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**STANDING COMMITTEE
ON ENERGY
(2009-2010)**

FIFTEENTH LOK SABHA

MINISTRY OF NEW AND RENEWABLE ENERGY

*[Action Taken on the recommendations contained in the Second Report
(Fifteenth Lok Sabha) on Demands for Grants of the Ministry of
New and Renewable Energy for the year 2009-10]*

SEVENTH REPORT



सत्यमेव जयते

**LOK SABHA SECRETARIAT
NEW DELHI**

August, 2010/Shravana, 1932 (Saka)

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STANDING COMMITTEE ON ENERGY (2009-2010)

(FIFTEENTH LOK SABHA)

MINISTRY OF NEW AND RENEWABLE ENERGY

*[Action Taken on the recommendations contained in the Second Report
(Fifteenth Lok Sabha) on Demands for Grants of the Ministry of
New and Renewable Energy for the year 2009-10]*

*Presented to Lok Sabha on 10.08.2010
Laid in Rajya Sabha on 10.08.2010*



LOK SABHA SECRETARIAT
NEW DELHI

August, 2010/Shravana, 1932 (Saka)

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COMPOSITION OF THE STANDING COMMITTEE ON ENERGY
(2009-2010)

Shri Mulayam Singh Yadav — *Chairman*

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3. Shri S.K. Bwiswmuthiary
4. Shri P.C. Chacko
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6. Shri Ram Sundar Das
7. Shri Paban Singh Ghatowar
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16. Dr. K.S. Rao
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28. Shri Veer Pal Singh Yadav
29. Shri Govindrao Wamanrao Adik
30. Shri Mohammad Shafi
- *31. Prof. Anil Kumar Sahani

SECRETARIAT

1. Shri Brahm Dutt — *Joint Secretary*
2. Shri N.K. Pandey — *Additional Director*
3. Shri Rajesh Ranjan Kumar — *Deputy Secretary*

Retired from Rajya Sabha *w.e.f.* 04.07.2010.

* Nominated *w.e.f.* 26.02.2010.

INTRODUCTION

I, the Chairman, Standing Committee on Energy having been authorized by the Committee to present the Report on their behalf, present this 7th Report on the action taken by the Government on the recommendations contained in 2nd Report of the Standing Committee on Energy (15th Lok Sabha) on Demands for Grants of the Ministry of New and Renewable Energy for the year 2009-10.

2. The 2nd Report was presented to the Lok Sabha/laid in Rajya Sabha on 17th December, 2009. Replies of the Government to all the recommendations contained in the Report were received on 15th March, 2010.

3. The Report was considered and adopted by the Committee at their sitting held on 17th June, 2010.

4. An Analysis on the Action Taken by the Government on the recommendations contained in the 2nd 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;
30 July, 2010

09 Shravana, 1932 (Saka)

MULAYAM SINGH YADAV,
Chairman,
Standing Committee on Energy.

CHAPTER I

REPORT

This Report of the Standing Committee on Energy deals with the action taken by the Government on the Observations/Recommendations contained in their Second Report (Fifteenth Lok Sabha) on the Demands for Grants of the Ministry of New and Renewable Energy for the year 2009-10.

2. The Second Report was presented to Lok Sabha on 17th December, 2009 and was laid on the Table of Rajya Sabha on the same day. The Report contained 27 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 examined and categorized as follows:—

- (i) Observations/Recommendations which have been accepted by the Government:—

Serial Nos. 1, 2, 3, 4, 5, 7, 9, 11, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25 and 26

Total-21

Chapter-II

- (ii) Observations/Recommendations which the Committee do not desire to pursue in view of the replies of the Government:—

Serial. Nos. 10, 20, and 27

Total-03

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:—

Serial Nos. 6, 8 and 12

Total-03

Chapter-IV

- (iv) Observations/Recommendations in respect of which the final replies of the Government are still awaited:—

Serial No. Nil

Total-00

Chapter-V

4. 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.

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

A. Grid-Interactive and Off-Grid Renewable Power

Recommendation (Serial No. 6)

6. The Committee in their 2nd Report had pointed out that for the year 2009-10, against the target of 3224 MW Grid Power, only 429 MW had been achieved till 31st July, 2009 which was barely 13.3 per cent of the target. Under off-grid section only 6.56 MWeq. had been achieved till 31st July, 2009 against the annual target of 95.80 MWeq. which was formed 6.84 per cent of the target. In view of the achievement badly lagging behind the target in almost all the segments of the Grid-Power and Off-Grid/Distributed Renewable Power Programmes, the Committee had recommended the Ministry to launch special campaign to ensure the conversion of targets into achievements.

7. In their Action Taken Reply, the Ministry of New and Renewable Energy have informed as under:—

“During 2009-10 a total capacity addition of about 1300 MW Grid Interactive power and 57 MWeq of distributed power has been reported upto 31st Jan. 2010. The shortfall is mostly due to recession observed in the Wind industry. Targets in case of Biomass have already been achieved and in Small Hydro Power it is likely to be fully achieved. However, the Ministry is regularly reviewing the situation for maximum achievement of targets.

From the item-wise details furnished by the Ministry, it is observed that as against the targets of 3224 MW for Grid-interactive power the achievement was 1301 MW. Similarly, for Off Grid Power as against target of 9580 MW the achievement upto 31st January, 2010 was 57 MW.”

8. The scrutiny of the data supplied by the Ministry reveals that the achievement under Grid head is still 1301.47 MW upto 31st January, 2010 against the target of 3224 MW for 2009-10 and under Off-Grid Programmes, achievement of 57.42 MWeq. has been made against the target of 95.80 MWeq. during the same period. Under Grid-Interactive Programmes, the Ministry have attributed the shortfall to recession in the Wind industry. At the same time they are hopeful of achieving the annual target in Small Hydro Power. The Committee are surprised to note that the Ministry have chosen to be silent over their performance in Off-Grid/Distributed renewable sector, wherein the achievements under almost all the programmes including Gasifier (Rural as well as Industrial), Aero-gen./Hybrid System, SPV Plants+Street Lights and Water mills/Micro Mini Hydel Plants are far behind the target marks. Even in Wind Power Sector, the Committee find that the achievement in respect of annual target is merely 28.32 per cent till 31st January, 2010 and feel that by blaming recession in the wind industry, the Ministry have tried to shift the attention of the Committee from their own weaknesses in implementation and monitoring to an external factor of recession. The recession might have affected the performance to some extent, but the Ministry took it too far to cover their own lack of sincere efforts. The Committee, therefore, reiterate their earlier recommendation that the Ministry should launch special Schemes for implementation of Grid-Interactive and Off-Grid Programmes to set a pace which would help them in achieving the 11th Five Year Plan targets fully.

B. Wind Power Programme

Recommendation (Serial Nos. 7 and 8)

9. The Committee had found that expenditure during 2007-08 under Wind Power Programme was Rs. 16.07 crore against BE of Rs. 21 crore and RE of Rs. 15.50 crore. The physical achievement of 1663.5 MW had surpassed target of 1500 MW during of 2007-08. But during 2008-09, the Ministry could spend only Rs. 14.20 crore against BE of Rs. 22.25 crore and RE of Rs. 19.50 crore and the physical achievement of 1485.50 MW fell short of the target of 2000 MW. For 2009-10, budget allocation of Rs. 7 crore was made for wind power programme and a separate allocation of Rs. 8.40 crore was made for C-WET under a different budget head "Research Institutions/Centres". The Committee had observed that the total amount of Rs. 15.40 crore for wind energy sector including allocation for C-WET was less than that for 2008-09 while the physical target was increased from 2000 MW in 2008-09 to 2500 MW in 2009-10. The physical achievement upto 31st July, 2009 had been only 222 MW making 8.88 per cent of the annual target. The Committee were of the view that

even though the Ministry did not play a direct role in capacity addition and the budget estimates under wind energy meant to support wind resource assessment, demonstration projects and for activities of C-WET, the initiatives like Generation Based Incentives, tariff reforms, CERC guidelines, etc. had given private sector investors conducive atmosphere and favourable opportunity to thrive. The Committee had recommended that a periodical review of the projects and corrective measures be taken so as to ensure achievement of the target of 2500 MW wind power capacity addition during the remaining part of the year 2009-10. The Committee had also desired the Ministry to carry out evaluations of the projects as well as expenditure position.

10. In their Action Taken Reply pertaining to the periodical review of the projects and corrective measures, the Ministry have stated:—

“As installation of wind power projects is taking place with private sector investment, the Ministry is facilitating the growth of the sector by creating conducive policy environment. The capacity addition during 2008-09 and 2009-10 so far has been poor due to regulatory issues in a few States, local problems in the state of Maharashtra preventing the wind power development in potential areas and non-conducive investment environment due to global economic recession. There continue to be policy problems in Karnataka as also problems of land/forest clearance. TNEB is reluctant to encourage more wind projects.

