



Increasing the uptake of High Efficiency Motors (HEMs) and Drive Systems in Philippine Industries

Project Rationale and Objectives

The specific objective of the project was to increase the deployment of high efficiency electric motors and drives systems in Philippine industries through the design of model investment and financing schemes, the implementation of replicable pilot projects, and through the mobilization of key stakeholders including government authorities and agencies, industries (end-users and service providers), and the private financing sector. The project thereby aimed to contribute to:

- Increase the energy efficiency of the electricity-intensive industries and achieve reduction in electricity consumption
- Reduce the contribution of industries in GHG emissions from energy use
- Help defer the implementation of additional generating capacity from fossil fuels

 **27.4%** of the Philippines' total electricity consumption is due to the energy-intensive industrial sector

 **65 - 70%** of the total electricity consumption of local industries is due to the use of electric motors

 **55%** potential electricity savings of companies that would invest in using high-efficiency motors.

Particular Case of Sugar Mills

Sugar mills in the Philippines, typically have excess electricity-generating capacity during the non-milling period. This creates specific opportunities for these mills to sell excess electricity to the grid. Using higher efficiency motors is a means to reduce losses, and thereby to maximize the potential for selling excess electricity to the grid. Sugar mills were therefore specifically targeted for pilot implementation of high efficiency motors.

Funding Agency




Funded by the European Union

Project Partners







Program Value

€2 million

Implementation Period

2014 - 2017

Pilot Projects

With the support of the Philippines Sugar Millers Association (PSMA), and project partners' networks, pilot sites were identified, and agreements were signed with the following companies:

- Lopez Sugar Corporation (LSC)
- Central Azucarera De La Carlota (CACI)
- Central Azucarera Don Pedro Incorporated (CADPI)
- CEMEX Philippines (Solid Plant in Tanay Rizal, and Apo Cement in Naga, Cebu).

Investment grade audits and full feasibility studies were subsequently carried out for each pilot location. IE2 and IE3 motors were installed at the pilot sites, in replacement of IE1 old motors.



Signing of MOA with CEMEX Philippines, December 12, 2016

Capacity Building for ESCOs

Basic training (1-day) was provided to 51 ESCOs.

In addition, the project developed a series of 9 training modules which were offered as the "ESCO Business Development Series" (3-days). The training program aimed to give companies the raw tools and practical knowledge needed to bid for an ESCO project and implement it.

24 ESCOs were trained using the ESCO Business Development Series. Of these, 9 ESCOs participated in the conduct of the feasibility studies and investment grade audits for the potential pilot sites



ESCO Business Development Workshop – July 11, 2016, Mandaluyong City (in cooperation with Asian Development Bank)

Financing and Capacity Building for Commercial Banks

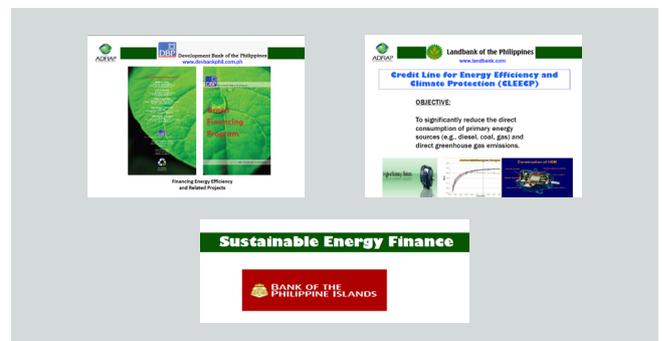
- Integration of motor credit lines in EE financing programs of 3 commercial banks
- Training for: Landbank of the Philippines, Development Bank of the Philippines, Philippine National Bank
- Training program extended to (Banco De Oro (BDO) Universal Bank, Metropolitan Bank and Trust Company, Security Bank and Trust Company, China Banking Corporation, Small Business Guarantee Corporation (SB Corporation, Philippine Export-Import Bank (PHILEXIM), Bangko Kabayan, etc.



Training of LandBank of the Philippines, April 4–5, 2016

Policy

- White paper on MEPS and creation of a Working Group with DOE for MEPS adoption (2017)
- Establishment of a Technical Working Group on Motors under Department of Energy (DOE)
- Adoption of IEC 60034 standards (test methodology and energy efficiency classes) as national Philippine Standards.



Integration of motor credit lines in EE financing programs of 3 commercial banks (Bank of the Philippine Islands, Development Bank of the Philippines, Landbank of the Philippines)

