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**STANDING COMMITTEE ON ENERGY**

**(2017-18)**

**SIXTEENTH LOK SABHA**

**MINISTRY OF NEW AND RENEWABLE ENERGY**

**[Action Taken on the recommendations contained in the  
Sixteenth Report (16<sup>th</sup> Lok Sabha) on Demands for Grants of the  
Ministry of New and Renewable Energy for the year 2016-17]**

**THIRTY FIFTH REPORT**



**LOK SABHA SECRETARIAT  
NEW DELHI**

***March, 2018/Phalguna, 1939 (Saka)***

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Sixteenth Report (16<sup>th</sup> Lok Sabha) on Demands for Grants of the  
Ministry of New and Renewable Energy for the year 2016-17**

*Presented to Lok Sabha on 07.03.2018*

*Laid in Rajya Sabha on 07.03.2018*



**LOK SABHA SECRETARIAT  
NEW DELHI**

*March, 2018/Phalguna, 1939 (Saka)*

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**COMPOSITION OF THE STANDING COMMITTEE ON ENERGY  
(2017-18)**

**LOK SABHA**

Dr. Kambhampati Haribabu- Chairperson

2. Shri Devendra Singh Bhole
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4. Shri M. Chandrakasi
5. Shri Harish Dwivedi
6. Shri Deepender Singh Hooda
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16. Shri Vinayak Bhaurao Raut
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18. Shri Conrad Kongkal Sangma
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20. Shri Kotha Prabhakar Reddy
21. Shri Nagendra Kumar Pradhan

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22. Shri T.K.S. Elangovan
23. Shri Oscar Fernandes
24. Shri Manish Gupta
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26. Dr. Prabhakar Kore
27. Shri Shamsher Singh Manhas
28. Shri S.Muthukaruppan
29. Shri Surendra Singh Nagar
30. Dr. Anil Kumar Sahani
31. Smt. Viplove Thakur

SECRETARIAT

- |    |                          |                      |
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| 1  | Shri A.K.Singh           | Additional Secretary |
| 2. | Shri N.K.Pandey          | Director             |
| 3. | Smt. L.Nemjalhing Haokip | Under Secretary      |

## **INTRODUCTION**

I, the Chairperson, Standing Committee on Energy having been authorized by the Committee to present the Report on their behalf, present this Thirty-fifth Report on the action taken by the Government on the recommendations contained in Sixteenth Report of the Standing Committee on Energy on Demands for Grant (2016-17) of the Ministry of New and Renewable Energy.

2. The Sixteenth Report was presented to the Lok Sabha on 2<sup>nd</sup> May, 2016 and was laid in Rajya Sabha on the same day. Replies of the Government to all the recommendations contained in the Report were received on 16<sup>th</sup> August, 2017.

3. The Report was considered and adopted by the Committee at their sitting held on 15th February, 2018.

4. An Analysis on the Action Taken by the Government on the recommendations contained in the Sixteenth Report 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**  
**5th March, 2018**  
**Phalguna 14, 1939 (Saka)**

**Dr. Kambhampati Haribabu ,**  
**Chairperson,**  
**Standing Committee on Energy**

# REPORT

## CHAPTER - I

This Report of the Standing Committee on Energy deals with the action taken by the Government on the Observations/Recommendations contained in the Sixteenth Report (Sixteenth Lok Sabha) on Demands for Grants of the Ministry of New and Renewable Energy for the year 2016-17, which was presented to Lok Sabha on 2<sup>nd</sup> May, 2016 and was laid on the same day on the Table of Rajya Sabha. The Report contained 10 Observations/Recommendations.

2. 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:

Serial Nos. 1,2,3,,5,6,7,8,9 and 10

Total - 09  
Chapter-II

- (ii) Observation/Recommendation which the Committee do not desire to pursue in view of the Government's reply:

- Nil -

Total - 00  
Chapter-III

- (iii) Observation/Recommendation in respect of which the reply of the Government has not been accepted by the Committee and which require reiteration:

Serial No.4

Total-01  
Chapter-IV

- (iv) Observation/Recommendation in respect of which the final reply of the Government is still awaited:

- Nil -

Total - 00  
Chapter-V



**3. The Committee desire that Action Taken Notes on the Observations/Recommendations contained in Chapter-I of the Report may be furnished to the Committee within three months of the presentation of this Report.**

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

## **Wind Energy**

(Recommendation Sl.No.4 Para No.4)

5. The Committee had noted that the major activities undertaken by the Ministry under the wind energy programme for the year 2016-17 include finalization of repowering policy, finalization of wind-solar hybrid policy, finalization of the National Wind Energy Mission, etc. The Committee had hailed the initiatives taken in the wind-solar hybrid which they felt is the need of the hour. In view of the much talked about global warming and El Nino which are going to have impact the river water system and the oceans, the Committee felt that the only way out is to utilize the wind capacity as well as solar energy. The Committee were also concerned about the delay in the finalization of the National Wind Energy Mission. The Committee had therefore, recommended that:

- i) The Ministry may prepare a roadmap for the hybrid system to make optimum use of solar and wind energy for generation of electricity.
- ii) A pilot project on wind-solar hybrid system may be initiated on priority basis.
- iii) The Committee may be apprised of the progress regarding finalization of the repowering policy, the National Wind Energy Mission and the wind-solar hybrid policy.

6. The Ministry of New and Renewable Energy in their action taken reply has stated:

" As suggested by the Committee, the Repowering Policy has been finalized and issued in August 2016. The policy provides a facilitative development and evolves a new policy regime which would encourage retrofit and / or replacement of old projects.

Ministry has also issued draft National Wind-Solar Hybrid Policy and got comments from the stakeholders. The main objective of the policy is to optimally utilise resources such as land and transmission.

National Wind Energy Mission (NWEM) document was circulated to related Ministries/Departments for comments and the document has been finalised after suitably incorporating the comments. During last two years various new initiatives have been taken for the wind sector and the wind capacity has reached 32.75GW at the end of 2016-17. Considering recent developments, it is felt that the need for NWEM may not be required.

