ENERGY MANAGEMENT SYSTEM (EnMS)
JOHNSON MATTHEY SOUTH AFRICA
Automotive component suppliers
September 2013

BACKGROUND

Johnson Matthey, a British company established in 1817, is a global manufacturer of automotive components, specifically autocatalysts. The South African operation began in 1953 and since 1992 Johnson Matthey South Africa (JMSA) has been manufacturing catalysts at its Germiston (Gauteng) plant, supplying several local “canners” who fit the catalyst into the catalytic converter system for export to the motor vehicle assemblers.

In response to the increase in energy costs, JMSA Germiston signed up with the IEE Project in 2012 as a candidate plant for the implementation of an ISO 50001-based energy management system. The plant holds management system certification for ISO 9001/TS16949, ISO 14001 and OHSAS 18001 and adopted the ISO 50001 approach as an integration and extension.

IMPLEMENTATION OF AN ENERGY MANAGEMENT SYSTEM

An IEE Project energy consultant facilitated a systems review and conducted an ISO 50001 initial audit. The expert then assisted JMSA to develop and implement an energy management system (EnMS) and energy efficiency measures were systematically implemented in both production and utilities.

Existing structures, such as policies, procedures and sustainability reporting, were expanded to include energy specific requirements.

An energy team was appointed, under the chairmanship of the Engineering (Energy) Manager which met weekly to identify, co-ordinate and implement energy performance improvements. Two members of the energy team attended the IEE Project’s advanced EnMS training and further training is planned for additional energy team members and energy management system auditors.

HIGHLIGHTS OF INTERVENTIONS

Four main projects were identified as potentially large energy savers. Three of these, namely the air compressors, chillers and mixing vessels, could be implemented immediately with nominal or no investment required.

The fourth project was the optimisation of the ovens, which was implemented as phase two, during the December shutdown period.

These four projects resulted in approximately R4.5 million of the R7.7 million in savings. The balance was realised through behaviour changes and a process of continuous improvement (Kaizen projects). A summary of the interventions and savings realised is outlined in the table below.
If you don’t know about potential savings opportunities, you won’t look for them and if you don’t look for savings you won’t find them.

If you don’t care, the savings won’t happen – it’s all about attitude. Awareness and knowledge are key, and attitude is king.