup>th</sup> March, 2021 and was laid on table of the Rajya Sabha on the same day. The Report contained 19 Observations/Recommendations.

3. Action Taken Notes in respect of all the observations/recommendations contained in the Report have been received from the Government. These have been categorized as follows:

- |   |                           |
|---|---------------------------|
| (i) Observations/Recommendations which have been accepted by the Government:<br>Serial Nos. 1,2,3,6,8,9,10,11,13,14,15,16,17,18 and 19  | Total - 15<br>Chapter-II  |
| (ii) Observations/Recommendations which the Committee do not desire to pursue in view of the Government's replies:<br>Nil   | Total - 00<br>Chapter-III |
| (iii) Observations/Recommendations in respect of which the replies of the Government have not been accepted by the Committee and which require reiteration:<br>Serial Nos. 4, 5, 7 and 12 | Total- 04<br>Chapter-IV   |
| (iv) Observation/Recommendation in respect of which the final replies of the Government are still awaited:<br>Nil   | Total - 00<br>Chapter-V   |

4. The Committee observe that the Seventeenth Report (17<sup>th</sup> Lok Sabha) on the subject 'Action Plan for Achievement of 175 GW Renewable Energy Target' was presented to the Lok Sabha on 19<sup>th</sup> March, 2021 and was laid on table of the Rajya Sabha on the same day. The Ministry was required to submit the action-taken replies on the recommendations/observations contained in the Report within a period of three months i.e. by 18<sup>th</sup> June, 2021. However, the Ministry submitted the action-taken replies on 21<sup>st</sup> January, 2022 after a delay of more than seven months. The Committee deplore the delay on the part of the Ministry in submission of action-taken replies. The Committee while expressing their displeasure caution the Ministry to ensure timely submission of replies to the Committee. Further, it is reiterated that the replies of the Government to the recommendations/observations of the Committee should be comprehensive and not inconclusive, vague or couched in general terms like 'noted', 'accepted', etc.

5. The Committee further desire that Action-taken Statement on the Recommendations/Observations contained in Chapter-I of this Report may be furnished to the Committee within three months of the presentation of this Report.

6. The Committee will now deal with action-taken by the Government on some of their Recommendations that require reiteration or merit comments.

#### **Recommendation No. 4**

7. The Committee had recommended as under:

"The Committee note that there is a target to install 40 GW of Solar Power by setting up over 50 Solar parks and Ultra Mega Solar Power Projects by 2022. Against this target, 39 solar parks of aggregate capacity of 22,879 MW have been approved to be setup in 17 States. Out of these approved Solar parks, infrastructure in 8 Solar parks is almost fully developed where solar projects of aggregate capacity of 6580 MW have also been commissioned and 4 Solar parks are partially developed where solar projects of aggregate capacity of 1365 MW have been commissioned. The Committee observe that the remaining 11 solar parks of aggregate capacity of 17,121 MW have not even got the approval of the Ministry although these Solar parks have to be

developed and projects therein commissioned by 2022. Further, only 20% of the approved solar parks are fully developed so far and another 10% are only partially developed leaving as much as 70% unachieved. The Committee are disappointed with the slow progress made so far as the Ministry have been able to fully develop 8 Solar parks only in more than 5 years (2015-20) and an aggregate capacity of 32,055 MW is yet to be commissioned in order to achieve the stipulated target by 2022. The Committee have been informed that the major challenge in development of Solar parks is the acquisition of land that is dependent upon cooperation from the State Governments and other stakeholders. But it is inexplicable as to why 11 solar parks are yet to get approval of the Ministry even after lapse of more than three years. The Committee believe that the exercise of setting targets is rendered meaningless if Ministry-level approvals take such an undue long time. The Committee would therefore expect the process of granting approvals to be completed expeditiously so that the project can be implemented in a given time-frame. Keeping in view the fact that the solar power projects are land intensive projects, which require large flat tracts of shadow free contiguous land with accessibility, the Committee specifically recommend that:

- i) The Ministry should actively explore the option of using surplus land available with various public sector undertakings and different State Governments for setting up of solar parks expeditiously.
- ii) The Ministry should encourage all the airports in a time bound manner, to set up solar projects on the lines of Kochi Airport which is the first fully solar-powered airport in the world.”

**8.** In its action-taken reply, the Ministry of New and Renewable Energy has stated as under:

“(i) The suggestion of the committed has been noted. Ministry is making concerted efforts to achieve the target of completion of solar parks of aggregate capacity 40 GW by 2023-24.

As on 31-12-2021, Ministry has granted approval for 50 solar parks of aggregate capacity 33.8 GW. Out of this, 8 parks are complete with projects of 6580 MW installed in them and 6 parks are partially complete with projects of 2615 MW installed.

Ministry has introduced a new Mode (Mode-8) of implementation under the solar park scheme with a provision to incentivize the States. The CPSUs/State Government agencies are actively involved and are developing parks under this Mode.

Ministry is also conducting regular review meetings to monitor the progress of solar parks.

(ii)The Ministry of Civil Aviation was requested in January 2020 to develop an action plan for solarizing various airports and for utilising airport vacant lands for setting up RE projects. With the initiatives taken, over 101 MW capacity Solar PV Projects have already been installed in various airports. Detail of the same is given at **Annexure-I.**”

**9. The Committee in their recommendation had noted that out of 50, 11 solar parks were yet to get approval of the Ministry even after lapse of more than three years, thereby rendering the whole exercise of setting targets meaningless when Ministry-level approvals took such an unduly long time. The Committee were disappointed with the slow progress made as the Ministry had been able to fully develop only 8 solar parks in more than 5 years (2015-20).**

The Ministry in its action-taken reply has stated that it has granted approval for 50 solar parks of aggregate capacity of 33.80 GW as on 31-12-2021 out of this, only 8 parks have been completed with commissioned capacity of 6580 MW and 6 parks are partially complete with projects of 2615 MW installed. The Committee observe that although the Ministry has granted approvals for 50 solar parks with aggregate capacity of 33.80 GW, but it is less than the target of 40 GW by 6.20 GW. Further, there has been no increase in the number of fully developed solar parks since 2020 and therefore, 42 solar parks are yet to be fully developed when the original deadline of December 2022, is knocking at the door. The Ministry has neither furnished the reasons for delay in according approval to 11 solar parks at the first place, nor it has given any explanation regarding reduction in target at the level of approval itself. The Ministry has also not responded to the recommendations regarding using the surplus land available with various PSUs and State Governments for setting up of solar parks and encouraging all the airports to set up solar project on the lines of Kochi Airport. In view of the above, the Committee reiterate their recommendation and specifically want the Ministry to furnish the reasons for delay in according approval to 11 solar parks in the first place and shortfall of 6.20 GW at the level of approval itself. The Committee would also like to be informed about the initiatives taken to

**explore the option of using surplus land available with various PSUs and State Governments for setting up solar parks and setting up of solar power projects in all the airports.**

**Recommendation No. 5**

**10.** The Committee had recommended as under:

“The Committee note that nine Central Public Sector Undertakings (CPSUs) participated in 1000 MW CPSUs Scheme and viability gap funding (VGF) of Rs. 795 crore (including Solar Energy Corporation of India’s charges) has been released to the Solar Energy Corporation of India (SECI) for disbursement to these nine CPSUs. Under CPSUs Scheme phase-II, around Rs. 319 crore has been released for disbursement to seven participating CPSUs/Government Organizations. It has also been submitted that this Scheme envisages the use of domestically manufactured cells and modules. The Committee appreciate the fact that there is a provision of domestic content requirement under the Scheme which may give a fillip to domestic manufacturing. In order to encourage domestic manufacturing for establishment of Solar PV power projects and to provide a sustained market to the domestic manufacturers, the Committee recommend that:

i) Target under the scheme for setting up of grid-connected solar PV power projects by the CPSUs and Government Organizations should be increased.

ii) Since only a few CPSUs have participated in the scheme till date, the Ministry should take pro-active steps and encourage more CPSUs/ Government Organizations to participate in the scheme.

**11.** In its action-taken reply, the Ministry of New and Renewable Energy has stated as under:

“(i) and (ii) The Government, through Ministry of New & Renewable Energy (MNRE), is implementing a scheme, viz. CPSU Scheme Phase-II (Government Producer Scheme), for setting up grid-connected solar photovoltaic power projects by the Government producers with Viability Gap Funding (VGF) support for self-use or use by Government/ Government entities, either directly or through Distribution Companies (DISCOMS).

The solar PV power plants under CPSU Scheme Phase-II are to be set up using domestically manufactured solar PV cells and modules. Under the aforesaid scheme, following capacities have been allotted till date (03.01.2022):

<b>Sl. No.</b>	<b>Name of Government Entity</b>	<b>Capacity of solar PV power plants allotted under CPSU Scheme Phase-II (MW)</b>
1	NTPC Limited	3682
2	The Singareni Collieries Company Limited	171
3	Delhi Metro Rail Corporation Limited	3
4	Assam Power Distribution Company Limited	30
5	NHDC Ltd.	25*
6	Nalanda University	5
7	Indore Municipal Corporation	100
8	SJVN Limited	1000
9	NLC India Limited	510
10	NHPC Limited	1000
11	IRCON International Limited	500
12	Solar Energy Corporation of India Limited	1200
	<b>Total</b>	<b>8226*</b>

*\*25 MW capacity allotted to NHDC Ltd. has been cancelled by SECI*

Out of 8226 MW capacity mentioned above, 1911 MW capacity has VGF requirement of Rs 65.70 Lakh/MW, 115 MW capacity has VGF requirement of Rs 55.60 Lakh/MW and 6200 MW capacity has VGF requirement of 44.45 Lakh/MW.