**7. The Committee are informed that the Repowering Policy has been finalized which will facilitate the development and evolve a new policy regime, encouraging retrofit and / or replacement of old projects. As informed, the Committee trust the Ministry to make the most out of the Repowering Policy to boost the wind energy sector.**

**The Committee note that the Ministry has issued draft National Wind-Solar Hybrid Policy, pending finalization seeking comments from the stakeholders. The Committee desire the Ministry to speed up finalization of the policy, so as to make optimum use of solar and wind energy for generation of electricity. The Committee would also like to reiterate that a pilot project on wind-solar hybrid system may be initiated on priority basis.**

**Regarding the National Wind Energy Mission, the Committee are informed that the document was finalized after suitably incorporating comments received from related Ministries/Department. The Committee are, however, surprised to note that after coming such a long way, the Ministry now, do not feel the need for NWEM. This shows the non seriousness of the Ministry in their planning. The reason for discontinuing the NWEM was stated to be the capacity addition of 32.75 GW wind energy achieved at the end of 2016-17. The Ministry appears highly satisfied with their performance. The Committee feel that wind energy being the fastest growing renewable energy technology for generating grid connected power amongst various renewable energy options, they should not be complacent with their achievement but should make every effort to exploit the wind energy sector so as to boost the renewable energy sector as a whole. The**

**Committee, therefore, desire the Ministry to have relook with regard to their approach on the NWEM.**

## **Biogas**

(Recommendation Sl.No.7 Para. No.7)

8. The Committee had noted that the Ministry has been supporting programmes for the deployment of renewable energy systems and devices such as biogas plants, photovoltaic systems, biomass gasifiers, solar cookers and solar thermal systems, remote village electrification programme and village energy security test projects. A scrutiny of the data provided revealed a continuous reduction of the budgetary allocation at RE stages and the actual expenditure was much lesser. Further, the physical achievement were very discouraging. Regarding non-achievement of biogas targets, the Committee were informed that it was due to the high cost of installation of biogas plants and improved supply of LPG of rural areas. In view of the performance of the Ministry, the Committee were doubtful about the successful implementation of the biogas programme and apprehended that investment in the sector could be a waste of valuable resources. The Committee had therefore, recommended that:

- i) The Ministry may critically review and evaluate the implementation of the biogas programme in the rural areas in terms of their feasibility, affordability and availability of the technology, so as to ensure the investment in the sector does not go in vain.
- ii) The Ministry may also ensure that the operational system of the already installed biogas plants are functioning well and also as per plans.

9. The Ministry in their Action Taken Reply has stated:

"As desired by the Committee, an Independent Evaluation Study for the Central Sector Scheme, National Biogas and Manure Management Programme (NBMMP) implemented during the 12th Five Year Plan Period (2012-13 to 2016-17) has commenced in ten States namely Assam, Sikkim, Odisha, Rajasthan, Gujarat, Maharashtra, Telangana, Kerala, Chhattisgarh and Punjab, Planning (India) Limited, A-50, Ashoka Enclave-II, Sector-37, Faridabad- 121003. The suggestions/recommendations as given by the Standing Committee has been incorporated in the objectives and Terms of References (ToR) of the study. The survey work has been completed. Report is awaited.

There are 8 Biogas Development and Training Centres (BDTCs) functioning in the country in various IITs and Universities. They are also entrusted with the task of inspection of Biogas plants in the States of their jurisdiction. These centres inspect the already installed biogas plants on random sample selection basis and prepare a report in the prescribed format and send it to MNRE for monitoring the operational status of the plants already installed. Based on the current years, 2016-17 inspections and reports received up to 31.12.2016, an overall functionality of biogas plants has been reported to be about 94%. In addition to the above, letters have been written to all the programme implementing State Nodal Agencies (SNAs)/State Nodal Departments (SNDs)/ Khadi and Village Industries Commission (KVIC) as well as Biogas Development and Training Centres (BDTCs) to ensure 100 % functionality of the biogas plants installed by them and also enforce the terms and conditions of the post-installation operation and maintenance of the installed biogas plants under the five year free warranty provisions. States have been also asked to inspect the biogas plants on their own and maintain a database of installed plant vis-à-vis operational plant. Action Taken Reports are being sought from the States".

**10. In accordance to their recommendation, the Committee are happy to note that the Ministry has initiated an Independent Evaluation Study for the Central Sector Scheme, National Biogas and Manure Management Programme (NBMMP) implemented during the 12th Five Year Plan Period (2012-13 to 2016-17). The States include Assam, Sikkim, Odisha, Rajasthan, Gujarat, Maharashtra, Telangana, Kerala, Chhattisgarh and Punjab. The Committee are informed that the survey work has been completed and that Report is awaited. The Committee desire that the Report may be finalized early. The Committee also would like the Ministry to initiate Evaluation Study for all the remaining States which have not been covered under the scheme so far.**

#### **Research, Design, Demonstration and Development in New and Renewable Energy (RDD&D)**

(Recommendation Sl.No.9, Para.No.9)

11. The Committee had noted a continuous reduction in the budget allocation under RDD&D at the RE stage. Moreover, they had found that even the reduced amount could not be fully spent. The Committee had however noted that during 2015-16, although a lesser amount was allocated at the BE stage (Rs.90 crore), it has been enhanced at RE stage (Rs.106 crore). Nonetheless, the actual expenditure as on 28.03.2016 was only

Rs.62.46 crore which was only 59 percent of the R.E. Regarding the activities during the last three years, the Committee were informed that RD&D is being supported in the field of solar, biogas, biofuels, Hydrogen Energy and fuel cells and wind. For the year 2016-17, the Committee had noted that an outlay of Rs 498.00 crore was allocated under RDD&D which includes Rs. 53 crore for MNRE Institutions. The Committee had also noted that for faster development of technologies in the R&D sector, the MNRE have renamed the technological institutions. While the motive in renaming the institution was laudable, the Committee felt that outputs are more important for which the Ministry should endeavour. The Committee had therefore recommended that:

- i) The Ministry may ensure a coordinated approach for successful collaboration among the technological institutions and industries to achieve the goal of renewable energy technology development.
- ii) The Ministry should concentrate on development of materials and technologies which are most efficient and cost effective. Simultaneously constant and close monitoring of all the R&D projects should be ensured with a view to evaluating their functioning in a result-oriented manner.
- iii) The Ministry should focus on full utilization of the allocated funds, so that more funds may be sought at the RE stage.

