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**STANDING COMMITTEE ON ENERGY**

**(2015-16)**

**SIXTEENTH LOK SABHA**

**MINISTRY OF NEW AND RENEWABLE ENERGY**

**[Action Taken on the recommendations contained in the  
Thirteenth Report (16<sup>th</sup> Lok Sabha) on Development and Status of  
Small Hydro Sector]**

**TWENTY-FIRST REPORT**



**LOK SABHA SECRETARIAT  
NEW DELHI**

***August, 2016/Shravana, 1938 (Saka)***

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**STANDING COMMITTEE ON ENERGY**  
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**MINISTRY OF NEW AND RENEWABLE ENERGY**

**[Action Taken on the recommendations contained in the Thirteenth Report  
(16<sup>th</sup> Lok Sabha) on Development and Status of Small Hydro Sector]**

*Presented to Lok Sabha on 05.08.2016*

*Laid in Rajya Sabha on 05.08.2016*



**LOK SABHA SECRETARIAT**  
**NEW DELHI**

*August, 2016/Shravana, 1938 (Saka)*

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**COMPOSITION OF THE STANDING COMMITTEE ON ENERGY  
(2015-16)**

**LOK SABHA**

**Dr. Kirit Somaiya - Chairperson**

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4. Shri Ashwini Kumar Choubey
5. Shri Harish Dwivedi
6. Shri Deepender Singh Hooda
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16. Shri M.B. Rajesh
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18. Shri Gutha Sukender Reddy
19. @Shri P.A. Sangma
20. Shri Devender Singh alias Bhole Singh
21. Shri Malyadri Sriram
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31. Shri Ananda Bhaskar Rapolu
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33. \*\*Dr.Vinay P. Sahasrabuddhe
34. Shrimati Viplove Thakur

**SECRETARIAT**

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

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*# Ceased to be Member of the Committee w.e.f. 05.07.2016*

*@ Expired on 04.03.2016*

*@@ Retired from Rajya Sabha w.e.f. 04.07.2016*

*## Resigned from Rajya Sabha w.e.f. 08.06.2016*

*^ Nominated as member of the Committee w.e.f. 28.07.2016*

*^^ Retired from Rajya Sabha w.e.f. 01.07.2016*

*\* Retired from Rajya Sabha w.e.f. 29.06.2016*

*\*\* Nominated as member of the Committee w.e.f. 25.07.2016*

## **INTRODUCTION**

I, the Chairperson, Standing Committee on Energy having been authorized by the Committee to present the Report on their behalf, present this Twenty-first Report on the action taken by the Government on the recommendations contained in Thirteenth Report of the Standing Committee on Energy on 'Development and Status of Small Hydro Sector'.

2. The Thirteenth Report was presented to the Lok Sabha on 14th March, 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 9th June, 2016.

3. The Report was considered and adopted by the Committee at their sitting held on 3rd August, 2016.

4. An Analysis on the Action Taken by the Government on the recommendations contained in the Thirteenth Report of the Committee is given at Appendix-II.

5. The Committee appreciate that the Ministry have accepted all the recommendations of the Committee.

**NEW DELHI**  
**03 August, 2016**  
**Shravana 12, 1938 (Saka)**

**Dr. Kirit Somaiya,**  
**Chairperson,**  
**Standing Committee on Energy**

## CHAPTER – I

This Report of the Standing Committee on Energy deals with the action taken by the Government on the Recommendations/Observations contained in their Thirteenth Report (Sixteenth Lok Sabha) on 'Development and Status of Small Hydro Sector'.

2. The Thirteenth Report was presented to Lok Sabha on 14th March, 2016 and was laid on the Table of Rajya Sabha on the same day. The Report contained 15 Recommendations/Observations.

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

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

Serial Nos.1,2,3,4,5,6,7,8,9,10,12,13,14 and 15	Total - 14
	Chapter-II

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

Nil	Total - 00
	Chapter-III

- (iii) Recommendations/Observations in respect of which the replies of the Government have not been accepted by the Committee and which require reiteration:

Nil	Total-01
	Chapter-IV

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

Serial No. 11	Total-01
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4. The Committee appreciate that the Ministry have accepted all the recommendations of the Committee. The Committee however, desire and expect the Ministry to implement the recommendations of the Committee in letter and spirit, in a time bound manner. They further desire that Action Taken Notes on implementation of the Recommendations/Observations contained in the Report may be furnished to the Committee within three months of the presentation of this Report.

