

Public Buildings Partnership

Public Buildings Energy Efficiency is an “Efficiency” program targeted to implementing energy efficiency measures in public buildings such as state and local government buildings.

Background

Public buildings in Maharashtra consumed approx. 27.85 crores units in the year 2003-2004. Govt. of Maharashtra has initiated efforts towards reducing the energy consumption of all public buildings by 20%. It is observed that there is a lack of awareness exist in public servants resulting in wastage of electricity.

Rationale

Substantial opportunities exist for energy efficiency improvement in public buildings. The Central Government has initiated a number of EE projects in government buildings using energy service companies (ESCOs) as implementing organizations. This approach can be applied in Maharashtra by MEDA.

Program Objectives

- Reduce energy consumption in public buildings
- Showcase public buildings as demonstration case studies
- To develop energy conservation standards and norms for building
- To reduce financial burden on Govt. of Maharashtra towards energy bill
- Increase awareness of public building officials on available approaches to implement energy efficiency projects.

Program Design

The program will promote energy efficiency in public buildings by promoting the use ESCOs for the implementation of energy efficiency projects. Specifically the program will develop standardized contracts for use by ESCOs and financial institutions. Additionally the program will set an objective to convert the EC Act into specific actionable targets for public buildings (e.g. 15/5 Plan – Reduce energy consumption by 15% in five years). Program Delivery

MEDA will work with ESCOs and public building officials to identify contractual issues and mitigate them. MEDA will then work to recruit ESCOs to undertake demonstration projects that can be showcased to increase participation from public buildings.

MEDA will work with legislators to enact laws to motivate public agencies to implement energy efficiency.

Target Market Segments

- Government offices
- Schools
- Higher education
- Hospitals
- Military facilities
- Institutional buildings

End Uses Targeted

- Lighting
- Air-conditioning
- Pumping
- Water Heating

Key Barriers Addressed

- Budget allocation for financing of energy efficiency measures
- Lack of awareness of methods to finance and implement energy efficiency
- Lack of experience with the ESCO concept
- ESCO risk of non-payment or late payment
- Limited motivation for public buildings to embrace energy efficiency

Technologies to be Employed

- High efficiency lighting
- High efficiency air conditioning
- High efficiency pumping and water heating

Appliance and plug load efficiency improvements

Financing Approach

MEDA shall develop and demonstrate a set of implementation and financing mechanisms for public/private partnerships to finance and implement energy efficiency projects in government buildings. While a large number of options are available for financing and implementation, MEDA shall focus on a set of generic strategies for financing and implementation.

The alternative “models” for financing and implementation include different roles for the state government agency, a financial institution, an energy service company (ESCO) or an EPC (engineering, procurement and construction) contractor, and possibly a credit guarantee provider. The three “generic” models that can be used are similar to the models discussed above for the municipal energy efficiency program.

- Model 1 - Equity financing by the state government agency, with implementation by an EPC contractor (with appropriate equipment performance guarantees).
- Model 2 - Financing by a financial institution (FI) to the state agency, with implementation by an ESCO or an EPC contractor.
- Model 3 - Financing by a financial institution (FI) to the ESCO with the state agency signing an energy services agreement (ESA) with the ESCO using the principles of performance contracting.

Anticipated Results

- Reduction in energy bill
- Reduction in energy wastage

Key Action Steps

- MEDA shall work with the Public Works Department and the various state government agencies to identify public buildings that would be suitable for demonstration of energy efficiency improvement.
- A task force will be established under the administrative control of MEDA with members from different stakeholders