**12. In view of the fact that only nine Central Public Sector Undertakings (CPSUs) had participated in 1000 MW CPSUs Scheme and only seven CPSUs/Government Organizations had participated in Phase-II of the Scheme, the Committee had recommended that the Ministry should facilitate more CPSUs/Government Organizations to participate and increase the targets under the scheme in order to encourage domestic manufacturing.**

**The Ministry in its action-taken reply has indicated that only 12 CPSUs/Government Organizations have participated under Phase-II of the Scheme till 3<sup>rd</sup> January, 2022 with allotted capacity of 8226 MW. Out of the 12 Organizations, capacity allotted to NHDC Ltd. has been cancelled. The Committee find that the Ministry has just provided the**

**updated data regarding participation of CPSUs in Phase-II of the Scheme, and no information about the steps taken by the Ministry to encourage more CPSUs to participate and increase the target under the scheme in pursuance of recommendation of the Committee has been furnished. The Committee therefore, reiterate their recommendation that the Ministry should take pro-active steps and encourage more CPSUs/Government Organizations to participate in the scheme and increase the target for setting up of grid-connected solar PV power projects by the CPSUs and Government Organizations. The Committee should be informed about the outcome in this regard.**

### **Recommendation No. 7**

**13.** The Committee had recommended as under:

“The Committee note that all the State/Joint Electricity Regulatory Commissions have issued net metering regulations/tariff orders but there is lack of uniformity in this regard. It has been submitted that in most of the States and Union territories, there is no proper payment mechanism for excess units exported to the grid and the same are generally adjusted in the electricity bill itself. The Committee observe that in addition to Net-metering, there are also other metering arrangements like gross metering. The Committee are of the opinion that the target set for solar roof-tops cannot be achieved without proper implementation of the Net/Gross Metering and feel that there is a need to maintain uniformity in terms of regulations/model operating procedures/online unified portals etc. The Committee, therefore, recommend that after analyzing the advantages and disadvantages of both the arrangements, the Ministry should ensure proper implementation of Net/Gross Metering arrangements in the Country through consultations with all the stakeholders so that both DISCOMs as well as the consumers get a fair deal.”

**14.** In its action-taken reply, the Ministry of New and Renewable Energy has stated as under:

“In order to bring uniformity in net-metering regulations and promote RTS, the Government has issued Electricity (Rights of Consumer) Rules, 2020 and amended these Rules vide its notification in June 2021. As per amended Rules, net-metering is to be allowed to the Prosumer for loads up to five hundred Kilowatt or upto the

sanctioned load, whichever is lower and net-billing or net feed-in for other loads. The relevant provision is reproduced as under:

*“11 (4) The arrangements for net-metering, gross-metering, net-billing or net feed-in shall be in accordance with the regulations made by the State Commission, from time to time:*

*Provided that where the regulations does not provide for net-metering, net-billing or net feed-in, the Commission may allow net metering to the Prosumer for loads up to five hundred Kilowatt or upto the sanctioned load, whichever is lower and net-billing or net feed-in for other loads.”*

Regarding the notifications on standard operating procedure the Ministry has already shared the standard operating procedures with the States. Further, most of the DISCOMs have online portal for applying and approval progress. These portals are being updated based on the requirement and feedback to make them more user friendly.”

**15. The Committee in their recommendation had urged the Ministry to ensure proper implementation of Net Metering as the target set for solar roof-tops cannot be achieved without the same. The Ministry in its action-taken reply has stated that Government has amended Electricity (Rights of Consumer) Rules so as to provide that net-metering is to be allowed for loads up to five hundred Kilowatt or upto the sanctioned load, whichever is lower and net-billing or net feed-in for other loads. However, the Ministry has not furnished the details regarding actual implementation of Net-Metering in the Country. Since notification of rules is one thing and their proper implementation quite another, the Committee therefore, reiterate their recommendation and desire that the Ministry should furnish State/UT-wise status of actual implementation of Net/Gross Metering in the Country.**

#### **Recommendation No. 12**

**16. The Committee had recommended as under:**

“The Committee note that the Ministry of New and Renewable Energy has been vested with responsibility of developing Small Hydro Power (SHP) projects up to 25 MW capacity. The identified potential in the Country for power generation from SHP projects is about 21,133 MW at 7133 number of sites. Against the target of 5000 MW, 4688.16 MW capacity from 1130 small hydro power projects have been achieved by 30th June 2020 and 100 projects of about 509 MW are in

various stages of implementation. It has been submitted that the SHP Scheme, 2014 ended on 31.03.2017 and the proposal for continuation of SHP programme for three years from 1st April 2017 to 31st March 2020 could not get approval of the Cabinet. It is now proposed to develop the scheme afresh valid up to March 2025 and an EFC (Expenditure Finance Committee) Memorandum for continuation of the SHP Scheme from 2020-21 to 2024-25 has been prepared and is under consideration of the Ministry. The Ministry has not furnished any reason, for this inordinate delay in coming up with a Scheme for SHP since 2017. The Committee would, therefore, recommend that:

- i) The Ministry should expedite the process of formulation of Small Hydro Power Scheme on priority basis and get it approved from the EFC at the earliest.
- ii) Targets may be set in a manner that would harness the available potential of 21,133 MW power in small hydro sector in a given time frame.
- ii) All the Small Hydro Power (SHP) projects starting from 1<sup>st</sup> April 2017 should be covered under the new SHP Programme.”

17. In its action-taken reply, the Ministry of New and Renewable Energy has stated as under:

“The suggestion of the committed has been noted. The Ministry is in the process of formulating a new Scheme for the development of Small Hydro Power projects in the country.”

**18. The Committee in their recommendation had noted that the SHP Scheme, 2014 ended on 31.03.2017 and the proposal for continuation of SHP programme from 1<sup>st</sup> April 2017 to 31<sup>st</sup> March 2020 could not get approval of the Cabinet. It was then proposed to develop the scheme afresh valid up to March 2025 and an EFC (Expenditure Finance Committee) Memorandum for continuation of the Scheme from 2020-21 to 2024-25 had been prepared and was under consideration of the Ministry.**

**The Ministry in its action-taken reply has stated that it is in the process of formulating a new Scheme for the development of Small Hydro Power Projects in the Country. The Committee observe that the scheme for small hydro power has been a work in progress since April, 2017 as 5 years have passed and there is no scheme/programme in sight. Further, the Ministry has again desisted from furnishing the**

**reasons for this inordinate delay in coming up with a Scheme for SHP despite it being flagged by the Committee in their recommendation. In view of the above, the Committee reiterate their recommendation that the Ministry should expedite the process of formulation of Small Hydro Power Scheme on priority basis and get it approved from the EFC at the earliest. Moreover, the targets may be set in a manner that would harness the available potential of 21,133 MW in a given time frame and all the Small Hydro Power (SHP) projects starting from 1<sup>st</sup> April 2017 should be covered under the new SHP Programme.**

## **CHAPTER - II**

### **Observations/Recommendations which have been accepted by the Government**

#### **Recommendation No. 1**

The Committee note that India has made a pledge that by 2030, 40 percent of her installed power generation capacity shall be from clean energy sources. Keeping in view its commitment for a healthy planet, it has been declared that 175 GW of renewable energy capacity will be installed by 2022, which includes 100 GW from solar, 60 GW from wind, 10 GW from biomass and the remaining 5 GW from small hydro power. Against these set targets, it has been informed that the total installed capacity of renewable energy as on 1st January, 2021 is 92.54 GW, which comprises 38.79 GW from solar power, 38.68 GW from wind power, 10.31 GW from bio power and 4.76 GW from small hydro power. The Committee find that only little more than 50 percent of the target have been achieved and the remaining 82.46 GW capacity have to be installed in just one and a half year. The Committee are also informed that an additional capacity of 49.30 GW is under implementation and another 27.57 GW has been tendered. Even if these capacities are installed, the cumulative capacity will be 169.41 GW which is still short of the target of 175 GW. In such a situation, the Committee are apprehensive that any laxity on the part of the Ministry in achieving the assigned target may amount to reneging on our commitment. The Committee, therefore recommend that the Ministry should work on a mission mode so that the target of 175 GW is successfully achieved by the year 2022.

#### **Reply of the Government**

A total of 151.39 GW of renewable energy capacity (including large hydro) has been installed in the country as on 31-12-2021 which is 38.48% of the total installed electricity capacity in the country. Against the target of 175 GW installed renewable energy capacity by 2022, a total of 104.88 GW of Grid Interactive Renewable Power Capacity (excluding large hydro) has been installed (as on 31.12.2021) in the Country. Around 56.31 GW renewable energy capacity is under installation, and an additional 26.82 GW capacity has been tendered. Thus, a total of 188.01 GW capacity is either installed or under implementation/bidding. The Ministry has made all possible efforts to achieve the target of 175 GW of installed renewable energy capacity by December 2022. However, an extension of 7.5 months was granted to projects on account of the two waves of COVID. This delay might cause the

achievement of the 175 GW target to take some more months beyond December 2022.

[Ministry of New and Renewable Energy  
O.M. No. 372-12/8/2017-PU, Dated: 21/01/2022]

### **Recommendation No. 2**

The Committee observe that the National Solar Mission (NSM) was launched on 11th January, 2010 with the targets of (i) deployment of 20,000 MW of grid connected solar power by 2022 (ii) 2,000 MW of off-grid solar applications including 20 million solar lights by 2022 (iii) 20 million sq. m. solar thermal collector area (iv) to create favorable conditions for developing solar manufacturing capability in the country; and(v) support R&D and capacity building activities to achieve grid parity by 2022. Subsequently the Cabinet in its meeting held on 17.06.2015 approved revision of cumulative targets under NSM from 20,000 MW to 1,00,000 MW by 2021-22 for grid connected solar power projects. However, since the mission of achieving 175 GW Renewable Energy (including 100 GW from solar) was launched in the year 2015, the Committee enquired about the physical components through which the Ministry intended to achieve the target of 100 GW solar energy by 2022. The Committee were informed that these components are as follows:

- (a) 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;
- (b) Scheme for setting up of Grid-Connected Solar PV Power Projects by the Central Public Sector Undertakings (CPSUs) and the Government of India organizations with Viability Gap Funding (VGF);
- (c) 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;
- (d) Installation of Grid Connected Solar Rooftop Power Plants;
- (e) Off-Grid Solar PV Scheme;
- (f) 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.

### **Reply of the Government**

The suggestion of the committed has been noted. The Ministry is making concerted efforts for achieving the targets set under National Solar Mission. Further, an extension of 7.5 months was granted to projects on account of the two waves of COVID. This delay might cause the achievement of the 175 GW target to take some more months beyond December 2022.

