

# Industrial Energy Efficiency Project

For the achievement of energy savings and efficiency gains in their facilities, Steel Asia Manufacturing Corporation (SAMC) has joined the Global Environment Facility (GEF)-funded project, "Industrial Energy Efficiency in the Philippines." The project, jointly implemented by the United Nations Industrial Development Organization (UNIDO), the Department of Energy and the Department of Trade and Industry, has supported Steel Asia Manufacturing Corporation (SAMC) to introduce a structured approach to energy management in their operations through an Energy Management System in alignment with ISO 50001.

## A Case Study of Steel Asia

Steel Asia Manufacturing Corporation (SAMC) in Bulacan, Philippines operates a straight line automated rolling mill, manufacturing steel reinforcing bars in a variety of sizes; annual production in the four plants in the Philippines is more than 1 million metric tons.

Industry: Steel

Product: Steel Reinforcing Bars

SAMC is the first ISO 9001 and 14001 certified reinforcing steel bar manufacturer in the Philippines. This is a strong platform upon which the company can engage with UNIDO in the implementation of structured energy management systems in its facility.

source: Schematic World Map, UNIDO

## Management Commitment

Senior management has shown ongoing commitment to the delivery of the energy improvement plans in the Integrated Management System (IMS). This can be seen in the improvements implemented and has been recognized by their inclusion in the Don Emilio Energy Efficiency Hall of Fame. Management is committed to integrating energy management into the IMS and this initiative, in cooperation with the UNIDO Industrial Energy Efficiency (IEE) project, is a part of their site objectives.

## Data Driven Objectives and Targets

The energy planning process was driven by obtaining data from the factory which led to the identification of a significant number of projects, 12 projects were evaluated for their performance improvement potential, consisting of a combination of investment projects and operational control improvements.

**Objectives and targets set by the organisation included focusing on the following key improvement areas throughout 2014 and 2015:**

Reducing compressed air leakage

Reducing fuel consumption by reducing furnace heat loss

Replacing lights with energy efficient LED lights as required

Reducing power consumption by reducing roller motor running in cooling beds

Minimizing utility consumption through the implementation of pumping improvements

## UNIDO Programme Benefits

SAMC's perspective:

The utilisation of statistical tools builds confidence in the effective management of energy throughout the plant and creates strong links between production output and energy in order to predict the performance of the plant.

The targeted training of company or contracted personnel who influence the performance of significant energy using systems can be enabled by focusing specifically on significant energy using equipment. By building awareness of the impact of personnel's actions on energy performance, significant improvements can be achieved.

### National EnMS Expert's perspective:

Starting from energy use requirements and subsequently looking at energy distribution and generation ensures that the experts' comprehensive coverage of the energy system's consumption is analysed. This allows the national experts to expand their understanding of the system as a whole, rather than focusing only on individual components and their characteristics.

Life cycle costing ensures that all costs, not only first cost, are considered in comparing project alternatives and internal auditing gives the client company the confidence to be able to comply with third-party certification requirements. As a result, the experts trained under the IEE project, have the skills to help Philippine industry achieve significant energy savings beyond what is currently available in the market.

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## SAVINGS