12. The MNRE in their Action Taken Replies has stated :

"The MNRE is in the process of review of achievements of RD&D Programme implemented in 12th Plan Period for drawing up an action plan. An award scheme for encouraging innovation in new and renewable energy has been launched in July 2017. The MNRE is in the process of bringing out "Technology Development and Innovation Policy" in furtherance of RD&D effort aiming at promoting indigenous technology development and manufacture, improving quality and reliability of energy supply for large scale deployment of new and renewable energy for various applications. A Lab Policy for Testing, Standardization and Certification for RE Sector has been brought out for quality control of new and renewable energy systems/devices/components. The same is under consideration for release and implementation".

**13. The Committee are pleased to note that the Ministry is in the process of reviewing the achievements of RD&D Programme implemented in 12th Plan Period for drawing up an action plan. Evaluation/ Assessment is required for any programme /Scheme for its smooth and successful implementation further. The Committee desire the Ministry to accelerate the process and apprise them the outcome.**

**The Committee note that the Ministry is bringing out 'Technology Development and Innovation Policy' to strengthen the RD&D effort and 'A Lab Policy' for Testing, Standardization and Certification for RE Sector for quality control of new and renewable energy systems/devices/components of the RD&D. The Committee desire the Ministry to hasten up finalization of the said Policy, which will boost the RD&D effort aiming at promoting indigenous technology development and manufacture, improving quality and reliability of energy supply for large scale deployment of new and renewable energy for various applications. Committee may be apprised of the follow up Action.**

## CHAPTER II

### RECOMMENDATIONS/ OBSERVATIONS WHICH HAVE BEEN ACCEPTED BY THE GOVERNMENT

Performance of Twelfth Five Year Plan

(Recommendation SI No.1, Para No. )

The Committee find that the budgetary allocation for the entire 12th Plan is Rs.19113 crore, against which an amount of Rs.9653.91 crore has been actually allocated during the first four years of the Plan period. Hence, Rs.9459.09 crore, i.e 49 percent of the Plan allocation is still left for utilization in the terminal year of the Plan. The total actual expenditure of the first four years of the Plan period, as on 28th March, 2016, was Rs. 9326.01 crore which accounts for only 49 percent of the GBS allocation for the 12th Plan. As four years of the Plan period are over, the Ministry were expected to utilize at least 80 percent or a major portion of the total budget allocated for the 12th Plan. On the physical performance, against the physical target of 29800 MW grid power capacity for the 12th Plan, 14993.11 MW power capacity has been achieved, which is 50 percent of the Plan target. The Committee note the Ministry's ambitious target of 1,75,000 MW capacity of renewable power by 2022. In view of the foregoing:

- i) The Committee would like the Ministry to revisit their policies and programmes under various renewable energy resources;
- ii) The Committee recommend that the Ministry should make a serious effort for achievement of the physical targets of the 12th Plan with maximum utilization of allocated funds for the 12th Plan, so that the cascading effect of the 12th Plan will not spill over to the next Plan.

#### Reply of the Government

Against 12<sup>th</sup> plan outlay of Rs. 19,113 crore, actual allocation at R.E stage was Rs.13961.21 Crore which was 73.04 % of the outlay. Further, an expenditure of Rs.13327.29 crore has been incurred against RE of Rs.13961.21 Crore which was 95.46 % of RE.

Against a physical targets of 29,800 MW of Grid Power capacity addition during 12<sup>th</sup> plan period an achievement of 29,462 MW has been reported which was 98.87 % of 12<sup>th</sup> plan target. The commutative achievements have reached to 57244.23 MW at the end of 12th Plan.

As suggested the committee, the Ministry is in a processes of reviewing all major programmes i.e. Solar, Wind, Small Hydro Power and Bio Power programmes so as to achieve the commutative target of 1,75,000 MW by the year 2022.

[Ministry of New and Renewable Energy- OM No 8/7/2015 dated 16/8/2017]

Demands for Grants of MNRE for 2016-17

(Recommendation No.2, Para. No.2)

The Committee find that the Plan Outlay of Rs.6160.73 crore (BE) during the year 2015-16 was enhanced to Rs.9648.78 crore at the RE stage. This is due to the enhanced support from the National Clean Energy Fund (NCEF) from Rs.2500 crore to Rs. 4000 crore and Internal and Extra Budgetary Resources (IEBR) from Rs.3373.06 crore to Rs. 5402.55 crore. The Committee observe that during the last three years, the

Plan Outlay of the Ministry has been enhanced at RE stage, which indicates the commitment of the Government towards implementing renewable energy programmes. The Committee appreciate the Ministry's effort to mobilize supplementary Demands for Grants at the RE stage. Although the whole amount of allocation at the RE not has been fully spent during the last three years, the Committee find that during the year 2015-16, an amount of Rs.10474.24 crore could be spent which is more than the RE of Rs.9648.78 crore. For the year 2016-17, the Committee note that the Ministry had sought Rs.9115.40 crore as Plan Outlay (excluding IEBR). However, against this, an amount of Rs.5000 crore (BE) was allocated as support from NCEF. The Committee also note that there is an increase of Rs.753 crore, i.e 17.75 percent, in the budgetary support for the year 2016-17 over the Revised Estimates of the previous year's support of Rs.4246.23 crore. The Committee are informed that additional funds will be required for achieving the higher targets set for renewable energy sector. As the allocated amount (Rs.5000 crore) is much lower than the projected amount (Rs.9115.40 crore), the Committee are apprehensive that unless additional allocation is made, implementation of various programmes of the Ministry will be seriously affected. The Committee observe that for the year 2016-17, the Ministry are projecting Internal and Extra Budgetary Resources (IEBR) to the tune of Rs. 9118.85 crore. The Committee trust that the Ministry will make all-out efforts additional funds from IEBR to meet the additional requirement of funds. The Committee, therefore, recommend that:

- i) Additional Gross Budgetary Support may be provided to the Ministry as supplementary Demands for Grants at the RE stage;
- ii) The Ministry of New and Renewable Energy should make concerted efforts to mobilize additional funds from Internal and Extra Budgetary Resources (IEBR), the National Clean Energy Fund (NCEF) and other renewable energy development fund so as to achieve the targets set for the current financial year under various programmes of the renewable energy sector.



