Island Seafoods Ltd. Make Giant Steps Towards Sustainability

ISLAND SEAFOODS LTD. - KILLYBEGS

Description of the Business
Island Seafoods Ltd., was established in 1986. Located in the village of Killybegs, its products range from mackerel, herring, sprat and blue whiting. The business is certified by the Marine Stewardship Council, which recognises and rewards sustainable fishing and promotes the best environmental choice in seafood.

Background
Island Seafoods Ltd. has a history of improving efficiencies at their plant, and reducing their energy and water requirements. In 2007, Island Seafoods Ltd. commissioned a hydroelectric power plant that generates 700MW of electricity each year (~60% of the factory's annual consumption, 350 t carbon emissions offset yearly).

In 2009 with SEAI funding, 6 key improvements were made, and these have contributed to a reduction of 200 MWh per annum, and a reduction of 205 t of carbon emissions. The overall spend by Island Seafoods Ltd. was just €86k with SEAI grant assistance of €44k.

Recent Improvements
Recently Island Seafoods Ltd. has focused on managing electricity used for lighting and refrigeration. By installing an online monitoring and targeting system they have identified their key electrical loads and profiles. This has allowed the company to focus on the big energy users and reduce their consumption.
The key improvement included:

- A water cooled condenser installed on the cold store – switching from an electrical powered refrigeration system Island Seafoods Ltd. availed of a natural resource to reduce their electrical demand. A cooling tower, which uses water from the same stream where they generate their hydro power, reduced electrical demand by 34.5 MWh annually.

- Maintaining product at -18°C or below is energy intensive and any loss of coldness through gaps/weak spots in the fabric of freezers or chill rooms is an ongoing cost that is difficult to quantify. Once the cold stores had been heat tested the ceiling edges and corners were further insulated to minimise losses and reduce the running times of the compressor. This resulted in an electricity reduction of over 20 MWh a year in the running of the refrigeration system!

- A soft start motor was fitted to the main blast freezer compressor to reduce the peak loads during start-up. While this resulted in a 5MWh saving annually, it also reduces the pressure on the mechanics of the refrigeration system.

- Flourescent lighting was replaced with LEDs. The use of natural daylight was maximised through strategically placed skylights when the factory was extended.

- In areas where occupancy is not constant sensors were fitted. This, in conjunction with the improved efficiency of the light fittings resulted in a 27.2MWh annual savings.

Goals for the Future

As part of its work towards a Sustainability Charter for Bord Bia’s Origin Green Programme, Island Seafoods is currently working with GreenBusiness to further reduce their environmental impacts.

Some of the key areas where GreenBusiness is currently assisting Island Seafoods:

- Further reducing electrical demand in the blast freezers and chillers by switching from metal halide lights to LEDs.
- Reducing water use through improved cleaning practices.
- Designing a heat recovery system which will take waste heat from the current refrigeration system (cooling tower) and preheat water for use throughout the site (currently heated by immersion).

Island Seafoods aims to become electrically self sufficient, through reducing electrical demand as much as possible, and installing a wind turbine to make up the shortfall that currently exists between what the hydro plant generates and what the factory uses.

With this vision of sustainability now ingrained within the business, Island Seafoods is an example of how this important indigenous sector can progress towards a better and greener way of working.