

## Dimplex launches new solar water heating and Xpelair heat recovery systems

**In today's environmentally challenged world, it is time to rethink our heating. Dimplex has expanded its renewable energy portfolio with the launch of a new solar water heating solution – Solar Eclipse.**



Every year the sun provides over 8000 times more energy than we consume worldwide. Even in Ireland, we receive as much as 1,000 kWh/m<sup>2</sup> of solar radiation energy every year, enough to provide up to 60% of the domestic water heating needs for a typical home.

With new building regulations aimed at reducing carbon emissions from new buildings and homeowners becoming increasingly environmentally aware, the Dimplex Solar Eclipse hot water system is a sustainable energy solution for the future, with a range of packages designed to provide low carbon, low cost water heating for new and existing homes.

The new Dimplex solar range consists of 16 pre-packaged kits, making specification, purchase and installation easy, while each of the system components has been carefully selected for its quality and suitability for the Irish climate.

The range consists of:

- 2, 4 and 6 m<sup>2</sup> flat plate solar collector kits, heat transfer system and full range of installation accessories
- Purpose designed solar hot water cylinders with high efficiency coils, fully optimised for solar water heating.
- Choice of roof mounting options: integrated kit, on-roof suitable for slate, tiles and flat roof
- Separate control and pump station
- 25-year solar cylinder and 10-year solar collector warranties



*Glen Dimplex Renewables stand at the Energy Show*

## NEWS in brief

- Jason Smith, who has been involved on the heating side of Dimplex for several years, has joined the renewable energy team and is now looking after the Xpelair products in Ireland.



- Dimplex Solar Eclipse Launch at the Energy show.



- Registered under SEI Green home grant scheme. Flat plate solar panels qualify for a €250/m<sup>2</sup> grant, up to a maximum of 6m<sup>2</sup> (€1500 max).
- Glen Dimplex group acquired Applied Energy Products, incorporating well known brands such as Redring and Xpelair.

### more inside!

- CASE STUDIES
- XPELAIR HEAT RECOVERY
- SHOWS AND EXHIBITIONS
- NEW PRODUCTS





## Whole House Heat Recovery Unit

Over 50 years Xpelair has earned an enviable reputation in world-class domestic, commercial and industrial ventilation leading the way with innovative technologies and style to ensure the air we breath is clean, fresh and healthy. Xpelair products are specified and distributed in over 80 countries – and in Ireland since 2008 by Glen Dimplex. Their ease of installation and reliability has gained many international Government contracts and firmly retained their position as the specifier's choice.

Today, the Xpelair range addresses the issues of safety in the home, air-tight buildings, energy efficiency, passive smoking and the need to remove carbon emissions – all with intelligent products that meet specific needs. The range anticipates forthcoming Building Regulations, environmental legislation and changing construction methods.

Xpelair's dedicated specification team is ready to provide advice on field applications advice and to work with installation providers to ensure fast and hassle-free installations. If required, a design service is also available to provide a specification from your plans. All Xpelair product information is available on-line at [www.dimplex.ie/xpelair.htm](http://www.dimplex.ie/xpelair.htm)

## CASE STUDY 1

### District heating with Dimplex heat pumps guarantees cheaper hot water and heating

**CASE STUDY:** Farnham Court low temperature district heating - Phase 2

**LOCATION:** Cavan Town

**INSTALLER:** Design Environmental Heating Systems (DEHS)

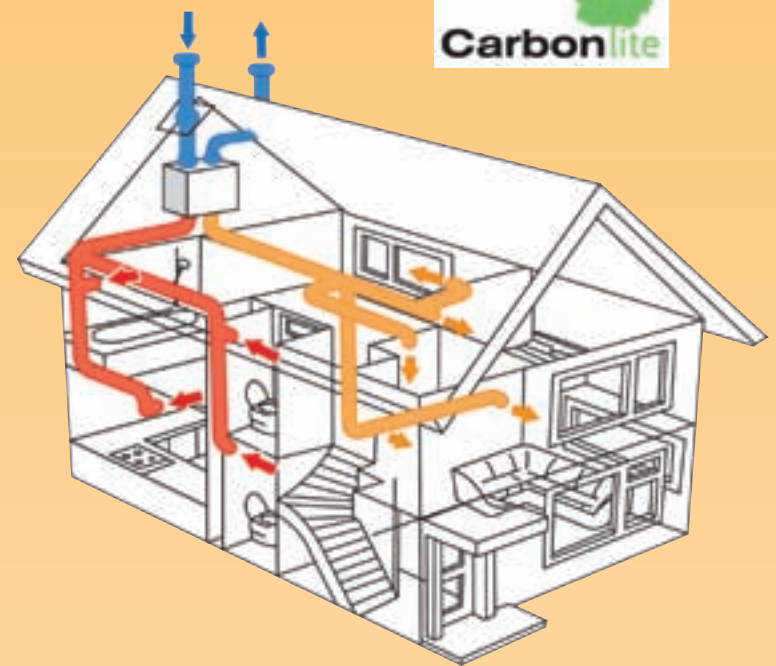
**ENERGY MANAGEMENT:** Owen Power, Bioenergy Power Systems, [www.bio-energy.ie](http://www.bio-energy.ie)