As the earlier fiscal incentive of accelerated depreciation was directed towards capacity addition by profit making investors, the Government approved a Generation Based Incentive to broaden the investor base by attracting independent power producers and foreign direct investment. This was approved in November, 2009. CERC has also issued the revised guidelines for tariff determination. However, the state regulatory authorities will take some time in adopting these guidelines.

It is expected that the capacity addition in wind sector, because of this, would be higher in coming two years. The situation has now started improving. The installed capacity addition in the year has gone to 710 MW by January, 2010 from only 230 MW in July, 2009. All State Governments are being requested to encourage wind power generation. Ministry had reviewed the positions in meetings held on 17.12.2009 and 12.02.2010 with major state nodal agencies and the manufacturers of the wind electric generators. It is expected that another around 700 MW will be added by March, 2010, taking the cumulative capacity in the year to around 1,400 MW.”

11. The Committee take note of the reasons elaborated by the Ministry towards poor achievement during 2008-09 and 2009-10 pointing to regulatory issues in a few States, local problems in the State of Maharashtra, non-conducive investment environment due to global economic recession, policy problems in Karnataka and problems of land/forest clearance etc. The Committee are aware that the Government of Karnataka have recently come out with new Energy Policy. The Committee understand that the feasibility of setting up of the Wind Power installations can also be worked out without targeting forest clearance, which would certainly be environment friendly and time saving exercise. The Committee do acknowledge the efforts of the Ministry to hold review meetings, etc. and hope that the Ministry will live up to their own expectation of coming close to the physical target of 2009-10. At the same time, the Committee are not satisfied with the reply of the Ministry that they have noted the recommendation of the Committee to carry out evaluation of the projects as well as expenditure position to ensure achievement of the target. The Committee had expected the Ministry to carry out the periodical review of projects, evaluation of project as well as expenditure position and initiative corrective steps in the larger interest of achievement of the targets set for the 11th Five Year Plan under Wind Power Programme. That this was not done is nothing but regrettable. The Committee desire that the recommendation of the Committee in this regard may be implemented in letter and spirit under intimation to the Committee.

C. Small Hydro Power Programme

Recommendation (Serial No. 12)

12. The Committee in their 2nd Report had observed that out of an allocation of Rs. 107 crore for the year 2009-10, an allocation of Rs. 65 crore was made for the border village electrification project in Arunachal Pradesh and Rs. 42 crore was earmarked for other States with a target to achieve 275 MW of Small Hydro electricity. The Ministry had been able to release Rs. 53.93 crore for the border village electrification project in Arunachal Pradesh, while an expenditure of Rs. 14.46 crore had been incurred in rest of the States against the financial allocation of Rs. 42 crore resulting in capacity addition of 72 MW till 30th September, 2009 against the target of 275 MW during 2009-10. The Ministry were hopeful of achieving 236 MW in the 2nd half (*i.e.* during last two quarters) of the year 2009-10. Being apprehensive about the Ministry's version in the light of their financial and physical performance during the first half of the year, the Committee had recommended the Ministry to strengthen both the initiatives and monitoring especially in the potential States so that the efforts of the Ministry could be translated into the results.

13. In their Action Taken Reply the Ministry have stated that an expenditure of Rs. 98.87 crore has been incurred, as on 24.02.2010, against an allocation of Rs. 107 crore under the SHP Programme during 2009-10 and it is expected that the entire allocation will be utilized.

14. The Committee are surprised to note that the Ministry have furnished an incomplete and insufficient information regarding the Small Hydro Power Programme which in the opinion of the Committee, is one of the most under-utilized area of renewable energy so far. The Ministry in their reply have expected to utilize the entire allocation of 2009-10 riding on the statistics of 92.40 per cent utilization till 24th February, 2010. In their action taken reply to an another recommendation, the Ministry have informed that during 2009-10, 214.27 MW capacity addition has been achieved till 24th February, 2010 against the annual target of 300 MW. They have further expressed hope of achieving the targets for capacity creation for this year and for the 11th Plan period as well. In the recommendation contained in their 2nd Report, the Committee had pointed out that the Ministry had been able to release Rs. 53.93 crore out of the allocations of Rs. 65 crore under Border Village Electrification Project in Arunachal Pradesh while an expenditure of Rs. 14.46 crore was incurred in rest of the States against the financial allocation of Rs. 42 crore and capacity addition of 72 MW was achieved against the target of 275 MW till 30th September, 2009. Keeping in view the observations of the Committee, the Ministry should have furnished the Committee the statistics of financial utilization and physical achievements in both Arunachal Pradesh and other States separately so that a more rational and clear picture of area-wise progress made could have emerged. The Committee had also recommended the Government to strengthen the initiatives and monitoring particularly in potential States but the Committee are dismayed to note that the Ministry have come out with a rather simplistic approach and evasive reply. The Committee would like to have specific replies and a detailed and comprehensive action taken note from the Ministry in this regard.

CHAPTER II

OBSERVATIONS/RECOMMENDATIONS WHICH HAVE BEEN ACCEPTED BY THE GOVERNMENT

Recommendation (Serial No. 1)

The Committee take note that the Rule 331G of the Rule of Procedure and Conduct of Business in Lok Sabha relating to examination of Demands for Grants by the Departmentally Related Standing Committees (DRSCs) was suspended by Hon'ble Speaker, Lok Sabha to enable the House to pass the Demands for Grants for the year 2009-10 during the Second Session of Fifteenth Lok Sabha without the same being referred to the concerned DRSCs. The Demands were, however, referred to the Standing Committees for examining the same after their constitution and for presenting the Report to the House therein. The Committee, after their constitution on 31st August, 2009 took up examination of the Demands for Grants pertaining to the Ministry of New and Renewable Energy for the year 2009-10. Since the Budget for the year 2009-10 has already been passed by the Parliament, the Committee endorse the same. The Committee would however, like the Ministry to take note of their recommendation while implementing various programmes/schemes, etc. within the approved budget.

Reply of the Government

The recommendations of the Committee have been noted. The Ministry will follow the recommendations of the Committee while implementing various programmes/schemes etc., within the approved budget of 2009-10.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C
dated 15.03.2010]

Recommendation (Serial No. 2)

The Committee are unhappy to note that against the total budgetary outlay of Rs. 4000 crore for 11th Plan period only Rs. 1062 crore has been expended in the first half of the Plan which accounts for about 26.5% of the total budget provision. The Committee strongly feel that the shortfall in utilization of funds is bound to have

a cascading effect on the achievement of programmes/projects envisaged in 11th Plan period. The reasons given by the Ministry *inter alia* included indepth evaluation of schemes/programmes in line with Ministry of Finance guidelines, change in approval mechanism for Ministries schemes/programmes and need to restructure the schemes within the framework of the 11th Plan proposals. The Committee are not at all satisfied with the reasons advanced by the Ministry for their dismal performance as no proactive measures seem to have been taken by the Ministry to overcome the hurdles that have impeded the implementation of the projects. Since first half of the plan is over, the Ministry were expected to spend at least 40% of the budgetary provision for implementation of projects by now. The Committee would like the Ministry to focus on specific areas which have been affecting the implementation of the projects.

Reply of the Government

During 2009-10 against a RE of Rs. 560 crore expenditure of Rs. 540 crore is expected. Thus an amount of Rs. 1460.50 crore would have been spent in the first three years which would be around 37% of the total plan outlay. A GBS of Rs. 1,000 crore has been approved for the Ministry during 2010-11 with a special focus on Solar Programme under the Solar Mission. The Ministry will seek the balance amount of XI Plan allocation for the last year.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C
dated 15.03.2010]

Recommendation (Serial No. 3)

Regarding power generation, the achievement in Grid-interactive programme is about 4659 MW till 31st July 2009 against the 11th Plan target of 14000 MW. Similarly, in off-Grid sector achievement is 177.13 MWeq. upto 31st July, 2009 against the targets of 1,000 MWeq. The Committee note that the physical achievement upto the first half of the 11th Plan is nearly one-third of the total target in Grid-interactive renewable power programmes. The performance in Off-Grid Programme has also not been encouraging and only 17.7 per cent achievement has been made so far which is far below the half-way mark. In their 26th Report (14th Lok Sabha) on the Demands for Grants for the year 2008-09, the Committee had called for a focused approach of the Ministry towards achieving targets set in the current plan period with optimum utilization of the funds so as to secure the desired increase in allocation from the Planning Commission for the remaining three years of the 11th Plan. The Committee, however, feel that the Ministry did not take the recommendations of the Committee seriously and are constrained to

point out that the Ministry are neither showing resolve to spend the amount allocated nor they are able to make the expenditure result oriented. In the meantime, the Ministry is reported to have completed mid-term appraisal of 11th Five Year Plan. The Committee trust that the Ministry will take all the corrective steps particularly on weak areas identified in mid-term appraisal during the remaining part of the current plan period to realize the goals set in 11th Plan. In order to have a perspective planning, the Committee would like the Ministry to bring out a Vision Document.

