

# Green homes are cheaper homes

Barry McCall looks at how more and more people are waking up to the financial as well as environmental benefits of energy efficiency.

There has undoubtedly been something of an environmental awakening in Ireland over the past decade or so. You only have to look at the electoral success of the Green Party and the prominence of many environmental campaigners around the country for evidence of this. But this hasn't really translated into personal lifestyle choices, until now that is.

Recent price increases have led to a situation where Ireland's electricity prices are 51% higher than the EU average with a further 19% rise on the way. Gas recently increased by 34% and is now more than double the price that UK consumers pay. This has led to the heating and general running costs of an average home becoming a key part of the equation for prospective purchasers and existing home owners.

They are being assisted in this by Sustainable Energy Ireland's Greener Homes Scheme which offers a range of quite substantial grants

to homeowners who intend to purchase a new renewable energy heating system for either new or existing homes. The scheme aims to increase the use of renewable energy and sustainable energy technologies such as solar energy systems, heat pumps, and wood pellet boilers in Irish homes.

But this is effectively the end stage of the energy efficiency process. It starts a lot earlier as John Quinn of Surface Power Technologies points out. Surface Power Technologies is Ireland's largest renewable energy company: manufacturing and supplying state of the art renewable energy solutions throughout Europe.

"Don't use the energy in the first place", is Quinn's very sound and common-sense advice. "By insulating your home far in excess of current building standards, you will require less heat energy. By making your property airtight with no vents and with the installation of a heat and ventila-

tion recovery system, you will minimise your heat energy needs. Use solar gain in designs, lots of glass to the south, little to the north. Triple glazing and underfloor heating will also lower your energy use. Make sure you buy A++ rated appliances where possible."

This will result in lower emission and an improved energy label for the home and thereby increased value.

Quinn's second piece of advice is to use free energy from nature. "Install products which have no fuel bills", he advises. "By using the free energy from the sun, wind and rain you can get a significant energy requirement depending on the insulation standard of your property and the size of the system. You don't need to buy fuel for everything. These products can provide free electricity, hot water and a solar vacuum can even provide central heating. Using our solar PV offset system, you can even run your heat pump for free."

It is only at this stage that you need to consider buying fuel and then Quinn recommends carbon neutral fuels such as wood, wood pellet, Elephant Grass pellets, hemp pellets, rice grain pellets, wood-chip, biomass and other bio-fuels.

Finally. There's energy from fossil fuels. "If you have done a good job in heating, ventilation and installing products with no fuel bills you won't need to install any fossil fuel appliances. Ask yourself, does this product need fossil fuel to run? When you install free energy sources in your property, they save you substantial money, pay for themselves in very efficient timescales and also increase the value of your property."

While many people are prioritising energy efficiency when purchasing or building a new home finding one can be a problem. This is where EnergyTech365 comes in. EnergyTech365 is an Irish engineering design

consultancy specialising in the provision of low energy solutions that can deliver up to 75% savings on your annual household energy costs.

Established a little over three years ago the company took the strategic decision to specialise in energy efficient design solutions from the outset. "It was a very different market then", says EnergyTech365 partner Mark O'Brien. "Gas and oil prices were relatively low and capital costs were quite high. There was not that much interest in what we were doing. But we stuck at it because we are committed to the concept of energy efficient buildings. The market has grown rapidly since and we are expanding to meet the need."

The company is very much a leader in its field and has been involved in no fewer than five House of Tomorrow projects around the country to date - with three more in the pipeline. "We design homes which are at least

50% or 60% more energy efficient than standard houses", says O'Brien. "But the really important thing is that it need not add to the overall cost to the purchaser."

This efficiency at no cost equation is achieved largely through the €8,000 grant available through Sustainable Energy Ireland to builders of homes which qualify for the House of Tomorrow energy efficiency standard.

In fact the "House of Tomorrow" energy standard is rapidly becoming the house of today as more county councils around the country, Notably Fingal, & Wicklow, specify that this is the new mandatory standard that homes will be built to.

"The €8,000 grant makes up for the additional costs involved in building an energy efficient home to House of Tomorrow standards", O'Brien explains. "The process of creating such a home is relatively simple. It's just three steps; insulation, ventilation and energy efficient heating. You just have to do all three together, that's all."

The first step is fairly obvious. "You have to make sure that the building is properly insulated, this alone reduces energy consumption dramatically", he says. "But you've got to make sure that you've got proper ventilation. If a building is totally airtight you get condensation and CO2 build up and that's both unhealthy and bad for the structure. So, you've got to ensure that it is adequately ventilated without being draughty or causing unnecessary heat loss. The third step is an energy efficient heating source such as a solar panel, a heat pump or a wood pellet boiler."

EnergyTech365 uses the latest and best available technologies in all three areas to achieve massive energy savings for homeowners. "We are purely consultants and designers - concentrating on the industrial & commercial market", O'Brien points out. "This means that we aren't tied to any particular product or supplier. We constantly review the latest technologies and advances and are able to employ the best of them in our designs."