[Ministry of New and Renewable Energy  
O.M. No. 372-12/8/2017-PU, Dated: 21/01/2022]

### **Recommendation No. 3**

The Committee, however, observe that after more than 10 years of the launch of National Solar Mission in the year 2010 and subsequent more laudable declaration in the year 2015 of the target of 100 GW solar Energy as a part of the mission of achieving 175 GW Renewable Energy by the year 2022, the Government has been able to install only 38.79 GW of solar energy in the Country upto 31st January, 2021. The Ministry has though stated that solar power projects of 36.03 GW are under various stages of implementation and 23.87 are in tendering process but the real test lies in their actual commissioning within the scheduled time frame. The Committee while expressing their displeasure on the pace with which the Ministry have progressed in this significant area of renewable energy during the last 10 years, would recommend that the Ministry should speedily work out a strategic plan to achieve the target of 100 GW solar energy within the deadline of the 2022 which is approaching very fast.

### **Reply of the Government**

The Ministry has noted recommendations of the Committee and is making concerted efforts to achieve the 100 GW target for solar energy by December, 2022. The status of achievement as on 31.12.2021 is as under:

Solar projects commissioned (as on 31.12.2021)	48.08 GW
PPA signed but not commissioned	32.47 GW (29.43 + 3.04 Hybrid solar)
LoI issued but PPA not signed	13.83 GW (11.43 + 2.40 Hybrid solar)
Tender issued but not issued	25.32 GW (20.52+4.80 Hybrid solar)
<b>Total:</b>	<b>119.70 GW</b> <b>(109.46 + 10.24 hybrid solar)</b>

Further, in accordance with Hon'ble Prime Minister's announcement at COP26, Ministry of New and Renewable Energy is committed to achieving 500 GW of installed electricity capacity from non-fossil fuel sources by 2030.

[Ministry of New and Renewable Energy  
O.M. No. 372-12/8/2017-PU, Dated: 21/01/2022]

## **Recommendation No. 6**

The Committee note that out of assistance provided by the Ministry, only 1948 MW of solar power roof-top could be installed in more than five years (i.e. from 01.04.2015 to 30.06.2020). The phase II of the Grid connected rooftop solar programme was approved in February 2019 with a target for achieving cumulative capacity of 40,000 MW from Rooftop Solar (RTS) Projects by the year 2022. However, against annual target of 3000 MW, only 472 MW could only be achieved during 2019-20, while still higher targets have been set for subsequent years that is 2020-21; 2021-22 and 2022-23 (upto 31 December, 2022) such as 6000 MW, 12000 MW and 17000 MW respectively. The Committee thus observe that the targets set with respect to solar roof-top are extremely unrealistic as compared to actual achievements. It is a matter of concern that since 2015-16, till date, the Ministry has never been able to cross the figure of 500 MW installed solar roof-top capacity in any year even as an exaggerated and unrealistic target of 17000 MW has been set to be achieved in just nine months of 2022-23 (April to 31 December, 2022). Even with such abysmal achievement record, the Ministry has shown the intent and increased the subsidy amount to 40 % from the earlier 30 % for capacity upto 3 kW. The Committee feel that if the intent has to be effectively translated into concrete achievement on the ground more people have to be encouraged to install solar roof-top facilities across all States and Union-territories in the Country. The Committee are of the view that given the performance of the Ministry in this Sector till date, the Roof-top Solar target of 40 GW by 2022 is highly unlikely to be achieved with the present pace of progress. In the Committee's view, one major reason for such a tardy progress is lack of awareness about this scheme amongst the masses. The Committee thus recommend that:

- i) The Ministry should widely advertise the benefits of having roof-top solar power system and also about the incentives being provided by the Government for the same in all vernacular print and electronic media so as to spread awareness among the masses.
- ii) Single Window Clearance System should be put in place, in the first phase, in all District headquarters in the country to provide all assistance/services/information to the customers and facilitate them in getting roof top solar system installed in hassle free manner.
- iii) The process of subsidy disbursement should be made transparent, simpler and faster through the aforesaid Single Window Clearance System and preferably a digital platform be developed for this purpose to reduce the human interface in the process.

iv) The Ministry may consider providing of subsidy based on income criteria with a view to offer a higher subsidy for the customers in lower income group.

v) The Ministry need to draw a time bound plan across all States and Union-territories by which solar roof-tops system should be installed on all Government buildings.

### **Reply of the Government**

The ongoing phase II of the Rooftop Solar (RTS) programme is being implemented through DISCOMs. Some of the DISCOMs have shown very encouraging results e.g. the DISCOMs of Gujarat have undertaken aggressive publicly and awareness campaign for promotion of RTS in the state including the following:

- SMS- 150 lakh nos. of SMS sent to Residential Consumers
- Missed Call: Just a missed call on 7666449911 to get a web link and get all information
- Consumer information portal- (<https://suryagujarat.guvnl.com>) to obtained information related to Subsidy, name of Empanelled Agencies, Implementation guideline, etc.
- Radio AIR(FM/AM) and PVT FM 7 Channels (FM/AM)-Broadcast Audio from at regular intervals
- Flex Banner- displayed at various Govt. Offices (DISCOM, Collector Office, Mamlatdar, Jila Panchayat, Taluka Panchayat, Gram Panchayat)
- Flyer- Flyers printed for residential consumers under town and distribution is started with electricity Bills of residential consumers.
- Public Awareness programs arranged in Villages, Towns, Nagar Palika, Corporation area
- News Paper Advertisement- Full page/ Half page advertisement in Gujarati, Hindi; English News Papers are published twice in year.
- Hoardings displayed on Key locations where public visits regularly on daily basis for the time of one month in each year
- Video Advertisement on TV News channels and Cinema
- Social media:-Web pages on Facebook and Instagram are launched to give information and updates related posts. YouTube:- "SURYA-Gujarat-GUVNL" channel to see the videos of awareness. AI based WhatsApp Chat bot: - An AI based chat bot is launched on WhatsApp on mobile no. 9724300270; any person on WhatsApp can save above number in contact list and start chat by typing "Hi" and can get FAQ answers.

As a result, the state of Gujarat has installed over 1000 MW RTS capacity in residential sector itself in a period of less than two years. Other DISCOMs have been suggested to undertaken similar publicly and awareness initiatives for promotion of RTS. Against the target of 4 GW capacity to be achieved in residential sector through CFA under RTS Programme Ph-II, total 3.34 GW capacity has been allocated of which over 1.1 GW capacity has been reported installed and rest are at various stages of implementation/tendering. Overall 6 GW capacity RTS installations has been achieved in the country including in all sectors i.e. residential, social, commercial, industrial, Government, institutional, etc.

Most of the DISCOMs have online portal for applying and approval progress. These portals are being updated based on the requirement and feedback to make them more user friendly. To reduce the burden of initial investment of consumers, the consumers are not required to pay full cost of RTS system, they have to pay only beneficiary share and the subsidy share is directly paid to the installer after installation of RTS and its inspection through DISCOM. Modalities are being worked out for automatic payment of subsidy to the installer immediately after inspection and clearance by DISCOM officer.

The present subsidy structure has been designed to give more benefit the consumers in the lower consumption category i.e. with lower income. Most of the lower income category consumers are within the sanctioned load of 3 kW for which higher subsidy slab of 40% is applicable.

Government departments are being encouraged for installation of RTS in all Government buildings. Ministry has prepared model PPA and Bid documents to promote installation in RESCO mode. In addition, demand aggregation support is also being provided through Technical Assistance available from multilateral and bilateral agencies.

[Ministry of New and Renewable Energy  
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### **Recommendation No. 8**

The Committee note that off-grid and decentralized Solar photo-voltaic (PV) Applications Programme has been launched with the objective of installation of 3 lakh solar street lights, 25 lakh solar study lamps and 100 MWp of off-grid solar power plants, mainly in North-East States and Left-Wing Extremism (LWE) affected districts and areas where grid power has not reached or is not reliable. The Ministry has submitted that the Scheme has been extended till 31.03.2021 due to outbreak of Covid-19. The Committee observe that against the targets of 3 lakh solar street lights, 25 lakh solar study lamps and 100 MWp solar power packs, merely 12,167 solar street

lights, 60,662 solar study lamps and 1,422 kW solar power packs have been installed/distributed. The Committee understand that the implementation of this programme has been rather slow so far mainly due to outbreak of COVID-19, therefore with the normalization of the situation, the Ministry is expected to put in every effort to achieve the objectives and aim of the Scheme. When it comes to students and especially those from backward and remote areas in North-East States and LWE affected districts, the Committee feel that in order to enhance the learning experiences of the students living in rural, hilly and remote areas of the Country, reliable supply of good quality electricity be ensured to them by providing solar study lamps. The Committee, therefore recommend the following specific measures:

- i) The Ministry should consider providing solar study lamps to students from backward and remote areas in the North-East States and LWE affected districts free of cost.
- ii) Service Centers should be set up in every District in the country in a time bound manner to ensure timely and proper maintenance and repair services to the customers.
- iii) The Ministry should encourage installation of Solar Lights along the State Highways, National Highways, Railway Stations, Irrigation Canals etc and State and Union territory wise status in this regard be given on the website of the Ministry for information of the general public.

### **Reply of the Government**

Under Off-grid and Decentralized Solar PV Application Programme Phase 3, Ministry distributes the solar study lamps to schooling children in backward and remote areas in North-Eastern states and LWE affected districts and provides central financial assistance (CFA) up to 85% of the cost of the solar study lamp. Under this program, many states proactively funded the balance 15% share without burdening the students, accordingly, in those states lamps distributed free of cost to students.

Ministry made mandatory for the solar study lamps supplier to have one service center in each operational district and helpline in local language in each operational state. Ministry release CFA to Implementing Agencies only after the compliance of the above.

The Off-grid and Decentralized Solar PV Application Programme Phase-III was closed on 31.03.2021. The programme is proposed for continuation with certain modifications as recommended in the third party evaluation report. It is proposed to include provision for financial support to decentralized renewable energy applications for rural livelihood in the programme as these

applications will give boost to rural economy and create job opportunities in the rural areas.