Reply of the Government

At the time of Mid-Term review of the 11th Plan targets of Grid Power and Distributed Power have been revised to 11,829 MW and 483 MW respectively. An achievement of about 5525 MW and 190 MWeq. have already been reported upto Jan 2010. Apart from above, decentralized systems have also been installed in 2378 villages for lighting. With the launch of Solar Mission the revised targets of 11th Plan are likely to be achieved. However, the suggestions received from the Committee from time to time will be adhered too.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C
dated 15.03.2010]

Recommendation (Serial No. 4)

The Committee note that the Budget allocation of the Ministry of New and Renewable Energy for the year 2009-10 is Rs. 628 crore comprising Revenue Sections for Rs. 608.20 crore and capital section Rs. 19.20 crore. The Budget Estimates (BE) for the year 2008-09 stood at Rs. 624.09 crore, which were subsequently reduced to Rs. 509 crore at Revised Estimates (RE) stage *i.e.* a net reduction of about Rs. 115.09 crore. So far as Estimates under the Plan head is concerned, the reduction amounted to Rs. 117.60 crore (*i.e.* Rs. 617 crore BE Rs. 499.40 crore RE). Though the Ministry could only utilize Rs. 441.79 crore under plan head during 2008-09, the Committee find that during the current financial year, the Ministry have utilized Rs. 260 crore out of Rs. 617 crore under plan head upto 30th September, 2009 which is over 42 per cent of BE. The Committee appreciate the resolve shown by the Ministry for full utilization of the allocated amount by the end of the financial year. This would obviate the possibility of reduction of budget at RE stage as was done during previous years. The Committee also take note of the apprehensions shown by the Ministry regarding performance utilization of the funds by the State Nodal Agencies which are responsible for implementation of various Schemes/Programmes in their respective State and hope that the Ministry will overcome the difficulties successfully by

prompt initiative, constant supervision and proactive approach while coordinating with the States. The Committee feel that the corrective measures being undertaken by the Ministry need proper monitoring so that the coordination mechanism of the Ministry and State Governments becomes more effective to help curb delays that hamper implementation of plan projects.

Recommendation (Serial No. 5)

The Committee are concerned to observe that the Ministry have not initiated any concrete action to motivate or persuade non-performing States/UTs which have shown lack of interest in the renewable sector. What is more disquieting to note is the fact that Ministry do not make state-wise allocations in advance. The transfer of financial resources from the Ministry to the State Governments is linked to performance of the respective State Governments which the Ministry release only when utilization certificates for previous releases have been made. As a matter of corrective steps, the Committee were informed that all out efforts are being made to promote various renewable energy programmes in all States/UTs through increased private sector participation. The Committee recommend that advance allocations within a given financial year needs to be rationalized in terms of financial jurisprudence. The Committee desire the Ministry to sensatise the non-performing States/Union Territories in the field of renewable sector by having frequent interaction with them through an effective mechanism. The Committee would like the Ministry to consider a proposal for giving little more incentive to private sector to give boost to renewable sector.

Reply of the Government

Although the Ministry had achieved the Finance Ministry norms of expenditure upto September 2009, RE was still reduced to Rs. 560 crores.

Implementation of the major programmes/projects are being monitored at the highest level. Minister and Secretary are in constant touch with different States for proper and timely implementation of the programmes/projects.

Advances are given to States as per the norms of the Finance Ministry. It is necessary that utilization of previous releases be ensured. The States are given targets in advance and encouraged to overachieve. Under all schemes of the Ministry there are substantial incentives already for the private sector.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C
dated 15.03.2010]

Recommendation (Serial No. 7)

The Committee observe that expenditure during 2007-08 under Wind Power Programme was Rs. 16.07 crore against BE of Rs. 21 crore and RE of Rs. 15.50 crore. The physical achievement of 1663.5 MW has surpassed target of 1500 MW during 2007-08. But the position has not been very satisfactory during 2008-09 and the Ministry could expend only Rs. 14.20 crore against BE of Rs. 22.25 crore and RE of Rs. 19.50 crore during 2008-09 and the physical achievement of 1485.50 MW also fell short of the target of 2000 MW. The physical target of 2500 MW has been fixed for the year 2009-10 and achievement upto 31st July, 2009 has been only 222 MW which is merely 8.88 per cent of the annual target. The reasons adduced by the Ministry for poor performance in 2008-09 included regulatory and tariff issues in a few States, inability to introduce Generation Based Incentives (GBI) and non-conducive investment environment due to global economic recession. The Committee do agree with the Ministry that there is no direct relationship between the budget allocation and the capacity addition in wind sector as this is entirely achieved through private sector investment and the Government do not provide any capital subsidy or direct financial incentive for setting up wind power projects. The Committee have been given to understand that the budget estimates under wind energy are towards supporting wind resource assessment, demonstration projects and for activities of Centre for Wind Energy Technology (C-WET). Under the given circumstances the Committee feel that even though the Ministry do not play a direct role in capacity addition, they are providing a solid base, conducive atmosphere and favourable opportunity for private sector investment for growth of the wind energy sector. Now as the Ministry have come forward with Generation Based Incentives, tariff reforms, CERC Guidelines and other initiatives, the Committee are unable to find any logical reason for such a poor show in the current financial year in converting their efforts in results. The Committee desire that a periodical review of the projects and corrective measures be taken so as to ensure achievement of the target during the remaining part of the year.

Reply of the Government

As Committee members are aware, installation of wind power projects is taking place with private sector investment. Ministry is facilitating the growth of the sector by creating conducive policy environment. The capacity addition during 2008-09 and 2009-10 so far has been poor due to regulatory issues in a few states, local problems in the state of Maharashtra preventing the wind power development in potential areas and non-conducive investment environment due to global economic recession. There continue to be policy problems in Karnataka

as also problems of land/forest clearance. TNEB is reluctant to encourage more wind projects.

As the earlier fiscal incentive of accelerated depreciation was directed towards capacity addition by profit making investors, the Government approved a Generation Based Incentive to broaden the investor base by attracting independent power producers and foreign direct investment. This was approved in November, 2009. CERC has also issued the revised guidelines for tariff determination. However, the state regulatory authorities will take some time in adopting these guidelines.

It is expected that the capacity addition in wind sector, because of this, would be higher in coming two years. The situation has now started improving. The installed capacity addition in the year has gone to 710 MW by January, 2010 from only 230 MW in July, 2009. All State Governments are being requested to encourage wind power generation. Ministry had reviewed the positions in meetings held on 17.12.2009 and 12.02.2010 with major state nodal agencies and the manufacturers of the wind electric generators. It is expected that another around 700 MW will be added by March, 2010, taking the cumulative capacity in the year to around 1,400 MW.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C
dated 15.03.2010]

Recommendation (Serial No. 9)

Research and Development undertaken by the Government for wind energy reportedly focuses on wind turbine components, research on wind resource assessment, wind prediction tool, wind hybrid systems, design and manufacturing methodologies etc. The consolidated R&D projects are being co-ordinated by C-WET. According to the Ministry, the R&D Council is making the C-WET get the involvement of the premier R&D institutions like IITs, IISc, CSIR Labs etc. on long-term research on specific projects in a co-ordinated manner. While appreciating all these R&D activities in wind energy sector, the Committee observe that C-WET spent a negligible amount of Rs. 2.40 crore on R&D activities during the 10th Five Year Plan. During 11th Plan Rs. 80 crore have been earmarked for R&D in Wind Energy Sector out of which a meager amount of Rs. 5.50 crore have been spent upto 31st July, 2009 which also include an expenditure of Rs. 5.06 crore made during the year 2007-08 only. The Committee find that an allocation of Rs. 5 crore has been allocated for RD&D activities for wind energy within the overall allocation of Rs. 8.40 crore to C-WET during 2009-10 and almost entire funds are unspent. The Committee also take note of the fact that there is a vast

potential in this sector lying unexplored in the country and almost 77.5 per cent of the physical target of Grid Power generation set for current financial year (*i.e.* 2500 MW out of 3224 MW) comprise of the target set under wind energy programme with a dismal achievement of 222 MW till 31st July, 2009. Moreover, the PLF is 21 per cent and wind mapping of the whole country is still not done. Against this backdrop, the Committee recommend that the Ministry should focus on the RD&D of wind energy with full momentum in order to prepare a solid base for optimum exploitation of wind energy potential available in the country.