## Reply of the Government

During the year 2016-17, against a B.E of Rs.5,000 Crore and RE of Rs.4307 Crore, the actual expenditure was Rs.3871.32 crore which was about 90% of the R.E. Further, in pursuance of budget announcement for the year 2016-17 IREDA raised funds of Rs. 1,640 Crore by issuance of Government of India fully service taxable bonds. This amount was for the promotion of Renewable Energy programmes of the Ministry. An amount of Rs.1615.22 Crore was released by IREDA for different programmes of the Ministry as per requirement.

Hence, a total amount of Rs. 5486.54 Crore was utilized for promotion of various Renewable Energy programmes during 2016-17. Further, IEFR of Rs.10,336.40 Crore was also mobilised during the year.

[Ministry of New and Renewable Energy- OM No 8/7/2015 dated 16/8/2017]

### Wind Energy

(Recommendation No.3, Para No.3)

The Committee note that wind power potential in the country at the height of 100 metre has been estimated to be more than 3,00,000 MW. Against this, a total capacity of 25188 MW has been reportedly installed as on January, 2016. The Committee note a fluctuating performance during the last three years, viz. in 2013-14 and 2014-15, against the targets of 2500 MW and 2000 MW, wind energy capacities of 2079 MW and 2312 MW, respectively, have been achieved. However, the performance in 2015-16 is quite discouraging, i.e. against a target of 2400 MW, only 1744.78 MW capacities has been installed (as on January, 2016). The budget allocated in each of the three years has been reportedly fully utilized. For the year 2016-17, the Committee are informed that a physical target of 4100 has been set with a budgetary allocation of Rs.365 crore. When the Ministry could not achieve a physical target of 2400 MW with an allocation of Rs. 314 crore in 2015-16, the Committee are apprehensive about achievement of the enhanced target with the current allocation. The Committee also note that the fiscal and financial incentives available include concessional custom duty and special additional duty, excise duty exemptions, income tax holiday, Accelerated Depreciation (AD) and Generation Based Incentive (GBI) for those who do not avail AD benefit. The Committee, therefore, recommend that:

- i) The Ministry may approach the Ministry of Finance to allocate more funds at the time of Revised Estimates so as to ensure that implementation of the wind energy projects does not suffer due to shortage of funds.
- ii) The Ministry should spare no efforts to achieve the physical target of 4100 MW wind energy capacity for the year 2016-17.

- iii) The Ministry should also give due publicity to the fiscal and financial incentives available to the industry.

### Reply of the Government

During the year 2015-16, actual achievement was reported as 3423.05 MW against a target of 2400 MW for wind energy. During the year 2016-17 an achievement of 5502.37 was reported against a target of 4000 MW taking commutative achievement to 32279.77 MW as on 31.03.2017.

During 2016-17 an amount of Rs.365 Crore was kept as BE and additionally Rs. 123.95 Crore was also made available through budget re-appropriation. Thus a total of Rs. 488.95 Crore was released from budget. Further, an amount of Rs. 891.186 Crore was also released from the money raised through bonds. Hence, the total amount released was Rs. 1380.13 crore for wind GBI which is the highest ever.

Programme for creating awareness among masses about the benefits of renewables including wind energy is an integral part of Ministry's activities. Main objectives of the programme include: a) popularise and create awareness about government of India's programmes, policies, fiscal and financial incentives provided with respect to new and renewable energy; b) create mass awareness about technological developments and promotional activities taking place in renewables from time to time in the country; c) make people aware about the availability of renewables including their proper use, repair and maintenance facilities, etc.; d) expand and promote the market for renewables systems & devices; and e) raise awareness about renewables amongst students, teachers, scientists and public at large. These programmes are implemented with specific focus on respective target groups. The mediums deployed include electronic media such as radio, TV, spot films etc; print media, newspapers; exhibitions; seminar/symposia etc.

[Ministry of New and Renewable Energy- OM No 8/7/2015 dated 16/8/2017]

### Solar Energy

(Recommendation No.5, Para No.5)

The Committee observe that the target under the Jawaharlal Nehru National Solar Mission has been revised from 20,000 MW to 1,00,000 MW to be achieved by 2022. Against the

estimated potential of 7,50,000 MW solar energy in the country, 6104.3 MW solar energy capacity has been commissioned/installed as on 14th March, 2016. As such, the Ministry has a huge task before them to achieve 93896 MW solar energy capacity to meet the ambitious target of 1,00,000 MW solar energy capacity by 2022. The Committee note that the Ministry has drawn up a detailed strategic plan to achieve the specified targets under the Mission. For the year 2016-17, a physical target of 12,000 MW for Grid-interactive solar power has been set with an outlay of Rs.2350 crore. The Committee are informed that the budget allocated will be less to achieve the specified target set for 2016-17. The Committee are apprehensive that implementation of the solar energy projects in the country may be adversely affected due to the dearth of funds. The Committee, therefore, recommend that:

- i) The Ministry may make sustained efforts to initiate projects through various schemes of the Union Government and State Governments, so as to achieve the target of 12000 MW set for the year 2016-17.
- ii) The Ministry should play a proactive role in monitoring the progress of various solar energy projects.
- iii) The Ministry should also ensure that implementation of the solar energy projects is not affected due to lack of adequate financial resources.

