

## Commissioning Report for Solar Thermal Systems

<u>Details of Installer</u>
Name: (If Different From Commissioner)
SEAI Registered ID: (If available)

<u>Details of Commissioner</u>
Name of Commissioner:
SEAI Registered ID:

### Installation Details

Name of Homeowner: \_\_\_\_\_

Installation Address  
\_\_\_\_\_  
\_\_\_\_\_

Phone:  
(If available) \_\_\_\_\_

Greener Homes Scheme  
Grant Approval Ref No: \_\_\_\_\_

### Description of System:

#### Model Identification

SEAI Reference code: SEI-ST- \_\_\_\_\_ Model No. \_\_\_\_\_

Manufacturer \_\_\_\_\_ Total Solar collector Area (Aperture Area) \_\_\_\_\_ m<sup>2</sup>

Make \_\_\_\_\_ Serial No. (if available) \_\_\_\_\_

Tube/Plate \_\_\_\_\_

**All Information requested is Mandatory**  
**Failure to provide all information requested will result in this report being returned by SEAI**

## Installation Details

Date of Completion \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Existing heating system? Yes   
No

Age of Dwelling \_\_\_\_\_ years

Dwelling floor area \_\_\_\_\_ m<sup>2</sup>

Is the system for:

- Water Heating only
- Space and Water Heating

### **A) For Solar Water Heating:**

- 1) Solar collector area (aperture area): \_\_\_\_\_ m<sup>2</sup>
- 2) Maximum Cylinder Temperature: \_\_\_\_\_ °C
- 3) \*\*Volume of solar heated cylinder: \_\_\_\_\_ litres
- 4) Type of solar heated water storage:
  - 1 tank with twin coils (1 solar/1 back up)
  - 1 tank with one (solar) coil
  - 2 tanks in series (one solar/one back up)
  - Other (please specify): \_\_\_\_\_  
\_\_\_\_\_
- 5) Back-up water heating system:
  - Immersion heater
  - Boiler  Fuel: \_\_\_\_\_
  - Back Boiler  Fuel: \_\_\_\_\_
  - Other (please describe): \_\_\_\_\_  
\_\_\_\_\_
- 6) Thermal Mixing Valve: Yes  No

### **B) For Solar Space and Water Heating:**

- 1) Solar collector area (aperture area): \_\_\_\_\_ m<sup>2</sup>
- 2) Solar air heating? Yes  No
- 3) Type of solar heated storage (buffer tank):
  - tank in tank - total volume: \_\_\_\_\_ litres
  - buffer tank (vol.: \_\_\_\_\_ litres) +  
separate domestic hot water tank (vol.: \_\_\_\_\_ litres)
  - Other (please specify): \_\_\_\_\_  
\_\_\_\_\_
- 4) Back-up heating system:
  - Boiler  - Fuel: \_\_\_\_\_
  - Back boiler  - Fuel: \_\_\_\_\_
  - Other (please describe): \_\_\_\_\_  
\_\_\_\_\_
- 5) Heat distribution and emission system:
  - Radiators
  - Underfloor coils
  - Warm air
  - Other (describe): \_\_\_\_\_
- 6) Thermal Mixing Valve: Yes  No

Comments:

\*\* The volume of the solar hot water cylinder is related to the maximum cylinder temperature. A rough guideline is for establishing the volume is at 60°C use approximately 70 litres per m<sup>2</sup> of aperture area and at 85°C use 50 litres per m<sup>2</sup> of aperture area

