
Financing Mechanisms for Scaling Up Energy Efficiency

Deep Dive Workshop

Session III : EE Financing

Neelima Jain

National Programme Manager

16th June, 2015, Manila

Energy Efficiency Services Limited

(A JV company of PSUs of Ministry of Power, Govt of India)

Energy Efficiency Services Limited

Creating Energy Efficient India



Who we are..

- Promoted by Ministry of Power, Government of India
- 100% public owned company
- Governed by all rules and procedures of Government of India
- Board of Directors represented by Ministry of Power and Bureau of Energy Efficiency (BEE)
- Authorized share capital of 95 Million USD
- Line of credit from KfW & AFD. In process: ADB, KfW, and JICA

What we do..

- Implement energy efficiency projects for Central and State Government
- Implement Demand Side Measures:
 - Domestic
 - Municipalities
 - Agriculture
 - Buildings
 - Industry
- Pipeline of 151 EE projects in Domestic Sector worth 500 mln USD
- Pipeline of 240 projects in EE Street Light worth 800 mln USD

Key Achievements

- Our projects have helped avoid capacity addition of 285 MW in 2014-15
- Implemented largest EE street lighting project in India – replaced 92,000 street lights in 6 weeks
- Implemented largest domestic efficient lighting project in India – replacement of 6 million conventional lamps in 4 months
- EESL's LED programmes adopted as national programmes that will cover 100 cities

▪ **Replacement of 10 mln street lights and 200 mln conventional domestic lamps over next 2 years across India**

▪ **Pipeline of \$1.3 bln**

- Aggregating demand to bring economies of scale
- Strong Public Private Partnership (PPP) model
- Deemed savings approach – demonstration of energy savings upfront
- Third party investments in efficient equipments by EESL
- Monetization of energy savings
- Turnkey implementation by EESL including performance and warranties
- Awareness and outreach in project areas
- Risk mitigation – technical risk through back to back arrangement with suppliers.
- Financial risk – BG, ESCROW and Revolving LCs – Approval by regulatory bodies, State govt guarantees

Domestic Efficient Lighting Programme



EESL's Service Model

- First high cost barrier – providing LEDs at 2 cents against a market price of \$6-7
- Monetise energy savings to pay for upfront investment
- Aggregating demand – 70 % reduction in prices