#### Reply of the Government

Steps taken by the Government to achieve Solar Energy targets include:

Tenders of around 20,000 MW are in pipeline for which PPAs of projects of around 13,000 MW have been signed. We are expecting to achieve the target of 100 GW for solar energy by 2022. Ministry is taking various steps in this regard and have launched the following schemes to achieve the target of 100 GW:

- Scheme for Development of Solar Parks and Ultra Mega Solar Power Projects.
- Scheme for Development of Solar PV Power Plants on Canal Banks/ Canal Tops.
- Scheme for setting up 300 MW of Grid connected Solar PV Power Projects by Defense Establishments under Ministry of Defence and Para Military Forces with viability Gap Funding under Batch-IV of Phase-II/III of JNNSM.
- Implementation of scheme of setting up 1000 MW of Grid- Connected Solar PV Power Projects by CPSUs with Viability Gap Funding under Batch-V of Phase-II of JNNSM.
- Implementation of Scheme for Setting up of 15000 MW of Grid connected Solar PV Power Projects under Batch II of Phase II of National Solar Mission (by NTPC/NVVN)

- Setting up of 2000 MW Grid connected solar power with Viability Gap Funding through Solar Energy Corporation of India (SECI).
- Scheme for Development of Solar Zones in the country.

With the implementation of above steps, an achievement of 12289 MW has been reported upto 31.03.2017

ii) Ministry monitors the progress of solar energy projects through meetings with various stakeholders e.g. Solar Power Developers, Industry Associations, Solar Manufacturers etc. Through concerted efforts, the cumulative Grid Connected Solar capacity of 12289 MW has been installed in the country as on 31.03.2017. Tenders of around 20,000 MW have been issued.

iii) Ministry is making concerted efforts in this regard even through raising extra budgetary resources by raising Green Bonds with the help of IREDA and raising funds from multilateral agencies e.g. World Bank, ADB, GIZ, New Development Bank, Asian Infrastructure Investment *Bank etc.*

[Ministry of New and Renewable Energy- OM No 8/7/2015 dated 16/8/2017]

#### Biomass and Bagasse Co-generation Power

(Recommendation No.6, Para No.6)

The Committee find that the estimated potential for power generation from Biomass/Bagasse Co-generation in the country is around 12754 MW. Against this, a cumulative capacity of 4626 MW has been reportedly installed. The Committee also find the performance in this sector during the last three years to be quite satisfactory. The physical targets in all the three years could be achieved with full utilization of the funds allocated. Against a physical target of 400 MW each in the last three years, achievement was 412 MW, 405 MW and 400 MW, respectively. The fund allocated was Rs.32.50 crore, Rs.25 crore and Rs.29 crore, respectively. For the year 2016-17, a physical target of 400 MW has been fixed with an outlay of Rs.20 crore, which is much lower than the previous year's allocation. That being so, the Committee are concerned about achievement of target with the reduced allocation. The Committee note that besides the Central Financial Assistance, fiscal incentives such as concessional import duty, excise duty, tax holiday for 10 years, bank loans up to Rs. 15 crore for biomass-based power generators, etc., are available for Biomass power projects and that the benefits of concessional custom duty and excise duty exemption are also available on equipment required for the initial setting up of biomass projects. Hence, the Committee recommend that:

- i) The Ministry may pursue with the Ministry of Finance for additional funds at the RE stage, so as to ensure achievement of the physical target for the year 2016-17.

Ans: The funds granted for 2016-17 were sufficient to meet the CFA release for the projects that were in the pipeline at the stage.

- ii) More projects on Biomass/Bagasse Co-generation should be encouraged, especially in those States with potential like Karnataka, Maharashtra and Uttar Pradesh.

Ans: Biomass/Bagasse cogeneration plants have been mainly installed in the states of Karnataka, Maharashtra and U.P. The Ministry's scheme to promote "Promotion of Grid Interactive Biomass Power and Bagasse Cogeneration in Sugar Mills" during the 12th Plan Period is open to developers from all over India including Karnataka, Maharashtra and Uttar Pradesh.

- iii) Proper internal check system be put in place to check non transparency in biomass energy projects of Sugar Mills.

Ans: CFA is released only after due verification of all the documents, successful commissioning and performance assessment by independent agencies National Productivity Council (NPC) / National Sugar Institute (NSI).

- iv) Promotional and awareness programmes for stakeholders like sugar mills, farmer associations and industry representatives may be intensively organized.
- v) The Ministry may also undertake adequate publicity for the fiscal incentives and other benefits available to the industry.

Ans (iv & v) : The suggestion of the committee has been noted. However, Programmes for creating awareness among masses about the benefits of renewables including Biomass and bagasse cogeneration is an integral part of Ministry's activities. Main objectives of the programme include: a) popularise and create awareness about government of India's programmes, policies, fiscal and financial incentives with respect to new and renewable energy; b) create mass awareness about technological developments and promotional activities taking place in renewables from time to time in the country; c) make people aware about the availability of renewables including their proper use, repair and maintenance facilities, etc.; d) expand and promote the market for renewables systems & devices; and e) raise awareness about renewables amongst students, teachers, scientists and public at large. These programmes are implemented with specific focus on respective target groups. The mediums deployed include electronic media such as radio, TV, spot films etc; print media, newspapers; exhibitions; seminar/symposia etc.

vi) The technologies used in the sector may be upgraded and improved, keeping in mind the cost effectiveness.

Ans: Ministry provides financial support for publication of quarterly news magazine namely Industrial Cogeneration in India. MNRE has also supported business meets and awareness programmes under the Programme on Energy from Urban, Industrial and Agricultural Wastes/Residues during 12th Plan.

It depends upon the decision of the developer to use cost effective technologies. Ministry creates awareness about the upgraded technology available through cogen newsletter namely "Industrial Cogeneration in India".

