



ANERT
Agency for Non-Conventional Energy & Rural Technology
(Established by Government of Kerala)

No.001/STP/ANERT/2012

24th January 2012

From

Director

To

All the District Programme Managers/ District Engineers

Sir,

Sub: ANERT – Solar Thermal Programme 2011-12 –
Programme Implementation Strategy and Guidelines – Reg.

The programme implementation strategy and guidelines to be followed during Solar Thermal Programme 2011-12 are detailed below.

OBJECTIVES

The main activities under Solar Thermal Programme 2011-12 are implementation and propagation of solar thermal devices like solar water heating systems and solar drying systems in the State by introducing ANERT's subsidy along with the capital subsidy sanctioned by the Ministry of New and Renewable Energy (MNRE). The main objective of the programme is to give wide publicity among the public and to propagate these devices for domestic, commercial and industrial applications to exploit the enormous opportunities in solar thermal sector for the fulfillment of energy requirements for water heating and air heating. These eco-friendly solar devices are significantly useful in conserving grid electricity.

SYSTEM COST AND SUBSIDY

There are Flat Plate Collector (FPC) based and Evacuated Tube Collector (ETC) based solar water heating systems depending on the type of heating materials used. Generally these solar water heating systems are broadly classified as domestic and non-domestic depending on the capacity and place of installation. FPC and ETC based solar water heating systems of capacity 100 litres / day (LPD) used in houses, convents etc are termed as domestic solar water heaters and all the systems of capacity 100 LPD and

above are termed as non-domestic systems. The approximate cost of a FPC based solar water heating system of capacity 100 LPD is Rs.26,000/- whereas the approximate cost of ETC based system of capacity 100 LPD is Rs.16,500/- (*).The collector area required for a 100 LPD FPC system is 2 m² and that for an ETC system is 1.5 m². The capital subsidy available for various systems are given below. If 30 % of the cost of the system is less than the rate mentioned below, the eligible subsidy will be limited to 30 % of the cost.

	MNRE subsidy (Rs)		ANERT subsidy (Rs)	
	FPC	ETC	FPC	ETC
Domestic SWH system	3300 per m ²	3000 per m ²	3000 per m ²	3000 per m ²
Non-domestic SWH system	3300 per m ²	3000 per m ²	NIL	NIL

(*) Please note that the total cost given is an indicative one and may vary from manufacturer to manufacturer of solar water heating systems and is exclusive of charges for laying of pipe lines. MNRE subsidy is applicable w.e.f 1.3.2011 (For new subsidy claims) and ANERT's subsidy w.e.f 1-1-2012. The beneficiary has to pay the total cost of the system to the manufacturer and the subsidy will be reimbursed to the beneficiary on completion of the commissioning of the system and inspection of the technical personnel of ANERT. The technical personnel means Scientists, Project Engineers, District Programme Managers, Technical Officers, District Engineers, Technical Assistants or Technicians

TARGETS

The physical targets of SWH systems and solar drying systems are given below.

	MNRE subsidy scheme (Rs)		ANERT subsidy scheme (Rs)	
	FPC	ETC	FPC	ETC
Domestic SWH System	1450 m ²	1356 m ²	3000 m ²	2000 m ²
Non-domestic SWH System	2250 m ²	2104 m ²	NIL	NIL

	MNRE subsidy scheme (Rs)	ANERT subsidy scheme (Rs)
Solar Fish Drying System	Rs.2500 & Rs.1750 per m ² of FPC area for non-profit making and profit making institutions respectively	Rs.2000 per m ² Target: 500 m ²

CLAIM FOR SUBSIDY

Subsidy for SWH systems is eligible to the beneficiaries who have installed the systems through manufacturers approved by MNRE for the purpose. In case of flat plate collector type SWH systems, solar collectors with BIS approval alone are eligible for subsidy. A list of such manufacturer is given in Appendix I. In case of ETC based SWH systems, MNRE approved manufacturers of ETC alone are eligible for subsidy. A list of such manufacturers is given in Appendix II. For latest information log on to MNRE website at mnre.gov.in

Subsidy claims of manufacturers / suppliers other than the recognized channel partners of MNRE will be entertained by ANERT for consideration of MNRE subsidy. The claims of the channel partners of SWH systems should be forwarded directly to the Ministry and such claims will not be entertained by ANERT to avoid duplication of MNRE subsidy. However the claims for State subsidy by the Channel Partners of MNRE will be considered if the firm is empanelled in the manufacturers' list of ANERT for the purpose.

Capital subsidy will be available only for SWH systems previously registered with ANERT. The format of registration form is given in Annexure 1. The beneficiary can register for the installation of SWH systems and can forward the subsidy claims (i) directly to ANERT HQ or (ii) through the district offices of ANERT or (iii) through the manufacturers approved for the installation of systems under MNRE subsidy scheme. The registration for domestic SWH systems will be valid for a period of 3 months and that for non-domestic SWH will be 6 months only. On expiry of this period, the registration will be cancelled and the beneficiary will not be eligible for subsidy.

The following documents should be forwarded to ANERT by the beneficiary or manufacturer for claiming the eligible subsidy. Subsidy will be released to the beneficiary by way of crossed cheque or money transfer from ANERT.