Case Study - AP

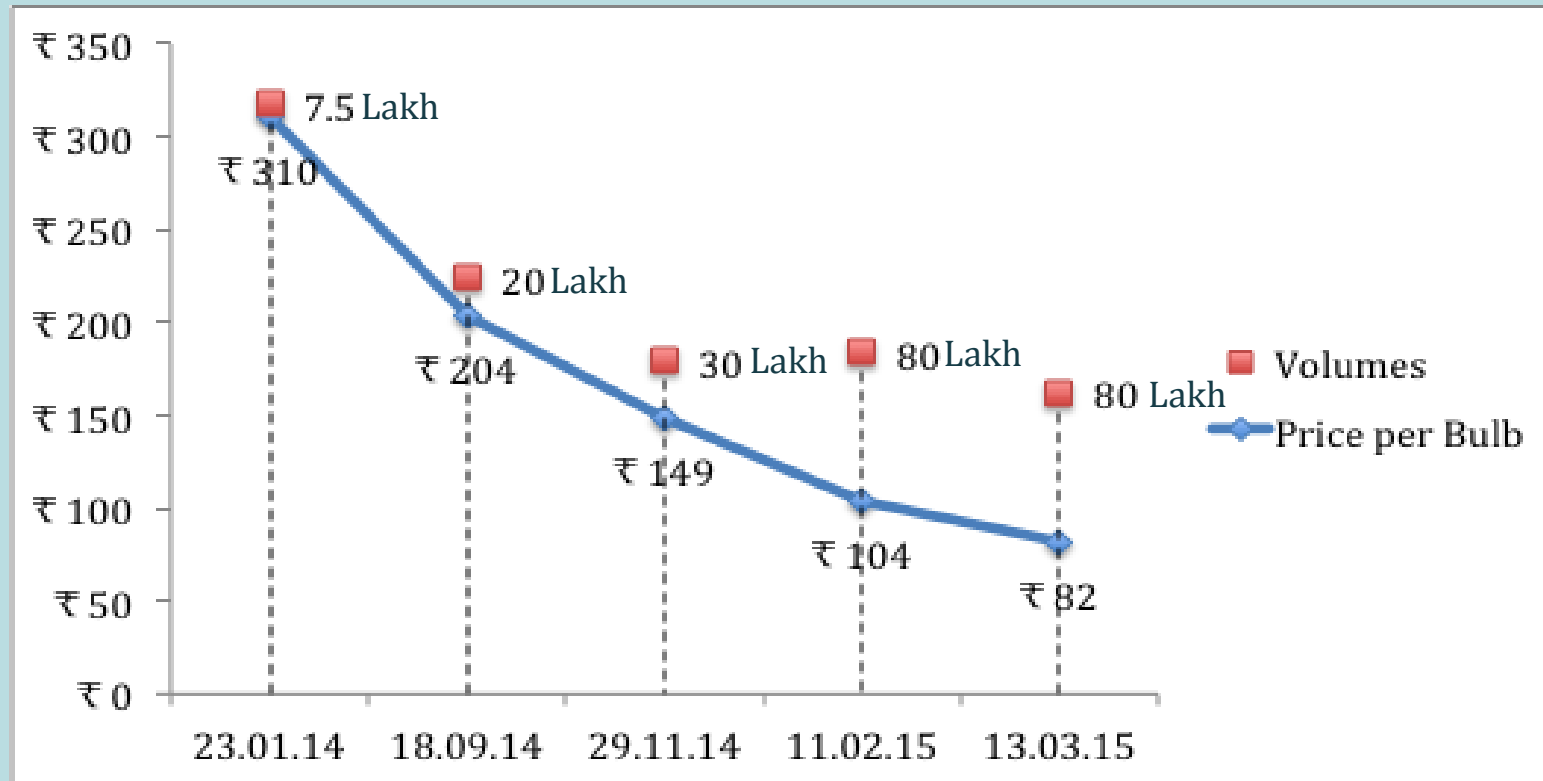
- No of ICLs replaced : 4.5 Mln
- Actual capital investment : 1.4 mln USD
- Estimated cost savings every year: 1.09 mln USD
- Expected annual energy savings: 240 mln KWh



PM launches: Scheme for LED bulb distribution under Domestic Efficient Lighting Programme in Delhi

Transparency in procurement and mass aggregation of bulbs has resulted in sharp drop in LED bulb prices

Price Discovery



EESL Procurement process has been very successful in bringing down the price of bulbs by more than 70% in the last 6 months

EESL's Service Model

- EESL invests in replacement of conventional street lights with energy efficient LED street lights
- Technology demo with validation to arrive at energy savings
- Monetize energy savings to pay for upfront investment
- Strong SLA to ensure maintenance and replacements over project period
- Ensuring light levels as per the National Lighting Code

Case Study - Vizag

- No of street lights replaced in Vizag : 90,000
- Actual capital investment : 1 mln USD
- Estimated cost savings every year: 0.5 mln USD
- Expected annual energy savings: 24 mln KWh
- Expected reduction of installed street light load: 3.9 MW

IMPACT

- **Launched by Prime Minister on 5th January, 2015 for 100 cities – 390 MW of reduction in load expected**
- **Price of LEDs in Street lights in India has dropped by 35%.**
- **Demand for LED street lights to increase from 10,000 per annum to 200,000 per annum**

Snapshots from Vizag Street Light Project



- Energy savings of about 55% - automatic controls being installed and savings to increase further
- Light level improvement by 70-100%
- High levels of public satisfaction

Thank You

For more information contact

njain@eesl.co.in

www.eesl.co.in