**DEVELOPER:** Keelagh Properties

**EQUIPMENT:** 4 Dimplex 75kW ground source heat pumps for two apartment blocks

**DESCRIPTION:** The centralised heating and domestic hot water featured in the first issue of Ecotalk has been running for a few months and has been a success. Both plant rooms have now been completed and heat is being provided to all 60 apartments from the 4 Dimplex ground source heat pumps. The heat meters for hot domestic water and space heating have also been installed and are functioning correctly. The meters are read using mbus technology which outputs the heat usage in kWh for each apartment. This information is then used to generate the individual customer invoices.

With block one now sold out, initial indications show that we are achieving our target of a 30% reduction in the heating costs. The development has been hailed as a great success and both the developer and apartment owners are very happy with the overall outcome.



#### What is Heat-Recovery?

- An energy-efficient process that helps keep an air-tight home cosy and well ventilated

#### How does it work?

- Stale, damp and warm air is removed from 'wet' areas of your home, such as the kitchen and bathrooms.
- Fresh air is drawn in from the outside and the stale air is used to heat this fresh air in a heat exchanger.
- The stale air is then disposed of through an exhaust vent and the fresh, now warm air is introduced into your home.

#### What are the benefits?

- Improves the energy-efficiency of your home
- Reduces heating costs
- Keeps your home 'fresher'
- Lowers humidity levels and reduces damp / harmful bacteria
- Provides health benefits for allergy sufferers
- Is environmentally friendly

#### What are the products features?

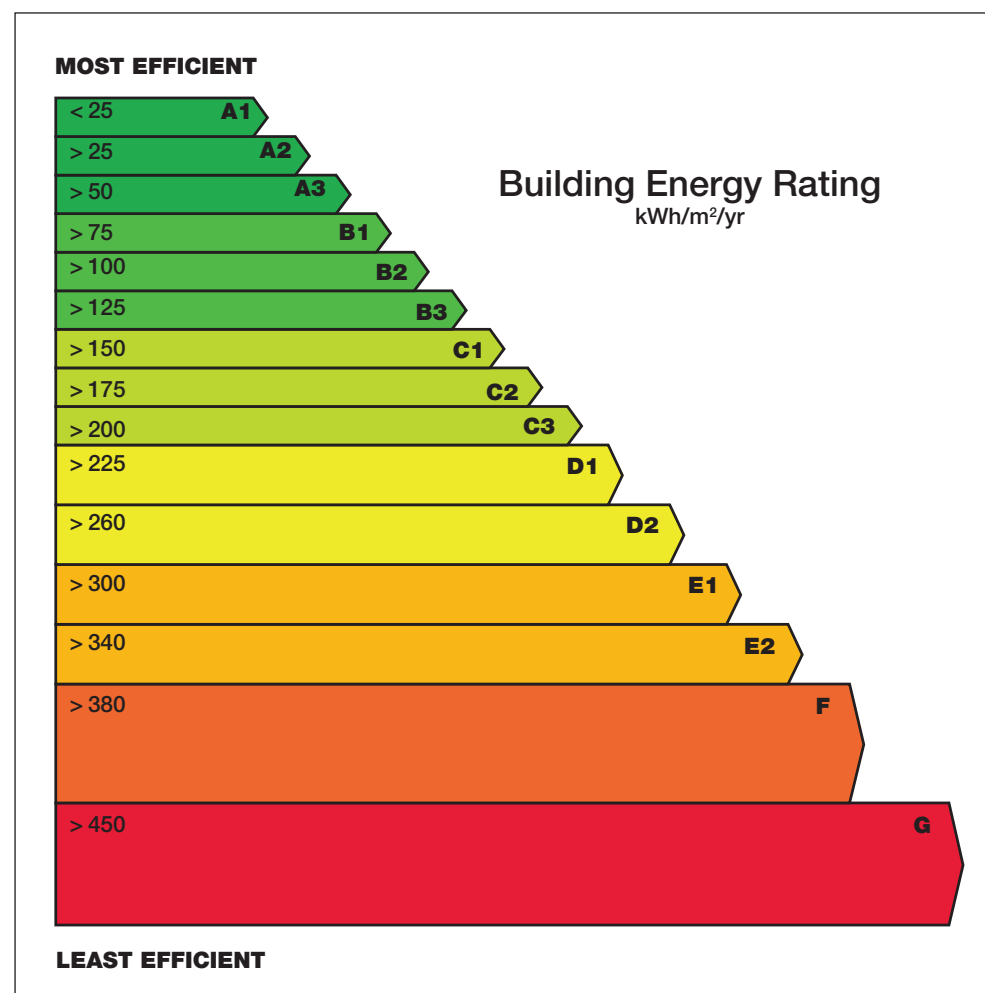
- Xpelair's Xcell 270 is a mechanical ventilation and heat recovery unit
- Extracts stale air from the kitchen and up to seven additional wet rooms
- Offers 95% heat exchange e-efficiency
- Has an UltraDC, low-energy, long-life motor
- Meets energy standards 'best practice' criteria
- Is part of the Xpelair CarbonLite range
- Has an automatic summer bypass