## **CHAPTER II**

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

**Status of implementation of the recommendations of the Committee contained in the Thirteenth Report, under Direction 73A of the 'Directions by the Speaker'**

**(Recommendation Sl. No.1)**

The Committee note that the Government of India's ambitious renewable power mission of 1,75,000 MW (hydro 5,000 MW; biomass 10,000 MW; solar 100,000 MW; wind 60,000 MW) by 2022 need to be balanced by supplementary power projects to balance the generation/supply of power with the solar/renewable power generation. As the renewable/solar power will be available for 8+ hours, the power supply for balancing 8 to 16 hours will have to be done by a power technology like hydro power projects. The thermal power and the nuclear power are required to be run round the clock. Hydro power can be stopped/closed when solar power is available. The balance to solar power can be generated with the help of hydro projects; small hydro/mini hydro power projects. On the background of the above, the Committee feel that there is a need to give greater importance/priority to mini/small hydro power projects. The Committee observe that mini hydro power projects momentum got lost in the so called mini hydro power projects scam/non-transparency which got attracted in major regions like Arunachal Pradesh, Uttarkhand, Himachal Pradesh and Sikkim. The Committee recommend that :

- (i) Government may appoint a task force/committee to have an action plan along with time bound programme to settle down the issues of mini hydro projects.
- (ii) Priority may be given to mini hydro power projects which are being planned to take up on the river/dam back water.

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

Reply No. i. Suggestion of the committee has been noted. Ministry has been assigned to achieve the target of 5000MW by 2022 through SHP in 24X7 Power for All.

Reply No. ii. Suggestion of the committee has been noted. Ministry implement SHP programme as per the provisions contained in the administrative approval No. 14 (03) 2014-SHP dated 2<sup>nd</sup> July 2014. Projects are considered for allotment irrespective of capacity first on come first basis there is no provision of priority or priority

scheme. Ministry is of opinion that keeping priority for the river/dam back water projects may lead to objection by developers.

[Ministry of New and Renewable Energy  
File No.1/4/2015-SHP dated: 09/06 /2016]

**(Recommendation Sl. No.2)**

The Bhakra Beas Management Board briefed the Committee that 28 mini hydro power projects may be developed/planned on such river/dam back water, but the projects could not be taken up due to lack of attention/coordination between the State Governments/BBMB/Ministry of MNRE/Power etc. The committee recommend that:

- (i) Top priority be given to these projects and the problems/ issues should be sorted out at the earliest.
- (ii) The past performance on the implementation of mini hydro projects demands attention.
- (iii) Government of India must take initiative/ coordinate/ motivate and encourage State Governments/ PSUs in this regard as the efficient performance on implementation of mini hydro is very important.

**Reply of the Government**

Reply No. i. Suggestion of the committee has been noted. Ministry deals with projects in uniform manner. Ministry tries to restore problems/issues associated in implementation of SHP project.

Reply No. ii. Suggestion of the committee has been noted.

Reply No. iii. Suggestion of the committee has been noted. Ministry implement SHP programme as per the provisions contained in the SHP scheme announced vide Administrative Approval No.14 (03) 2014-SHP dated 2<sup>nd</sup> July 2014. There is a separate sub scheme for implementation of SHP projects by state government which is open to include state owned PSUs also. Most of the SHP projects are implemented by State government or their PSUs.

[Ministry of New and Renewable Energy  
File No.1/4/2015-SHP dated: 09/06 /2016]

**(Recommendation Sl. No.3)**

The Committee note that the Ministry of New & Renewable Energy has been entrusted with the responsibility of developing small, micro and mini hydro power upto 25 MW capacity. Water being a subject in the State

List gives the States a decisive say in matters of small hydro power projects. As the State Governments do not involve themselves directly in the development of small hydro power projects, the participation of private developers becomes essential for the development of the sector. The involvement of multiple agencies is a kind of barrier for the expeditious development of the available small hydro potential. Within the given situation, a well coordinated mechanism needs to be evolved with the participation of all the stake holders concerned. The Government of India do not set up small hydro power projects as such and they act only as a catalyst by providing Central financial assistance to the State Governments and to private entrepreneurs. In addition, the Ministry may organize technical support towards survey and investigation, preparation of DPRs, project monitoring and training through the Alternate Hydro Energy Centre. The small hydro power sector is primarily private investment driven and projects are allocated by the State Government for implementation. The Committee, therefore, recommend that :

- (i) Steps should be taken to attract more investment in the small hydro power sector from private entrepreneurs and State Governments.
- (ii) The incentive schemes for the sector should be made more attractive involving single window clearances for such projects. Identification of sites, preparation of DPRs, obtaining of clearances, survey and investigation, etc. should be a pre-requisite before allocation of a small hydro power project to an interested developer.

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

Reply No. i. Suggestion of the committee has been noted. Private sector don't find SHP as attractive proposition as the tariff of power generated from SHP projects, low rate of average pool power purchase rate in Himachal Pradesh and non-sale of REC in open market.

Reply No. ii. Suggestion of the committee has been noted.

