

9.1 Special attention is being given to the development of the eight States of the NE Region of the country through a separate budget allocation under various renewable energy programmes. Accordingly, Ministry allocated 10% of the budgetary support for the deployment of biogas plants, solar thermal systems, solar photovoltaic systems, remote village electrification, small hydro projects, wind energy systems, village energy security projects and energy parks. The project on Electrification/ Illumination of all Villages along the State Border of Arunachal Pradesh was continued during the year. Against an allocation of ₹100 crore as 10% of the Gross Budgetary Support (GBS) at RE stage for NE Region an amount of ₹97.16 crore was released during the year upto February 28, 2011.

BIOGAS PROGRAMME

9.2 The National Biogas and Manure Management Programme (NBMMP) is being implemented in the North- Eastern Region (NER) through State Government Departments/State Nodal Agencies. The Khadi and Village Industries Commission (KVIC) also implements the programme in the State of Arunachal Pradesh, Assam, Meghalaya, Nagaland, Sikkim and Tripura. State-wise installation of family type biogas plants in the region during 2009-10 (upto 31/12/2010) is given in **Table 9.1**. Biogas Development and Training Centres for North-East located at IIT Guwahati, Assam provided technical and training support for the programme.

Table 9.1 Family Type Biogas Plants installed in North Eastern Region

S.no.	Name of the State	Plants installed (as on 31/01/2011)
1.	Arunachal Pradesh	-
2.	Assam	1512
3.	Manipur	-
4.	Meghalaya	545
5.	Mizoram	100
6.	Nagaland	169
7.	Sikkim	98
8.	Tripura	75
	Total	2499

SOLAR PHOTOVOLTAICS

9.3 During 2010-11, the Ministry sanctioned to Central Electronics Limited a Public Sector Company projects for installation of 27 nos of stand-alone SPV Power projects of 935 kWp aggregate capacity for installation in SSB and educational institutions in Arunachal Pradesh (11 projects of 320 kWp), Assam (6 projects of 500 kWp) and Sikkim (10 Projects of 115 kWp). 4 nos of stand-alone SPV power projects of 100 kWp capacity were sanctioned in Manipur for installation at hospitals, jail and State Training Academy in Manipur. 3350 nos of solar home lights and 171 nos. of total 560 kWp capacity stand-alone SPV power plants each were sanctioned in Meghalaya for installation at various institutions. Seven stand-alone SPV power plants of total capacity of 121 kWp were sanctioned for installation in hospitals and charitable institutions in Mizoram. 10 stand-alone SPV power plants for installation in Government Institutions were sanctioned in Nagaland. SPS power plants of 168 kWp capacity were also sanctioned for installation in Tripura at different educational institutions.



Solar Power Plant at Tourism guest house, Yumthang, North Sikkim

Tabel 9.2 State-wise Cumulative Installation of SPV Systems during 2010-11

Sl. No.	State/UT	Solar Photovoltaic Systems (Nos)	
		Lanterns	Home Lights
1	Arunachal Pradesh	0	2000
2	Mizoram	2519	2350
3	Sikkim	2730	335
	Total	5249	4685

9.4 During 2010-11, State Renewable Energy Development Agencies have reported installation of 2000 solar home lights in Arunachal Pradesh, 2519 nos of solar lanterns and 2350 nos of solar home lights in Mizoram and 2730 nos of solar lanterns and 335

nos of solar home lights in Sikkim as shown in **Table 9.2**.

SOLAR CITIES

9.5 In North Eastern Region, Imphal, Kohima, Itanagar, Jorhat, Guwahati, Agartala, are being developed as Solar Cities under the scheme. Sanctions have been issued and their Master Plans are under preparation. Solar Cities Cells have been created in the Municipalities of these cities. Stakeholders Committees have also been formed to ensure public participation.

Table 9.3 Remote Village Electrification in NE Region States

Sl. No.	State	Nos. of Remote Villages/ hamlets Electrified	Projects under implementation in Villages and Hamlets
1.	Arunachal Pradesh	1246	52
2.	Assam	1391	633
3.	Manipur	191	49
4.	Meghalaya	97	66
5.	Mizoram	20	0
6.	Nagaland	3	8
7.	Sikkim	13	0
8.	Tripura	431	368
	Total	2392	1176

REMOTE VILLAGE ELECTRIFICATION

9.6 The villages in the North-Eastern Region continue to receive special attention under the Programme as many of these are most suitable for electrification through stand alone renewable energy devices. A number of villages in these states are too remote to be electrified through grid extension. A portion of the budget for the Programme is earmarked for these states. So far, 2392 remote villages and hamlets have been provided renewable energy based systems and projects in another 1176 remote villages and hamlets are under implementation in various North Eastern states. The status of RVE Programme in the North - Eastern States is given in the **Table 9.3**.

SMALL HYDRO POWER

9.7 North-Eastern States have fairly good potential to develop small hydro power projects. Among the NE States, Arunachal Pradesh has the highest potential followed by

Sikkim, Meghalaya and Mizoram. MNRE has been giving special emphasis for the development of small hydro projects in the NE region and higher level of financial support has been provided under SHP schemes. So far, 164 SHP projects aggregating to 270 MW have been setup in the NE States and another 45 projects aggregating to 68.06 MW are under implementation. During the year, two new projects were sanctioned in Arunachal Pradesh and Sikkim. Ministry is implementing a project on



SPV home Light in a remote village in Barpeta Distt. of Assam



Solar Street Light installed at Enchey Monastery, Gangtok, Sikkim



Distribution of Solar Lantern 2010 by Hon'ble Speaker, Sikkim Legislative Assembly and Secretary, RM & DD.

electrification/ illumination of 1058 border villages in Arunachal Pradesh through completion of ongoing and installation of new small hydro power projects and solar photovoltaic systems. So far 726 villages including 523 villages from solar photovoltaic home lighting systems and 203 villages from small / micro hydel projects have been illuminated / electrified. During the year a detailed exercise was undertaken to assess

the renovation and modernization requirement of existing small hydro projects in Arunachal Pradesh. Based on this, the Ministry has approved renovation of 15 SHP projects in Arunachal Pradesh.