

1. Department: Electricity
2. a) Sector: Energy  
b) Sub-Sector: Non-Conventional Energy Sources
3. Scheme No: NRSE- 3

4. Name of the Scheme: Installation of Solar Photovoltaic Energy Systems in Andaman & Nicobar Islands.

5. OBJECTIVE OF THE 9<sup>TH</sup> FIVE YEAR PLAN :-

The Andaman & Nicobar Islands lie between 6° and 14° North Latitude and receive sun shine in abundance. The clear atmosphere over the islands, due to very less air pollution, off sets the adverse effect of more Nos. of rainy days in these islands. M/s BHEL conducted a preliminary study during 1985 and on the basis of their report, Solar PV Domestic & Street Lighting Systems were installed in remote and isolated areas for providing lighting energy. An expert team headed by Dr. Maheswar Dayal, Secy, DNES, during its visit to these islands in September 1988 recommended that as the Solar Photovoltaic Energy was very promising, it can be utilized for meeting energy demands in remote and isolated islands where power was generated by consuming costly imported HSD oil through DG Sets. The team also suggested that the power requirements of small isolated islands shall be met from Non-Conventional Energy Sources and its electrification shall be done by centralised SPV system. It was also recommended that Solar Lantern shall be provided to localities in remote and isolated islands and camps deep inside forests, so as provide the basic need of lighting energy to such inaccessible houses.

Till now around 185 KWp of system have been installed in these islands in form of Domestic Lights, Street Lights, Lanterns, Pumps and its major portion consists of 25 Nos. 5 KWp SPV power plants in different isolated areas / localities.

It is proposed to establish Solar PV Power Plants of various capacities in different isolated and remote islands and localities to provide them the basic facility of lighting for 12 Hrs. during the night. This would also require augmenting the capacity of existing SPV Power Plants where power is provided for 6 Hrs. in the evening at present. Installation of SPV Power Plants in such remote locations / islands would reduce the dependency on costly imported HSD oil and the problems associated with transporting the HSD oil in drums to such in- assessable areas. It is also proposed to provide Solar Lanterns and Solar PV Lights and Systems at a subsidy of 25% of the ex-works cost, over and the above the subsidy provided by the MNES, so as to make it affordable by the needy poor rural masses, so that one of their minimum energy requirement i.e. house lighting is met. It is also proposed to explore the possibilities of providing Solar Lanterns to house holds below poverty line in remote localities and islands through village panchayats and tribal communities on monthly rent basis. It is also proposed to meet 100 % subsidy towards the cost of transportation of these devices from the manufacturers end to users end out of this scheme.

6. Approved Outlay for 9<sup>th</sup> Five Year Plan: Rs.50.00 Lakhs.

7. Principal Targets for the 9th Five Year Plan :

- I). Construction of staff quarters ( Type- II- 20 Nos., Type - I - 20 Nos.) for Centralised SPV Power Plants staff.
- II). Purchase, installation and commissioning of 15 Nos. 1 / 2 / 3 / 5 / KWp SPV Power Plants / Packs at various remote and isolated locations and also installation in Govt. establishments who are interested in SPV system at concessional cost of 25% of total cost of Andaman & Nicobar Islands along with distribution systems.
- III). Purchase of 3 Nos. battery operated vehicles, machineries and equipments.
- IV). Purchase of 100 Nos. charge controllers high frequency inverters for tube lights, light fittings for SPV street and domestic lighting systems.