[Ministry of New and Renewable Energy- OM No 8/7/2015 dated 16/8/2017]

Biogas

(Recommendation No.7, Para No.7)

The Committee note that the Ministry has been supporting programmes for the deployment of renewable energy systems and devices such as biogas plants, photovoltaic systems, biomass gasifiers, solar cookers and solar thermal systems, remote village electrification programme and village energy security test projects. A scrutiny of the data provided for the last three years reveals that the budgetary allocation has been reduced at RE stages and the actual expenditure is much lesser. Further, the physical achievement is very discouraging. Except in the year 2013-14, none of the targets has been achieved. Regarding non-achievement of biogas targets, the Committee are informed that it was due to the high cost of installation of biogas plants and improved supply of LPG of rural areas. The Committee note that for the year 2016-17, Rs.142 crore has been allocated for biogas programme with a physical target for deployment of 1 lakh biogas plants. In view of the present status, the Committee are doubtful about the successful implementation of the biogas programme and apprehend that investment in the sector could be a waste of valuable resources. , The Committee, therefore, recommend that:

- i) The Ministry may critically review and evaluate the implementation of the biogas programme in the rural areas in terms of their feasibility, affordability and availability of the technology, so as to ensure the investment in the sector does not go in vain.

- ii) The Ministry may also ensure that the operational system of the already installed biogas plants are functioning well and also as per plans.

#### Reply of the Government

As desired by the Committee, an Independent Evaluation Study for the Central Sector Scheme, National Biogas and Manure Management Programme (NBMMP) implemented during the 12th Five Year Plan Period (2012-13 to 2016-17) has commenced in ten States namely Assam, Sikkim, Odisha, Rajasthan, Gujarat, Maharashtra, Telangana, Kerala, Chhattisgarh and Punjab, which has been entrusted to a professional consultancy organization M/s. Spectrum Planning (India) Limited, A-50, Ashoka Enclave-II, Sector-37, Faridabad-121003. The suggestions/recommendations as given by the Standing Committee has been incorporated in the objectives and Terms of References (ToR) of the study. The survey work has been completed. Report is awaited.

There are 8 Biogas Development and Training Centres (BDTCs) functioning in the country in various IITs and Universities. They are also entrusted with the task of inspection of Biogas plants in the States of their jurisdiction. These centres inspect the already installed biogas plants on random sample selection basis and prepare a report in the prescribed format and send it to MNRE for monitoring the operational status of the plants already installed. Based on the current years, 2016-17 inspections and reports received up to 31.12.2016, an overall functionality of biogas plants has been reported to be about 94%. In addition to the above, letters have been written to all the programme implementing State Nodal Agencies (SNAs)/State Nodal Departments (SNDs)/ Khadi and Village Industries Commission (KVIC) as well as Biogas Development and Training Centres (BDTCs) to ensure 100 % functionality of the biogas plants installed by them and also enforce the terms and conditions of the post-installation operation and maintenance of the installed biogas plants under the five year free warranty provisions. States have been also asked to inspect the biogas plants on their own and maintain a database of installed plant vis-à-vis operational plant. Action Taken Reports are being sought from the States.

[Ministry of New and Renewable Energy- OM No 8/7/2015 dated 16/8/2017]

Renewable Energy for Urban, Industrial and Commercial Applications

[Recommendation No.8, Para No.8)

The Committee note that the MNRE has been promoting the use of technologies for energy recovery from municipal, industrial and commercial wastes and solar energy under renewable energy for urban, industrial and commercial applications. The other programmes include i) energy efficient solar/green building programme; ii) energy recovery from urban, industrial and agricultural wastes; and iii) bioenergy and cogeneration in Industry. On scrutiny of the data under the waste to energy programme, the Committee find that the targets during the last three years were never achieved, i.e. against a target of 30 MW each in 2013-14 and 2014-15, a capacity addition of 27.85 MW and 21.78 MW, respectively could be achieved. During 2015-16, against a target of 20 MW, only 14.13 MW could be achieved (as on 29.02.2016). In the financial front, although the entire amount of RE were spent, there was a consecutive reduction of budget both at the BE and the RE stages. The BE of Rs.33 crore in 2013-14 and Rs.20.50 crore in 2014-15 has been reduced to Rs.10 crore and Rs.9.07 crore, respectively, at RE stage. There was no allocation of fund during the year 2015-16. The Committee have been apprised that the activities and management of municipal solid waste to energy are now under the Ministry of Urban Development and that industrial waste is managed by the MNRE. The Committee are concerned about the allocation of the municipal solid waste to energy management programme to a less experienced Ministry, as they feel that the MNRE being the nodal Ministry of the Government of India for all matters relating to new and renewable energy would be more capable in handling such projects. The Committee desire that the MNRE should play a proactive role in supplementing the programmes under the waste to energy. The Committee note that for the year 2016-17, the major schemes of the Ministry include promotion of solar cities, green building programmes and support to State programmes with and outlay of Rs. 20.00 crore.

- i) In view of the importance of the solid waste to energy programme, the Committee recommend that there should be an integrated strategy in managing the entire activities under the waste to energy programme.

Ans: The suggestion of the Committee has been noted. However, the Ministry is already working closely with Ministry of Urban Development and other stakeholders for promoting Waste to Energy projects in the country.

- ii) In view of rapid urbanization, resulting in extensive construction activities, the Committee urge the Ministry to give due importance to the activities under energy efficient solar/green building programme, to facilitate promotion and development of solar cities and green buildings.

Ans: The advice/ recommendation of the committee has been noted. In this regard, it is to mention that the Ministry has launched a Scheme on "Development of Solar Cities" under which Ministry of New and Renewable Energy (MNRE) has sanctioned /allocated 60 cities under Development of Solar Cities Programme, against the target of 60 numbers of cities/towns fixed for 12<sup>th</sup> Five-year Plan period. MNRE is providing financial support up to of ₹50 lakh for each city for preparation of the Master Plan alongwith few DPR (up to ₹10 lakh), oversight of its



implementation (up to ₹10 lakh), setting up and functioning of Solar City Cell in the city (up to ₹10 lakh) and organizing promotional activities (up to ₹20 lakh). Beside this Ministry has been implementing a Scheme on “Energy Efficient Solar/Green Buildings” since, February, 2009 which aims to promote the widespread construction of energy efficient solar/green buildings in the country through a combination of financial and promotional incentives mainly for capacity building, awareness, seminar and workshops and other promotional activities etc., under the “Energy Efficient Solar/Green Buildings programme”. About 225 capacity building programme including trainings, seminar, conferences, workshops for Evaluators and Trainers on GRIHA Ratings and awareness programmes on Green Buildings/GRIHA Ratings/Green Architecture were organized across the country by various technical institutions. So far, 850 buildings with aggregate 32 million sq.m built up-areas have been covered for acquiring GRIHA rating.

