



# Market Transformation through Domestic Efficient Lighting Program (UJALA) in India

**Energy Efficiency Services Ltd.**

Ministry of Power, Govt. of India

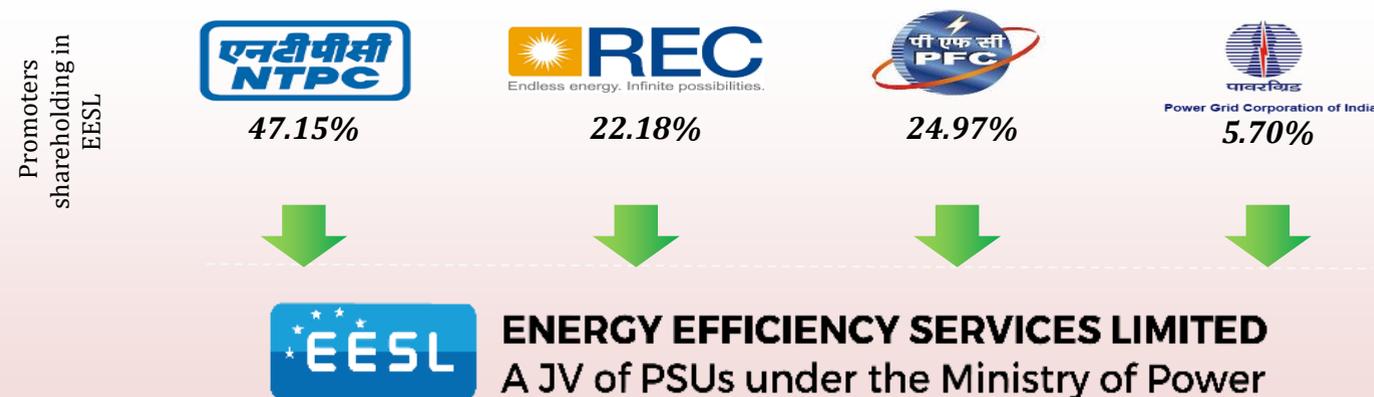
## EESL: One of the largest SUPER ESCOs in the World - Driving Energy Efficiency Solutions in India and Globally

### Company overview

- Founded in 2009, under National Mission on Enhanced Efficiency (NMEEE)
- Joint venture of four Public Sector Enterprise of Ministry of Power, GoI
- Equity Paid up capital – INR **983.33** Crore \*
- Current employee strength - **955**
- Total number of active schemes - **14**
- No. of Urban Local Bodies (ULBs) touched across States - **1,500+**
- International presence/ operations - **8 countries**
- Estimated Energy Savings from EESL's interventions – **54 billion kWh** per year with Avoided peak demand of **10,740 MW**
- Estimated Carbon Foot print reduction - 44 million t of CO<sub>2</sub> per year
- Estimated Monetary Savings of INR 20,000 Crore

\* Till September '19

### EESL is promoted by 2 Navratana and 2 Maharatna PSEs



### Global financial institutions supporting growth

**Total line of credit sanctioned ~\$ 1,062 million**



# EESL's Journey





**Energy Efficiency** Business has resulted Electricity saving of over **45** billion kWh per annum

**360** million  
LED Bulbs  
UJALA

**7.2** million  
LED Tube Lights  
UJALA

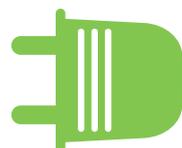
**2.3** million  
EE Fans  
UJALA

**10.4** million  
LED Street Lights  
Street Light National Program

**10400+**  
Buildings  
Building EE Program

**74700**  
EE Agri-Pumps  
Ag-DSM Program

**1** million  
Smart Meters  
Smart Meter National Program



**Enabling More**



## Clean Energy Business for Sustainability and enhancing Social Value

**150,000**

**Solar LED Street Lights**

Atal Jyoti Yojana (AJAY)

**6.3 million**

**Solar Study Lamps**

SoUL Program

**80 MWp**

**Decentralized Solar**

Solar Program

**1510**

**E-Cars**

National e-mobility Program

**470+**

**AC & DC Captive Chargers**

National e-mobility Program

**66**

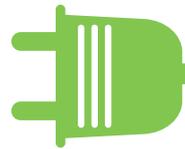
**Public Charging Stations**

National e-mobility Program

**1 MW**

**Tri-Generation**

40 MW in Pipeline



**Enabling More**



# Value Proposition



**More Efficiency | More Innovations | More Savings | More Productivity**

Project Management for complete project period – repair & maintenance



**Transparent operations, outcomes in Public Domain**

EESL follows the Public Procurement Guidelines to procure Goods & Services – Bulk Procurement Approach followed.



