

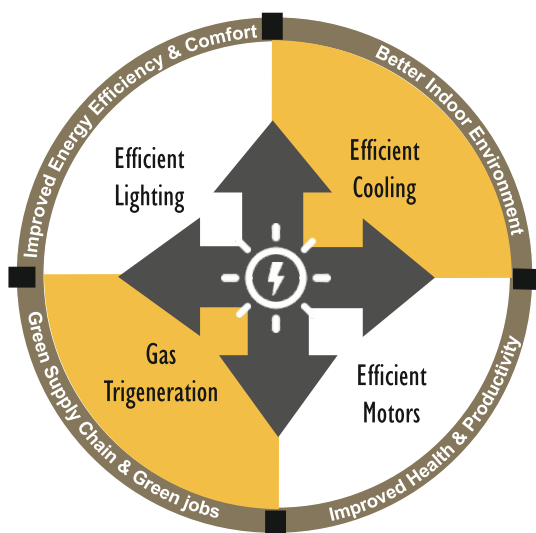


ENERGY EFFICIENCY SERVICES LIMITED
A JV of PSUs under the Ministry of Power

Integrated Energy Efficiency Services Model



EESL Integrated Energy Efficiency Services Model



INTEGRATED ENERGY EFFICIENCY SERVICES

Energy Efficiency Services Limited has been actively engaged since 2009 in bringing cutting edge, energy efficient technologies to the market in a cost-effective manner. Customers have saved nearly 17,400 crores annually due to EESL's efficiency solutions. 49,000 million kWh of electricity is saved each year through these interventions.

EESL has continuously expanded to include a multiplicity of demand side energy efficiency solutions. The company now offers an integrated energy efficiency services model with a blend of energy efficient appliances and power generation technologies for buildings, industries and commercial operations.

Energy Efficient Air-conditioners and Appliances

In all major markets today, people are typically buying air conditioners whose average efficiencies are less than half of what is available (IEA, 2018). EESL's super-efficient air conditioners, 40% more efficient than the average AC in the market today, is a game changer. Super-efficient ceiling fans deliver 40-50% savings. LEDs offered by EESL are 60-70% more efficient than the typical CFL luminaires.

Building Energy Efficiency Program, EESL's large scale appliance replacement program, has a pan-India network to deliver building lighting and cooling solutions. Attractive buy-back and environmentally safe disposal options are available for all replaced appliances. Clients are assured of additional monetary benefits realized through buy-backs.

Efficient Power Generation, Cooling and Heating Systems

Combined cooling, heating and power or trigeneration systems designed and supplied through our UK based subsidiary Edina enable commercial enterprises and industries to operate independently of the grid in a cost effective and environmentally sustainable manner. EESL designs, installs and maintains plants under guaranteed savings instruments.

EESL Business Model

EESL's clients enjoy the advantage of innovative financing models, high quality technologies, guaranteed energy savings and project management skills to reduce energy costs and carbon footprint while increasing comfort and productivity.

EESL business model is a win-win situation for consumers. EESL uses demand aggregation and bulk procurement models to get a price advantage. This enables us to bring the most advanced technologies to our clients at the most competitive prices. Products are backed by comprehensive warranties and maintenance.

Efficiency projects can be funded through the ESCO mode, wherein EESL pays upfront costs. Clients can repay the upfront investment through PayAsYou Save model. Clients can also choose the alternative model of Project Management Consultant (PMC); upfront costs are borne by client and EESL designs and implements projects for a predetermined consultancy fee. EESL guarantees minimum energy savings for its projects, default on which is adjusted in repayments.