With the increased emphasis on insulation, ventilation is vitally important. However, ventilation usually

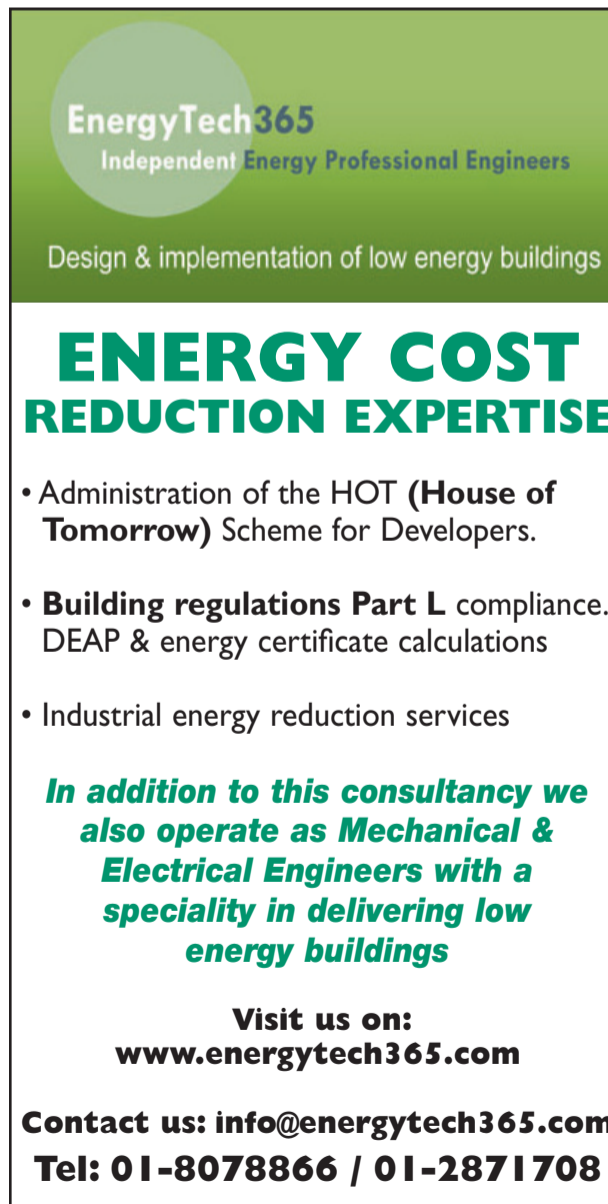


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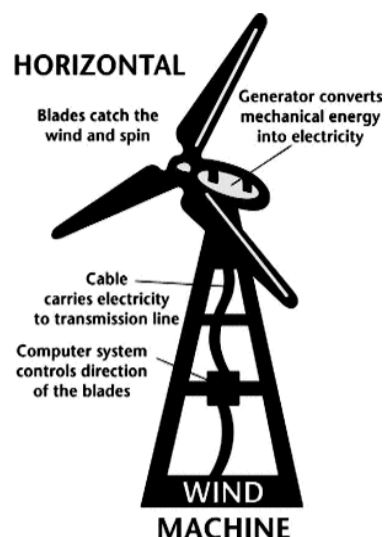
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Solar panel & example of wind energy.



Mark O'Brien, EnergyTech365 partner

means heat and therefore energy loss. Not so with a system from MTD-Solutions. The MTD system not only expels the stale, damp air from the house but uses its heat to warm the fresh air coming in - and it cleans it as well.

"Our unit has a 97% thermal efficiency level", says Ciaran King, managing director of MTD-Solutions. "It uses a thermal heat exchanger to recover the heat from the air going out and pre-warms the cool air coming in. The system can reduce annual heating bills by up to 30% by reducing heat loss. The system uses brushless DC motors and the running costs are just €30 per annum. Most importantly, it uses filters which are just below surgical standard and which take out all of the pollen and dust and so on which can lead to allergies and breathing difficulties."

Of course, it's not just energy efficient heating systems which people are looking for. In general, people are becoming more environmentally aware and are looking for general everyday food and other products which are more eco-friendly. This is where the Ecoshop comes in. Founded in 2003 by Jane Hall, Ecoshop is based in the Glen of the Downs, County Wicklow and started with a selection of cleaning, beauty, baby and gardening products and which grew to include fairly traded goods and organic, fine and local foods, as well as books and clothes. The shop has grown to become

Ireland's largest source of natural, organic and ecologically friendly goods, with over 3,500 product lines.

"The driving force behind setting up the shop was that I couldn't find environmentally friendly products myself", explains Jane Hall.

"I could get them here and there but not all in one place. It was a bit fringy back then but it has really taken off over the past three years and we are open seven days a week with customers coming back time and again. There is much greater

awareness of the environment now and this is very welcome. We set up our online shop recently (www.ecoshop.ie) and customers can purchase just about everything available

in the shop online. We process all orders on the same day as receipt and ship them the following day by the cheapest means possible. We only charge our customers the same shipping

costs that we pay. The online shop has been a great success and we are getting repeat business from customers already."

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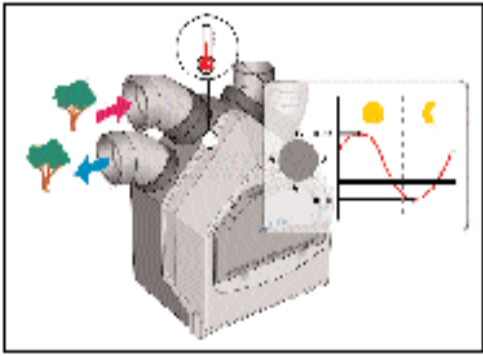
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