With the improvement in LED and battery technology the solar lights are becoming cost effective and respective departments in central and state Governments are considering installation of Solar lights along the national/state highways, railway stations, irrigation canals, etc. Further, the Ministry encourages the installation of Solar Lights under Off-grid Solar program. However, priority was given on areas where there is no facility for street lighting systems through grid power. The Ministry maintains and update regularly the data of state and UT wise solar light systems installed and the same is made available on the website of Ministry for the information to the general public.

[Ministry of New and Renewable Energy  
O.M. No. 372-12/8/2017-PU, Dated: 21/01/2022]

### **Recommendation No. 9**

The Committee note that the Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan (PM-KUSUM) Scheme has been initiated after approval on 19.02.2019 with the aim to add a solar capacity of 25,750 MW by 2022. The Scheme has three Components: under Component-A, 10,000 MW capacity is targeted and farmers can install solar power plants up to 2 MW capacity on their barren/fallow land and sell power to DISCOM and thus increase their income, under Component-B, 17.5 lakh stand-alone Solar Water Pumps is to be installed for replacement of diesel pumps reducing the input cost, pollution, etc., under Component-C, 10 lakh existing Grid Connected Agriculture Pumps have been targeted to be solarized to double the capacity of each pump so that the farmer can not only irrigate land during day-time but also sell surplus power and get additional income. Against these targets, 1000 MW in 14 States under Component-A, 1,71,270 solar water pumps in 17 States under Component-B and solarization of 82,308 agriculture pumps in 12 States under Component-C have been sanctioned during 2019-20. Allocation of 2.21 lakh stand-alone solar pumps under Component-B has been made to 15 states for 2020-21. The Committee find that participation of the States in the Scheme so far is low and the Ministry is also not setting the target of all components year-wise which could have ensured better monitoring of outcomes. The Committee observe that this scheme is not only beneficial to the farmers but also States and DISCOMs, as States will save on subsidy being provided for electricity to agriculture and DISCOMs will get cheaper solar power at tail-end, saving transmission and distribution losses. Further, this scheme envisages additional income for

farmers and reduction of environmental pollution as well. However, the Committee find that for Component-A and C, only seven and three States respectively have approved the tariff and for remaining States, tariff is yet to be decided. Out of the seven States, DISCOMs in atleast two States have filed petition for revision/fixation of tariff. In light of the constraints brought before the Committee, it is recommended that:

i) The Ministry should devise a mechanism to ensure that the power produced by the farmers is bought by DISCOMs and timely payment to farmers is made in lieu of that.

ii) All States/Union Territories may be encouraged to implement the PM-KUSUM Scheme vigorously, as only 19 States have got the capacity sanctioned under the Scheme during 2019-20.

### **Reply of the Government**

During Budget Speech for FY 2020-21, Hon'ble Finance Minister proposed to expand the PM-KUSUM Scheme to support 20 lakh farmers for setting up standalone solar pumps (Component-B) and 15 lakh farmers to solarize their grid-connected pump sets (Component-C). Accordingly, the Scheme was scaled up with revised targets under Component-B and Component-C which will result in additional solar capacity of 30.8 GW (increased from 25.75 GW). With the scale-up of the Scheme, a new sub-component under Component-C, Feeder Level Solarization, was introduced under which the States can now solarize the agriculture feeder with 30% (up to Rs. 1.05 Crore/MW) CFA from MNRE. Solarization of feeders can be done in either CAPEX or RESCO mode.

Till date, 4909 MW capacity under Component-A; 3.59 lakh standalone solar pumps under Component-B; and solarisation of over 10 lakh pumps under Component-C has been sanctioned. State-wise sanctioned capacities are placed at **Annexure-II**. Out of this, over 25 MW capacity has been installed under Component-A; over 77 thousand standalone solar pumps installed under Component-B; and 1026 existing pumps solarized under Component-C (Individual Pump Solarization). Further, tariff has been approved in 15 States under Component-A.

Since the start of implementation of the Scheme in September, 2019, the country has seen two massive surges of COVID-19 in the year 2020 and 2021. These surges and regional surges in many areas in the intervening period have greatly affected the implementation. Supply chain of materials and parts, and access to installation sites has been disrupted resulting in huge delays in implementation. Taking cognizance of the disruption of global scale, Ministry has provided a total blanket extension of 7.5 months to all RE projects. Besides, for implementation of sanction issued during FY 2019-20,

extension has been granted till 31.03.2022 under Component-A; till 30.11.2021 under Component-B; and till 31.07.2022 under Component-C (individual pumps solarisation). In view of these delays and extensions granted, Ministry also proposes to extend the PM-KUSUM Scheme beyond December, 2022.

To ensure timely payment to the farmers, the standard Power Purchase Agreement (PPA) provided along with the Scheme Guidelines stipulates that DISCOM shall provide to the renewable power generator/ farmer, in respect of payment of its Monthly Bills and/or Supplementary Bills, a monthly unconditional, revolving and irrevocable letter of credit. If DISCOM fails to pay undisputed Monthly Bill or Supplementary Bill or a part thereof within and including the Due Date, then, the generator/farmer may draw upon the Letter of Credit, and accordingly the bank shall pay without any reference or instructions from DISCOM, an amount equal to such Monthly Bill or Supplementary Bill or part thereof. DISCOMs have also been advised to open an escrow account to ensure timely payment to the farmers.

All States/UTs are being encouraged to implement the Scheme. As a result, till date, sanctions have been issued to 22 States/UTs under Component-A; 24 States/UTs under Component-B; and 20 States/UTs under Component-C. More States/UTs are likely to join going forward. Further, there is huge demand for Feeder Level Solarization, wherein demand of over 43 lakh pumps has been received against a total target of 15 lakh pumps under Component-C. To increase public awareness amongst general public, Ministry has launched a massive public awareness campaign through power sector PSUs. Under the campaign, hoardings/ posters will be installed at sites of high visibility in district headquarters, blocks and gram panchayats. This in all likelihood would greatly increase uptake of the Scheme.

[Ministry of New and Renewable Energy  
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### **Recommendation No. 10**

The Committee note from the reply of the Government that the Country has the fourth highest wind installed capacity in the World with total installed capacity of 37.94 GW (as on 31<sup>st</sup> July, 2020) and 64.639 billion units were reportedly generated from the wind power during 2019-20. The Committee however observe that since 2017-18, the Ministry has not been able to achieve its annual wind energy target. It has been submitted that the capacity additions till 2017 were through Feed in Tariff (FiT) mechanism and subsequently the tariff regime has been shifted from Feed-in-Tariff (FiT) to bidding route, which has slightly slowed the installation of projects. However,

tariff based competitive bidding process has reduced the tariff of wind power considerably, i.e. from over Rs 4 per unit through FiT to around Rs 2.80 per unit in bidding regime. The Committee have been apprised that the Ministry, through SECI, is regularly issuing bids for awarding wind power projects through transparent competitive bidding process and the bids of adequate capacities are being issued for achieving 60 GW by 2022. The Committee hope that this shift would not hamper the achievement of overall target i.e. 60 GW by 2022.

The Committee also note that approximately 36 GW and 31 GW offshore wind power potential exist off the coast of Gujarat and Tamil Nadu respectively. India is in the initial phase of offshore wind energy development and exhaustive off-shore wind and other oceanographic measurements/surveys are underway to understand the nature of subsurface, seabed topology etc. Keeping in view the fact that India has a long coastline of more than 7500 Kilometers, the Committee recommend that:

- i) Besides Gujarat and Tamil Nadu, the Ministry should extensively explore the offshore wind power potential in all other coastal States in a time bound manner.
- ii) The Ministry should have consultations with all the stakeholders about shift in tariff regime so that achievement of overall target of 60 GW by 2022 does not get hampered.

### **Reply of the Government**

- i) Initial assessment of offshore wind energy potential has been estimated to be about 70 GW within the eight identified zones each off the coast of Gujarat and Tamil Nadu. Wind resource measurements using LIDARs, geo-physical, geo-technical and rapid Environmental Impact Assessment studies have been carried out for Gulf of Khambhat off Gujarat coast. Similar studies are planned for Gulf of Mannar off Tamil Nadu coast. The other coastal states may be explored after completion of measurements in already identified zones.
- ii) The necessary amendments and changes in policy/guidelines are being carried out from time to time in consultation with stakeholders.

[Ministry of New and Renewable Energy  
O.M. No. 372-12/8/2017-PU, Dated: 21/01/2022]

### **Recommendation No. 11**

The Committee note that against the target of 10 GW, total capacity of 9.936 GW of Biomass Power and Cogeneration has been installed in the Country (as

on 31.07.2020). The Ministry has submitted in this regard that the Sector has been facing problems like non-signing of power purchase agreements (PPAs) by DISCOMs, lack of working capital and non-availability of biomass. The Committee express their satisfaction that the Ministry is closer to achieve the target of 10 GW of Biomass Power. However, with regard to achievement of annual target under the New National Biogas and Organic Manure Programme (NNBOMP), the Committee observe that the Ministry has not been able to achieve its annual target during the last 9 years since the year 2011-12. Keeping in view the non-satisfactory performance of the Ministry under NNBOMP, the Committee recommend that:

- i) The Ministry should conduct a comprehensive review of the programme with a view to ensure annual achievement under the programme atleast from now onwards.
- ii) The list of targeted beneficiaries may be redrawn under NNBOMP in the light of Ujjwala Scheme so that the intended objectives of the Scheme are effectively achieved.

### **Reply of the Government**

The suggestions/recommendations regarding comprehensive review meetings with the programme Implementing Agencies /SNAs for achieving the physical targets and qualitative results for installation of biogas plants have been duly noted.

Additionally, The Biogas Programme has been reviewed in the EFC meeting held on 22.09.2021 under the chairmanship of FS & Secretary Expenditure Ministry of Finance under the Umbrella Scheme-Bioenergy programme. An EFC proposal for the 5 years' period (FY2021-22 to 2025-26) was submitted to MoF for 'In-principle' approval. In the above said EFC meeting, Dept. of Expenditure (DoE) recommended that the programme may be continued only to meet the already created liability and no new projects may be sanctioned under sub schemes of this programme. This condition implies an effective discontinuation of Bioenergy programme beyond 31.03.2021 as no new projects can be supported.