[Ministry of New and Renewable Energy  
File No.1/4/2015-SHP dated: 09/06 /2016]

#### **(Recommendation Sl. No.4)**

The Committee note that small hydro power projects usually do not encounter the problems associated with the large hydro power projects like land acquisition, deforestation and re-settlement. These projects have the

potential to meet the power requirements of remote and isolated areas. The sector has the added advantage to make the small hydro as an renewable source of grid quality power generation. For this to happen, the policy framework requires to be reoriented and made uniform all across. The reliability and quality of projects is another important factor. For the purpose, state-of-the-art technology may be developed and adopted while setting up the projects. Priority should be given for development of efficient designs of water mills for mechanical as well as electrical generation. The Committee observe that for accelerating the pace of hydro development, public and private sector participation for commercial projects and decentralized micro hydel in remote villages electrification are essential. The Committee, therefore, recommend that :

- (i) Small hydro power projects should have smaller gestation period as they are free from problems like deforestation and resettlement.
- (ii) To achieve faster pace of small hydro development, public and private sector participation should be encouraged.
- (iii) To improve reliability and quality of small hydro power projects, their annual energy audit should be made mandatory. This should also include the quality of the machinery of the power project.

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

Reply No. i. Suggestion of the committee has been noted. SHP projects upto 25 MW station capacity are placed in “White category” and do not attract environmental clearance. However, all other statutory clearances under Forest Right Act (FRA) from State Government and Forest Clearances are necessary for implementation of project.

Reply No. ii. Suggestion of the committee has been noted. This observed that Private sector don't find SHP as attractive proposition as the tariff of power generated from SHP projects, low rate of average pool power purchase rate in Himachal Pradesh and non-sale of REC in open market.

Reply No.iii. Suggestion of the committee has been noted. The reliability and quality of project most of the time depend on availability of design discharge.

[Ministry of New and Renewable Energy  
File No.1/4/2015-SHP dated: 09/06 /2016]

## Small/Mini Hydel potential

### (Recommendation SI. No.5)

The Committee note that the estimated potential for power generation in the country from small hydro projects (upto 25 MW capacity) is 19749 MW from 6474 identified sites, and as on 31<sup>st</sup> August, 2015, a cumulative capacity of 4146.905 MW has been set up from 1047 project sites and projects of about 591.71 MW are in various stages of implementation. The Committee find that only 20 per cent of the estimated potential in the country has been exploited so far. A scrutiny of the State-wise data reveals that the performance of the States with maximum potential has been far from satisfactory. Thus, against the identified potential of 1341.38MW in Arunachal Pradesh, only 104.605 MW capacity (7.8 %) has been installed. Likewise, in Chhattisgarh, Himachal Pradesh, Jammu & Kashmir and Uttarakhand, against estimated potential of 1107.15MW, 2397.91MW, 1430.67MW and 1707.87MW, the installed capacity is 52MW (4.69%), 754.81MW (31.4%), 156.53MW (10.94%) and 156.53MW (10.94%), respectively. The Committee have taken note of the cumulative capacity addition target of 4700 MW from small hydro projects by the end of the 12th Plan. To achieve this target, the Ministry needs to achieve about 500 MW during the year 2016-17. Even if the projected figure of 4700 MW of cumulative capacity of SHP projects is to be achieved by the end of the 12th Plan, the total installed capacity would be only about 23 per cent of the identified potential. The Committee also note the constraints involved in the construction of small hydro projects and the limited role of the Ministry. However, the Ministry is playing the role of catalyst by way of facilitating and guiding the States, providing subsidy to the projects to improve their economic viability and create technical support services. In the light of these, the Committee observe/recommend that:

- (i) the development of the small hydro potential in the country has been less than satisfactory, and by the end of the 12th Plan, it will only be 23 percent of the identified SHP potential.
- (ii) The Ministry should step up its efforts by closely monitoring the projects and their performance.
- (iii) Interaction with the States who are developing SHPs themselves and private developers should be direct more frequent and result oriented.
- (iv) Besides monitoring the ongoing projects, new sites having potential should also be identified.
- (iv) The Ministry should come out with a concrete plan of action to expedite the huge untapped potential at a faster pace and in a time-bound manner.

### **Reply of the Government**

Reply No.i.Noted. Ministry has assigned to achieve target of 5000MW by 2022 through SHP in 24X7 Power for All.

Reply No.ii.Suggestion of the committee has been noted. Ministry have vigorously monitored the progress of Small Hydro projects by (1) holding frequent meetings with State governments and SHP developers, (2) visits by MNRE officers for onsite monitoring of the SHP projects and (3) visit by technical team of Alternate Hydro Energy Centre (AHEC), established in Indian Institute of Technology (IIT) Roorkee, to provide on the spot technical advice to SHP developers.