<b>Solar Thermal: Installation points to be checked</b>			
<b>1. Installation of collectors</b>	<b>Complete</b>	<b>N/A</b>	<b>Comments</b>
a) Collectors have been fastened to the roof to support collector weight and wind/snow loads			
b) Collectors are properly oriented (between South-East and South-West)			
c) Potential for shading of collectors (trees, buildings, etc.) is limited			
d) Waterproofing and air sealing of collector-to-roof connections and pipe penetrations			
<b>2. Solar Loop</b>	<b>Complete</b>	<b>N/A</b>	<b>Comments</b>
a) Solar loop pipe work is watertight/airtight under pressure)			
b) Pipe work in the solar loop has been insulated thoroughly (no significant gaps in slits or clips or joints			
c) Solar loop insulation material to withstand collector stagnation temperatures			
d) Solar loop external pipe and fittings insulated with UV resistant insulation			
e) Pipe penetrations of building fabric made good, debris removed from site			
f) Pipes securely fixed but allowing for thermal movement			
g) Expansion and pressure release valve sized and installed correctly			
h) Connection of solar loop to storage tank heat exchanger is correct			
i) Collection of anti freeze liquid from pressure relieve valve in place			
j) Concentration of antifreeze is correct			
k) Pressure in the solar loop is correct after final bleeding.			
l) Flow rate in the solar loop is correct			
m) Anti reverse-circulation measure in place (e.g. non-return valves)			
n) Air bleeding of the loop (no audible or visible gases left in fully-filled systems)			
<b>3. Controller and electrical work</b>	<b>Complete</b>	<b>N/A</b>	<b>Comments</b>
a) Sensors correctly placed and sensor wire correctly fastened			
b) Electrical installation correct and safe (to BS 7671)			
c) Circulation indicator for the solar loop is present			
d) Temperature readings and controller settings correct			
<b>4. Domestic hot water installation</b>	<b>Complete</b>	<b>N/A</b>	<b>Comments</b>
a) Anti-water boiling controls are in place			
b) Pressure release valve (non-vented system) operating correctly			
c) Overflow from safety valve (non-vented system) sent to the drainage			
d) Use of approved components			
e) Hot water tank and pipes properly insulated			
f) Ensure that unwanted circulation is prevented.			
g) Temperature interlock present between solar heated storage and auxiliary heating			
h) Auxiliary heating set-up to allow raising water temperature above 60 deg. C regularly to avoid legionella risks			
i) Anti-scalding measure in place (mixer)			
j) Corrosion protection anode installed in storage tank			

5. Integration with space heating (if applicable)	Complete	N/A	Comments
a) Solar loop flow and return pipes connected correctly to the buffer tank			
b) Heat distribution circuit flow and return pipes connected correctly to the buffer tank			
c) Sensor for space heating control correctly placed			
6. Commissioning and Handover	Complete	N/A	Comments
a) Commissioning of solar heating system completed and ready for hand-over			
b) Maintenance instructions and schedules provided to customer/end user			
c) Customer/end user has been instructed in correct operation of system			
d) System documentation and operating manual supplied to end user			
e) Warranty documentation provided to customer			

I hereby undertake that the **Solar Thermal System** referenced above has been commissioned by me, in accordance with the prescribed commissioning report above and that I am satisfied that all of the installation points specified have been correctly followed / checked. I further declare that:

- the design and sizing of the heating system is appropriate for the requirements of the house. Calculations supporting the design and sizing are available on request;
- the particular heating system is of merchantable quality, fit for the purpose intended and free from defects;
- the installation was carried out with the degree of skill and care that is required by good, competent, workmanlike procedures, in accordance with recognised good practice and relevant national and European norms and regulations,
- the instructions of the manufacturer, and any statutory requirements and regulations, relating to the manufacture, packaging, distribution, supply, sale and purchase of such heating systems have been adhered to at all times;
- the system complies with all relevant health and safety regulations and requirements;
- the householder has been provided with all the necessary system documentation, corresponding in all respects with the system installed, and has been shown how to correctly operate the heating system
- the householder has been provided with a schedule of required maintenance noting any particular warranty conditions.

**Phase I or II:** Existing dwelling or new build

**Phase III:** the building is an **existing dwelling** which was first occupied prior to 30th June 2008

Signed by Commissioner	_____
Name in Block Capitals	_____
Date	_____
Date of Actual System Commissioning (If different to signature)	_____
<b>Completion of all fields is <u>MANDATORY</u>. Failure to provide all information requested will result in this report being returned by SEAI</b>	