

Industrial Energy Efficiency Project

For the achievement of energy savings and efficiency gains in their facilities, PT. APAC INTI CORPORA (APACINTI) has joined hands with the United Nations Industrial Development Organization (UNIDO), the Ministry of Energy and Mineral Resources (MEMR), Ministry of Industry and National Standardization Agency of Indonesia. The Global Environment Facility (GEF) funded project, “Promoting Industrial Energy Efficiency through System Optimization and Energy Management Standards in Indonesia”, has supported APACINTI to introduce a structured approach to energy management in their operations through an Energy Management System in alignment with ISO 50001.

INDONESIA:

A Case Study of PT. APAC INTI CORPORA

Importance of a Structured Approach

Strong performance and management commitment have helped APACINTI receive certification from SAI GLOBAL on ISO 9001:2008 and ISO 14001:2004. Through the development and use of a management system, APACINTI utilized the collected knowledge and data as a backbone for the implementation of an Energy Management System (EnMS), with the support of UNIDO trained national and international experts.

Through this cooperation, APACINTI was certified to ISO 50001 in 2014.

By implementing a structured approach under the guidance of the UNIDO Industrial Energy Efficiency (IEE) Project, APACINTI has developed an energy policy and an EnMS procedure, identified the significant energy usage areas of their facility, set up a dedicated energy team, established objectives and targets for the mid- and long-term, promoted energy awareness through trainings to management, and installed monitoring devices for machinery.

A key element of any EnMS is the identification of significant energy users (SEU) that will help the facility develop a full-fledged energy optimization program. This approach has helped APACINTI progress from a project-based company to an energy management company.



PT. APAC INTI CORPORA (APACINTI) is a textile and textile product manufacturer with the largest weaving and spinning factory in the world in a single location.

Location: Semarang City
Products: Yarn, greige fabric, denim

Powered by a computerized system and sophisticated and integrated machinery, 70% of APACINTI's products are exported to over 70 countries in 5 continents, and 30% to the domestic Indonesian market.

source: Schematic World Map, UNIDO

The energy savings achieved by APACINTI were driven by actions

APACINTI began to strategically monitor the results of these interventions by establishing a baseline as a starting point to measure the implementation of the EnMS and the associated energy measures. Realizing the benefits of a structured monitoring system and the importance of operational controls in the system as a whole, APACINTI is now focusing on establishing operational controls and conducting trainings for their personnel. As the implementation of an EnMS requires a team effort, APACINTI has incorporated the EnMS approach into their existing Kaizen management system to ensure that all involved personnel are fully trained.

Action Plans

Previously, energy was not considered a key focus area by APACINTI. With the support of UNIDO's experts, however, APACINTI, as a pilot company of the IEE project, was able to identify and focus on low-cost energy measures, making technical aspects a priority in the initial stage of the project. These measures included:

Replacement of lights and screw compressors with higher performance versions.

Installation of inverters for reduced losses

Purchase of new machinery with energy saving devices

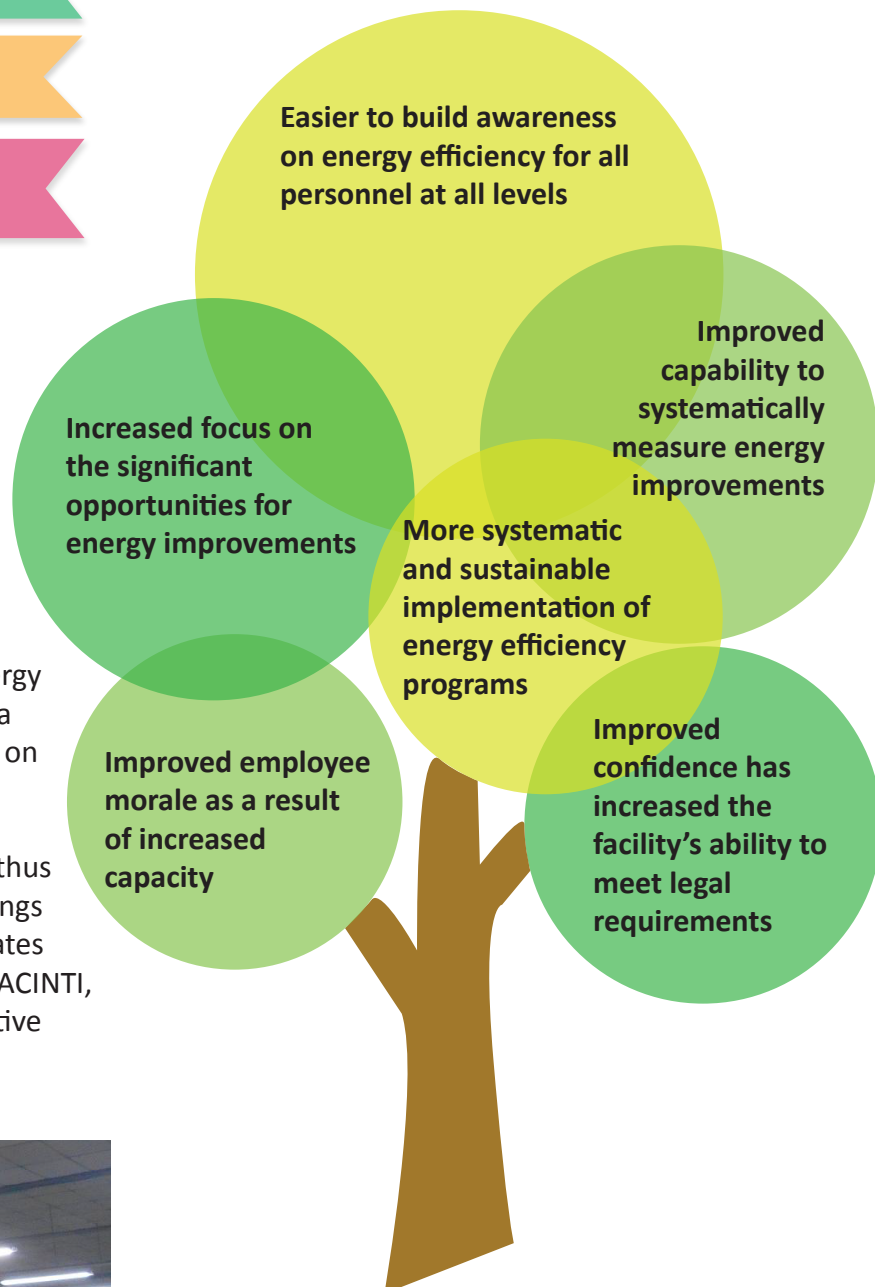
Sustainability in the long term through certification

A structured management system, through the annual planning process, brings sustainability to the implemented improvements. As such, APACINTI has decided to go for ISO 50001 certification. The Indonesian certification body found that APACINTI had implemented significant improvements in energy performance and through the establishment of baselines and Energy Performance Indicators (EnPIs), had developed a monitoring system capable of monitoring these on an ongoing basis. A number of initiatives were identified and implemented resulting in an 8% improvement in various sections of the facility, thus achieving the management objective of 5% savings from Energy Standard Line annually. This translates into approximately \$1,710,000 in savings for APACINTI, as a result of primarily low-cost and non-disruptive interventions.



The Added Benefits of an EnMS

APACINTI believes that the UNIDO program and the subsequent implementation of an EnMS offered them tangible benefits in a sustainable and achievable manner. As the EnMS approach requires a system to be implemented, rather than isolated energy savings measures, top management has and continues to be actively engaged. APACINTI has seen the following tangible benefits:



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