Ministry makes progress linked releases of sanctioned CFA for project. In addition to this ministry have general instruction for project developer that the progress report of the work on the project will be maintained on quarterly basis including photographs and submitted to ministry. The expenditure on this account may be charged to the project account under head "contingencies". The progress report of will be reviewed/monitored quarterly as well as once in a year by the ministry. Ministry may also designate Scientist/experts for periodical visits to the project.

Reply No.iii. Suggestion of the committee has been noted.

Reply No.iv. Suggestion of the committee has been noted.

Reply No. v. Suggestion of the committee has been noted.

[Ministry of New and Renewable Energy  
File No.1/4/2015-SHP dated: 09/06 /2016]

### **11<sup>th</sup> and 12<sup>th</sup> Five Year Plan performance**

#### **(Recommendation Sl. No.6)**

The Committee appreciate the overall achievement under the small hydro during the 11th Plan. Against the targeted capacity addition of 1400 MW for the 11<sup>th</sup> Plan, 1419 MW was achieved, which is more than the targeted capacity. Reportedly, the achievement so far under the 12th Plan is very discouraging, i.e. against a capacity addition target of 1300MW, as on December, 2015, only 781.55 MW could be achieved (forming only 60.11 per cent of the target), leaving a daunting task ahead to achieve about 40 per cent of the total target of the 12<sup>th</sup> Plan in less than one and a half years. Keeping in view the performance so far during the current Plan period (except 2014-15), the Committee feel that the task ahead is certainly

challenging and the Ministry do not have any other option but to tighten their monitoring and coordination mechanism in order to get the desired results from the developers and the State Nodal Agencies. No doubt, a cohesive, well coordinated and dynamic management would be required to achieve the objectives. The Committee, therefore, recommend that:

- (i) Reasons for non-achievement of targets during the 12th Plan Period should be ascertained.
- (ii) Strategy should be redrawn to achieve the outstanding targets in the remaining time frame of the 12th Plan period.
- (iii) Fiscal and financial targets should correspond with each other.

### **Reply of the Government**

Reply No.i. Suggestion of the committee has been noted. Generic constraints being faced in implementation of SHP project in states includes delays in obtaining the statutory clearances from state governments, forest clearance from MOEFCC which in turn causes not only delay in implantation of the project but also escalates the cost of the projects. To overcome such delays, MNRE has time and again approached/requested state governments and MOEFC to set up a time line for providing all statutory clearances. A meeting has also been held with Additional Secretary MOEFC and MNRE submitted its requested again. Till now during XII plan following achievement have been made:

<b>S.NO.</b>	<b>Year</b>	<b>Target(MW)</b>	<b>Achievement(MW)</b>
1	2012-13	250	236
2	2013-14	250	171
3	2014-15	250	251
4	2015-16	250	218.6
	<b>Total</b>	<b>1000</b>	<b>640.6</b>

Reply No.ii. Suggestion of the committee has been noted. Ministry is pursuing with the implementation Agency of States to expedite completion/commissioning of SHP projects.

Reply No.iii. Suggestion of the committee has been noted.

[Ministry of New and Renewable Energy  
File No.1/4/2015-SHP dated: 09/06 /2016]



(Recommendation Sl. No.7)

The Committee note that the planned target of 1,300 MW of the 12th Plan seems unattainable. The delay in announcing the SHP scheme and slow pace of implementation of projects have been attributed as reasons for the same. The Committee further note that the Ministry is in touch with the Ministry of Environment, Forest and Climate Change for solving issues related to various clearances for SHP Projects and also with the State Governments to ease the process of obtaining statutory clearances. Low progress has also been attributed to difficult locations of the project, slow working sessions in hilly areas and involvement of private and forest land in setting up the projects. The risk of natural calamities, resistance from local residents and delay in allotment of sites have also been cited as reasons for the delay. The Committee note that these reasons are extremely routine in nature and unless they are addressed, no SHP can be set up. Hence, they are not convinced with the reasons attributed for the delay in achieving the targets. The Committee also would like to know about the role of the Ministry of Environment, Forest and Climate change in setting up of SHPs. In the light of the foregoing, the Committee recommend that :

- (i) The Ministry should not proffer routine excuses for non-performance;
- (ii) Budgetary allocation should be adequate to ensure that a project does not stop midway for want of funds;
- (iii) Process of clearances should be streamlined and made time-bound.

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

Reply No.i. Suggestion of the committee has been noted.

Reply No.ii.Suggestion of the committee has been noted. The financial allocation for the small hydro programme for the 12th Plan is of Rs. 825 crore.

