



ENERGY EFFICIENCY SERVICES LIMITED
A JV of PSUs under the Ministry of Power

Creating & Sustaining Markets for Energy Efficiency

(Global Environment Facility Project under the GEF-6 cycle)



Figure 1: Launch of the project by CEO, GEF and other senior Gol, UN, ADB and EESL officials in November 2017

1. Background

According to International Energy Agency, the primary energy demand in India has grown from about 450 million tons of oil equivalent (toe) in 2000 to about 770 million toe in 2012 and is further estimated to grow to 1250 mtoe. The primary energy demand can be controlled through the generation side (more renewable energy, energy efficient generation) and energy efficiency and conservation at demand side. Further, a recent World Bank study, "Utility Scale DSM Opportunities and Business Models in India" has pegged India's Energy Efficiency Market at Rs. 1.6 Lakh Crores.

Energy Efficiency Services Limited (EESL), a JV of PSUs under Ministry of Power, Govt. of India, has been taking various initiatives to unlock the energy efficiency market of India since its inception in 2009. EESL's initiatives in Domestic Lighting, Street Lighting, Smart Meters, AgDSM, Industrial motors, Super-efficient Air-conditioners, etc. and are resulting in an annual energy reduction of more than 50 billion kWh and emission reduction of more than 40 million t CO₂ per year. These programs have not only resulted energy savings to the country, but also brought market and social transformation in many ways. Considering the existing potential and untapped potential by EESL and the likes, there is a need to sustain the existing efforts and create opportunities for newer markets.

2. About the GEF-6 project



The Global Environment Facility (GEF), an international partnership focussed on addressing global environmental issues, has partnered with Energy Efficiency Services Limited (EESL) for the project '**Creating and Sustaining Markets for Energy Efficiency**', under its GEF - 6 cycle to further impetus on the implementation of EE in India. The GEF-6 project aims to mitigate around 60 million tons of CO₂ eq by 2032 by deployment of various energy efficient technologies.

2.1. Objective and Project Components

The project aims to achieve its targets through both investment and technical assistance by:

Component 1: Expanding and sustaining investments in existing market sectors, and support a certain portion of EESL's existing installation target

Component 2: Building market diversification: development and implementation of new ESCO business models through installation of new technologies

Component 3: Replication and scaling up: Developing a long-term growth strategy based on collected lessons, experiences and insights.

2.2. Funding under the GEF-6 project

This five-year project (2018-2022) involves a total funding of USD 453 million comprising of a GEF grant of USD 18.85 million and Co-financing of USD 434.2 million from Asian Development Bank (ADB), United Nations Environment Programme (UNEP), German Development Bank (KfW) and EESL.

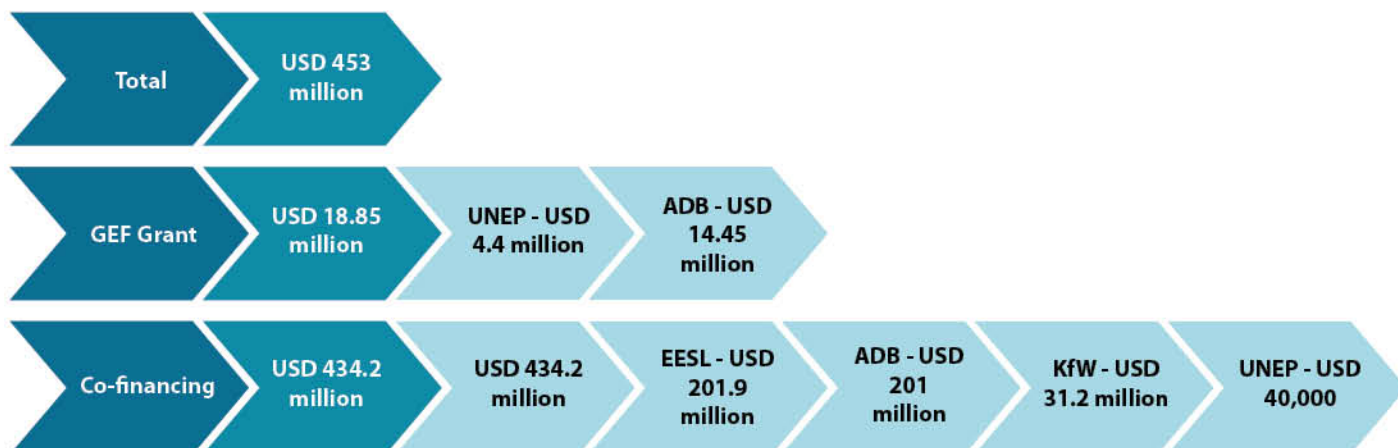


Figure 2: An overview of the funding under GEF

2.3. Project Institutional Arrangement



Figure 3: Grant agreement (for USD 13 million) signing between EESL and ADB, November 2018

A dedicated Project Management Unit (PMU) has been established to manage and operationalize the GEF-6 project. This PMU interacts both with external and internal stakeholders for various activities.

In addition, a Project Steering Committee (PSC) has been established with the participation of EESL, UNEP, ADB and KfW for project monitoring and planning.

Further, a high level Strategic Advisory Group (SAG) has also been established to provide a oversight and strategic advice to the PMU. SAG comprises of Ministry of Power, Bureau of Energy Efficiency, Department of Economic Affairs and Ministry of Environment, Forests & Climate Change.