However, in order to achieve the maximum annual targets of biogas plants, following remedial action have been taken up to 31.03.2021;

- (i) MNRE invited proposals for new designs of small biogas plant leading towards simple and cost effective domestic, community / village level small scale Biogas usage (in the range of 1 to 25 Cubic Meter) made up of eco-friendly & durable but with standard and virgin quality materials and should be suitable for Indian Climatic conditions and able to process various

feedstock/organic wastes for anaerobic fermentation. This would push the adaptability of wide range of biogas models; and

(ii) Biogas Application Portal & Mobile application has been developed by MNRE to provide service to all smaller biogas project proponents to smoothly proceed through the administrative procedure and to provide a robust application management system with its end-to-end solution from submission to installation and operation & maintenance of biogas plants under NNBOMP. The end-to-end management of the application processing will significantly reduce the time taken for the approval and the digital platform will allow seamless communication between the stakeholders.

(iii) MNRE is continuously reviewing the progress of biogas scheme by conducting the national level and regional level review meetings with State Program Implementing Agencies for achieving the annual target.

[Ministry of New and Renewable Energy  
O.M. No. 372-12/8/2017-PU, Dated: 21/01/2022]

### **Recommendation No. 13**

The Committee note that as per the Electricity Act, 2003, Renewable Purchase Obligation (RPO) mandates all the electricity licensees to purchase or produce a minimum specified quantity of their requirement from the renewable energy sources and the State Electricity Regulatory Commission (SERC) fix the minimum RPO for the State. They find that the Ministry of Power notified the uniform Renewable Purchase Obligation (RPO) trajectory on 14th June 2018 that seeks 21 percent RPO (10.5 percent non-solar and 10.5 percent solar) by 2021-22. For 2019-20, the trajectory mandated the share of renewable energy (excluding hydro power above 25 MW installed capacity) to be 17.50 percent (7.25 percent from solar and 10.25 percent from non-solar), however the achievement was only 10.77 percent. It has been submitted that only six States namely Andhra Pradesh, Himachal Pradesh, Karnataka, Rajasthan, Sikkim and Tamil Nadu have achieved RPOs in full and seven States/UTs, namely Gujarat, Mizoram, Nagaland, Madhya Pradesh, Telangana, Dadra and Nagar Haveli and Maharashtra have achieved more than 55 percent RPO. The Committee observe that the RPO compliance in the Country varies from 3.7% for Manipur to 250% for Karnataka. While expressing their displeasure about the non-compliance of RPO trajectory so far, the Committee recommend that:

i) The Ministry should actively pursue all the SERCs/JERCs for ensuring RPO compliance, aligning their RPO trajectory with the one issued by the Ministry of Power and enforcing penal provisions against defaulting obligated entities.

- ii) Carry forward or waiver of RPO should not to be permitted.
- iii) Penalty for non-compliance may be increased as deterrence.

### **Reply of the Government**

- i) In order to ensure the RPO compliance and align the RPO trajectory of the states with the RPO trajectory issued by the Ministry of Power, MNRE has been regularly following up with the SERC/JERCs. In this regard, Ministry vide letters dated 6<sup>th</sup> October 2020, 4<sup>th</sup> January 2021, 28<sup>th</sup> July 2021 and 12<sup>th</sup> November 2021 requested SERCs/JERCs to align their RPO trajectory with the one issued by the Ministry of Power and enforcing penal provisions against defaulting obligated entities. Moreover, Hon'ble Minister, NRE vide letter 30<sup>th</sup> January 2021 also requested Chief Ministers/Administrators of States/UTs to emphasize the need of RPO Compliance by the DISCOMs of respective States/UTs.
- ii) Recommendation of the Committee has been noted.
- iii) Necessary provisions have been included in the Draft Electricity (Amendment) Bill 2021 for ensuring strict compliance of RPO.

[Ministry of New and Renewable Energy  
O.M. No. 372-12/8/2017-PU, Dated: 21/01/2022]

### **Recommendation No. 14**

The Committee note that India has adequate domestic manufacturing capability for wind, biomass and small hydro power equipments with expert capability. One of the targets under National Solar Mission, launched in 2010, was creation of favorable conditions for developing solar manufacturing capability in the Country. As per the reply, the annual manufacturing capacity in the Country is around 3 GW for solar PV cells; around 10-15 GW for solar PV modules; 5 GW for solar inverters; while there is no commercial production in the Country for Polysilicon/Wafer/Ingots. The Committee observe that Wafers, solar inverters, solar PV cells and modules worth several million USD were being imported from China, Germany, Malaysia, USA etc. since 2013-14. The Committee feel that excessive dependence on imports may put solar power sector at the risk of supply side disruptions. In the opinion of the Committee, it is very troubling that the Ministry has not come up with any long term policy for developing domestic solar manufacturing capability in the Country since 2010. Even after a decade of the launch of the National Solar Mission, the Ministry is still only envisaging to set up Renewable Energy manufacturing hubs in and around existing ports

and waiting for an appropriate time to issue orders regarding approved list of Solar PV Models and Manufacturers. In pursuance of the Hon'ble Prime Minister's clarion call for 'Make in India', 'Atmanirbhar Bharat' and 'Vocal for Local', the Committee recommend that the Ministry should formulate a long term policy for developing and facilitating domestic solar manufacturing capabilities in the Country to create a strong supporting base to give boost in the solar energy segment of the renewable energy which will not only reduce our dependence on imports from other Countries but also open employment generation opportunities in the Country.

### **Reply of the Government**

The Government has taken various steps to enhance domestic solar PV manufacturing, as follows:

a) Schemes with Domestic Content Requirement (DCR) and 'Preference to Make in India Order': about 37 GW of DCR (Cells and modules) is required for a number of Schemes being implemented by MNRE. It is expected that assured demand for domestic cells & modules will facilitate investment for domestic manufacturing.

b) On 28th April, 2021, the Government introduced, Production Linked Incentive Scheme "National Programme on High Efficiency Solar PV Modules" with an outlay of Rs. 4500crores, to support and promote manufacturing of high efficiency solar PV modules, including the upstage vertical components like cells, wafers, ingots and polysilicon in India and thus reduce the import dependence in Solar Photo Voltaic (PV) sector. In pursuance of the decision, a tender for invitation of bids for manufacture of high efficiency solar PV modules was issued. The tender received very encouraging response wherein 18 bids were received which could add another around 55 GW of solar PV module manufacturing to present solar PV module manufacturing capacity of around 11 GW (ALMM enlisted). Letters of Award have been issued to three eligible successful bidders to the extent of funds allotted.

c) In order to ensure reliability of solar PV modules being deployed in India, MNRE has brought in a mechanism of enlisting of Models and Manufacturers, after thorough inspection of manufacturing facilities. After inspection, all eligible solar PV module models and manufacturers will be included in Approved List of Models and Manufacturers (ALMM) - List-I (Solar Modules) and List II (Solar Cells). It will give edge to domestic manufacturers by way of lead time in registration. Since, domestic solar manufacturing capacity is very less, MNRE has published List-I only for solar

modules. As on 30th November, 2021, module manufacturing capacity of around 11 GW per annum has been enlisted in this ALMM list.

d) Government has decided to impose Basic Customs Duty (BCD) on import of solar PV modules @40% and on import of solar PV cells @25% with effect from 1st April, 2022.

[Ministry of New and Renewable Energy  
O.M. No. 372-12/8/2017-PU, Dated: 21/01/2022]

### **Recommendation No. 15**

The Committee observe that the Green Energy Corridor Project aims at synchronizing electricity produced from renewable sources, such as solar and wind, with conventional power stations in the Grid. For evacuation of large-scale renewable energy, Intra State Transmission System project was sanctioned by the Ministry in the year 2015-16. The project is being implemented by eight renewable-rich states of Tamil Nadu, Karnataka, Andhra Pradesh, Maharashtra, Gujarat, Madhya Pradesh, Rajasthan and Himachal Pradesh through their respective State Transmission Utilities (STUs). Its regular monitoring is done by the Ministry and it is understood that a Project Appraisal Committee in the Ministry also monitors the project and recommends on the disbursement of the central grant to the STUs. The Committee are however, pained to observe that despite having well placed mechanism, the project has not marched at the desired pace and the construction of cumulative 7365 ckm transmission lines and commissioning of 9976 MVA capacity substations during the last 5 years' period (as on 31.12.2020) have been far from satisfactory and much below the target fixed which was 9700 ckm transmission lines and 22600 MVA substations. In the Committee's opinion, among the various factors stated to be responsible for the slow pace in the progress of Green energy Corridor Project, the inadequate monitoring by the Ministry and lack of the priority which the project deserved to be given, have also contributed a lot in missing the target. The Committee are concerned about the already delayed implementation of the intra state Green Energy Project. The Committee observe that to meet the given target, 2335 ckm of transmission lines have to be installed and substations of aggregate capacity of 12624 MVA have to be charged by May 2021 so as to meet the extended deadline, which seems highly unlikely seeing the track of past performance. Keeping in view the importance of the project for evacuation of power from renewable energy rich States and its integration with the Grid, the Committee would like to know the action plan prepared by the Ministry and recommend that the Ministry should work on a

mission mode to earnestly pursue with the States concerned to ensure timely completion of Green Energy Corridor so that renewable energy projects do not have to suffer due to lack of reliable evacuation infrastructure.

### **Reply of the Government**

The Inter – State Transmission System (ISTS) component of GEC with 3200 ckm transmission lines and 17,000 MVA sub-stations has been completed by March 2020.

Under the Intra-State Transmission System (InSTS) component of GEC, a total of approx. 8468ckm of transmission lines have been constructed out of target of 9700 ckm, and a total of 15268 MVA substations have been charged out of target of 22600 MVA, as on 31.12.2021.

The InSTS component of GEC is being implemented by the State Transmission Utilities of the respective States. The commissioning schedule of InSTS GEC project was first extended till 31.12.2020 upon the requests from the State Governments and then further extended up to 31.05.2021 due to disruption of works because of COVID. Subsequently, upon the requests received from the States the timeline for commissioning of projects under GEC has been further extended upto June-2022.