EESL takes full responsibility to design, install and commissioning of the project



Feasibility Studies, Energy Audits, Diagnostic Studies to understand the energy saving potential and the business model



Mobilize investment to implement the project on ESCO model – **Pay-as-You-Save (Pays) Model**





Prime Minister of India launches UJALA Program in January 2015

# U J A L A

Domestic Efficient Lighting Program



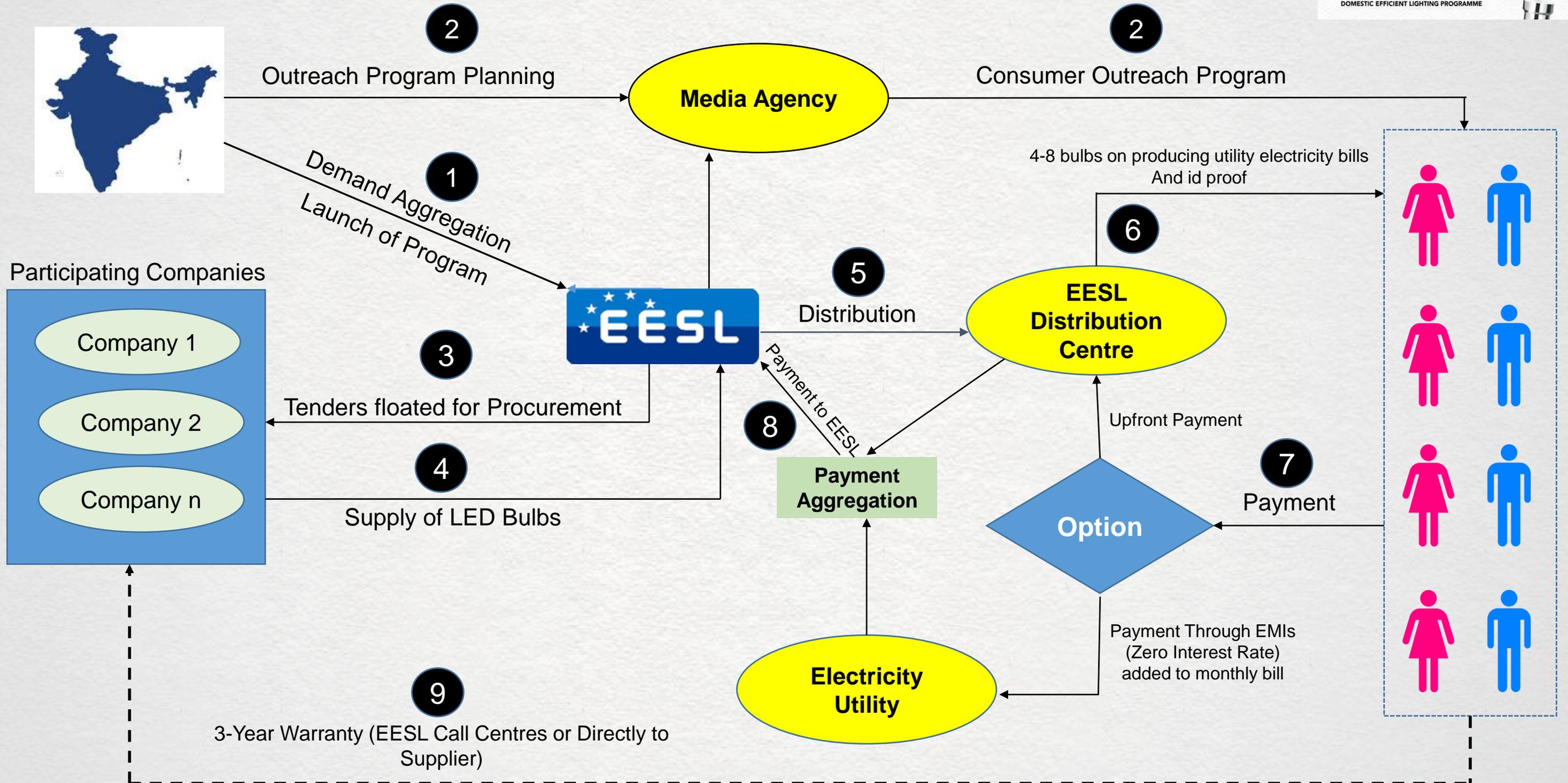
World's Largest Non-Subsidy Based Energy Saving Program