S.No	Components	Budget in Rs. Crore					
		12 <sup>th</sup> Plan	2012- 13	2013- 14	2014- 15	2015- 16	2016- 17
1	Grid connected	750	141	135	140	160	170
	DSI & DPR	20	-	4	5	5	6
	State Projects	300	72	50	50	60	68
	Private Projects	385	59	73.5	81	86.5	85
	R&M	40	10	7	7	7	9
	Monitoring	5	-	0.5	1	1.5	2
2	Off Grid						

	Water Mills/ Micro Hydel	40	10	7	7	7	9
3	R&D	35	8	10	5	6	6
Total		825	159	152	152	176	185

Whereas year-wise details of funds provided during the Plan Period, has been as follows:

Period	Target (RE) (Rs. in Crore)
12th Plan	
2012-13	159.00
2013-14	123.18
2014-15	108.00
2015-16	105.05
2016-17	125.00 (BE including Rs.27 Crore for North East)
Total	620.23

Reply No.iii. Suggestion of the committee has been noted.

[Ministry of New and Renewable Energy  
File No.1/4/2015-SHP dated: 09/06 /2016]

### **Micro Hydel Projects and Water Mills**

#### **(Recommendation SI. No.8)**

The Committee note that there is a significant potential for development and upgradation of water mills and micro hydro projects (up to 100 kW) in the country and that water mills and micro hydro projects lead to micro entrepreneurship development which would further meet the power requirements of remote areas, particularly hilly and mountain areas, in a decentralized manner. The Committee are informed that new designs of water mills have been developed which are 2 to 3 times more efficient than the traditional in water mills. The Committee do appreciate the steps taken by the Ministry to promote production of scientifically improved designs of the water mills with better efficiency, longer life and diversified uses. The Committee, therefore, recommend that :

- (i) The cost of installation of improved designs of water mills and Central Financial Assistance be managed in a realistic manner, keeping in mind the affordability for the end-users.

- (ii) The production of the improved version of water mills in large scale may also be linked with their maintenance, so that spare parts and technical/mechanical services are easily available at reasonable cost.

### **Reply of the Government**

Reply No.i. Suggestion of the committee has been noted. Cost of installation of water mills of all designs and Central Financial Assistance are well managed. Ministry is in receipt of request for allocation of target regularly.

Reply No.ii. Suggestion of the committee has been noted. Private entrepreneurs are involved in production. Production depends on demand. Maintenance / AMC is prerogative of user.

[Ministry of New and Renewable Energy  
File No.1/4/2015-SHP dated: 09/06 /2016]

### **(Recommendation Sl. No.9)**

The Committee observe that besides lighting, water mills are providing income generating opportunity to the villagers as it is used for grinding, wool carding, as oil expeller and for small cottage industries. The Committee feel that the mechanical and electrical uses of the water mills and their socio-economic value make it a significant tool in enhancement of the economic activities and betterment of the opportunities of livelihood for the people of remote and inaccessible areas where grid connectivity is not feasible. The Committee are informed that to encourage and accelerate the development of water mills and Micro Hydel Projects in the remote and hilly areas, the Ministry is providing Central Financial Assistance. The Committee, therefore, recommend that :

- (i) The promotional programmes and financial assistance for watermills be spread on a large scale and implemented in potential areas by involving local bodies, NGOs, Associations etc.
- (ii) Appropriate mechanism be developed to ensure that the financial assistance is reaching the intended beneficiary and result achieved on desired lines.

### **Reply of the Government**

Reply No.i. Suggestion of the committee has been noted. The SHP scheme contains provision to consider allocation of target for water mills to local bodies/Co-operatives/ NGOs etc.

Reply No.ii. Suggestion of the committee has been noted.

[Ministry of New and Renewable Energy  
File No.1/4/2015-SHP dated: 09/06 /2016]

### **SHP incentive schemes**

#### **(Recommendation SI. No.10)**

The Committee note that to develop the SHP sector, the Ministry of New and Renewable Energy have been providing financial support/subsidy for the activities related with Research & Development, capacity building, Resource Assessment, Detailed survey & investigation, DPR preparation and perspective plan for States, capital subsidy to State sector projects, subsidy for commercial projects, Renovation & modernization of old SHP projects (State Sector) and water mills/micro hydel projects. The Committee are aware that the Government is providing financial assistance to States, private entrepreneurs, etc. to boost the sector. The Committee observe that during the year 2014-15, financial support/subsidy provided for development of SHP amounts to Rs.10.5 crore. Considering the huge gap in the potential and the installed capacity, the present level of targets in this regard for achievement is not very encouraging. The Committee, therefore, recommend that the incentives and subsidies extended as financial assistance for development of the hydro sector may be reviewed and all out efforts should be made to encourage entrepreneurs.