The InSTS component has been delayed in all the States due to various reasons such as:

- a) Some projects were retendered due to low bid turnout, hence delay in award of work (Maharashtra, Himachal Pradesh and Madhya Pradesh).
- b) Some projects had to be cancelled as the planned renewable energy generation projects did not come up (Rajasthan). Accordingly, alternate projects were planned and sanctioned. These projects are under implementation.
- c) Some projects were cancelled due to no bid turnout (Maharashtra and Himachal Pradesh).
- d) Some projects were cancelled by the State for their own reasons (Andhra Pradesh).
- e) A few sanctioned projects have been delayed due to forest clearance and RoW issues.
- f) Delay due to disruption of works because of COVID.

Ministry is making concerted efforts to complete the GEC projects timely so that renewable energy projects do not have to suffer due to lack of reliable evacuation Infrastructure.

[Ministry of New and Renewable Energy  
O.M. No. 372-12/8/2017-PU, Dated: 21/01/2022]

### **Recommendation No. 16**

The Committee note that funding of Rs. 2,61,000 crore is required for installation of 58 GW of renewable power projects (the installed capacity is 87 GW and around 30 GW is under implementation as on June, 2020). It has been submitted that the average annual investment in renewable energy sector has been around Rs. 82,300 Crore in the past 5 years and cost reduction for wind and solar power technologies over the years is also expected. Keeping in view the situation arising out of the Covid-19 pandemic and resultant supply side disruptions as well as the non-performing assets in conventional power sector; the Committee feel that attracting an investment of Rs. 2,61,000 crores in next two years will not be an easy task. The Committee are of the opinion that Indian Renewable Energy Development Agency (IREDA) being the only dedicated public sector financial institution for financing of renewable energy projects, must gear itself up to take up the extra responsibility and make available necessary capital for installation of renewable energy projects, so that projects are not held up due to non-availability of required funds. The Committee, therefore recommend that the Ministry should mobilize more long term financing and concessional loans through multilateral and bilateral agencies as far as possible.

### **Reply of the Government**

The Renewable Energy installed capacity is 104.88 GW as on 31.12.2021. Further, projects of 56.31 GW capacity are at various stages of implementation and projects of 26.82 GW capacity are under various stages of bidding. Thus, about 188.01 GW are either commissioned or in different stages of bidding.

IREDA has geared up to capture more business in the RE sector in the coming years and has made business plan for next 5 years (till FY 2025-26). As per projections made in the plan, IREDA expects a disbursement of Rs 1.95 lakh crore (approx.) over the next 5 years and the loan portfolio will reach to Rs 1.35 lakh crore (approx.). The details of disbursement and loan portfolio in next 5 years are as follows:

<b>( In Rs. Crore)</b>							
<b>Sr. No.</b>	<b>Particulars</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>FY 2024-25</b>	<b>FY 2025-26</b>	<b>Total</b>
1	Disbursement	19,488	26,120	35,277	48,452	65,182	1.95 lakh (approx.)

2	Loan portfolio	37,286	52,081	71,941	99,006	1,35,067 (1.35 lakh approx.)	-
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The Cabinet has cleared the proposal of Infusion of equity to the tune of Rs 1,500 Cr to IREDA on 19th January 2022, which would aid to improved net-worth, a healthy CRAR and lend approximately Rs 12,000 Cr to the RE sector to facilitate additional RE capacity addition of 3,500-4,000 MW. Further, IREDA has evolved an active monitoring & aggressive recovery process, wherein all the loan accounts are critically reviewed on a fortnightly basis to reduce NPA by taking various measures viz. restructuring of accounts & legal options (e.g NCLT, Sarfaesi & DRT).

[Ministry of New and Renewable Energy  
O.M. No. 372-12/8/2017-PU, Dated: 21/01/2022]

### **Recommendation No. 17**

The Committee note that out of 88 GW of installed renewable power projects (as on June, 2020), IREDA has financed 229 projects of 11,830.69 MW with loan amount of Rs 25,922.60 crore. It has also been submitted that IREDA has 86 NPA (Non-Performing Assets) accounts with total outstanding loan of Rs. 2110.64 crore as on 31.03.2020 and 31 projects are overdue accounts with outstanding loan of Rs. 1748.146 crore. The Committee observe that 18 small hydro power projects and 11 biomass power projects, financed by IREDA, with outstanding loan of Rs. 24920.01 crore and Rs. 104.59 crore respectively have become non-performing assets. The Committee express their concern over the huge outstanding loan amount of IREDA and some of them now turning into NPA and feel that comprehensive analysis of the reasons responsible for such scenario need to be critically done to ensure better financial management by IREDA in future projects. The Committee, therefore desire that the issues relating to NPA need to be dealt with utmost sincerity and thus recommend that:

- i) The IREDA should review its entire process of appraisal of the projects and disbursement of loan to incorporate stricter due diligence before sanctioning large projects involving huge investments to avoid them turning into NPA in future.
- ii) Necessary follow-up need to be done with SMA (Special mention accounts) category borrowers in order to prevent them from becoming NPAs.
- iii) Expeditious recovery of outstanding loan by auctioning of assets and other legal measures be initiated.

## **Reply of the Government**

IREDA has been taking several proactive actions to improve the recovery rate. As a result of timely action / regular monitoring / follow up with NPA borrowers, the gross NPA of IREDA has been reduced from 10.08% (as on 31.03.2020) to 8.77% (as on 31.03.2021) and net NPA has been reduced from 7.18% (as on 31.03.2020) to 5.61% (as on 31.03.2021), which corresponds to 13% reduction in gross NPA and 21.87% reduction in net NPA.

Further, out of total recovery of Rs. 342.24 Crores from NPA during Financial Year 2020-21, Rs. 169.55 Crores is received towards principal and Rs. 172.69 Crores towards interest income. The recovery of Rs.342.24 also includes Rs.10.37 crores recovered from loss assets.

IREDA has already taken following steps for strengthening its entire process of appraisal of the projects and disbursement of loans:

- IREDA has a Screening Committee in place having representation from Legal, Finance and Technical departments which deliberate upon the proposal and suggest improvement, if any before sanctioning of loan.
- Financial concurrence has been introduced for all the projects, at the time of appraisal and disbursement of loans.
- In all the accounts, IREDA does regular monitoring and appoints Lenders' Independent Engineer (LIE), as applicable for ensuring timely implementation of the projects and also identifying issues related to the projects, if any for its timely resolution.
- Further, IREDA also monitors the status of revenue receipts and take action as may be required in order to regularize the same in case of any deficiency in operation.

IREDA does regular follow ups with SMA (Special Mentioned Accounts) through e-mails, letters, Video Conference, telephonic discussions for immediate clearance of dues.

Further, internal review meeting having representation from Legal, Finance, Technical, Recovery & Monitoring departments are being conducted on fortnightly basis for early resolution of stressed assets.

IREDA has taken following steps for expeditious recovery from NPA accounts:

- IREDA is in continuous follow up with borrowers to make efficient recovery of dues from them and to reduce the NPA level.
- A separate Recovery Cell has been established at IREDA to take various steps towards reducing its NPA in accordance with various norms and circulars of the RBI issued from time to time. Some of the steps taken are:
  - Initiating appropriate action under Negotiable Instruments Act, SARFAESI Act, DRT or IBC for recovery of dues.

- A Board level Committee has been constituted for routine period monitoring of all the stressed assets including NPAs.

Due to above timely recovery actions, the gross NPA of IREDA has further reduced from 8.77% (as on 31.03.2021) to 8.05% (as on 30.09.2021) and net NPA from 5.61% (as on 31.03.2021) to 4.87% (as on 30.09.2021) as per the audited figures as on 30.09.2021.

[Ministry of New and Renewable Energy  
O.M. No. 372-12/8/2017-PU, Dated: 21/01/2022]

### **Recommendation No. 18**

The Committee note that States and distribution companies owe Rs. 11,752.71 crore to renewable energy generators/developers (as on 03.07.2020). The Committee feel that non-payment of dues to generators/developers may result in accumulation of more stressed/non-performing assets which may in turn add to the stress of lending financial institutions thereby creating a vicious cycle with possible cascading effects. The Committee, therefore recommend that the Ministry should take up this matter with concerned State Governments without any further delay and the outstanding dues be realized immediately and timely payment of dues to renewable energy generators/ developers be ensured in future.

### **Reply of the Government**

The new wind and solar project being installed under SECI bids are covered under payment security mechanism and does not have any issue related to delayed payment. The issue of delay in payment pertains to the old projects, where power purchase agreements are directly with state DISCOMs. The Ministry is regularly taking up the issue of delay in payment with concerned State Governments. In this regard, the Government has taken the following actions:

- a) MNRE through IREDA has developed an online portal to monitor outstanding dues to RE generators.
- b) Ministry of Power issued orders in June/ July 2019 for not allowing procurement of power from power exchanges and not granting short term open access, if LC provision which is part of the PPAs and acts as payment security mechanism for generators, is not in place or payment is not made in advance. As per orders, the LC shall be opened against the power purchases made from 1 August 2019 onwards.

- c) Ministry of Power issued 'The Electricity (Late Payment Surcharge) Rules, 2021 dated 22nd February, 2021' in order to ensure payment of Late Payment Surcharge on the payment outstanding after the due date.

[Ministry of New and Renewable Energy  
O.M. No. 372-12/8/2017-PU, Dated: 21/01/2022]

### **Recommendation No. 19**

The Committee note that the Ministry does not have information regarding effect of Covid-19 on renewable energy sector including the data regarding job losses so far in the sector. However, the Ministry has issued orders to mitigate the effects of COVID-19 like treating lockdown as well as delay on account of disruption of the supply chains due to spread of corona virus as *Force Majeure* and granting blanket extension of time for renewable energy projects, etc. It has also been submitted that disruptions caused due to Corona virus may affect achievement of renewable energy targets in time. The Committee are of the view that the situation arising out of spread of Covid 19 had been an unprecedented happening which impacted each sector of the economy but these challenges need now to be effectively encountered and therefore the Ministry should formulate a coherent plan for continuance of support to the renewable power sector so that the target of 175 GW by 2022 is achieved within the time frame announced. The Committee hope that the Ministry will achieve the target with their comprehensive plan and strategic implementation model.