Model 1: 100% upfront investment by the client

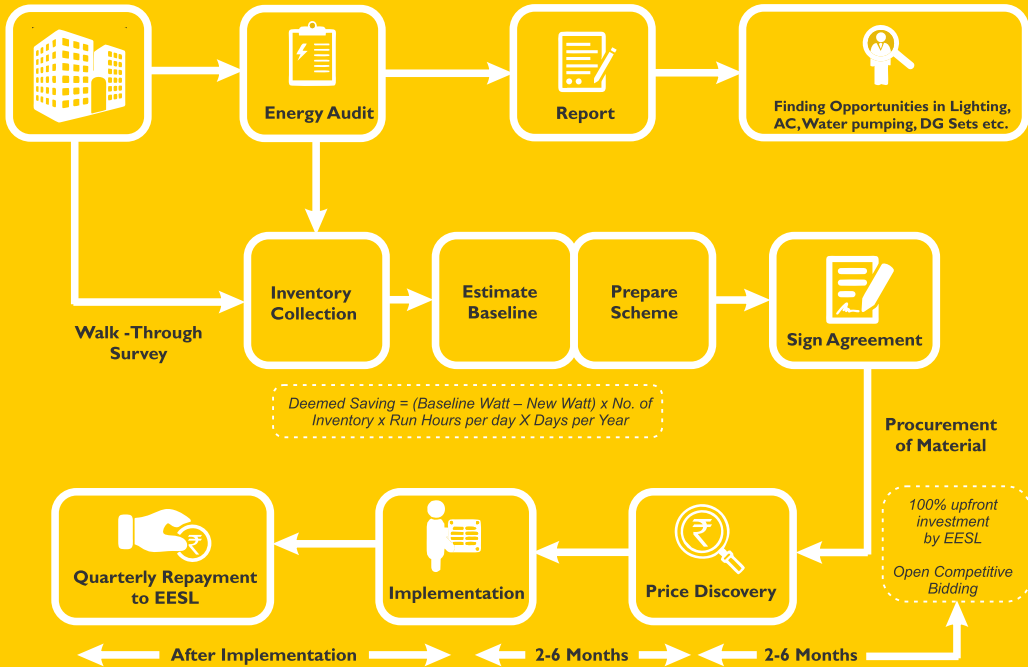


Model 2: 100% upfront investment by EESL

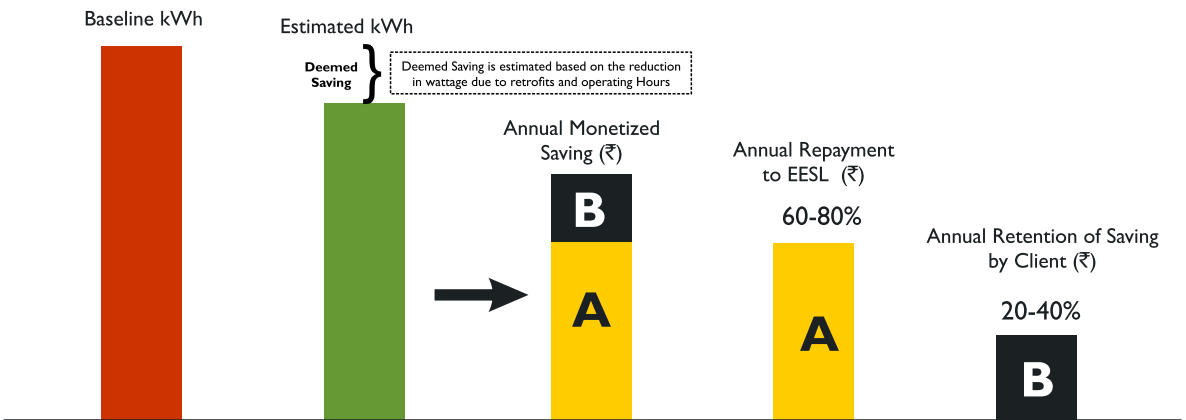


Building Energy Efficiency Program (BEEP)

Project Approach & Methodology



Shared Saving Approach



Project Period : **3-5** Years

Project Cost : Material Cost + PMC + ROI

Warranty

EESL: Transformation in Buildings till date



850,000
LED
fixtures



135,000
BEE 5-Star
ceiling fans



5,000
BEE 5-Star
ACs



10,000
Super
Efficient ACs



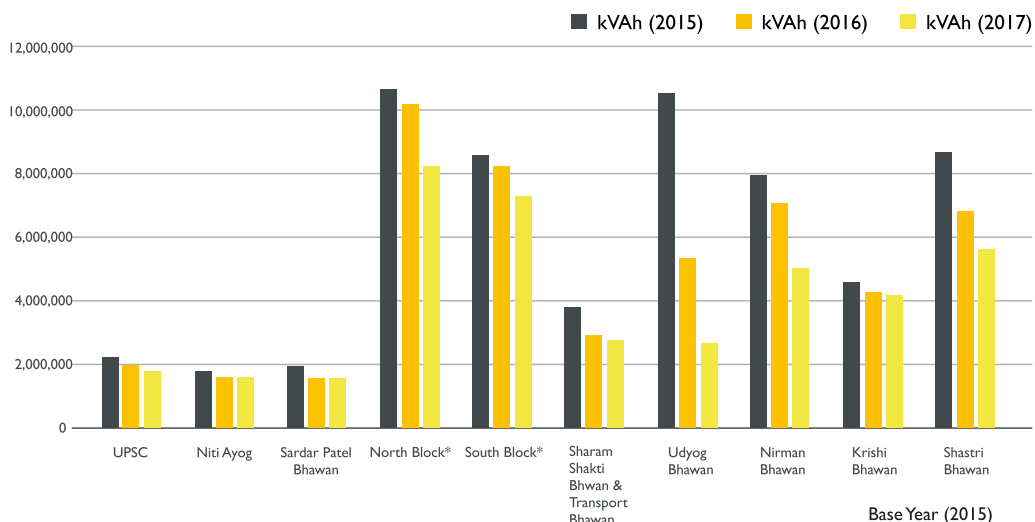
2 (120 TR)
Energy Efficient
Chillers



Other EE Products
e.g. Efficient Water
Pumps and APFC
Control etc.

| 60 MW of peak demand avoided | 80 million electricity units saved annually
| 64,000 tons of CO₂ emissions avoided