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

Reply No.i. Suggestion of the committee has been noted. Implementation of SHP programme during 10<sup>th</sup> plan as well as 11<sup>th</sup> plan has been evaluated

[Ministry of New and Renewable Energy  
File No.1/4/2015-SHP dated: 09/06 /2016]

### **Ladakh Renewable Energy Initiative**

#### **(Recommendation SI. No.12)**

The Committee note that the 'Ladakh Renewable Energy Initiative' project was approved on 23 April, 2010 with a projected cost of Rs.473 crore, envisaging setting up of small hydro power projects, solar photovoltaic and solar thermal systems. The project was originally approved for implementation in three and a half years beginning from 1 June, 2010. The Committee are surprised to find that after 5 years, the project has not been

commissioned till now due to site constraints, and the Committee are informed that the project duration has been extended till December, 2017. The slow progress has been attributed to limited working seasons, remoteness and cut off of the region. The Committee feel that these hurdles are a known fact in an area like Ladakh and the initiative had been taken up knowing all the probable hurdles. These problems could be tackled by proper planning, monitoring and concerted efforts. The Committee, therefore, recommend that the Ministry should review the feasibility and accessibility of the various renewable energy sources, other than small hydro, in the Ladakh area and make all out efforts for their implementation, by evolving a proper coordination mechanism with the State Government.

### **Reply of the Government**

Reply No.i. Suggestion of the committee has been noted to Prime Minister's announced programme i.e. "Ladakh Renewable Energy Initiative" includes installations of following: -

S No.	Activity
1	Small/Micro Hydro Projects
2	SPV Power plants and Lighting systems
3	Solar water Heating / Cooking / Solar passive heating / Green house / Solar dryers
4	Capacity building, Training, Consultancy etc.

[Ministry of New and Renewable Energy  
File No.1/4/2015-SHP dated: 09/06 /2016]

### **National Mission on Small Hydro**

#### **(Recommendation Sl. No.13)**

The Committee note that the objective of the National Mission on Small Hydro is to address issues responsible for the decline of the SHP sector in the country and to regenerate interest among the government, the community and the private sector to develop and make investment in this renewable energy sector. The target of the Mission is to achieve 500 MW of capacity in the next two years and aim towards adding 4500 MW in the subsequent three years. The Committee are informed that an investment of Rs. 50,000 crore is being infused primarily in the rural economy and about Rs.5,000 crore as support from the Government of India. The Mission also aims to set up 1000 MW SHP projects on canal drops, dam outlets, spillways and water outfall structures and to renovate old SHP projects to improve their capacity and efficiency. The Committee appreciate the initiatives of the Ministry, the objective of which is to revamp the small hydro sector. The Committee are, however, concerned to find that under the Mission, no year-wise/phase-wise physical targets have been set; it merely envisages total

installation of 5000 MW SHP capacity by 2022. Similarly, there is no budgetary allocation despite the fact that substantial investment will be required to achieve the targets. The Committee feel that in the absence of year-wise or phase-wise target, achievement cannot be targeted which will consequently affect the overall targets of the Mission. The Committee, therefore, recommend that :

- (i) year-wise/phase-wise target may be set under the Mission.
- (ii) Appropriate policy framework for long term sustainable growth in small hydro sector may be prepared in consultation with the Ministry of Power and the States.
- (iii) Requisite budgetary allocation be made to ensure the implementation of the project.

### **Reply of the Government**

Reply No.i. Suggestion of the committee has been noted. No year wise/phase wise targets have been fixed. However, Ministry has been assigned to achieve the target of 5000MW by 2022 through SHP. The Mission would target to achieve 500 MW of capacity in next two years and aim towards adding 4500 MW in the subsequent three years, for which preparation including appropriate policy interventions will be done in the first two years of the mission.

Reply No.ii. Suggestion of the committee has been noted.

Reply No.iii. Suggestion of the committee has been noted. This is estimated that an investment of Rs.50,000crores is expected to be infused primarily in rural economy and about Rs.5,000 crores may be required as support from Govt. of India.

[Ministry of New and Renewable Energy  
File No.1/4/2015-SHP dated: 09/06 /2016]

### **Policy for SHP development & Private Sector SHP projects**

#### **(Recommendation Sl. No.14)**

The Committee note that development of SHP projects through private sector investments has been the thrust of the Ministry's SHP programme since 1993. Out of the 1047 SHP projects commissioned in the country, 395 SHP projects with total capacity of 2227.60 MW have reportedly been set up through private sector participation so far. The Committee also note that a large part of capacity addition is being achieved through private investment where the State Nodal Agencies provide assistance for obtaining necessary clearances, in allotment of land and potential sites. The Committee have been informed that the policy for Small Hydro Power (SHP) and private sector participation therein is governed by the Electricity Act of 2003, the