# New building regulations heralds new era for renewables

**Compliance under the new 2007 Part L of the building regulations for homes requires a 40% reduction in energy use for heating, hot water and lighting compared to previous standards. Patrick Daly director and founder of BESRaC (Built Environment Sustainable Research and Consultancy) outlines key aspects of integrating renewables and achieving compliance.**



Achieving compliance under the new 2007 Part L (Dwellings) involves reducing overall energy use by 40% and will, in most cases, require houses and apartments to achieve a B1 rating. In addition there is a mandatory requirement for a renewable energy contribution of either 10kWh/m<sup>2</sup>/yr of space heating, water heating or cooling, or 4 kWh/m<sup>2</sup>/yr of electrical energy, or a combination of the above with equivalent effect.



How to achieve this new B1 'target' and renewable obligation is not prescribed in the performance standards and there are a range of renewables options available to developers. However all compliance specifications should prioritise energy conservation measures and as such most specifications will incorporate high insulation levels, high performance windows, air-tight construction and optimal passive solar gains. In addition measures will need to be taken to improve and conserve energy within the systems efficiency. Such measures will include alternative energy systems such as MVHR (Mechanical Ventilation with Heat Recovery) and advanced controls and programming / zoning capability etc.

Renewable energies are defined in the new regulations as energy sources from non fossil fuel energy sources and include solar energy (thermal and photovoltaic), wind, hydro, biomass, geothermal, wave, tidal, landfill gas, sewage treatment plant gas and bio gases.

Solar Hot Water systems are likely to play a key part in meeting the provision especially for housing and can also be integrated into most apartment schemes, either serving each individual units (in low rise) or contributing to a portion of overall units (more common in medium to high rise) possibly in tandem with another technology. The latter solution

is still accounted as a percentage contribution to the average under 'block averaging' compliance in apartment schemes. Solar Hot Water can also be specified to provide pre-heat for conventional boiler systems and as such contribute to the space heating requirement.

MVHR systems are certain to provide part of the systems solutions for B1 compliant and advanced rated houses and apartments. Notably these systems are optimal in highly air tight constructions with an air permeability of Q50 3 m<sup>2</sup>/(h.m<sup>2</sup>) @ 50 Pa or more being optimal. The combination of super-airtight envelopes with the heat recovery efficiency of these systems, (which are required to be independently tested under UK SAP appendix Q), has excellent ventilation heat loss reduction and systems efficiency benefits with notable reductions in BER ratings. In addition to the energy savings there are the health and comfort benefits of a continuous, filtered supply of air without coldness or draughts!

Heat Pumps will also play a significant part in meeting the new Part L via either individual or communal systems. Energy in excess of 2.5 times the electrical energy directly consumed by the heat pump can only be classified as renewable and so coefficients of performance will have to be high if these systems are to contribute to the renewable energy contribution. Given our mild climate we can in Ireland attain very good seasonal efficiencies between 2.5 to 4.0 for Air Source and 3.5 to 4.5 for Ground Source. As such we can expect heat pump systems to become a central part of B1 compliance specifications and indeed for advanced rated dwellings.