- iii) The Committee also recommend enhanced publicity of the financial assistance available under this sector.

Ans: Programmes for creating awareness among masses about the benefits of renewables including waste to energy programme, energy efficiency building, green building etc are integral part of Ministry’s activities. Main objectives of the programme include: a) popularise and create awareness about government of India’s programmes, policies, fiscal and financial incentives about new and renewable energy; b) create mass awareness about technological developments and promotional activities taking place in renewables from time to time in the country; c) make people aware about the availability of renewables including their proper use, repair and maintenance facilities, etc.; d) expand and promote the market for renewables systems & devices; and e) raise awareness about renewables amongst students, teachers, scientists and public at large. These programmes are implemented with specific focus on respective target groups. The mediums deployed include electronic media such as radio, TV, spot films etc; print media, newspapers; exhibitions; seminar/symposia etc.

[Ministry of New and Renewable Energy- OM No 8/7/2015 dated 16/8/2017]

Research, Design, Demonstration and Development in New and Renewable Energy (RDD&D)

(Recommendation No.9, Para No.9)

The Committee note that the allocation under RDD&D for the years 2013-14 and 2014-15 was reduced at the RE stage i.e. in 2013-14 BE of Rs.158 crore was reduced to 148 at RE and in 2014-15 BE was Rs. 149.50 crore and RE was Rs.128 crore. However, it is found that even the reduced amount could not be fully spent. However, the Committee are happy to note that during 2015-16, although a lesser amount was allocated at the BE stage (Rs.90 crore), it has been enhanced at RE stage (Rs.106 crore). Nonetheless, the actual expenditure as on 28.03.2016 was only Rs.62.46 crore which is only 59 percent of the R.E. Regarding the activities during the last three years, the Committee are informed that RD&D is being supported in the field of solar, biogas, biofuels, Hydrogen Energy and fuel cells and wind. For the year 2016-17, the Committee note that an outlay of Rs 498.00 crore has been allocated under RDD&D which includes Rs. 53 crore for MNRE Institutions, namely, the National Institute of Solar Energy (NISE), Gurgaon, the National Institute of Wind Energy, Chennai and the National Institute of Renewable Energy, Kapurthala. The Committee appreciates the enhanced allocation for the current financial year. However, keeping in view the previous year's financial performance, they are apprehensive about the optimal utilization of the fund during 2016-17 as well. The Committee also note that for faster development of technologies in the R&D sector, the MNRE have renamed the technological institutions. While the motive in renaming the institution is laudable, the Committee feel that outputs are more important for which the Ministry should endeavor. The Committee, therefore recommend that:

- i) The Ministry may ensure a coordinated approach for successful collaboration among the technological institutions and industries to achieve the goal of renewable energy technology development.
- ii) The Ministry should concentrate on development of materials and technologies which are most efficient and cost effective. Simultaneously constant and close monitoring of all the R&D projects should be ensured with a view to evaluating their functioning in a result-oriented manner.
- iii) The Ministry should focus on full utilization of the allocated funds, so that more funds may be sought at the RE stage.

#### Reply of the Government

Ans (i,ii & iii) : The MNRE is in the process of review of achievements of RD&D Programme implemented in 12th Plan Period for drawing up an action plan. An award scheme for encouraging innovation in new and renewable energy has been launched in July 2017. The MNRE is in the process of bringing out "Technology Development and Innovation Policy" in furtherance of RD&D effort aiming at promoting indigenous technology development and manufacture, improving quality and reliability of energy supply for large scale deployment of new and renewable energy for various applications. A Lab Policy for Testing, Standardization and Certification for RE Sector has been brought out for quality control of new and renewable energy systems/devices/components. The same is under consideration for release and implementation.

(Recommendation No.10, Para No.10)

The Committee note that the primary objective of the Research and Development activities is resource assessment, technology development, demonstration and commercialization for promoting large scale use of new and renewable energy. For manufacturing indigenous renewable energy devices and systems, new and renewable energy technologies, processes, materials, sub-systems, production devices and standards are to be supported and upgraded. The basic purpose of RDD&D is to make this sector competitive and renewable energy generation/supply profitable/self-sustainable. The Committee are of the considered view that the area of research, design and development in the renewable energy sector has not been given the required attention. Other areas of support in research, development and demonstration are solar, biogas, bio-fuel, hydrogen energy, fuel cells and wind. If due thrust is given to these areas with sufficient funds and talent, the sector can be revolutionized. The Committee, therefore, recommends that:

- i) Due attention should be paid to research, design, development and demonstration in the renewable energy sector with the backing of sufficient funds and talent.
- ii) The objective of these activities should be to tap the huge potential in the areas of wind, solar and other renewable energy sources.
- iii) The industry should become competitive with the indigenous manufacturing of renewable energy devices and systems.

Reply of the Government

Ans (i, ii& iii) : As replied under recommendation No 9 above.

### **CHAPTER III**

OBSERVATION/RECOMMENDATION WHICH THE COMMITTEE DO NOT DESIRE TO  
PURSUE IN VIEW OF THE GOVERNMENT'S REPLIES

-NIL-

## CHAPTER IV

### RECOMMENDATION / OBSERVATION IN RESPECT OF WHICH THE REPLY OF THE GOVERNMENT HAS NOT BEEN ACCEPTED BY THE COMMITTEE AND WHICH REQUIRE REITERATION

#### Wind Energy

(Recommendation No.4, Para No.4)

The Committee understand that the major activities to be undertaken by the Ministry under the wind energy programme for the year 2016-17 include finalization of repowering policy, finalization of wind-solar hybrid policy, finalization of the National Wind Energy Mission, etc. The Committee welcome the initiatives taken in the wind-solar hybrid which they feel is the need of the hour. In view of the much talked about global warming and El Nino which are going to have impact the river water system and the oceans, the Committee feel that the only way out is to utilize the wind capacity as well as solar energy. The Committee are also concerned about the delay in the finalization of the National Wind Energy Mission. The Committee therefore, recommend that:

- i) The Ministry may prepare a roadmap for the hybrid system to make optimum use of solar and wind energy for generation of electricity.
- ii) A pilot project on wind-solar hybrid system may be initiated on priority basis.
- iii) The Committee may be apprised of the progress regarding finalization of the repowering policy, the National Wind Energy Mission and the wind-solar hybrid policy.