National Electricity Policy of 2005 and the Tariff Policy of 2006 announced by the Government of India. The Central Electricity Regulatory Commissions (CERC) have issued guidelines to determine tariff for all renewable energy technologies, including small hydro projects. They are also informed that the State Electricity Regulatory Commissions (SERCs) have been empowered to decide on various components of the policy such as tariff, wheeling, banking and third party sale for grid interactive renewable energy based power projects. Reportedly, 23 State Governments have so far announced policy for private sector participation for the development of SHP projects in their respective States. However, it has been stated that some of these States have imposed restrictions/levies like Entry Tax on SHP equipment, sale of power outside the State, water royalty even for non-consumptive use of water, etc, which are seen as hindrances by the private developers in taking up SHP projects. The Committee therefore, recommend that :

- (i) Grievances Redressal mechanism be put in place to redress grievances of developers/ investors.
- (ii) There should be uniform policies on the development of the small hydro power.
- (iii) Restrictions in the form of taxes, levies on water and sale of electricity outside States be reasonable and practical, which only would facilitate unhindered growth of the sector.
- (iv) State Regulatory Commissions should also look into the aspects of proper growth of the sector before determining the tariff.

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

Reply No.i. Suggestion of the committee has been noted. A meeting under the Chairmanship of Hon'ble MoS (IC) Coal, Power & NRE was held on 06.04.2016 where Ministers of State Government, Implementing Agencies of State Government, CERC, CEA as well as private developers were invited.

Reply No. ii. Suggestion of the committee has been noted. The rate of central financial assistance varies with respect to government sector, private sector, special category states like North Eastern states, J&K and Uttarakhand.

Reply No.iii. Suggestion of the committee has been noted.

Reply No.iv. Suggestion of the committee has been noted.

[Ministry of New and Renewable Energy  
File No.1/4/2015-SHP dated: 09/06 /2016]

## **Alternate Hydro Energy Centre, IIT Roorkee**

### **(Recommendation Sl. No.15)**

The Committee note that the Alternate Hydro Energy Centre (AHEC) at the Indian Institute of Technology, Roorkee, has been providing professional support in the field of Small Hydropower Development covering planning, Detailed Project Reports, Detailed Engineering Designs and Construction drawings, Technical Specifications of Turn Key execution/equipment Supply, Renovation and Modernization of SHP Stations, and Techno-Economic Appraisal. It has been imparting training to the field engineers and technologists through short-term training courses. The Committee are informed that real time digital simulator for small hydropower plants has been set up with support from the Ministry for providing efficient initial and advanced training to operators and engineering staff of different types of small hydroelectric plants. Standards, manuals and guidelines for various aspects of small hydropower development are being prepared by AHEC through consultative process with the sponsorship of MNRE. A project to set up a small hydro hydraulic turbine R&D laboratory at AHEC with an objective of creating international level facilities for testing, design and R&D in the area of hydraulic turbines, hydro mechanical equipment, control and instrumentation of small hydro electric power plants has been sanctioned. The Committee feel that AHEC, IIT Roorkee, is a premier institution in the development of small hydro technology in the country paving the way for economic and efficient development of the technology and hence should be provided all support in encouraging it to boost research and development activities in the small hydro sector. The Committee, therefore, recommend that the Institution may be strengthened with regard to their capacities and resources, both human and financial, and it should be made a guiding star for the sector with sufficient technical, financial and functional support and autonomy.

### **Reply of the Government**

Reply No.i. Suggestion of the committee has been noted.

[Ministry of New and Renewable Energy  
File No.1/4/2015-SHP dated: 09/06 /2016]



### **CHAPTER III**

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

**Nil**

#### **CHAPTER IV**

**OBSERVATIONS/ RECOMMENDATIONS IN RESPECT OF WHICH THE REPLIES  
OF THE GOVERNMENT HAVE NOT BEEN ACCEPTED BY THE COMMITTEE AND  
WHICH REQUIRE REITERATION**

**Nil**

## **CHAPTER V**

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

#### **Electrification / illumination of all Villages along the State border of Arunachal Pradesh**

##### **(Recommendation Sl.No.11)**

The Committee note that the project for electrification/ illumination of all the villages along the state border of Arunachal Pradesh had been launched in December, 2008 with a financial package of Rs. 550 crore. Part-II of the project is being implemented by MNRE with the physical target for electrification / illumination of 1058 villages from small / micro hydel projects and solar photovoltaic systems with a total cost of Rs.275.58 crore. The Committee find that as on December, 2015, 976 villages have been electrified/ illuminated, including 523 villages by Solar PV home lighting systems. The Committee are informed that to complete the remaining project, an additional fund of Rs. 25.38 crore is required and the project could be taken up by the State Government only after availability of this additional fund. The Committee observe that the project had been initiated way back in December, 2008 with a target to complete it in three years, i.e., by the end of 2011. However, it was extended up to 31 March, 2015 as the targets could not be achieved within the time frame. The extended period has already expired, and there are 82 villages yet to be covered under this project, due to lack of funds, as reported. The Committee note that there is an absolute need for better coordination between the Union Government and the State Government in the implementation of this strategically important programme. Out of the earmarked total amount of Rs.275.58 crore, Rs.240 crore has already been sanctioned for the implementation of the project and a shortfall of Rs.25 crore is hampering its completion, leaving 82 villages unelectrified. The Committee, therefore, recommend that :