Reply of the Government

A budget allocation of Rs. 8.40 crore was made for carrying out various activities at C-WET including R&D in wind power projects during the year 2009-10. Out of this amount, an allocation of Rs. 5.00 crore was made for implementation of R&D projects in the area of wind power development. R&D amount is likely to be spent by the end of March, 2010 on various projects being implemented by C-WET which have been approved by Research and Development Council of C-WET. R&D projects being implemented by C-WET relate to power quality issues in grid connected wind farms, power evacuation for grid integrated wind energy conversion system, development of Indian wind grid code etc. Enhanced resource assessment will also be carried out in the next two years. However, in a large measure, achievement of wind capacity and PLF are not directly related to this aspect.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C
dated 15.03.2010]

Recommendation (Serial No. 11)

The Committee observe that Small Hydro Power (SHP) can provide electricity to remote areas and hilly terrains in a cost effective manner. The Committee find that against the estimated potential of SHP projects (upto 25 MW capacity) at 15,000 MW in the country and identified 5415 potential sites with an aggregate capacity of 14,292 MW, the installed capacity of SHP as on 30.09.2009 is 2502.24 MW from 682 projects. Further, 313 projects with 1007.28 MW capacity are under implementation. The Committee are distressed to find that against the target of 1400 MW for the 11th Plan, only 478.68 MW capacity has been achieved as on 15.07.2009 *i.e.* only 34% of the targeted capacity. Further, during 2009-10, against the target of 300 MW, the achievement as on 30.09.2009 has been 72.47 MW. The Committee are given to understand that the Ministry is closely monitoring implementation of SHP projects including those

allotted to the Private Sector in the potential States. While the Committee take note of the initiatives of the Ministry for faster implementation of projects, the Committee feel that problem areas in this area should be identified and corrective steps be taken to achieve the desired goal of the 11th Plan and of the current financial year as well.

Reply of the Government

A target of 1400 MW has been set for the 11th Plan from SHP projects. So far 667.95 MW capacity (up to Feb., 2010) has been added during the 11th Plan. Further, projects aggregating to about 85 MW are expected to be commissioned during March, 2010. The year wise physical targets and achievements of SHP programme for the 11th plan are as follows:—

Sl. No.	Year	Physical	
		Target	Achievement
1.	2007-08	200 MW	204.75 MW
2.	2008-09	250 MW	248.93 MW
3.	2009-10	300 MW	214.27 MW (24.2.10)
4	2010-11	300 MW	
5.	2011-12	350 MW	
	Total	1400 MW	667.95 MW

The Ministry is giving focused attention towards monitoring of ongoing projects specifically in the private sector to expedite implementation and remove bottlenecks in the implementation. In this regard, the Ministry is regularly interacting with the States and the private developers. Several meetings have been taken by Secretary, MNRE to review the status of SHP projects implemented by private developers with the State Government officials and SHP developers. Minister has also written to Chief Ministers. The Ministry is hopeful of achieving the targets for capacity creation for both this year as well as the XIth Plan.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C
dated 15.03.2010]

Recommendation (Serial No. 13)

Regarding R&D support in the field of SHP programme, the Committee are given to understand that the Ministry have been supporting institutions to meet technical demand of the sector and organizing training programmes on various aspects of SHP Project development and Alternate

Hydro Energy Centre(AHEC) at IIT Roorkee has been developed as apex technical institution to provide all services including design, performance testing and training. The Committee are further informed that towards this initiative, country's first Real time digital SHP simulator, on-site testing facilities have been created and for small size projects, standardization of size and equipments have been done. The Committee take note of the fact that against the total potential capacity of 14,292 MW available in the country, the total installed capacity so far is only 2502.24 MW. In view of a large quantum of potential remaining unexploited, the Committee are of the opinion that the Ministry should tighten their grip over R&D sector under Small Hydro Power Programme to boost up outcome in thrust areas of R&D.

Reply of the Government

The small hydro sector is now commercial with mature technology and there is a good manufacturing base in the country. The Ministry is giving special emphasis to promote use of new designs of water mills for mechanical as well as electricity generation and setting up of micro hydel projects. The Ministry has been strengthening AHEC, IIT Roorkee on all technical aspects of SHP development. It is proposed to initiate setting up of a test rig for different type of SHP turbines. The facility when completed would help in testing and characterization of new models/designs of SHP turbines.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C
dated 15.03.2010]

Recommendation (Serial No. 14)

The estimated biomass power potential in the country is about 2100 MW and the cumulative biomass power/bagasse co-generation based power capacity achieved so far is 1752 MW, which comprises 703 MW of biomass power projects and 1049 MW of bagasse co-generation projects. The physical and financial targets for the 11th Plan period under this programme are 1700 MW and Rs. 130 crore respectively. The Committee note with satisfaction that the physical achievement during the last two years exceeds the target. However, the Committee are concerned to observe that during the last two years, the actual expenditure is only about 77% (approx.) of the financial target. The Ministry have informed that the promotion of biomass power projects have not shown interest to avail a small amount of capital subsidy which is about 2 per cent of the project cost. It has also been informed that bagasse cogeneration projects in private sector sugar mills do not approach the Ministry for meager amount of CFA. The Committee feel that systematic and objective planning for better

utilization of funds like working out possibilities of financial assistance in development of cooperative sector sugar mills in coordination with States would be in the larger interest of the people and would push up the physical achievement progressively

Reply of the Government

Based on the initiatives taken in the States of Maharashtra, Tamil Nadu and Punjab for implementing cogeneration projects in cooperative sector through BOOT model, an EFC note has been formulated and circulated for extending financial support to cogeneration project in cooperative sector sugar mills implemented by Joint Venture Company/IPP/ State Government Undertaking through BOOT model. Comments on EFC note from the concerned ministries including Planning Commission have been received. The EFC meeting will be held shortly.

The Ministry during the year has organized seminars/workshops/ in-plant training programme under grid interactive and off-grid programme in various states to create awareness amongst various stakeholders. The same will be continued.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C
dated 15.03.2010]

Recommendation (Serial No. 15)

The Committee observe that the R&D expenditure on biomass gasifier technology during the last two years was only Rs. 24 lakh against budget allocation of Rs. 40 lakh *i.e.* 60% of budget allocated. As the R&D activities hold the key to solve operational and technical problems associated with the programme and ushering in new and better technologies, the Committee are distressed to point out that the expenditure on R&D for the Biomass power programme during the last two years was very low. The Committee, therefore, desire that utmost importance should be attached to the R&D activities for Biomass power programme and expect that the amount of Rs. 50 lakh which has been allocated for the year 2009-10 for R&D support on biomass gasifier technology would be fully utilised.

Reply of the Government

An allocation of Rs. 50 lakh for the year 2009-10 was made for R&D projects on Biomass Gasifier Technology. These projects were sanctioned to IIT Guwahati for hot gas cleaning, IIT Mumbai for development of circulating fluidized bed gasification system and IIMT Bhubaneswar for development of two stage gasifier system.

In addition, the provision was made for financial support under preparation of Biomass Resource Atlas being developed by IISC Bangalore. However, due to delay in procuring Satellite/Survey of India maps by the IISC Bangalore, the expenditure could not be utilized.

It may be mentioned that in addition to above, a provision of Rs. 1 crore has been made for core support to IISC Bangalore for strengthening of Advanced Biomass Gasification Centre for which a total outlay of Rs. 8.84 crore was sanctioned in 2008-09 against which an amount of Rs. 2 crore stands released during 2008-09 and a further release of Rs. 1.75 crore is proposed during the current year.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C dated 15.03.2010]

Recommendation (Serial No. 16)

The Committee observe that the country is endowed with a vast solar energy potential where most part of the country reportedly have about 300 sunny days and the average solar radiation incident over the land is in the range of 4-7 KWh per square metre per day. The utilization of solar energy is basically effected through Solar Photovoltaic (SPV) and Solar Thermal routes. The Committee find that against the BE of Rs. 123.25 crore and RE of Rs. 90.71 crore during 2008-09, the Ministry had expended only Rs. 81.90 crore. The budget estimate for the current financial year 2009-10 has been enhanced to Rs. 116.00 crore. Explaining the fund utilization plan, the Ministry have informed the Committee about the Solar Grid Power Initiative introduced on 1st January, 2008 to develop and demonstrate Megawatt capacity solar power generation in the country. Accordingly, generation based incentive upto Rs. 12 per KWh for photovoltaic and Rs. 10 per KWh for solar thermal power would be provided, in addition to tariff fixed by SERC. According to the Ministry, plants with minimum of 1 MW per developer will be supported. Further, a maximum of 10 MW cumulative capacity in a State, subject to an overall capacity of 50 MW in the country, will be allowed for availing incentive. The Committee recommend that the Ministry should take up with Ministry of Finance/State Governments for suitable incentives so as to attract more investment and usage of solar energy.

Reply of the Government

As furnished in the combined Reply to Recommendation No. 19.

