Energy Plan Aims To Turn Silver To Green

Solar panels and rapeseed oil now provide a chunk of Newbridge Silverware's energy requirements, writes Dick O'Brien

Silver won't be the only thing glinting in Newbridge from now on, as an array of new photo voltaic cells grace the roofs of Newbridge Silverware's buildings, providing renewable, green energy to power the company's operations. Newbridge says it is investing €250,000 in implementing its new energy saving strategy that will see the company switching over to a combination of solar power and renewable fuels to cover a large proportion of its energy needs.

While the move does contain the prospect of energy cost savings further down the line, the company said that the realisation about the long-term unsustainability of fossil fuels was the prime motivation for making the switch. The prospect of energy costs soaring further and supplies running low prompted it to take action sooner rather than later.

Once the decision was made by the firm's management, it took almost a year for the programme to be implemented. The start of the process was the creation of an energy saving committee, which drew personnel from all parts of the company in addition to representatives from the local farming and business community. Nicknamed the 'alternate light bulbs team', the committee was tasked with investigating alternative sources of energy for the company, determining the exact amounts of energy savings it could make, establishing the effects of using each alternative resource and putting a plan into place.

Newbridge Silverware: setting trends beyond jewellery

Within the company, the main energy users are electricity, natural gas, water, transport fuel, packing materials and waste disposal. Newbridge's electrical load was accounted for by its main production area, showroom, restaurant, administration building and dispatch and storage areas. Gas was used mainly for heating parts of the company's buildings, while diesel was used to fuel its fleet of vans and sales rep cars.

One of the first steps was to switch the boiler to renewable energy, installing a wood pellet boiler to eliminate its kerosene-burning predecessor. This work was undertaken by Kedco. Newbridge also converted its van and jeep fleet to run on rapeseed oil, while switching to hybrid company cars, which run on a combination of petrol and electricity. Ecomotion.ie did the conversion work on the vehicles, while the supply of rapeseed oil will come from Ailish Oil.

As electricity is the highest cost, the initial focus was to achieve savings in this

area. The first step was the introduction of auto control of lighting loads by installing photocell controls in all of the office and admin areas. This meant that lights only activated when natural light fell below a certain level and weren't left on all day.

One of the main planks of the strategy that emerged was the installation of photo voltaic cells to generate solar energy for the company's showroom and factory. Newbridge contracted Coolpower for the job, a sister company of Carey Glass, which specialises in installing photo voltaic (PV) systems and is responsible for projects such as the much publicised Green Building in Temple Bar. Coolpower founder and head of R&D Tim Cooper advised on the project and drew up an hour-by-hour, year-round model of onsite electricity consumption. With this, Cooper was able to assess the various options for reducing energy consumption and associated carbon dioxide emissions.

Newbridge had already undertaken some initiatives off its own bat. High efficiency lighting was being installed throughout the complex. High efficiency LED lamps were also tested along with a various high other efficiency alternatives. Cooper found that, as with most modern buildings, heating loads were extremely low, rendering the site unsuitable for combined heat and power generation. He concluded that PV panels offered the only realistic possibility for improving on the existing situation. The Newbridge Silverware solar panel installation can now deliver 10% of the company's needs.

Solar panels generate 10% of Newbridge Silverware's electricity needs

Backing up the PV panels is a standby generator which runs on rapeseed fuel.

Newbridge Silverware project manager Jim Doyle said the company had submitted an application for funding to Sustainable Energy Ireland. SEI is responsible for promoting and assisting the development of sustainable energy. However, SEI has no grant structure for projects such as that undertaken by Newbridge, as it focuses largely on projects that produce renewable sources of heat or combined heat and power. "SEI's mandate is to promote sustainable energy and we believe that this is the kind of initiative they should be supporting," said Doyle.

Doyle said that Newbridge spent around €250,000 on installing the new system. "That's a big capital investment but it will result in savings. It will take seven years to recoup the costs but after that we'll be generating free electricity,"