- (i) There should be clarity on the issue of physical and financial target. Allocation of a sum of Rs.25 crore has delayed the completion of the project by more than 5 years.
- (ii) The Ministry should initiate action to mobilize the additional fund requirement and make it available to the State Government, so that the targets for electrification/ illumination of all villages along the State border of Arunachal Pradesh is achieved without any further delay. There should be immediate release of funds for the project from the SHP or other heads of the Ministry.

- (iii) The physical verification of the electrified villages/ audit of the result achieved under the programme be done and reported to the Committee.

**Reply of the Government**

Reply No.i. Suggestion of the committee has been noted. There is no provision of separate funds for Prime Minister's announced package/ programme. Ministry is meeting the funds requirement out of regular allocation of funds available towards implementation of SHP programme/head. As per SHP scheme releases are made with respect to progress achieved. Sometimes funds in the division have been exhausted while implementing the SHP programme, by the time demand letter has been submitted by implementing agency to Ministry.

Reply No.ii. Suggestion of the committee has been noted. Request for allocation of additional funds in SHP head had been made for 2015-16 at RE stage though request was not granted.

Reply No.iii. Suggestion of the committee has been noted.

[Ministry of New and Renewable Energy  
File No.1/4/2015-SHP dated: 09/06 /2016]

**New Delhi**  
**03 August, 2016**  
**Shravana 12, 1938 (Saka)**

**DR. KIRIT SOMAIYA,**  
**Chairperson,**  
**Standing Committee on Energy**

## **APPENDIX I**

### **MINUTES OF THE TWENTY-SEVENTH SITTING OF THE STANDING COMMITTEE ON ENERGY (2015-16) HELD ON 3<sup>rd</sup> AUGUST, 2016 IN COMMITTEE ROOM '62', PARLIAMENT HOUSE , NEW DELHI**

The Committee met from 1500 hrs. to 1600 hrs.

#### **PRESENT**

##### **LOK SABHA**

##### **Dr. Kirit Somaiya - Chairperson**

35. Shri M. Chandrakasi
36. Shri Ashwini Kumar Choubey
37. Shri Harish Dwivedi
38. Shri Bhagat Singh Koshyari
39. Dr. Arun Kumar
40. Dr. (Smt) Pritam Gopinath Munde
41. Shri Jagdambika Pal
42. Shri Ravindra Kumar Pandey
43. Shri Vinayak Bhaurao Raut
44. Shri Devendra Singh alias Bhole Singh
45. Shri Bhanu Pratap Singh Verma

##### **RAJYA SABHA**

46. Shri Ranvijay Singh Judev
47. Shri Javed Ali Khan
48. Shri Ananda Bhaskar Rapolu
49. Dr. Vinay P. Sahasrabuddhe
50. Shrimati Viplove Thakur

##### **SECRETARIAT**

- |    |                            |                 |
|----|----------------------------|-----------------|
| 1. | Shri Sukhi Chand Chaudhary | Joint Secretary |
| 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 of the agenda for the sitting. The Committee then took up for consideration the following draft Reports:-

- i) 20th Report on 'Power Generation from Solid Waste'.
- ii) 21st Report on 'Action Taken by the Government on the recommendations contained in the 13th Report (16th Lok Sabha) on 'Development and status of Small Hydro Sector'.

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

*The Committee then adjourned.*

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## APPENDIX II

(Vide Introduction of Report)

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

(i)	Total number of Recommendations	15	
(ii)	Observations/Recommendations which have been accepted by the Government:		
	Sl.Nos. 1,2,3,4,5,6,7,8,9,10,12,13,14 and 15		
	Total:	14	
	Percentage	93%	
(iii)	Observations/Recommendations which the Committee do not desire to pursue in view of the Government's replies:		
	Nil		
	Total:	0	
	Percentage	0%	
(iv)	Observations/Recommendations in respect of which the replies of the Government have not been accepted by the Committee and which require reiteration:		
	Nil		
	Total:	00	Percentage
		0%	
(v)	Observations/Recommendations in respect of which final replies of the Government are still awaited:		
	Sl.No. 11		
	Total:		
		01	
	Percentage		7%