

Installing a solar thermal hot water system is not such a difficult process. However, it is not a do-it-yourself job for most people. There are important decisions to make and a few rules to apply to ensure that your solar heating system, including system size and design, are to your satisfaction and meet your requirements.

It is vital to look for a high quality product when choosing your solar collector. All products registered by SEI under the Greener Homes Scheme have met minimum quality requirements in terms of efficiency and safety. In addition, we suggest that you select a collector that has a quality mark, e.g. the European Solar Keymark label, which shows a further commitment to quality from the manufacturer.

We advise that you ask your supplier to recommend an installer as reputable suppliers will generally only deal with experienced qualified installers.

Please visit www.sei.ie/greenerhomes for lists of solar heating system suppliers and installers. We highly recommend that you shop around and view a fully operating system before you make your final decision in order to get the best product and the best value for your money.



Questions to ask your supplier and installer

SEI REIO has compiled a list of questions you should ask suppliers and installers before making a purchase. It is in your best interest to make sure you are satisfied that all your questions are answered.

Equipment

- Is the product on SEI's list of registered products? (Remember, if it is not listed you will not receive a grant under the Greener Homes Scheme).
- Is the solar collector certified by the European Solar Keymark or similar quality mark?
- Are all the flashing and fixing components for the panels provided?
- Do all the materials used conform to the solar system manufacturer's specifications?
- Is the cylinder sufficiently insulated (minimum 50mm factory fitted insulation recommended), and how many °C of temperature will typically be lost from the cylinder over a 24 hour period if hot water is not used?
- Is the solar storage tank specifically designed to operate correctly with your solar system?
- Is the system protected against overheating, freezing and excessive pressure?
- Will the pipe work be insulated to a good standard?
- How do the controls work and are they suitable for my requirements?
- Will the control system keep a record of the energy supplied to the hot water system (useful to check performance)?
- Is water circulation in the solar system provided by a mains electricity powered pump, a small photovoltaic panel, or is it a natural circulation (thermosiphon) system?

Sizing and design

- Will the system be designed to be exempt from planning permission requirements?
- How are your hot water requirements calculated and how is the solar system sized?
- Is the solar hot water cylinder appropriately sized (Minimum cylinder size of 180 litres, and 50 litres per m² of collector aperture area)?
- What is the performance rating of the solar collectors under expected operating conditions (e.g. in kWh per metre square of collector area per year)?
- What percentage of your hot water requirement will be typically provided by the solar system?

- Will the location of the solar panels (orientation, tilt, visual aspect, avoidance of shading) be appropriate?
- Will the solar system be installed according to the manufacturer's installation instructions?
- Will there be any disruption of the building structure or fabric required to install the system?
- How is back-up heating going to be provided?
- Will the storage temperature be regulated to avoid health risks such as legionella (recommended storage temperature is usually 60°C)?
- Will a thermal mixing valve be fitted to reduce the risk of scalding?
- What type of solar thermal system would the supplier recommend for the dwelling in question. Flat plate or evacuated tube?
- How will the solar system affect the Building Energy Rating (BER) of the dwelling (where required)? See <http://www.epbd.ie> for more information.

Installation and commissioning

- Does the supplier offer delivery, installation, commissioning and after sales service?
- What is the training or accreditation of the installers involved in the installation?
- Which trade associations do the installers belong to?
- How many systems has the installer installed; are local references available?
- How much of the installation will be sub-contracted?
- Who is ultimately responsible for what segments of work?
- How long will the installation take?
- Who is responsible for commissioning the system?
- What are the procedures and tests carried out when commissioning the system?
- Who is responsible for making good disruption to walls / ceilings etc. necessary during the installation of the system?

Operation and maintenance

- Is full documentation, including an operation manual, provided with the system (in English)?
- What maintenance tasks have to be performed by a professional and how regularly?
- Does the supplier have spare parts available?

Costs and payment

- Does the quotation cover all the costs associated with the installation of the solar heating system (collectors, storage tank, pipes and fittings, controller, delivery, installation, commissioning)?
- What is the range of annual cost and energy savings under average conditions?
- Is electricity for operation of the water circulation pump included in the savings calculation?
- What are the financing options or payment terms?
- Are there any additional costs?

After-sales services

- What is the guarantee on labour and parts for each component of the system?
- Is an annual service contract available from the supplier?
- Is full documentation, including the user's manual, provided?
- How does the dealer provide emergency service work if required?

For further information on renewable energy and energy efficiency, please visit www.sei.ie.

Call 023 42193 or email renewables@reio.ie for a free information pack on how renewable energy can be applied to your house or business.