1. Registration form on prescribed proforma (Annexure I) of SWH system
2. Copy of invoice / bill of the SWH system
3. Affidavit by the manufacturer/supplier as per prescribed proforma (Annexure II)
4. Joint Inspection Report of the SWH system by the manufacturers and beneficiary as per Annexure III
5. A photograph of the system installed

All the details should be furnished vividly and the name and signature of the beneficiary should be the same in every documents. All the manufacturers have to provide the technical details and specifications of the components of their solar water heating system (Insulated water tank, Solar collector FPC/ETC, system pipe line and accessories) to ANERT for consideration of subsidy. The suppliers have to provide an instruction manual and guarantee card for 5 years of guaranteed performance to the beneficiaries.

Interest subsidy is also available for the beneficiaries of solar water heating systems @ 5 % interest rate on 80% of the MNRE benchmark cost (Rs.10,000 per m² of ETC area and Rs.11,000 per m² of FPC area) from banks, financial institutions and IREDA. No capital subsidy will be eligible to the beneficiaries who have availed interest subsidy.

The beneficiary share should not be collected in the offices of ANERT. ANERT will not give any preference to any of the manufacturers or place supply orders with any particular manufacturer on behalf of the beneficiaries, except in cases of tenders / quotations invited directly. The beneficiaries are free to select any supplier by negotiating with them for the installation of SWH systems.

The following two types of ETC solar collectors are eligible for capital subsidy.

Type:I : Outer diameter 47 mm and length 1500 mm

Type:II : Outer diameter 58 mm and length 1800 mm

Collector area for Type I may be taken as 0.1107 m² and area for Type II as 0.1639 m² for calculation purpose.

Thermosyphon solar water heating systems (SWH having no pump) can be installed up to a capacity of 2000 LPD. For SWH systems of capacities higher than 2000 LPD, forced flow systems (having pump for water circulation) should be installed.

SOLAR DRYING SYSTEM

A solar drying system of solar collector area 500 m² is proposed to be installed as demonstration unit for drying fish. The dryer will be installed for the Fisheries Department or Fishermen Society by utilizing the MNRE subsidy @ Rs.2500 & Rs.1750 per m² of FPC area for non-profit making and profit making institutions respectively. State subsidy @ Rs.2000 per m² will be made available for the project.

Yours faithfully,

Encl: As above

DIRECTOR

**Application to be Submitted by Beneficiary to State Nodal Agency Separately
for Each System for Installation of Solar Water Heating Systems**

1.	Name of Beneficiary with complete postal address, telephone, fax number, e-mail address etc.	:
2.	Details of Registration in case of Institution/ Organisation /Commercial establishment (Registration No. where registered etc.)	:
3.	Whether profit making / Non-profit making	:
4.	Place of installation of the system	:
5.	System capacity in LPD and sq.m. of collector area	:
6.	Type of system installed (FPC/ETC based natural/forced circulation)	:
7.	In case of ETC, Provide (a) Size of Tube (b) No. of Tubes in one collector (c) Total No. of Collectors provided	:
8.	Date of commissioning of the system	:
9.	Name of BIS/MNRE approved manufacturer/supplier with complete address, phone no. etc.	:

10.	Present utility of hot water	:
11.	Expected amount of fuel saving per year	:
12.	Total expenditure incurred on the system (Audited statement of expenditure to be enclosed)	:
13.	Amount of the capital subsidy sought from MNRE	:
14.	Certified that we have not availed any soft loan under MNRE interest subsidy scheme from any of the banks/FIs and will also not be availing that in future for the above system. We have also not availed any capital subsidy on this system earlier from MNRE till date.	

Date

**Signature with name and seal of
Head of beneficiary organisation**

Countersigned by Nodal Agency

AFFIDAVIT

(To be executed by the manufacturer / supplier of the Solar Water Heating System on their letter head)

We,(Name of the supplier / Manufacturer) hereby certify that the solar water heating system installed and commissioned by us in the residence / institution of Mr. / Mrs at.....
.....
..... (Address)

- (i) The solar water heating system and accessories have been installed as per BIS / MNRE standards / specifications / approval with minimum requirements mentioned in the Guidelines for preparation and submission of proposals for solar thermal systems.
- (ii) 5 years guarantee will be provided for satisfactory performance of the SWH system.
- (iii) There is no duplication of subsidy claim of the particular SWH system installed by us or our franchisees or distributors
- (iv) We have provided the detailed specifications of each and every part of the SWH system to the beneficiary along with operation and maintenance manual.

Signature, name and address of the manufacturer

Annexure – III

Joint Inspection-cum-Satisfactory Performance Report

Dated :

Certified that a Solar Water Heating System has been installed and commissioned at the premises of Mr./Mrs.
.....
.....(Name and address) on(date)
with the following details:

- Capacity of the System :
- Type of System (FPC or ETC) :
- No. of Collectors provided :
- Total Collector Area :

Further, the System has been inspected by us jointly on(date) and the same was found working satisfactorily.

Signature with Name of Manufacturer/
Channel Partner

Signature with Name of
Beneficiary

Signature of Verifying Officer of
Nodal Agency