

## Application Form

Please complete this form and return it **by the closing date of 24 June 2011** to your Responsible Care association or directly to: Cefic, Responsible Care, Avenue E. Van Niewenhuyse 4 - B-1160 Brussels, Belgium

ORGANIZATION NAME : Pfizer Ireland Pharmaceuticals Little Island

SME (see rules) – number of site employees 205

ADDRESS: Wallingstown, Little Island, Cork

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PROJECT TITLE: Advances in Environmental Sustainability at Pfizer Little Island

### BRIEF DESCRIPTION OF PROJECT

During 2010 significant advances were made at Pfizer Little Island to improve our environmental sustainability and reduce our carbon footprint. 4 projects were completed in 4 different areas of the site which led to a reduction of 8.9% CO<sub>2</sub>.

These projects were in the following areas:

- Thermal oxidiser
- Waste water treatment plant
- Administration building
- Maintenance workshop

## Advances in Environmental Sustainability at Pfizer Little Island

Pfizer Little Island is a pharmaceutical plant manufacturing the Active Pharmaceutical Ingredient (API) for Lipitor, a treatment for high cholesterol.

The site was one of the first companies in Ireland to become certified to the Energy Management System IS 310 and is now certified to EN16001. The impact of the use of energy on-site and the resulting CO<sub>2</sub> emitted is constantly under review.

Little Island uses approx. 15,300 MWHrs electricity and 17,852MWHrs gas per annum with an annual CO<sub>2</sub> emission of approx 11,400 tonnes

During 2010 colleagues from a dedicated Technology and Innovation team as well as Engineering, Utilities and EHS personnel were involved in the execution of specific projects aimed at reducing site energy use. The projects were selected based on their ability to influence the overall site usage of electricity or gas or both. In addition projects on solar powered heating system and wood pellet boiler were implemented to demonstrate the site's commitment to sustainability and increase awareness on-site.

One of the first areas targeted was the [Thermal Oxidiser](#), which treats the fume handling system for the site. The Thermal Oxidiser is a significant user of natural gas. An investigation was completed into the type of packing used in the unit and in July 2010, during the annual shutdown the existing ceramic bed was replaced with a packing which has a honeycomb design and therefore requires less natural gas to maintain the required temperature in the system.



New packing type (honeycomb) installed in Thermal Oxidiser

This change has led to 1.3% reduction in site electricity and an 8% reduction in site gas usage which equates to a CO<sub>2</sub> reduction of 370 Tonnes/year

Changes to the operation of the [Waste Water Treatment Plan](#) were implemented in August 2010.

An aerobic, activated sludge waste water treatment plant is operated on-site and is a significant user of electricity.

Greater process knowledge prompted the elevation of the Feed to Mass ratio which allowed the reduction of activated sludge mass through the elimination of one of the 4 aeration basins. This facilitated the switching off of its associated mixing pump and jet mixers as well as reducing the blower requirements for the remaining 3 blowers providing a great reduction in energy consumption.



One of the aeration basins in the waste water treatment plant

A 45kW Jet Mixing Pump which fed the Aeration Basin manifold was switched off as part of the removal of one of the aeration basins. The associated pump was measured to be using 45 kW and was running 24/7 for 365 days a year. A smaller blower (55kW) was also installed in place of the original 160kW blower.

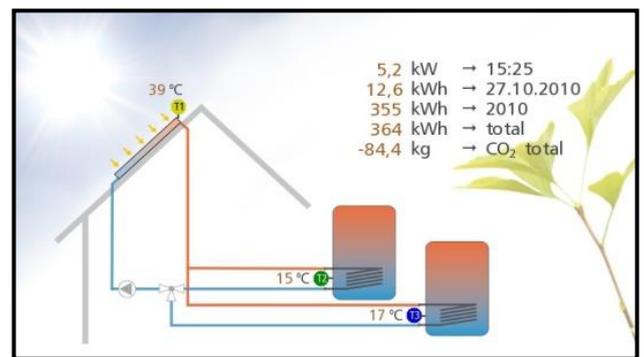
The combined electricity reduction is equivalent to an annual reduction of 647 tonnes of CO<sub>2</sub> to the atmosphere

In August 2010 a **solar powered water heating system** was installed on the roof of the administration building, consisting of 14 flat plate collectors. This system supplies up to 60% of the annual hot water demand to the canteen and bathroom areas. The system supplies 17,000kwh pa, with a CO<sub>2</sub> reduction of 3-4mT/annum. In addition the external walls of the administration building were insulated, ensuring that the as much heat as possible is retained.



Solar panels on the roof of the administration building

A real time display of the output from the solar panels was installed in the canteen, increasing the awareness of all to the project.



Display available in the canteen to view the contribution from solar panels

A **wood pellet boiler** was installed to replace an existing oil boiler, for the Maintenance workshop. 2,000 Lts oil per year have been replaced with the use of 4.5mT wood pellets and a CO<sub>2</sub> reduction of 4m Tonnes/annum.



The combined CO<sub>2</sub> reduction from these 4 projects is 1,025 tonnes of CO<sub>2</sub> per year, which is approx 8.9% of the total CO<sub>2</sub> emission from the site. This is a significant achievement in one year and demonstrates the commitment of all on-site to environmental sustainability.