Recommendation (Serial No. 17)

The Committee were informed that the Ministry have introduced a new scheme for providing Central Financial Assistance (CFA) for installation of Rooftop SPV systems (with or without grid interaction) in industrial and commercial establishments/complexes (excluding manufacturers of SPV cells/modules), housing complexes, institutions and others which face electricity shortages and are using diesel generators for power backup. The Committee find that a target of 4.25 MWp of SPV Rooftop systems for diesel replacement has been proposed during the 11th Plan period, including 1 MWp for 2009-10 and an allocation of Rs. 10 crore for 2009-10 and Rs. 36.00 crore during the 11th Plan for such system. The Committee suggest that for better utilization of power from the solar system, the Ministry should explore the feasibility of Net Metering to connect buildings with solar systems with the regulated utility through a two-way meter. This would help the users to draw electricity from the grid if needed and to give back to the utility grid any excess electricity from their installations.

Reply of the Government

As furnished in the combined Reply to Recommendation No. 19.

Recommendation (Serial No. 18)

The Committee in their 26th Report (14th Lok Sabha) on Demands for Grants of MNRE for 2008-09 had suggested the Ministry to focus their attention in a big way on R&D investment in solar energy. The Committee note with satisfaction that the Ministry have intensified their efforts over the last year and six R&D project proposals have been sanctioned during the current year. The Ministry have released an amount of Rs. 14.41 crore for these projects out of Rs. 20 crore allocation for R&D in Solar Energy for the current year. The Committee are aware that the photovoltaic technology in vogue in the country at present are neither cost effective nor much efficient as far as energy output is concerned. The Committee, therefore, desire that the Ministry should direct their whole R&D activities in making the solar energy cost effective and getting maximum output as well. The committee have been informed that the Ministry are supporting R&D in different areas including new materials to increase the efficiency of the system, increase the reliability and lifetime and reduce the cost of the system. The Committee would like to be apprised of the outcome of the initiative being made by the Ministry in this regard.

Reply of the Government

Ministry has been supporting research on different aspects of solar photovoltaic technology, with the objective of reducing the cost and improving the overall efficiency. The details of ongoing/new projects in this regard are as under:—

Solar Photovoltaics

Ongoing Projects	
Indian Institute of Science, Bangalore	Development of efficient electronic system for connecting small PV systems to the grid.
Delhi University	Development of dye-sensitized solar cells.
I.I.T. Mumbai	Development and testing of low concentration PV systems.
KIIT University, Bhubaneswar	Fabrication of CIGS/CdS thin film solar cells on large area glass and flexible substrate.
University of Pune	Fabrication of nc-SiH based single junction solar cells.
New Projects	
Indian Institute of Technology, New Delhi	Development of organic-inorganic heterojunction thin film solar cells.
Maharishi Solar Technology Pvt. Ltd., New Delhi	Development of solar grade poly silicon material.
Indian Association for Cultivation of Science, Jadavpur, Kolkata+Hind High Vacuum Co., Bangalore	Development of large area micromorph thin film modules.
Indian Institute of Petroleum, Dehradun	Development of dye-sensitized thin film solar cells.

Solar Thermal

Ongoing Projects	
IIT Bombay	Design and development of 1.5 kWe Stirling engine for solar thermal power generation.
National Aeronautics Laboratory, Bangalore	Development of high temperature absorber coating suitable for indigenous manufacturing of solar receivers.
CEPT University, Ahmedabad	Establishment of solar calorimeter facility for glass which can be used in solar systems and also as windows in green buildings. A test procedure for solar concentrators for industrial process heat systems has also been developed, and steps are being initiated to standardize it.

New Projects	
IIT Bombay, jointly with a consortium of industries	Major initiative was launched in solar thermal R&D during the year. A first of its kind R&D project entitled "Megawatt-scale Solar Thermal Power Testing, Simulation and Research Facility". The project aims at to develop a 1-MW capacity solar thermal power plant at Solar Energy Centre of the Ministry with a view to provide testing and evaluation facility to the technology developers in the emerging area of solar thermal power generation.
The system would be installed at Solar Energy Centre to develop solar cooling systems	Design, development and demonstration of solar steam generating system using two axis tracked parabolic solar dish technology.

Interactive projects with other specialized organizations have been taken up by SEC relating to development of solar cells/modules and batteries for SPV applications

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C dated 15.03.2010]

Recommendation (Serial No. 19)

The Committee have been informed that the Prime Minister's Council on Climate Change endorsed the National Solar Mission in August, 2009 with a target of 20,000 MW of solar generation capacity by the year 2020. The Committee are in agreement with the views of the Council that given the outlook of rising demand for and depleting reserves of conventional energy sources worldwide, solar energy is seen as the most promising, abundant and domestically available source of energy for the country in the long run. The Committee hope that the objectives of the mission will be implemented with the focus on technological advancements and cost reduction. The Committee would like to be apprised of the details of the National Solar Mission in due course. The CERC has reportedly brought out guidelines recently to fix tariff for solar power purchase by the utilities. The Committee may be provided with the details.

Reply of the Government

In November 2009 the Government has approved "Jawaharlal Nehru National Solar Mission" (JNNSM) which aims at development and deployment of solar energy technologies in the country to achieve parity with grid power tariff by 2022. The objective of the National Solar Mission

is to establish India as a global leader in solar energy, by creating the policy conditions for its diffusion across the country as quickly as possible.

The Mission will adopt a 3-phase approach, spanning the remaining period of the 11th Plan and first year of the 12th Plan (up to 2012-13) as Phase 1, the remaining 4 years of the 12th Plan (2013-17) as Phase 2 and the 13th Plan (2017-22) as Phase 3. At the end of each plan, and mid-term during the 12th and 13th Plans, there will be an evaluation of progress, review of capacity and targets for subsequent phases, based on emerging cost and technology trends, both domestic and global. The aim would be to protect Government from subsidy exposure in case expected cost reduction does not materialize or is more rapid than expected.

The immediate aim of the Mission is to focus on setting up an enabling environment for solar technology penetration in the country both at a centralized and decentralized level. The first phase (up to 2013) will focus on capturing of the low-hanging options in solar thermal; on promoting off-grid systems to serve populations without access to commercial energy and modest capacity addition in grid-based systems. In the second phase, after taking into account the experience of the initial years, capacity will be aggressively ramped up to create conditions for up scaled and competitive solar energy penetration in the country.

To achieve this, the Mission targets are:—

- To create an enabling policy framework for the deployment of 20,000 MW of solar power by 2022.
- To ramp up capacity of grid-connected solar power generation to 1100 MW within three years — by 2013; an additional 3000 MW by 2017 through the mandatory use of the renewable purchase obligation by utilities backed with a preferential tariff. This capacity can be more than doubled — reaching 10,000MW installed power by 2017 or more, based on the enhanced and enabled international finance and technology transfer. The ambitious target for 2022 of 20,000 MW or more, will be dependent on the ‘learning’ of the first two phases, which if successful, could lead to conditions of grid-competitive solar power. The transition could be appropriately up scaled, based on availability of international finance and technology.
- To create favourable conditions for solar manufacturing capability, particularly solar thermal for indigenous production and market leadership.

- To promote programmes for off-grid applications, reaching 2000 MW by 2022 including 20 million solar lighting systems.
- To achieve 20 million sq. solar thermal collector area by 2022.

The Government has given 'In Principle' approval to the over all targets proposed for the various activities covered under the Jawaharlal Nehru National Solar Mission. The Government has also approved the implementation of the first phase of the Jawaharlal Nehru National Solar Mission during 2009-2013 and the target to set up 1,000 MW grid connected (33 KV and above) solar plants, 100 MW of roof top and small solar plants connected to LT/11 KV grid and 200 MW capacity equivalent off-grid solar applications in the first phase of the Mission, till March, 2013. An amount of Rs. 4337 crore has been approved for the activities proposed under the first phase of the Mission till March, 2013 as per the following details

The implementation of the target of 1,000 MW of grid connected (33 KV and above) solar power plants will be through NTPC Vidyut Vyapar Nigam (NVVN), a trading subsidiary of NTPC Limited. NVVN will directly purchase the solar power from the project developers as per the norms and guidelines fixed in this regard.

Central Electricity Regulatory Commission (CERC) has recently announced preferential tariff for solar thermal and solar PV power projects as Rs. 13.45 per unit and Rs. 18.44 per unit respectively for 2009-10. This tariff will be applicable for purchase of solar power by NVVN for projects commissioned during 2009-10.

The Ministry of Power will allocate to NVVN, equivalent megawatt capacity, from the Central unallocated quota, from NTPC power stations, at the rate notified by the CERC for bundling together with solar power. NVVN will undertake the sale of the bundled power to State utilities at the rates determined as per CERC regulations, subject to review in case of significant price movement in the market. The above arrangement will be limited to utility scale solar power generated from a maximum anticipated capacity of 1000 MW in the first phase. When NVVN supplies bundled power to State utilities at the rates determined as per CERC regulations, those State utilities will be entitled to use the solar part of the bundled power for meeting their Renewable Purchase Obligations (RPO) under the Electricity Act, 2003.

