

Qenos Pty Ltd

Energy Efficiency Opportunities

Public report 2012 to 2013

Qenos continually seeks to improve the efficiency and productivity of its manufacturing processes including energy. Improvement opportunities are identified through internal Qenos assessment processes and regulatory programs such as the Energy Efficiency Opportunities program.

At the Qenos Altona Manufacturing facility significant investment and upgrade projects have been commissioned including a 21 MW cogeneration plant, increasing the ethylene production capacity of 17% and retrofitting a number of original turbo compressors have been implemented across 2012 & 2013. The net impact of the upgrades is an improvement in the energy efficiency by 20% while reducing greenhouse emissions by 130,000 tonnes.

Qenos 2012 – 2013 total energy use was 16,952,000 GJ consisting of 7,016,000 GJ of natural gas, 1,114,000 GJ of electricity, 2,367,000 GJ of black coal with the remainder coming from the consumption of plant by products.

In the second EEO cycle all Qenos energy use will be assessed. The Qenos Botany Olefines Manufacturing facility was assessed in 2012-2013 in accordance with the assessment plan and covered 6,770,000 GJ which is 40% of Qenos total energy use.

The Olefines assessment identified 3 opportunities with a payback period of < 4 years with a potential energy saving of 62,220 GJ of Natural gas:

1. an opportunity of saving 3430 GJ/yr has been implemented,
2. a project a saving of 20,800 GJ/yr is scheduled to start in 2014. The project involves installing a closed loop combustion control on the steam cracking furnaces has the potential to save 20,800 GJ/yr. The excess oxygen in the furnace stacks averages 2.6% versus a target of 2.2%. The project will automate operation of the furnace draft control to achieve the target excess oxygen via an application in the plant DCS system
3. a project with a saving of 38,000 GJ will be considered for implementation post 2015 following the completion of a major maintenance activity that is scheduled for the Olefines plant in 2015.

Nine opportunities were not considered feasible and there are seven opportunities that are still under investigation.

The information included in this report and is to the best of my knowledge, correct and in accordance with the Energy Efficiency Opportunities Act 2006 and Energy Efficiency Opportunities Regulations 2006. All opportunities have been assessed to a level of accuracy that is commensurate with the financial investment required for implementation.



Jonathan Clancy CEO