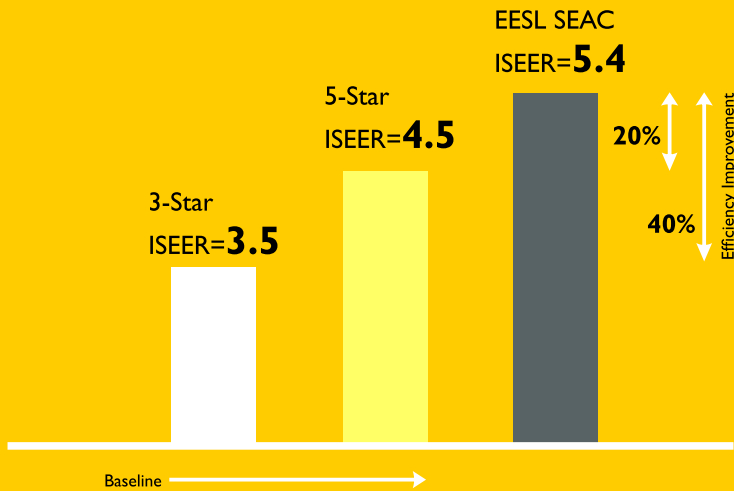
Energy Use Reduction in Key Public Buildings



Success Stories

EESL has partnered with numerous socially and environmentally responsible public and private sector agencies to enhance energy efficiency of their assets and operations. Indian Railways, Maharashtra PWD, Mahindra & Mahindra, Delhi Metro Rail Corporation, Airport Authority of India, NITI Aayog, Coal India Limited, Bank of Baroda, among others, have leveraged EESL's expertise and resources to moderate energy use related costs. Energy efficient appliances and equipment have been replaced in 10,000 public buildings in the last one year. We are financing MSME clusters across the country in integrating innovative, energy efficient technologies.

EESL Super-Efficient Air Conditioner



- Estimated price reduction: 20% -25% due to bulk procurement
- Quick Installation, Easy Payment options (EMI, Payment Gateway)
- Online Platform for domestic and institutional consumers
- Estimated annual energy cost saving per AC - Rs. 21,300
- Estimated Payback period – 2 to 2.5 Years
- Energy Efficient, Green refrigerant (low GWP)

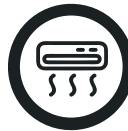
SEAC: Pilot Implementation Process



1. Agreement Signing



2. Launch of Program



3. Procurement of ACs



4. LOA to Suppliers



5. Registration/Upfront Payment from Consumers



6. Delivery of the goods to customer



7. Supply and Installation of ACs



8. Feedback of Consumers



9. Successful Deployment of 50,000 ACs



10. Impact Assessment



11. Completion of Successful Pilot Demonstration



12. Preparation of the next Phase for 5,00,000 ACs

EE Transformation Success Stories

NITI Aayog



306 LED Lighting Fixtures



59 BEE 5-Star ceiling fans



87 BEE 5-Star ACs



328 Super-efficient ACs



2 (120 TR) energy efficient chillers



Other EE products

Efficient water pump, solar window films, APFC controls, etc.

1.1
million

Annual Energy Savings (kVAh)



10.2
million

Annual Monetary Savings



966
tons

Annual CO₂ Reduction



26.7
million

Total Investment



Mahindra & Mahindra



65,000 LED Lighting Fixtures



940 Super-efficient ACs



450 Energy efficient Motors

17
million

Annual Energy Savings (kVAh)



136
million

Annual Monetary Savings



15,000
tons

Annual CO₂ Reduction



173
million

Total Investment



About EESL

A PSU under Ministry of Power, EESL leads the market-related activities of the National Mission for Enhanced Energy Efficiency (NMEEE), one of the eight national missions under the Prime Minister's National Action Plan on Climate Change.

EESL has emerged as the largest energy efficiency services provider globally and has been felicitated for its achievements (Best Public Sector Company - 2018 by Forbes). EESL today manages world's largest energy efficiency services portfolio through programs like Unnat Jyoti by Affordable LEDs for All (UJALA) Programme, world's largest zero-subsidy domestic LED bulb programme, Street Lighting National Programme (SLNP), world's largest street light replacement programme and Building Energy Efficiency Programme. Government of India has designated EESL as the primary implementing agency for mandatory energy efficiency measures in all public.

About USAID MAITREE Program

USAID led Market Integration and Transformation Program for Energy Efficiency (MAITREE) is a four-year bilateral program with the Ministry of Power. MAITREE aims at uptake of cutting edge technology, innovative business models, and end-user engagement, to accelerate adoption of energy efficiency strategies and technologies at scale. MAITREE works with a range of public sector, private sector and international partners.

EESL and MAITREE have partnered to develop strategies for roll-out of scalable, market led solutions for sustainable cooling technologies and super-efficient buildings. The Super-Efficient Air Conditioner Program was designed and rolled out in 2017. MAITREE is supporting development of business strategies and strengthening implementation practices for the Building Energy Efficiency Program.

