

Case Study



renewables
ireland

Location: ATON Imagination Solar - South Ulster Housing Association, Kinallen, Co Down
Installation date: September 2006
Contractor: Brown Brothers
Customer: South Ulster Housing Association
Overview: Phase one of the new build development in Co Down, specified the ATON (Imagination Solar) system. This specification was submitted directly from the NIHE Design and Specification team, who have advised South Ulster Housing Association throughout the entire project.



Phase one

Phase one of the development has involved the installation of:

- 6 single (2.7m²) panels on six 2 bedroom semi-detached houses.

The Single panel system is connected to a 168 Litre vented cylinder, which also incorporates the unique drain-back technology. This system ensures that the risk of overheating and freezing is minimal.

- 1 Twin panel system (5.4m²) on a 3 bedroom detached property.

The Twin panel system is connected to a 216 Litre vented cylinder, which incorporates the unique drain-back technology. As with the single panel system, drainback technology is employed and reduces the risk of overheating or freezing.

All buildings have a southerly aspect, which is recommended for solar panel installation. Installation of the ATON system has been carried out by on-site contractors, Brown Brothers. The systems will provide each household with approximately 60% of their domestic hot water requirements.

The Imagination Solar Panels

- 2 x 2.7m² of flat plate solar system.
- Each panel weighs only 25Kg
- Connected to drainback unit using 10mm copper
- 3 X 8mm holes through roof felt, flow & return and a PV light sensor to switch system on and off

Imagination Solar Drainback Vessel:

- The drainback system ensures the system is freeze and overheat protected
- Linked directly into the solar coil of the new vented cylinders installed in each dwelling



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Benefits:

The ATON Imagination Solar system is recognised as a market leader in terms of the benefits to householders.

The ATON (Imagination Solar) system has been used in this project for a number of reasons:

- Ease of installation
- Performance and compliance with European Standard EN12975
- No scheduled maintenance is required
- Cost effectiveness
- The panels are covered with a single sheet of Lexam polycarbonate, ensuring they remain damage free for the life of the panel (in excess of 25 years)
- The drainback system ensures there is no chance for the system to freeze or over heat
- Estimated domestic hot water costs before solar system installation - £271.89
- Estimated domestic hot water costs after solar system installation - £194.87

Information for Developers

■ Building Regulations

The new building regulations will have a serious effect on building practices in Northern Ireland with regard to energy and fuel requirements. The new regulations move to a carbon emission based method. Under new regulations, new homes will have to emit 20% less carbon, based on a "whole building" approach.

■ Grants

The Environment And Renewable Energy Fund offers grant assistance for householders and developers in Northern Ireland who wish to install renewable technology into existing or new build homes. The table below outlines the level of grants available:

Technology	Environment and Renewable Fund Household Programme
Wind Turbines	£2,000 per kW (up to a maximum of £8k and subject to an overall 50% limit of installed cost (inc. VAT)
Solar Thermal Hot water	£1,125 regardless of size subject to an overall 50% limit (inc. VAT)
Ground / Water source heat pumps	£3,000 regardless of size, subject to an overall 40% limit (inc. VAT)

For further information on renewable energy for developers, or to arrange a meeting with one of our representatives, contact Renewables Ireland Tel: 028 9334 4488 Email: sales@renewablesireland.com



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