

1. Department: Electricity

2. a) Sector: Energy

b) Sub-Sector: Non - Conventional Energy Sources.

3. Scheme No: NRSE- 6

4. Name of the Scheme: Harnessing of Ocean Energy in Andaman & Nicobar Islands.

5. OBJECTIVE OF THE 9TH FIVE YEAR PLAN :-

The Government of India has accorded high priority for development of New & Renewable Sources of Energy and ocean energy is one amongst them as ocean is the largest direct receiver of Solar Energy.

Prof. V.S.Raju, Ocean Energy Centre, IIT, Madras visited various sites in these islands during April 1984 for accessing the OTEC potential under the sponsorship of DNES. The study report submitted by him indicated that few suitable locations exist in these islands for harnessing Ocean Thermal Energy for meeting the increasing power demand of Andaman & Nicobar Islands without the necessity of importing HSD oil. A foreign organisation / consortium i.e. M/S. Sea Solar Power, USA has shown interest for exploiting the source of energy. It is proposed to harness the OTEC potential in these islands for meeting the power demand.

An expert team of CEA headed by Dr. H.R.Sharma, Member (Hydro) visited in these islands during February 1992 for exploring the feasibility of development of Tidal Power in Andaman & Nicobar Islands. The report submitted by this team mention that tidal power generation appeared feasible at different locations and the cost of generation was considered reasonable compared to the cost of power generation by diesel. It is also proposed further to explore the possibility of harnessing this source of energy.

A scheme for generation of wave energy utilization system with the proposed break water at Mus, Car Nicobar, Andaman & Nicobar Islands is under the consideration of Planning, Commission, which will have capacity of around 1 MW. A foreign organisation / consortium namely Sea Power AB, Sweden has shown interest in exploiting this source of energy. It is also proposed to utilize this source of renewable energy to meet the power demand of Car-Nicobar Island.

It has been observed by various expert groups that strong sea current is generated twice daily in narrow creeks in water bodies at several locations of these islands at the time of change of tide. It is proposed to exploit the possibility of harnessing this source of energy from the sea by installing suitable equipments for generation of power.

6. Approved Outlay for 9th Five Year Plan: Rs.2.5 Lakhs.

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

- I). Survey, investigation and identification of suitable locations for installation of 5/10 MW OTEC power plant.
- II). Survey, investigation, identification of suitable locations for installation of 1 MW wave power station.
- III). Detailed oceanographic survey and land survey of the selected locations and preparation of feasibility project report for establishment of OTEC & Wave Energy System and Hydrogen Energy System.
- IV). Purchase of required machineries, equipments and accessories for installation of ocean energy system.
- V). Establishment of OTEC / Wave Energy Hydrogen Energy System power generating system in A & N Islands through National / International organisation and development through MNES for meeting Base Load requirement in Andaman & Nicobar Islands.