

Project Brief

The Philippine Energy Efficiency Project (PEEP) is a loan from the Asian Development Bank (ADB) and a grant from the Clean Energy Fund for the sub-component on Communication for Efficient Lighting. The project objective is to reduce the peak load and power demand by implementing an energy-efficiency program, particularly on efficient lighting that will contribute to greenhouse gas reduction.

This is expected to result in savings of about \$100 million per annum from avoided fuel cost and deferral of an investment of \$450 million in power generation and associated network capacity of 450 megawatts, which is about 3% of the Philippines' total generation capacity. Low income customers will particularly benefit, as lighting is a significant component of their electricity consumption. These households will benefit from improved quality lighting.

Components

The Project has three (3) major components, namely:

- Component 1: Efficient Lighting Initiative
- Component 2: Efficiency Initiatives in Buildings and Industries
- Component 3: Communication and Social Mobilization

Component 2 - Efficiency Initiatives in Buildings and Industries

Commercial buildings consume large amounts of energy estimated at about 25% - 40% of energy used globally, generating 30% - 40% of greenhouse gases and 30% - 40% of solid waste. According to a recent publication, improving energy efficiency in buildings by implementing the following energy efficiency initiatives can reduce more than 700 million tons of greenhouse gases:



- Lighting retrofits
- Improved heating, ventilation and air conditioning systems
- Building control systems

In many countries, this priority area is addressed through efficient-building initiatives by encouraging adoption of efficient-building practices through the following:

- Incorporating better designs such as building orientation and construction
- Implementing improved operation systems
- Improving overall building management, including ventilation and air-conditioning

In the Philippines, four major professional groups are involved in developing efficient-

common long-term goals and plan to align their short-term activities. They plan to develop building rating system for the country. This has the potential to avoid emissions of about 2.2 million tons of CO₂ over the next 10 years. Development of an acceptable rating system for the Philippines-both for new and retrofitted buildings-is a priority for the Government. The proposed efficient-building system will be implemented as a national voluntary rating scheme.

In summary, this component aims to overcome the barriers to the implementation of energy efficiency projects in the public and private sectors, as well as develop a building rating system to reduce energy and GHG emissions in buildings through the following sub-components:

- Establishment of a Super Energy Efficiency Service Company (Super ESCO)
- Efficient Building Initiative

Sub-component 2.1— Super ESCO

The ESCO industry is not well developed in the Philippines, despite the high prices of energy, and well-established private banking system. This is due to lack of access to financing and lack of technical understanding by potential clients.

Through this project component, the Government will introduce incentives and technical expertise to the industry. As a pilot activity under this component, the Government's strategy is to develop a working model of Super ESCO as a subsidiary of the Philippine National Oil Company (PNOC). This newly established Super ESCO will develop projects for its own implementation and support development of other ESCOs by providing financial and technical advisory assistance.

The range of services offered by a typical ESCO includes the following:

- preliminary feasibility analysis including detailed audits of facilities and design of energy efficiency options and financing;
- installation services and management;
- operation, maintenance, and performance monitoring; and
- promotion of energy-efficiency technologies and services

Sub-component 2.2— Efficient-Building Initiative

This component will accelerate implementation of the building rating system by streamlining existing initiatives into a single building rating system. The Government plans to extend the industry-rating system to;

- rate new and retrofitted buildings; and
- expand it in harmony with other initiatives within the Association of Southeast Asian Nation region

All Government buildings that have completed energy saving retrofits can apply for certification under the rating system to be developed.

**Source: ADB Proposed Loan and
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Efficiency Initiatives in Buildings and Industries

**Consumer Welfare and Promotion Office
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