

Pilot Project "Introduction to Energy Efficiency and Energy Management Systems in SMEs in Mexico"

Example of energy efficiency improvement Sensata Technologies: zero-cost operational optimization

Background information:

The implementation of the pilot project began with the introductory workshop to ISO 50001:2011 in October 2015. The companies then conducted energy audits to identify and prioritize various opportunities for improvement, under the guidance of Mexican consultants with expertise in energy efficiency.

The company **Sensata Technologies** based in Aguascalientes assembles and tests products ranging from automotive sensors and aeronautical protection to white goods control, air conditioning protection and other applications, with more than 150 different lines or businesses and a varied list of clients worldwide.

Site Services Facilities is the group within the company that transforms, controls and distributes the various energetics used at Sensata Technologies, with its main energy source being electricity.

Site Services Facilities, which operates under the SME concept, is the department that promotes improved energy performance. Thanks to the implementation of ISO 50001: 2011, it is able to manage the energy for various customers, regulate them and charge for the cost incurred by the plant in producing and being able to obtain a comprehensive view of the benefits of participation in the program sponsored by PTB and CONUEE. It is worth highlighting that *Site Services Facilities* was previously considered only as a distributor of electric power, compressed air, air conditioning, and hydraulic cooling systems.

Description of the improvement:

As part of the responsibilities and work of *Site Services Facilities*, whose staff makes up 2% of the total staff of Sensata, the following actions have been taken to help improve the energy performance by over 7%:

1. Encouragement for senior management to improve operational performance by optimizing operations and reducing scrap and / or rejected parts.
2. Optimization of the compressed air system according to the desired pressure. During a system analysis it was observed that there were two separate systems; 6 low efficiency 20HP compressors were therefore removed to leave a single high pressure system. The unification into a single system makes it possible to deliver air at 2500 psi and 4100 psi with a single source and regulators.
3. Implementation of a program to check for compressed air leaks.



The Mexican National Commission for the Efficient Use of Energy (CONUEE) and the German Metrology Institute (PTB) make the aforementioned project available to small and medium enterprises (SMEs) in order for them to implement an energy management system (EnMS) according to ISO 50001, by strengthening the skills of technical staff within each company.

For more information on the pilot project, contact Lissette Mendoza Barrón, Tel. 3000 1000 ext. 1318, lissette.mendoza@conuee.gob.mx or Susanne Wendt, susanne.wendt@ptb.de

This case highlights the fact that implementing a management system at the core of the organization related to energy distribution has an expansive impact within the entire organization, regardless of its size.

Savings achieved, results and additional benefits

Key indicators	
Improvement in energy performance during the period from January 2016 to June 2016	7.1%
Semi-annual economic saving	MXN \$ 882 077
Semi-annual energy saving	780 599 kWh
Investment needed	0
Payback period	0



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