Project Steering Committee

EESL, UNEP, ADB and KfW

Strategic Advisory Group

EESL, BEE, MoP, DEA and MoEF&CC

2.4. Energy Efficiency Revolving Fund

One of the major activity under the project is the setting up of an Energy Efficiency Revolving Fund (EERF) for sustainable funding mechanism of energy efficiency projects and 13 million USD out of USD 18.85 million grant has been earmarked. The main objective of the **Energy Efficiency Revolving Fund' (EERF) mechanism** will be to support 'proof of concept' investments and scale up energy efficiency financing of identified EE projects/programs in the country.



Proof of concept
Investments in new
technologies



Scaling up existing
technologies



Scaling-up energy
efficiency financing

2.5. Technologies covered under GEF-6 project

2.5.1. Energy Efficiency Domestic Lighting

Before the start of the GEF project, around 208 million domestic lighting were installed by EESL. The project targeted an additional 40 million units during the project duration. This target has already been met and expected to grow significantly within the remaining GEF-6 project duration until 2022.



2.5.2. Street Lighting National Programme

As against the existing achievements of around 1.7 million street lights, the GEF project targeted an achievement of around 1.6 million street lights. Similar to Domestic Lighting, this targets have been far exceeded already and expected to grow significantly within the remaining GEF-6 project duration until 2022.



2.5.3. Agricultural Demand Side Management

Before the GEF-6 project was launched, achievements under this particular program was relatively less (around 2,500 pumps) because of lack of awareness. A target of around 0.23 million pumps were set for this particular program. Till date, around 30% of the target has been achieved under this program



2.5.4. BEE 5 Star Ceiling Fans

Before the GEF-6 project was launched, achievements under this particular program was around 0.29 million fans). A target of around 2.13 million fans have been set for this particular program. Till date, around 30% of the target has been achieved.



2.5.5. Pilot on new technologies

To pilot newer technologies & business models for improving energy efficiency in different sectors the risk of technology and failure to take-off is covered by the GEF-6 project by way of both Technical Assistance and Investment support. Some of the technologies included under this are as below:

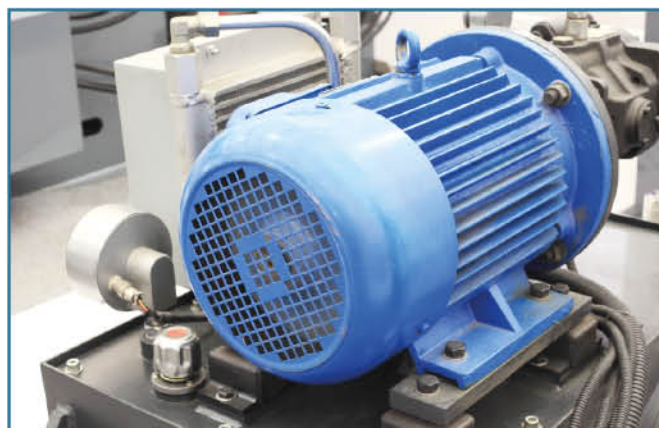
2.5.5.1. Super-efficient AC Program

A Super Energy Efficient AC with ISEER 5.4 (Indian Seasonal Energy Efficiency Ratio) has been launched with the support of the GEF project. This AC results in 20% more efficient than commonly used 5-star ACs available in the market. The target under this program is implementation of 50,000 ACs.



2.5.5.2. National Motor Replacement Programme

Under this programme, supported by the GEF-6 project, the old & inefficient industrial motors from 1 HP to 100 HP capacity are replaced by IE3 motors (Premium efficiency motors) with additional warranty and other features such as pre-dispatch inspection. Replacement of around 40,000 motors are targeted under this program.



2.5.5.3. EV Charging Programme

The GEF-6 project is supporting the establishment of 200 fast charging stations across India. This is expected to give a considerable filip and in accelerating the faster transition to e-mobility.



2.5.5.4. Trigenation

A dedicated program targeting industries and commercial establishments for paradigm shift of utilizing the available energy resources through Trigenation technology. The GEF-6 project is supporting the Trigenation project to establish a cumulative capacity of 12.5 MW plants.



3. Type of TA Support Available

The GEF-6 project has a grant component to aid in increased stakeholder engagements, program management, training & capacity building, project monitoring, market creation, awareness generation, etc. (Annexure 1) for improving the energy efficiency ecosystem in the country. In addition to above mentioned activities, the availability of GEF support has been instrumental for the following activities:

- i) As a catalyst in bringing in Energy and policy experts from different parts of the World to deliberate on EE related aspects and transformation of the sector EESL's flagship event INSPIRE for the years 2018 and 2019 had brought in International Experts from the World Bank, GCF, UNEP, ADB, etc.
- ii) The project is supporting the of Organizational Transformation of EESL to cater to the growing demands and to untap the available potential.
- iii) Support to larger stakeholder engagements (Think-tanks, DISCOMs, Industry Associations, etc.)

4. For further information please contact

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Annexure 1

Types of TA support Available

Studies / Surveys

- Feasibility studies
- Detailed Project Reports
- Market assessment studies for new business areas
- Policy studies
- Load surveys
- Growth Strategy studies
- Energy saving plans for ULBs, DISCOMS, etc.

Promotional Activities

- Conferences & Seminars (targeting different stakeholders)
- Roundtables
- Marketing collaterals
- Development of Audio-Visuals

Training

- Group trainings on PDI / Quality Assurance / Procurement / Gender / M&V aspects
- Trainings to other relevant stakeholders (non-EESL)
- Development of Training modules

Travel support

- Travel for Business development
- Travel for project implementation and monitoring
- Travel for conducting PDI checks
- Participation in International conferences / trainings

Reports & Publications

- Coffee-table books
- Impact assessment results
- Study results
- Quality assurance manuals

Note: Supports mentioned above are only indicative.

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