In addition, in the first phase of the Mission 100 MW capacity of solar roof top and small grid connected solar power plants will be connected to LT/11 KV grid of the distribution utility and the solar power will be directly purchased by the distribution utilities as per the norms

and guidelines fixed in this regard. These projects would be for (i) residential rooftops; (ii) commercial and industrial rooftops; (iii) ground mounted solar power projects including tail-end grid connected projects. This includes a provision of two way metering for residential rooftops connected to LT grid and net metering for other rooftops/power plants connected to 11 KV grid.

200 MW equivalent capacity of off-grid solar applications, both solar thermal and photovoltaic will be implemented through a combination of low interest bearing loans and/or Central financial assistance as per the norms and guidelines fixed in this regard.

In addition, the Mission will support various activities, as considered necessary, on R&D, Human Resource Development, Technical Assistance, training, publicity and awareness etc., for successful implementation of the Mission.

The Ministry will issue the detailed guidelines for implementation of each of the above components of the Jawaharlal Nehru National Solar Mission separately.

On 11th January, 2010 Hon'ble Prime Minister of India launched the Jawaharlal Nehru National Solar Mission in a Solar Energy Conclave organized by the Ministry.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C dated 15.03.2010]

Recommendation (Serial No. 21)

The Committee take note of the initiatives of the Ministry for expediting projects on Energy Recovery from urban wastes other than Municipal Solid Wastes. Besides other new initiatives, the Committee would like to be apprised of the initiatives taken for development of bio-gas upgradation systems for converting bio-gas into Natural Gas (NG) quality fuel for supplementing the supply of CNG and also a Research Project of 'Advanced Refuse Derived Fuel Gassification System'.

Reply of the Government

Three Research and Development projects on development of bio-gas up-gradation systems have been supported by the Ministry – one at IIT, Roorkee and two at IIT, Delhi. The project at IIT, Roorkee is ongoing and expected to be completed by March, 2010. One of the two projects at IIT, Delhi has been completed and the technology package has been licensed to six industries for commercialization. The second project at IIT, Delhi

has been extended upto September, 2010. In addition to these initiatives, eight projects on demonstration of integrated technology package on generation, purification/enrichment, bottling in piped distribution of bio-gas through medium size bio-gas have been sanctioned to private entrepreneurs during 2009-10.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C
dated 15.03.2010]

Recommendation (Serial No. 22)

The Remote Village Electrification Programme (RVEP) is one of the most important programmes of the Ministry as it aims at providing basic lighting/electricity facility through renewable energy systems in unelectrified remote villages and hamlets where grid extension is either technically not feasible or not cost effective. The Committee observe that for the 11th Plan, the Ministry have earmarked an outlay of Rs. 867.89 crore to cover 10,000 villages and hamlets. The Committee further observe that during the first two years of the 11th Plan, against the target of 3500 villages and hamlets, 2628 were sanctioned and only 1605 villages/hamlets could be electrified. Particularly during 2008-09 electrification of only 326 villages could be completed against the target of 1500. Even the number of sanctioned villages were merely 636 which was far below the target. During 2009-10, 1500 villages/hamlets are again targeted to be covered under the programme at a cost of Rs. 80.00 crore. Regarding physical achievement, the Ministry have stated that no proposals from the States were left unapproved as on 31st March, 2009 and during the current year also all eligible proposals received so far have been approved and initial funds released to the agencies. It has been further stated that as a result of continuous follow up, there are indications that Orissa will take up around 520 villages, Jharkhand around 300 villages and Assam may take up around 250 villages during the current year. In addition, support has already been sanctioned for 270 villages and hamlets in various States. The Committee are somewhat hopeful with the approach and optimism shown by the Ministry to achieve the intended target, they are at the same time apprehensive of real performance in view of the past experience. Explaining the reasons for not able to reach near the target during the first two years of the 11th Plan, the Ministry have stated that the physical achievement is dependent on the States identifying the villages to be covered and submitting the proposals for the same and carrying out implementation of the approved projects in a time bound manner. According to the Ministry, the States prefer extension of Grid to all unelectrified villages as 90 per cent of the funds are made available under RGGVY. But during actual implementation, when grid extension is found infeasible, these are transferred to MNRE for support under

REVP. The Ministry are expecting that as the completion date of RGGVY is approached, the position with regard to the villages taken up under this programme will become more clear. The Committee instead suggest the Ministry not to wait for completion of RGGVY and in spite of the problems being confronted by the States regarding identification of the villages and implementation of the projects, the Ministry may not feel content with their efforts and establish a task force to take initiative for coordinating with States and resolving the bottlenecks with regard to both identification of villages/hamlets and implementation of the Programme.

Reply of the Government

The Committee has suggested that more intensive coordination with the states should be put in place to ensure that identification of villages and hamlets to be covered under the Programme be completed early. The Committee has also suggested that a task force of the concerned may be set up.

In this connection, it is intimated that a Coordination Committee under the Chairmanship of Secretary, MNRE with representatives from Planning Commission, Ministry of Power, Rural Electrification Corporation and Ministry of Panchayati Raj, has been set up. Representatives of concerned State implementing agencies are also invited in the meetings, depending upon the agenda. The Ministry has also been taking up this issue with the concerned States at the highest level of the respective Governments. As a proactive measure to motivate the States, in principle approvals have also been given for a number of projects (in Jharkhand, in Tripura and in Orissa) asking the respective agencies to carry out the required documentation and project preparation. The efforts of the Ministry for expediting the implementation will be continued.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C
dated 15.03.2010]

Recommendation (Serial No. 23)

The Committee had desired to know the State-wise details of villages to be electrified under the Programme. The Ministry informed the Committee that no State-wise targets are fixed under the Programme and proposals are approved for financial support on case to case basis and for the remote villages and hamlets verified by Rural Electrification Corporation, subject to their final acceptance by the States and based on the future plans of the States for coverage of remote villages and hamlets through renewable energy sources. The Committee are of the view that even if the proposals are considered and approved on

case to case basis, it would be in the larger interest of the Ministry if the data is maintained State-wise including the details of the villages identified electrification, position of their sanction and status of implementation. This would help the Ministry in coordinating with the States and strive towards getting desired results in a planned manner.

Reply of the Government

It is to intimate that the Ministry maintains list of all villages which are identified by the States for coverage under the Remote Village Electrification Programme and are endorsed by Rural Electrification Corporation for non-inclusion under Rajiv Gandhi Grameen Vidyutikaran Yojana. List of around 6000 such villages has also been put on the website of the Ministry. The list is being brought up to date. The Ministry also persuades the respective State implementing agencies to survey and prepare proposals for villages which have been so identified and not yet provided with solar systems. Efforts for making this process more effective will be continued.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C
dated 15.03.2010]

Recommendation (Serial No. 24)

The Committee have been informed that the tidal power potential in India is estimated to be around 7000 MW with the potential sites in the Gulf of Kutch and Gulf of Cambay in Gujarat and the Delta of the Ganges in Sunderbans in West Bengal. According to the Ministry, a pilot tidal power project of 3.75 MW capacity has been sanctioned for installation at Durgaduani Creek in Sunderbans, West Bengal to West Bengal Renewable Energy Development Agency, Kolkata. The Project is being implemented through NHPC Ltd. In view of the vast potential of tidal energy available owing to long coastline of the country, the Committee feel that the Ministry have a long way to go in order to harness the natural resources the nation is endowed with and fully endorse the initiatives taken by the Ministry in this regard. The Committee would like to be apprised of the status of the project.

Reply of the Government

Under the Tidal Energy Programme of the Ministry, a project for setting up a 3.75 MW tidal power plant at Durgaduani Creek in Sunderbans, West Bengal was sanctioned to the West Bengal Renewable Energy Development Agency (WBREDA), Kolkata on 18.02.2008. An MoU was signed between WBREDA and NHPC Ltd. for execution of the project by the NHPC Limited.

The NHPC floated global tenders to award the job of the power plant on EPC contract basis. Only one company from China submitted technical and financial bids. The technical bid was not responsive and the issues raised by the NHPC were not addressed by the company. The company was also not able to submit security from a bank recognized in India due to not enough policy support for foreign currency quota permitted by the Chinese Banking Regulatory Commission. Thus, NHPC could not award the work of the power plant to this Chinese company.

The progress of the project – implementation by NHPC Ltd. was reviewed by the Ministry and it was *inter-alia* suggested to NHPC that they relax eligibility criteria for the bidding, so that NHPC receives bids from more companies for execution of the project. Further action is being taken by NHPC.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C
dated 15.03.2010]

Recommendation (Serial No. 25)

The Committee endorse that hydrogen is a clear energy carrier with potential to replace liquid and gaseous fossil fuels. The Committee observe that the Ministry have been supporting research, development and demonstration on different aspects of hydrogen energy and fuel cell technologies. According to the Ministry, as on 30.06.2009, a total of 25 RD&D projects on different aspects of hydrogen energy and fuel cell technologies are under implementation and a 'National Hydrogen Energy and Fuel Cell Centre' at the estimated cost of Rs. 500 crore is being set up for which the draft DPR is under consideration of the Ministry. The Committee are aware that apart from performing other functions, the proposed centre would coordinate implementation of the National Hydrogen Energy Roadmap for achieving its goals and targets. The Committee would like to be apprised of the States in this regard in due course.