The new Part L for dwellings will no doubt prove to be a significant catalyst for renewable energy take up in new build housing and apartment schemes and is set to permanently integrate renewable and alternative energy systems firmly into residential construction sector. The future is green.

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 Tel / Fax (00353) 044 93 85 407 Email [pd@patrickdaly.net](mailto:pd@patrickdaly.net) [www.besrac.net](http://www.besrac.net)

## Dimplex stainless steel cylinders

- Stainless steel direct and indirect
- 4 sizes: 175, 215, 255 and 305 litres
- Inlet diffuser – excellent temperature stratification
- Two immersions in direct and one in the indirect
- Two sensor pockets top and bottom.
- 60mm PU foam insulation
- 1.1m<sup>2</sup> solar coil and 0.78m<sup>2</sup> auxiliary coil
- Manufactured from Duplex stainless steel
- 25 year warranty
- Two port valve (indirect unit), inlet control group, expansion vessel with connection hose and bracket, T & P valve with tundish and thermostats are all included in package



# New Ross is looking a little greener with the opening of the new Pure Renewable Energy showroom



Pure Renewable Energy Ltd has just opened a new showroom in New Ross, Co. Wexford, in which the company's products are displayed and are working to give the customer and contractor a better understanding of the size, quality and sound level of the products. Dimplex heat pumps are a very efficient and maintenance-free way of heating your home or business and Philip Smith, PRE's Technical Engineer, is available to discuss any details required.

PRE was set up in September 2005 by Ollie and Triona McPhillips to distribute Dimplex heat pumps and various other renewable energy products. The proprietors have over 16 years' experience in all types of mechanical contracts and

have installed numerous heat pumps during this time. When they met Dave McConnell from Dimplex in 2005 they decided that the environment was at the right stage to promote renewable energy products and hence Pure Renewable Energy Ltd was established.

PRE personnel undertook extensive training in the Dimplex factory in Germany on all the products and now have the expertise and knowledge to promote and sell Dimplex heat pumps to mechanical contractors and end-user customers. Each heat pump sold is commissioned solely by PRE to cover warranty and to ensure that each product is installed to the highest level of quality possible.

## CASE STUDY 2

### Clean, quiet and tidy in Clare for €3.17 per day

**PROJECT:** Residential Installation

**LOCATION:** Ruan, Co. Clare

**INSTALLER:** Pure Energy Technology Ltd

**EQUIPMENT:** 1 Dimplex LA11MS

**DESCRIPTION:** Joe Donovan and Majella Shannon fitted a Dimplex 11Kw air-source heat pump to provide the bulk of the heat in their 220m<sup>2</sup> dwelling near Ruan in Co. Clare. The air-to-water heat pump was specified and commissioned by Limerick-based Pure Energy Technology Ltd.

Joe Donovan said: "I find the house much warmer since we had the system fitted. We had a special electricity meter supplied by Pure Energy Technology so that we could monitor the running cost of the new system. We are finding that the house is warmer and the running cost much lower than it had been when we depended solely on the oil boiler".

"Our running costs to date have averaged €3.17 per day. It's a win-win situation. The heat pump is a clean, quiet and tidy unit – we are delighted with it."



Dave Coleman of Pure Energy Technology Ltd and Joe Donovan beside Joe's new Dimplex LA11MS air-to-water heat pump.

## NEW PRODUCTS

### SIH 6 - 11ME ground source heat pumps

This range of single-phase high temperature heat pumps provides flow temperature up to 70°C with high COP through an economiser. These heat pumps are available in 6, 9 and 11kW and their high temperature makes them suitable for boiler replacement in existing houses.



## FORTHCOMING EVENTS

Meet us on the new Glen Dimplex renewable energy stand at the following shows in 2008:

**GALWAY SELFBUILD SHOW**, 23rd - 25th May

**WATERFORD SELFBUILD SHOW**, 28th and 29th June

**DUBLIN SELFBUILD SHOW**, Punchestown, 5th - 7th September

**SUSTAINABLE BUILDING EXHIBITION**, 18th - 20th September

**CORK SELFBUILD SHOW**, Millstreet, 31st October - 2nd November

**PLAN EXPO**, RDS Dublin, 4th - 6th November 2008



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