### **Reply of the Government**

MNRE has issued orders regarding treating lockdown due to COVID-19, as Force Majeure and granting of time-extension of around 7.5 months for renewable energy projects on account of lockdown and disruptions on account of COVID-19. This delay might cause the achievement of the 175 GW target to take some more months beyond December 2022.

[Ministry of New and Renewable Energy  
O.M. No. 372-12/8/2017-PU, Dated: 21/01/2022]

## **CHAPTER – III**

### **Observations/Recommendations which the Committee do not desire to pursue in view of the Government's Replies**

**Nil**

## CHAPTER – IV

### **Observations/Recommendations in respect of which the Replies of the Government have not been accepted by the Committee and which require Reiteration**

#### **Recommendation No. 4**

The Committee note that there is a target to install 40 GW of Solar Power by setting up over 50 Solar parks and Ultra Mega Solar Power Projects by 2022. Against this target, 39 solar parks of aggregate capacity of 22,879 MW have been approved to be setup in 17 States. Out of these approved Solar parks, infrastructure in 8 Solar parks is almost fully developed where solar projects of aggregate capacity of 6580 MW have also been commissioned and 4 Solar parks are partially developed where solar projects of aggregate capacity of 1365 MW have been commissioned. The Committee observe that the remaining 11 solar parks of aggregate capacity of 17,121 MW have not even got the approval of the Ministry although these Solar parks have to be developed and projects therein commissioned by 2022. Further, only 20 % of the approved solar parks are fully developed so far and another 10% are only partially developed leaving as much as 70% unachieved. The Committee are disappointed with the slow progress made so far as the Ministry have been able to fully develop 8 Solar parks only in more than 5 years (2015-20) and an aggregate capacity of 32,055 MW is yet to be commissioned in order to achieve the stipulated target by 2022. The Committee have been informed that the major challenge in development of Solar parks is the acquisition of land that is dependent upon cooperation from the State Governments and other stakeholders. But it is inexplicable as to why 11 solar parks are yet to get approval of the Ministry even after lapse of more than three years. The Committee believe that the exercise of setting targets is rendered meaningless if Ministry-level approvals take such an undue long time. The Committee would therefore expect the process of granting approvals to be completed expeditiously so that the project can be implemented in a given time-frame. Keeping in view the fact that the solar power projects are land intensive projects, which require large flat tracts of shadow free contiguous land with accessibility, the Committee specifically recommend that:

- i) The Ministry should actively explore the option of using surplus land available with various public sector undertakings and different State Governments for setting up of solar parks expeditiously.

ii) The Ministry should encourage all the airports in a time bound manner, to set up solar projects on the lines of Kochi Airport which is the first fully solar-powered airport in the world.

### **Reply of the Government**

(i) The suggestion of the committed has been noted. Ministry is making concerted efforts to achieve the target of completion of solar parks of aggregate capacity 40 GW by 2023-24.

As on 31-12-2021, Ministry has granted approval for 50 solar parks of aggregate capacity 33.8 GW. Out of this, 8 parks are complete with projects of 6580 MW installed in them and 6 parks are partially complete with projects of 2615 MW installed.

Ministry has introduced a new Mode (Mode-8) of implementation under the solar park scheme with a provision to incentivize the States. The CPSUs/State Government agencies are actively involved and are developing parks under this Mode.

Ministry is also conducting regular review meetings to monitor the progress of solar parks.

(ii) The Ministry of Civil Aviation was requested in January 2020 to develop an action plan for solarizing various airports and for utilising airport vacant lands for setting up RE projects. With the initiatives taken, over 101 MW capacity Solar PV Projects have already been installed in various airports. Detail of the same is given at **Annexure-I**.

[Ministry of New and Renewable Energy  
O.M. No. 372-12/8/2017-PU, Dated: 21/01/2022]

### **Comments of the Committee**

**(Please see Para No. 9 of Chapter – I of the Report)**

### **Recommendation No. 5**

The Committee note that nine Central Public Sector Undertakings (CPSUs) participated in 1000 MW CPSUs Scheme and viability gap funding (VGF) of Rs. 795 crore (including Solar Energy Corporation of India's charges) has been released to the Solar Energy Corporation of India (SECI) for disbursement to these nine CPSUs. Under CPSUs Scheme phase-II, around Rs. 319 crore has been released for disbursement to seven participating CPSUs/Government Organizations. It has also been submitted that this Scheme envisages the use of domestically manufactured cells and modules. The Committee appreciate the fact that there is a provision of domestic content requirement under the Scheme which may give a fillip to domestic manufacturing. In order to

encourage domestic manufacturing for establishment of Solar PV power projects and to provide a sustained market to the domestic manufacturers, the Committee recommend that:

i) Target under the scheme for setting up of grid-connected solar PV power projects by the CPSUs and Government Organizations should be increased.

ii) Since only a few CPSUs have participated in the scheme till date, the Ministry should take pro-active steps and encourage more CPSUs/ Government Organizations to participate in the scheme.

### **Reply of the Government**

(i) and (ii) The Government, through Ministry of New & Renewable Energy (MNRE), is implementing a scheme, viz. CPSU Scheme Phase-II (Government Producer Scheme), for setting up grid-connected solar photovoltaic power projects by the Government producers with Viability Gap Funding (VGF) support for self-use or use by Government/ Government entities, either directly or through Distribution Companies (DISCOMS).

The solar PV power plants under CPSU Scheme Phase-II are to be set up using domestically manufactured solar PV cells and modules. Under the aforesaid scheme, following capacities have been allotted till date (03.01.2022):

Sl. No.	Name of Government entity	Capacity of solar PV power plants allotted under CPSU Scheme Phase-II (MW)
1	NTPC Limited	3682
2	The Singareni Collieries Company Limited	171
3	Delhi Metro Rail Corporation Limited	3
4	Assam Power Distribution Company Limited	30
5	NHDC Ltd.	25*
6	Nalanda University	5
7	Indore Municipal Corporation	100
8	SJVN Limited	1000
9	NLC India Limited	510
10	NHPC Limited	1000
11	IRCON International Limited	500
12	Solar Energy Corporation of India Limited	1200
	<b>TOTAL</b>	<b>8226*</b>

*\*25 MW capacity allotted to NHDC Ltd. has been cancelled by SECI*

Out of 8226 MW capacity mentioned above, 1911 MW capacity has VGF requirement of Rs 65.70 Lakh./MW, 115 MW capacity has VGF requirement of Rs 55.60 Lakh/MW and 6200 MW capacity has VGF requirement of 44.45 Lakh/MW.

[Ministry of New and Renewable Energy  
O.M. No. 372-12/8/2017-PU, Dated: 21/01/2022]

### **Comments of the Committee**

**(Please see Para No. 12 of Chapter – I of the Report)**

### **Recommendation No. 7**

The Committee note that all the State/Joint Electricity Regulatory Commissions have issued net metering regulations/tariff orders but there is lack of uniformity in this regard. It has been submitted that in most of the States and Union territories, there is no proper payment mechanism for excess units exported to the grid and the same are generally adjusted in the electricity bill itself. The Committee observe that in addition to Net-metering, there are also other metering arrangements like gross metering. The Committee are of the opinion that the target set for solar roof-tops cannot be achieved without proper implementation of the Net/Gross Metering and feel that there is a need to maintain uniformity in terms of regulations/model operating procedures/online unified portals etc. The Committee, therefore, recommend that after analyzing the advantages and disadvantages of both the arrangements, the Ministry should ensure proper implementation of Net/Gross Metering arrangements in the Country through consultations with all the stakeholders so that both DISCOMs as well as the consumers get a fair deal.

### **Reply of the Government**

In order to bring uniformity in net-metering regulations and promote RTS, the Government has issued Electricity (Rights of Consumer) Rules, 2020 and amended these Rules vide its notification in June 2021. As per amended Rules, net-metering is to be allowed to the Prosumer for loads up to five hundred Kilowatt or upto the sanctioned load, whichever is lower and net-billing or net feed-in for other loads. The relevant provision is reproduced as under:

*“11 (4) The arrangements for net-metering, gross-metering, net-billing or net feed-in shall be in accordance with the regulations made by the State Commission, from time to time:*

*Provided that where the regulations does not provide for net-metering, net-billing or net feed-in, the Commission may allow net metering to the Prosumer for loads up to five hundred Kilowatt or upto the sanctioned load, whichever is lower and net-billing or net feed-in for other loads.”*

Regarding the notifications on standard operating procedure the Ministry has already shared the standard operating procedures with the States. Further, most of the DISCOMs have online portal for applying and approval progress. These portals are being updated based on the requirement and feedback to make them more user friendly.

[Ministry of New and Renewable Energy  
O.M. No. 372-12/8/2017-PU, Dated: 21/01/2022]

### **Comments of the Committee**

**(Please see Para No. 15 of Chapter – I of the Report)**

### **Recommendation No. 12**

The Committee note that the Ministry of New and Renewable Energy has been vested with responsibility of developing Small Hydro Power (SHP) projects up to 25 MW capacity. The identified potential in the Country for power generation from SHP projects is about 21,133 MW at 7133 number of sites. Against the target of 5000 MW, 4688.16 MW capacity from 1130 small hydro power projects have been achieved by 30th June 2020 and 100 projects of about 509 MW are in various stages of implementation. It has been submitted that the SHP Scheme, 2014 ended on 31.03.2017 and the proposal for continuation of SHP programme for three years from 1st April 2017 to 31st March 2020 could not get approval of the Cabinet. It is now proposed to develop the scheme afresh valid up to March 2025 and an EFC (Expenditure Finance Committee) Memorandum for continuation of the SHP Scheme from 2020-21 to 2024-25 has been prepared and is under consideration of the Ministry. The Ministry has not furnished any reason, for this inordinate delay in coming up with a Scheme for SHP since 2017. The Committee would, therefore, recommend that:

- i) The Ministry should expedite the process of formulation of Small Hydro Power Scheme on priority basis and get it approved from the EFC at the earliest.
- ii) Targets may be set in a manner that would harness the available potential of 21,133 MW power in small hydro sector in a given time frame.
- ii) All the Small Hydro Power (SHP) projects starting from 1st April 2017 should be covered under the new SHP Programme.