Reply of the Government

During 2009-10, the Ministry sanctioned seven new RD&D Projects, including three Technology Mission Mode Projects in the area of hydrogen energy.

Three of these projects relate to hydrogen production through biological routes, gasification of biomass and electrolysis of water using electricity generated by small wind turbines. The project on hydrogen production through biological routes is of Mission Mode nature and would be implemented over a period of five years and involves six institutions. The IIT, Kharagpur is the lead research institution for this project.

Two projects pertain to storage of hydrogen in hydrides and carbon materials and both of these projects are Mission Mode Projects with project duration of five years each. The lead research institute for the project on hydrogen storage in hydrides is the Banaras Hindu University (BHU), Varanasi and for the project on hydrogen storage in carbon materials is the IIT Madras, Chennai.

Other two projects were related to application of hydrogen in vehicles as fuel. One project is for development and demonstration of hydrogen fueled three wheelers involving BHU and M/s. International Cars and Motors Limited, Hoshiarpur. The other project is for use of hydrogen blended diesel in utility vehicle with a view to reduce emissions from diesel vehicles without having adverse impact on the performance of the vehicle. This project is being implemented by M/s. Mahindra and Mahindra, Nashik.

Four more RD&D project proposals relating to (i) hydrogen production from biomass submitted by National Institute of Technology, Rourkela; (ii) development of burners for use of hydrogen as fuel submitted by IIT, Kanpur; (iii) development of internal combustion engines using hydrogen as fuel submitted jointly by IIT, Delhi and Mahindra and Mahindra, Nashik; and (iv) lean limit extension for spark ignited direct injection engine through on-board hydrogen production through non-thermal plasma conversion, submitted by Annamalai University, Annamalainagar have also been recommended by RDPAC/RDSPAC of the Ministry for financial support by the Ministry during 2009-10 and are being processed for sanctioning.

A total of 31 RD&D projects in the area of hydrogen energy and fuel cells were under implementation as on 1.1.2010.

A DPR on National Hydrogen Energy and Fuel Cell Centre (NHEFCC) has been prepared. EFC Memorandum is under preparation. The total estimated cost of the project is about Rs. 560 crores.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C dated 15.03.2010]

Recommendation (Serial No. 26)

The Committee observe that the R&D expenditure during the first two years of 11th Plan was very low. While the expenditure during 2007-08 was Rs. 30.88 crore against budget allocation of Rs. 41.26 crore, the expenditure during 2008-09 was only Rs. 25.62 crore. The low expenditure was attributed to the delay in the process of consultation to finalise a comprehensive guideline which facilitate faster approval of

projects in line with the revised guidelines of the Ministry of Finance for the 11th Plan and a mechanism to take up good quality RD&D projects to achieve the goals set. The Committee are given to understand that the revised policy and guidelines were launched on 23rd July, 2008. In view of the lines already launched, the Committee desire that the Ministry should focus the R&D projects to achieve the objectives in time, so that the budget allocation of Rs. 75 crore for R&D support during 2009-10 would be expended fully in an effective manner.

Reply of the Government

The recommendation of the Committee has been noted and action taken by various divisions of the Ministry to strengthen R&D activities during the year 2009-10. In the current year, upto January, 2010 four Nos. of meetings of Research and Development Project Appraisal Committee, Research and Development Sectoral Project Appraisal Committee, Technology Demonstration Project Appraisal Committee have been organized and 21 numbers of new projects were recommended/sanctioned in various R&D areas of renewable energy amounting to about Rs. 100 crore. An amount of about Rs. 54 crore has been spent upto February, 2010 and the total expenditure is likely to be about Rs. 60 crore during the year. It may be seen that the sanctions for projects of about Rs. 100 crores were issued during the year which is more than the BE provision of Rs. 75 crore. However, funds are released according to progress and requirement of funds on project to project basis.

R&D Programmes

Under R&D activities, the Ministry have sanctioned 15 projects of biogas and 9 projects of biomass. Further the Ministry have launched the National Biomass Cookstoves Initiatives and a project entitled "A New Initiative for Development and Deployment of improved Cookstoves, Preparatory Activities for Lunch".

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C
dated 15.03.2010]

CHAPTER III

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

Recommendation (Serial No. 10)

The Committee find that the Ministry had sanctioned a project on preparation of Indian Wind Atlas to Centre for Wind Energy Technology (C-WET), Chennai in association with RISO National Laboratory, Denmark in November, 2006 at an estimated cost of Rs. 2 crore. During the examination of Demands for Grants of the MNRE for the year 2008-09, the Committee were informed that the project was expected to be completed by the end of 2008-09. On being enquired about the programme made in this regard, the Ministry have stated that the validation of the results for fine tuning for different regions is in progress and a small delay has occurred due to the need for extensive validation of the models in some of the selected regions. The Ministry have informed that the Wind Atlas is expected to be completed by the end of 2009. The Committee are concerned to observe that such an important project of preparation of Wind Atlas of the country on which the whole wind energy programme is dependent to get vital input in terms of identification of windy locations and the development of wind energy, is getting delayed for reasons which are routine in nature and are avoidable. The Committee expect that the project will be completed in the revised time schedule needless to emphasise that the Ministry would monitor it on regular basis.

Reply of the Government

The work on Indian Wind Atlas has almost been completed. Draft Indian Wind Atlas has been approved for publication by a Technical Experts Committee and the Final Atlas is likely to be published by end of March, 2010.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C
dated 15.03.2010]

Recommendation (Serial No. 20)

The Committee are dismayed to observe that during the last two years, against the physical target of 50 MW under waste-to-energy programme, the achievement was only 29.74 MW. Further, against the budget allocation of Rs. 27.05 crore, the Ministry could expend only Rs. 19.46 crore. The Ministry had attributed the less expenditure to the stay on Government support for Municipal solid waste based projects by the Supreme Court during hearing on a PIL in May, 2005, which was vacated only in May, 2007. Further, according to the Ministry, the delay in development of projects was due to the provision for disbursement of funds only after the release of 50% of bank loan. Since the said stay order by the Supreme Court was vacated way back in May, 2007, the reasons extended by the Ministry being routine in nature, are not acceptable to the Committee. The Committee, therefore, desire that utmost importance should be given to expedite development of projects on energy recovery from Municipal Solid Wastes (MSW) and the amount of Rs. 12.00 crore allocated for 2009-10 under urban waste to power programme should be fully expended. By utilizing the huge potential of Municipal Solid Waste available in most urban cities, the Committee feel that Urban Waste to Energy Power programme will not only help in getting away MSW from cities but also help in power generation.

Reply of the Government

Subsequent to the judgment given by the Supreme Court for setting up of five projects on energy recovery from municipal solid waste, three projects have so far been developed but they are taking unexpectedly long time to fructify. Work has not commenced on the 16 MW project awarded by Delhi Government for Okhla in Delhi in January, 2008. The status is the same for the second project awarded for Gazipur, Delhi in October, 2008, as well. As regards the 8.00 MW project taken up in Bangaluru, the Monitoring Committee has made certain observations for ensuring success of this project, as such funds could not be released even for this project.

The larger issue in respect of the subject of Energy Recovery from Municipal Solid Waste (MSW) continues to be the slow progress in implementation of MSW (Handling and Management) Rules, 2000, thus not leading to improvement in quality of waste which can be achieved through source segregation of various constituents of MSW. Ministry of New and Renewable Energy has no involvement in this matter. The progress in respect of such projects can only be expedited if the Ministry of Urban Development and the Urban Local

Bodies take necessary measures for improving the waste management at a fast pace.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C
dated 15.03.2010]

Recommendation (Serial No. 27)

The Committee observe that the proposals regarding reduction/abolition of taxes/duties being levied on various equipments and materials used in Solar Thermal Energy Sector and Wind Energy Sector of renewable energy are under consideration of the Ministry of Finance. As the proposals sent by the MNRE this year are vital in nature, the Committee desire that the matter may be pursued with the Ministry of Finance for early approval so that the renewable energy programmes gets fresh momentum.

Reply of the Government

The Ministry has actively pursued the matter with Ministry of Finance and the following concessions for renewable energy sector have been announced in the recent Budget:—

Wind Power Sector

The Government already provides for concessional custom duty on import of major components and materials for manufacture of wind turbines. During the year 2009-10, an additional item *viz.* permanent magnet has been added for concessional custom duty for manufacture of Generators of 500 KW and higher capacity wind turbines.

Excise duty exemption is also being provided on major components for manufacture of wind turbines. In the recent budget announcement on 26.02.2010, two more items *viz.* Polyester based infusion resin and hand layup resin and Gel coat and hardener which are required for manufacture of rotor blades for wind turbines, have been added to the list of items exempted from Excise Duty.