#### Reply of the Government

As suggested by the Committee, the Repowering Policy has been finalized and issued in August 2016. The policy provides a facilitative development and evolves a new policy regime which would encourage retrofit and / or replacement of old projects.

Ministry has also issued draft National Wind-Solar Hybrid Policy and got comments from the stakeholders. The main objective of the policy is to optimally utilise resources such as land and transmission.

National Wind Energy Mission (MWEM) document was circulated to related Ministries/Departments for comments and the document has been finalised after suitably incorporating the comments. During last two years various new initiatives have

been taken for the wind sector and the wind capacity has reached 32.75GW at the end of 2016-17. Considering recent developments, it is felt that the need for NWEM may not be required.

**Comments of the Committee**

***See Para 7 of Chapter - I of the Report***

## **CHAPTER V**

RECOMMENDATIONS/ OBSERVATION IN RESPECT OF  
WHICH FINAL REPLY OF THE GOVERNMENT  
IS STILL AWAITED

**-NIL-**

**New Delhi;  
5th March, 2018,  
Phalguna 14, 1939 (Saka)**

**Dr. Kambhampati Hari Babu  
Chairperson,  
Standing Committee on Energy**

## Appendix I

### MINUTES OF THE TENTH SITTING OF THE STANDING COMMITTEE ON ENERGY (2017-18) HELD ON 15<sup>TH</sup> FEBRUARY, 2018 IN COMMITTEE ROOM G-074, PARLIAMENT LIBRARY BUILDING, NEW DELHI

The Committee met from 1100 hrs. to 1400 hrs.

#### PRESENT

#### LOK SABHA

Dr. Kambhampati Haribabu- Chairperson

2. Shri Om Birla
3. Shri Harish Dwivedi
4. Shri Bhagat Singh Koshyari
5. Dr. Arun Kumar
6. Kunwar Sarvesh Kumar
7. Shri Jagdambika Pal
8. Shri Ravindra Kumar Pandey
9. Shri M.B. Rajesh
10. Shri Gutha Sukhender Reddy
11. Shri Bhanu Pratap Singh Verma
12. Shri Kotha Prabhakar Reddy
13. Shri Nagendra Kumar Pradhan

#### RAJYA SABHA

14. Shri T.K.S. Elangovan
15. Shri Oscar Fernandes
16. Shri Shamsher Singh Manhas
17. Shri S.Muthukaruppan
18. Shri Surendra Singh Nagar
19. Smt. Viplove Thakur



## SECRETARIAT

1. Shri A.K. Singh
2. Shri N.K.Pandey - Director
3. Smt. L.Nemjalhing Haokip - Under Secretary

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

- i.) Draft Report on 'Stressed /Non-performing Assets in Electricity Sector'.
- ii.) Draft Action Taken Report on the recommendations contained in the Fourteenth Report (16th Lok Sabha) on 'Evaluation of Role, Performance and Functioning of the Power Exchanges'
- iii.) Draft Action Taken Report on the recommendations contained in the Sixteenth Report (16th Lok Sabha) on Demands for Grants of the Ministry of New and Renewable Energy for the year 2016-17.
- iv.) Draft Action Taken Report on the recommendations contained in the Seventeenth Report (16th Lok Sabha) on 'Hydro Power – A Sustainable, Clean and Green Alternative'.
- v.) Draft Action Taken Report on the recommendations contained in the Twenty-Second Report (16th Lok Sabha) on 'Energy Access in India – Review of Current Status and Role of Renewable Energy'.
- vi.) Draft Action Taken Report on the recommendations contained in the Twenty-Seventh Report (16th Lok Sabha) on Demands for Grants of the Ministry of New and Renewable Energy for the year 2017-18.
- vii.) Draft Action Taken Report on the recommendations contained in the Thirtieth Report (16th Lok Sabha) on 'National Electricity Policy – A Review'.

3. After discussing the contents of the Reports in detail, the Committee adopted the aforementioned draft Reports without any change. The Committee also authorized the Chairperson to finalize the above-mentioned Reports and present the same to both the Houses of Parliament in the second part of the Budget Session.

4.	X	X	X	X	X	X	X	X	X	X	X	X
5.	X	X	X	X	X	X	X	X	X	X	X	X
6.	X	X	X	X	X	X	X	X	X	X	X	X

7.	X	X	X	X	X	X	X	X	X	X	X	X
8.	X	X	X	X	X	X	X	X	X	X	X	X

*The Committee then adjourned.*

## APPENDIX-II

(Vide Introduction of Report)

### ANALYSIS OF ACTION TAKEN BY THE GOVERNMENT ON THE RECOMMENDATIONS/ OBSERVATIONS CONTAINED IN THE 16<sup>th</sup> REPORT (16<sup>TH</sup> LOK SABHA) OF THE STANDING COMMITTEE ON ENERGY

(i)	Total number of Recommendations	10
(ii)	Recommendations/ Observations which have been accepted by the Government:	
	Sl. Nos. 1,2,3,,5,6,7,8,9 and 10	
	Total:	09
	Percentage	90%
(iii)	Recommendation/ Observation which the Committee do not desire to pursue in view of the Government's reply:	
	- Nil -	
	Total:	00
	Percentage	00%
(iv)	Recommendation/ Observation in respect of which the reply of the Government has not been accepted by the Committee and which require reiteration:	
	Sl. No. 4	
	Total:	01
	Percentage	10%
(v)	Recommendation/ Observation in respect of which final reply of the Government are still awaited:	
	- Nil -	
	Total:	00
	Percentage	00%