### **Reply of the Government**

The suggestion of the committed has been noted. The Ministry is in the process of formulating a new Scheme for the development of Small Hydro Power projects in the country.

[Ministry of New and Renewable Energy  
O.M. No. 372-12/8/2017-PU, Dated: 21/01/2022]

### **Comments of the Committee**

**(Please see Para No. 18 of Chapter – I of the Report)**

## **CHAPTER – V**

### **Observations/Recommendations in respect of which the final Replies of the Government are still awaited**

**Nil**

**New Delhi;  
26<sup>th</sup> July, 2022  
Sravana 4, 1944 (Saka)**

**Rajiv Ranjan Singh *alias* Lalan Singh  
Chairperson,  
Standing Committee on Energy**

## ANNEXURE-I

### Solar PV Projects installed in Airports

Sl. No.	Airport/related organisations	State/UT	Installed solar PV capacity in MW (as on September 2021)	Category
1	Portblair	Andaman and Nicobar	0.6	Ground and rooftop
2	Rajamundry	Andhra Pradesh	1	Ground
3	Tirupati	Andhra Pradesh	1	Ground
4	Vijayawada	Andhra Pradesh	1	Ground
5	Dibrugarh	Assam	0.725	Rooftop
6	Jorhat	Assam	0.075	Rooftop
7	Guwahati-I & II	Assam	0.3	Rooftop
8	Silchar	Assam	0.1	Rooftop
9	Patna	Bihar	0.25	Rooftop
10	Gaya	Bihar	0.22	Rooftop
11	Raipur	Chhattisgarh	0.1	Rooftop
12	Indian Aviation Academy	Delhi	0.2	Rooftop
13	Rajiv Gandhi Bhawan	Delhi	0.25	Rooftop
14	New Delhi	Delhi	7.84	Ground
15	Safdarjung	Delhi	0.06	Rooftop
16	Ahmadabad	Gujarat	1.4	Rooftop
17	Bhuj	Gujarat	0.23	Rooftop
18	Rajkot	Gujarat	0.15	Rooftop
19	Vadodara	Gujarat	0.675	Ground
20	Leh	Jammu and Kashmir	0.027	Rooftop
21	Ranchi	Jharkhand	0.25	Rooftop
22	Bangalore	Karnataka	3.438	Ground and rooftop
23	Calicut	Kerala	1.623	Rooftop
24	Kochi	Kerala	40	Ground, carport, floating and rooftop
25	Trivandrum	Kerala	0.5	Rooftop
26	Bhopal	Madhya Pradesh	1.2	Ground and rooftop
27	Indore	Madhya Pradesh	0.1	Rooftop
28	Indore	Madhya Pradesh	0.9	Ground
29	Aurangabad	Maharashtra	0.12	Rooftop

30	RED office and ATS complex , Mumbai	Maharashtra	0.103	Rooftop
31	Juhu	Maharashtra	0.15	Rooftop
32	Birsi (Gondia)	Maharashtra	0.38	Ground
33	Pune	Manharashtra	0.3	Rooftop
34	Andheri Transmitting Station Mumbai	Manharashtra	0.042	Rooftop
35	Imphal	Manipur	0.13	Rooftop
36	Bhubaneswar	Odisha	0.1	Rooftop
37	Jharsuguda	Odisha	0.09	Rooftop
38	Puduchhery	Puduchhery	0.5	Ground
39	Amritsar	Punjab	0.4	Rooftop
40	Jaisalmer	Rajasthan	0.1	Rooftop
41	Jaipur	Rajasthan	1.9	Ground and rooftop
42	Jodhpur	Rajasthan	0.1	Rooftop
43	Kishangarh	Rajasthan	0.04	Rooftop
44	Chennai	Tamil Nadu	1.5	Rooftop
45	New operational office RED-Chennai	Tamil Nadu	0.1	Rooftop
46	Madurai	Tamil Nadu	0.17	Rooftop
47	Tiruchilapalli	Tamil Nadu	1.14	Ground and rooftop
48	Madurai	Tamil Nadu	0.73	Ground
49	Hyderabad	Telangana	5.5	Ground and rooftop
50	Agartala	Tripura	0.25	Rooftop
51	Chandigarh	UT	3	Ground
52	Lucknow	Uttar Pradesh	0.515	Rooftop
53	Varanasi	Uttar Pradesh	1.6	Ground and rooftop
54	Allahabad	Uttar Pradesh	0.3	Rooftop
55	Allahabad	Uttar Pradesh	0.5	Rooftop
56	Rashtriya Uran Academy	Uttar Pradesh	0.06	Rooftop
57	Kolkata	West Bengal	17	Ground and rooftop
58	Bagdogra	West Bengal	0.05	Rooftop
<b>Total</b>			<b>101.083</b>	

**ANNEXURE-II**

**Cumulative sanctioned capacities under the three components of  
PM-KUSUM**

S. No.	State	Component-A (MW)	Component-B (Nos)	Component-C (Nos)	
				Individual Pumps Solarization	Feeder Level Solarization
1	Andhra Pradesh	0	0	0	50000
2	Arunachal Pradesh	0	50	0	0
3	Assam	50	1000	500	0
4	Chhattisgarh	30	20000	0	0
5	Delhi	62	0	550	0
6	Gujarat	500	3424	7000	500
7	Goa	50	200	11000	0
8	Haryana	65	37000	0	32927
9	Himachal Pradesh	20	950	0	0
10	Jammu & Kashmir	5	5000	0	0
11	Jharkhand	50	11000	500	10000
12	Karnataka	500	10500	0	250000
13	Kerala	40	100	100	2000
14	Ladakh	0	600	0	0
15	Madhya Pradesh	300	57000	20000	175000
16	Maharashtra	500	100000	0	250000
17	Manipur	0	150	0	0
18	Meghalaya	5	200	0	10000
19	Nagaland	0	50	0	0
20	Odisha	500	5700	0	0
21	Puducherry	7	0	0	0
22	Punjab	220	12000	0	25000
23	Rajasthan	1200	65000	12500	25000
24	Tamil Nadu	75	6100	20000	0
25	Telangana	500	0	0	65000
26	Tripura	5	3100	2600	0
27	Uttar Pradesh	225	20000	0	30000
28	Uttarakhand	0	338	200	0
29	West Bengal	0	0	700	0
<b>Total</b>		<b>4909</b>	<b>359462</b>	<b>75650</b>	<b>925427</b>

**STANDING COMMITTEE ON ENERGY**

**MINUTES OF THE THIRTEENTH SITTING  
OF THE STANDING COMMITTEE ON ENERGY (2021-22)  
HELD ON 26<sup>th</sup> JULY, 2022 IN HON'BLE CHAIRPERSON'S CHAMBER, ROOM  
NO. 111, PARLIAMENT HOUSE ANNEXE EXTENSION, NEW DELHI**

The Committee sat from 1530 hours to 1615 hours

**LOK SABHA**

**Shri Rajiv Ranjan Singh alias Lalan Singh - Chairperson**

2. Shri Gurjeet Singh Aujla
3. Shri Sanjay Haribhau Jadhav
4. Dr. A. Chellakumar
5. Shri Sunil Kumar Mondal
6. Shri Ashok Mahadeorao Nete
7. Shri Velusamy P.
8. Shri Gyaneshwar Patil
9. Shri Bellana Chandra Sekhar
10. Shri Shivkumar C. Udasi

**RAJYA SABHA**

11. Shri Ajit Kumar Bhuyan
12. Shri Rajendra Gehlot
13. Shri Muzibulla Khan
14. Shri Maharaja Sanajaoba Leishemba
15. Shri S. Selvaganabathy
16. Dr. Sudhanshu Trivedi

**SECRETARIAT**

- |                              |                     |
|------------------------------|---------------------|
| 1. Dr. Ram Raj Rai           | Joint Secretary     |
| 2. Shri R.K. Suryanarayanan  | Director            |
| 3. Shri Kulmohan Singh Arora | Additional Director |

2. At the outset, the Chairperson welcomed the Members and apprised them about the agenda of the sitting. The Committee then took up for consideration and adoption the following draft Reports:

- (i) Report on the subject 'Review of Power Tariff Policy - Need for uniformity in tariff structure across the Country'.
- (ii) Report on the subject 'Evaluation of Wind Energy in India'.
- (iii) Report on action-taken by the Government on observations/recommendations contained in Seventeenth Report (17<sup>th</sup> Lok Sabha) on the subject 'Action Plan for Achievement of 175 GW Renewable Energy Target'.
- (iv) Report on action-taken by the Government on observations/recommendations contained in Eighteenth Report (17<sup>th</sup> Lok Sabha) on the subject 'Development of Coal Blocks allocated to Power Sector Companies'.
- (v) Report on action-taken by the Government on observations/recommendations contained in Nineteenth Report (17<sup>th</sup> Lok Sabha) on the subject 'Delay in Execution/Completion of Power Projects by Power Sector Companies'.

3. After discussing the contents of the Reports, the Committee adopted the aforementioned draft Reports without any amendment/modification. The Committee also authorized the Chairperson to finalize the above-mentioned Reports and present the same to both Houses of the Parliament.

*The Committee then adjourned.*

## APPENDIX II

*(Vide Introduction of the Report)*

### **Analysis of action-taken by the Government on Observations/ Recommendations contained in the Seventeenth Report (17<sup>th</sup> Lok Sabha) of the Standing Committee on Energy**

(i)	Total number of Recommendations	19
(ii)	Observations/Recommendations which have been accepted by the Government: Sl. Nos. 1, 2, 3, 6, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18 and 19 Total:	15
	Percentage:	78.95 %
(iii)	Observations/Recommendations which the Committee do not desire to pursue in view of the Government's replies: Sl. No. Nil Total:	Nil
	Percentage:	00
(iv)	Observations/Recommendations in respect of which the replies of the Government have not been accepted by the Committee and which require reiteration: Sl. Nos. 4, 5, 7 and 12 Total:	04
	Percentage:	21.05 %
(v)	Observations/Recommendations in respect of which final replies of the Government are still awaited: Sl. No. Nil Total:	Nil
	Percentage:	00