Solar Energy Sector

All items of machinery require for initial setting up of solar power generation project or facility have been exempted from the whole of excise duty. The Budget has also exempted import of all such items of machinery and components from customs duty in excess of 5% *ad-veloram*.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C
dated 15.03.2010]

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 (Serial No. 6)

The Committee observe that the Grid-interactive and Off-Grid Renewable Power Programme, being related to renewable power generation, is the most important section and can be termed as the mother of all the renewable programmes. The Committee feel that in the present scenario of climate change and global warming, the need to focus more and more on clean sources of the energy as compared to the conventional fossil fuel has assumed much significance. However, a scrutiny of the data made available by the Ministry on achievements made during the year 2009-10 so far in terms of power generation reveals that against the target of 3224 MW Grid Power, only 429 MW has been achieved till 31st July, 2009 which is barely 13.3 per cent of the target. The situation in off-grid section is more gloomy as only 6.56 MWeq. has been achieved till 31st July, 2009 against the annual target of 95.80 MWeq. which forms 6.84 per cent of the target. What is further disquieting is the fact that the achievement is badly lagging behind the target in all the segments of the Grid-Power and Off-Grid Distributed Renewable Power Programme. The Committee desire that in order to ensure the conversion of targets into achievements in the current financial year, the Ministry should launch special campaign for promoting Grid-interactive and especially Off-grid programme.

Reply of the Government

During 2009-10 a total capacity addition of about 1300 MW Grid Interactive power and 57 MWeq of distributed power has been reported upto 31st Jan 2010. The shortfall is mostly due to recession observed in the Wind industry. Targets in case of Biomass have already been achieved and in Small Hydro Power it is likely to be fully achieved. However, the

Ministry is regularly reviewing the situation for maximum achievement of targets.

Details are as follows:—

A. Grid Interactive Power in MW

Programme	Target	Achievement (As on 31.01.2010)
Wind Power	2500.00	708.00
Small Hydro Power	300.00	165.85
Bio-power	405.00	414.80
Urban Industrial Waste to Power	15.00	4.72
Solar Power	4.00	8.10
Total	3224.00	1301.47

B. Off Grid Power in MWeq

Programme	Target	Achievement (As on 31.01.2010)
Waste to Power	10.00	10.28
Co-generation (Non-Bagasse)	50.00	40.00
Gasifier (Rural)	3.00	1.20
Gasifier (Industrial)	10.00	4.00
Aero-gen/Hybrid System	0.30	0.10
SPV Plants+Street Lights	5.00	0.086
Water mills/Micro mini Hydell Plants	17.50	1.75
Total	95.80	57.42

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C dated 15.03.2010]

Comments of the Committee

(Please see Para No. 8 of Chapter-I of the Report)

Recommendation (Serial No. 8)

The Committee find that the budget allocation of Rs. 7.00 crore for wind power programme during 2009-10 is too less as compared to

BE of Rs. 22.25 crore in 2008-09. The Committee have been given to understand that in the previous years, the budget estimates for wind energy programme included the budgetary support for the Centre for Wind Energy Technology, whereas, during 2009-10, Rs. 8.40 crore has been separately allotted for C-WET under a different budget head "Research Institutions/Centres". The Committee recommend that evaluations of the projects and expenditure position need to be carried out to ensure to achieve the target of 2500 MW grid-interactive power capacity addition from wind power fixed for 2009-10.

Reply of the Government

Noted

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C dated 15.03.2010]

Comments of the Committee

(Please *see* Para No. 11 of Chapter-I of the Report)

Recommendation (Serial No. 12)

The Committee observe that during 2008-09, the budget for SHP Programme was enhanced from Rs. 57.50 crore to Rs. 82.50 crore at RE stage to meet the financial requirement of the project on 'Electrification/illumination of border villages of Arunachal Pradesh' which was started in November, 2008 as per the announcement made by the Prime Minister during his visit to the State in February, 2008. Further, out of the total allocation of Rs. 107 crore for the year 2009-10, the Committee note that an allocation of Rs. 65.00 crore has been made for the border village electrification project in Arunachal Pradesh and Rs. 42 crore has been earmarked for other States with a target to achieve 275 MW of Small Hydro electricity. The Ministry have been able to release Rs. 53.93 crore for the border village electrification project in Arunachal Pradesh, while an expenditure of Rs. 14.46 crore has been incurred in rest of the States against the financial allocation of Rs. 42 crore and capacity addition of 72 MW has been achieved against the target of 275 MW till 30th September, 2009. Moreover, on analyzing the data furnished by the Ministry it has come out that the capacity addition during the first and second quarters of 2009-10 was 25 MW and 47.47 MW respectively. Against this backdrop, the Ministry have expected to achieve 71MW and 165 MW in third and fourth quarters respectively. While appreciating the optimism shown by the Ministry for achieving the remaining target during the year, the Committee are at the same time apprehensive about the Ministry's version keeping in view both the financial and physical performance

shown by them so far. The Committee, therefore, recommend that both the initiatives and monitoring may be strengthened by the Ministry particularly in the potential States in order to ensure that their efforts are translated into the results.

Reply of the Government

An expenditure of Rs. 98.87 crore has been incurred, as on 24.02.2010, against an allocation of Rs. 107 crore under the SHP programme during 2009-10 and it is expected that the entire allocation will be utilized.

[Ministry of New and Renewable Energy O.M. No. 8/6/2009-P&C
dated 15.03.2010]

Comments of the Committee

(Please *see* Para No. 14 of Chapter-I of the Report)

CHAPTER V

OBSERVATIONS/RECOMMENDATIONS IN RESPECT OF WHICH
FINAL REPLIES OF THE GOVERNMENT ARE
STILL AWAITED

– NIL –

NEW DELHI;
30 July 2010

09 Shravana, 1932 (Saka)

MULAYAM SINGH YADAV,
Chairman,
Standing Committee on Energy.

APPENDIX I

MINUTES OF THE SEVENTEENTH SITTING OF THE STANDING COMMITTEE ON ENERGY (2009-10) HELD ON 17TH JUNE, 2010 IN COMMITTEE ROOM '62' PARLIAMENT HOUSE, NEW DELHI

The Committee sat from 1100 hrs. to 1335 hrs.

PRESENT

Shri Mulayam Singh Yadav — *Chairman*

MEMBERS

Lok Sabha

2. Shri Adhir Ranjan Chowdhury
3. Shri Ram Sundar Das
4. Shri Shripad Yesso Naik
5. Shri Sanjay Nirupam
6. Shri Jagdambika Pal
7. Shri Nityananda Pradhan
8. Shri M.B. Rajesh
9. Dr. K.S. Rao
10. Shri Radha Mohan Singh
11. Shri E.G. Sugavanam

Rajya Sabha

12. Shri Motilal Vora
13. Shri Bhagat Singh Koshyari
14. Shri Shivpratap Singh
15. Shri Shyamal Chakraborty

16. Shri Govindrao Wamanrao Adik
17. Shri Mohammad Shafi
18. Prof. Anil Kumar Sahani

SECRETARIAT

1. Shri Brahm Dutt — *Joint Secretary*
2. Shri N.K. Pandey — *Additional Director*
3. Shri Rajesh Ranjan Kumar — *Deputy Secretary*

At the outset, the Chairman welcomed the Members of the Committee ***

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6. The Committee then took up for consideration/adoption the draft 7th Report on the Action Taken by the Government on the recommendations contained in the 2nd Report on the Demands For Grants of the Ministry of New and Renewable Energy for the year 2009-10. The Committee adopted the same with verbal changes and authorized the Chairman to finalise the report and present the same to both the Houses of Parliament.

The Committee then adjourned.

*** Matter not related to this Report.

APPENDIX II

(Vide Introduction of Report)

ANALYSIS OF ACTION TAKEN BY THE GOVERNMENT ON THE OBSERVATIONS/RECOMMENDATIONS CONTAINED IN THE SECOND REPORT (15TH LOK SABHA) OF THE STANDING COMMITTEE ON ENERGY

- (i) Total number of Recommendations:— 27
- (ii) Observations/Recommendations which have been accepted
by the Government:—
Sl. Nos. 1, 2, 3, 4, 5, 7, 9, 11, 13, 14, 15, 16, 17, 18, 19, 21,
22, 23, 24, 25 and 26
Total: 21
Percentage: 77.77%
- (iii) Observations/Recommendations which the Committee do
not desire to pursue in view of the Government's replies:—
Sl. Nos. 10, 20 and 27
Total: 03
Percentage: 11.11%
- (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. 6, 8 and 12
Total: 03
Percentage: 11.11%
- (v) Observations/Recommendations in respect of which final
replies of the Government are still awaited:—
Sl. No. Nil
Total: Nil
Percentage: 00%