



# Industrial Energy Efficiency Project

In order to introduce a structured approach to energy management in their operations, PT. Indah Kiat Pulp and Paper 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 helped PT. Indah Kiat Pulp and Paper to implement an Energy Management System in alignment with ISO 50001 for an overall improvement in energy efficiency and a reduction in energy consumption.

## INDONESIA:

### A Case Study of PT. Indah Kiat Pulp & Paper

#### Management System Approach to Increase Competitiveness

In order to ensure quality in every aspect of the business, IKPP Tangerang has implemented several management systems, believing that the management system approach is the most effective way to increase company competitiveness in the global market.

In 1996, IKPP Tangerang obtained a certificate of Quality Management System ISO 9001 and one year later, became the first company in Indonesia to implement an Environmental Management System, ISO 14001. The company has also implemented Chain of Custody of Forest Based Products (PEFC) that ensures that raw pulp material can be tracked to the forest it was taken from, as well as OHSAS 18001:2007, ISO 26000:2010 and SMK3 . After successfully implementing these various standards, IKPP Tangerang began implementation of an Energy Management System (EnMS), ISO 50001:2011 at the end of 2012 with the support of the UNIDO Industrial Energy Efficiency (IEE) Project, Ministry of Energy and Mineral Resources as well as the Ministry of Industry. In November 2013, the company became the first paper mill company in Indonesia to receive certification of ISO 50001:2011.



PT. Indah Kiat Pulp & Paper (IKPP) was established in 1976. They have been producing wood free paper for more than 30 years and began producing specialty paper in the 1990s. Since then, IKPP Tangerang has developed into one of the largest color paper manufacturers and converters of specialty paper.

Location: South Tangerang, Banten, Indonesia  
Products: Specialty paper

source: Schematic World Map, UNIDO

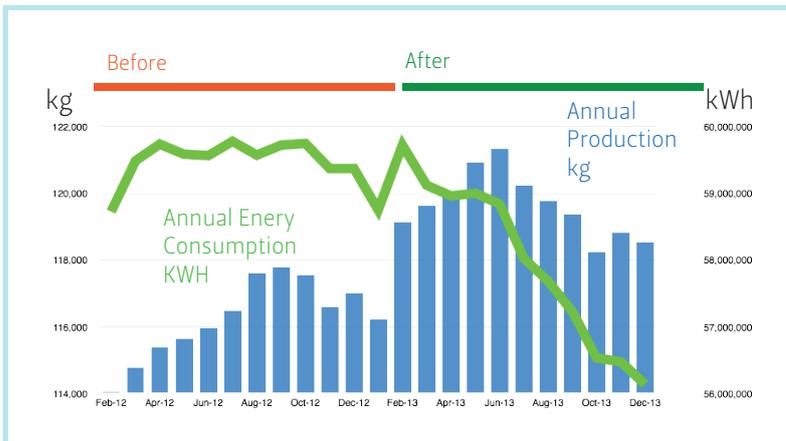


## Improving Energy Efficiency through an Energy Management System

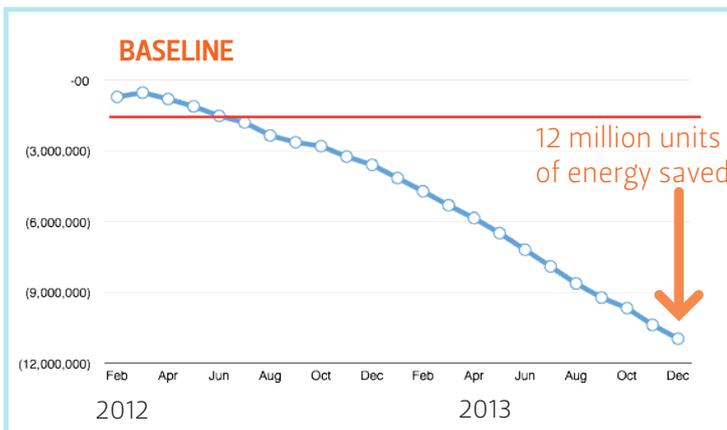
EnMS is a systematic approach to improving energy efficiency. Before the implementation of an EnMS, IKPP Tangerang had already implemented several activities to improve their energy efficiency and while initial improvements were made, energy consumption once again began to increase once each project was completed. Recognizing that better management of energy was needed and that a project approach is not sufficient, IKPP Tangerang decided that all employees needed to be involved in the day-to-day management of energy through the implementation of an EnMS.

Through collaboration between IKPP Tangerang as a pilot company and UNIDO international and national experts, the company began to implement EnMS ISO 50001 in 2012; a potential energy performance improvement of 10%, as compared to the baseline year of 2012, was identified.

## Annual Energy Production (kg) and Consumption (kWh)



## Energy Savings



## Focus on no and low cost opportunities

As part of the system implementation, a focused data driven approach to the improvement of energy performance was placed on their identified significant energy users (SEUs), including challenging the operational control set points employed. A majority of the actions were easy to implement and most savings came from day-to-day operational controls such as:

Controlling the differential pressure of Paper Dryers

Controlling the refining process in the stock preparation area

Controlling paper moisture

Managing the steam trap

Managing the power factor

Through close engagement with management and production sections, a number of changes were made to operational set-points, as well as various no cost measures and some medium-sized investment initiatives that led to significant improvements for IKPP Tangerang.

## Commitment at all Levels of the Organization as a Key Success Factor

Through the commitment of top management and the dedication of employees at all levels of the organization, significant savings were achieved through the program. During the EnMS implementation, energy awareness of employees gradually rose and the company continued to educate their employees to be more aware of the impact of their activities and behavior on the company's energy performance.

### For more information:

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