## Achievements

- **360+** million LED Bulbs distributed
- Electricity Saving of **47590** Million Units per annum
- Annual Saving of **US\$ 2700** million
- Avoided Peak Demand of **9,528** MW
- Annual CO<sub>2</sub> emission reduction **35.5** Million tons

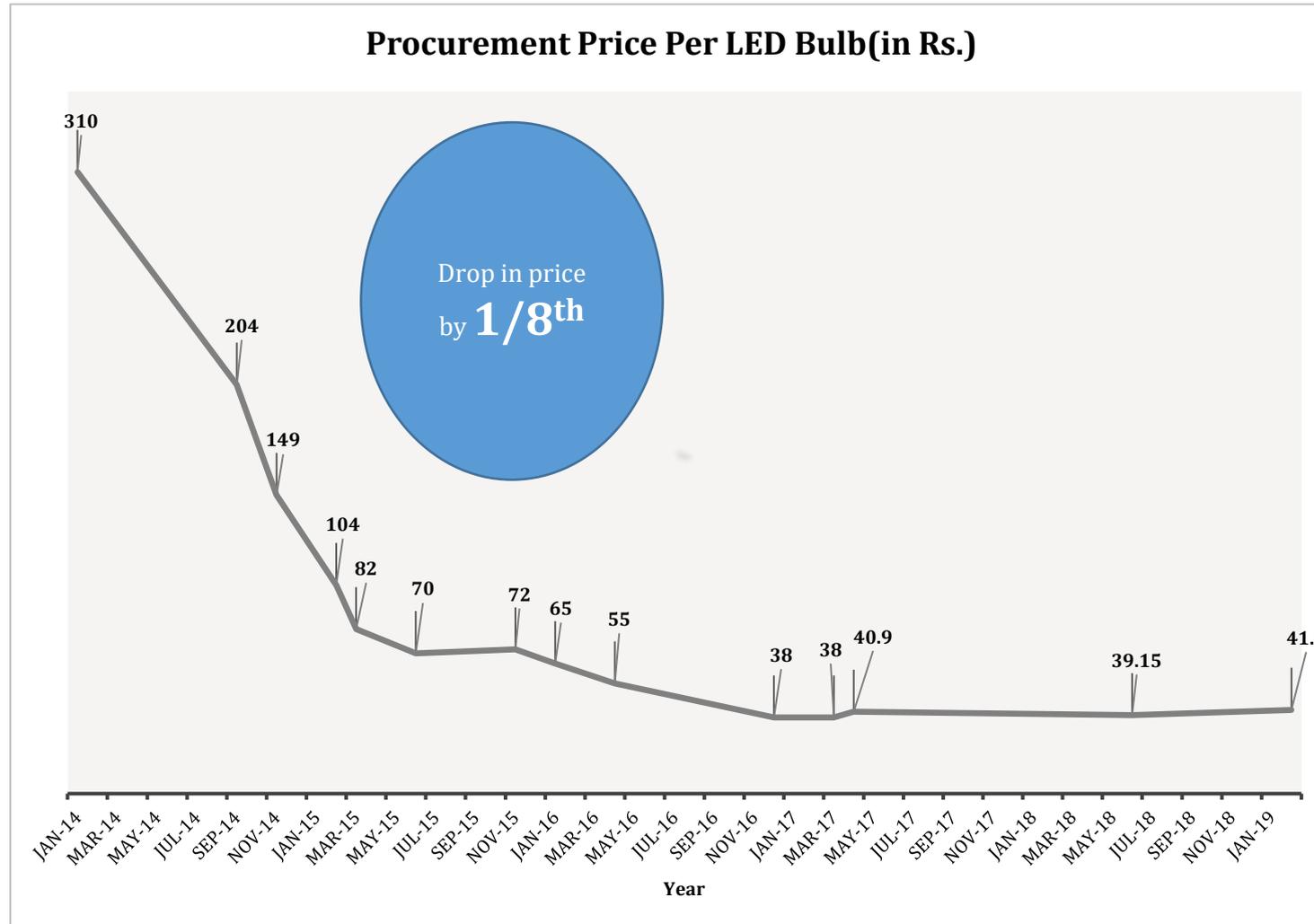


# Operating Model of UJALA

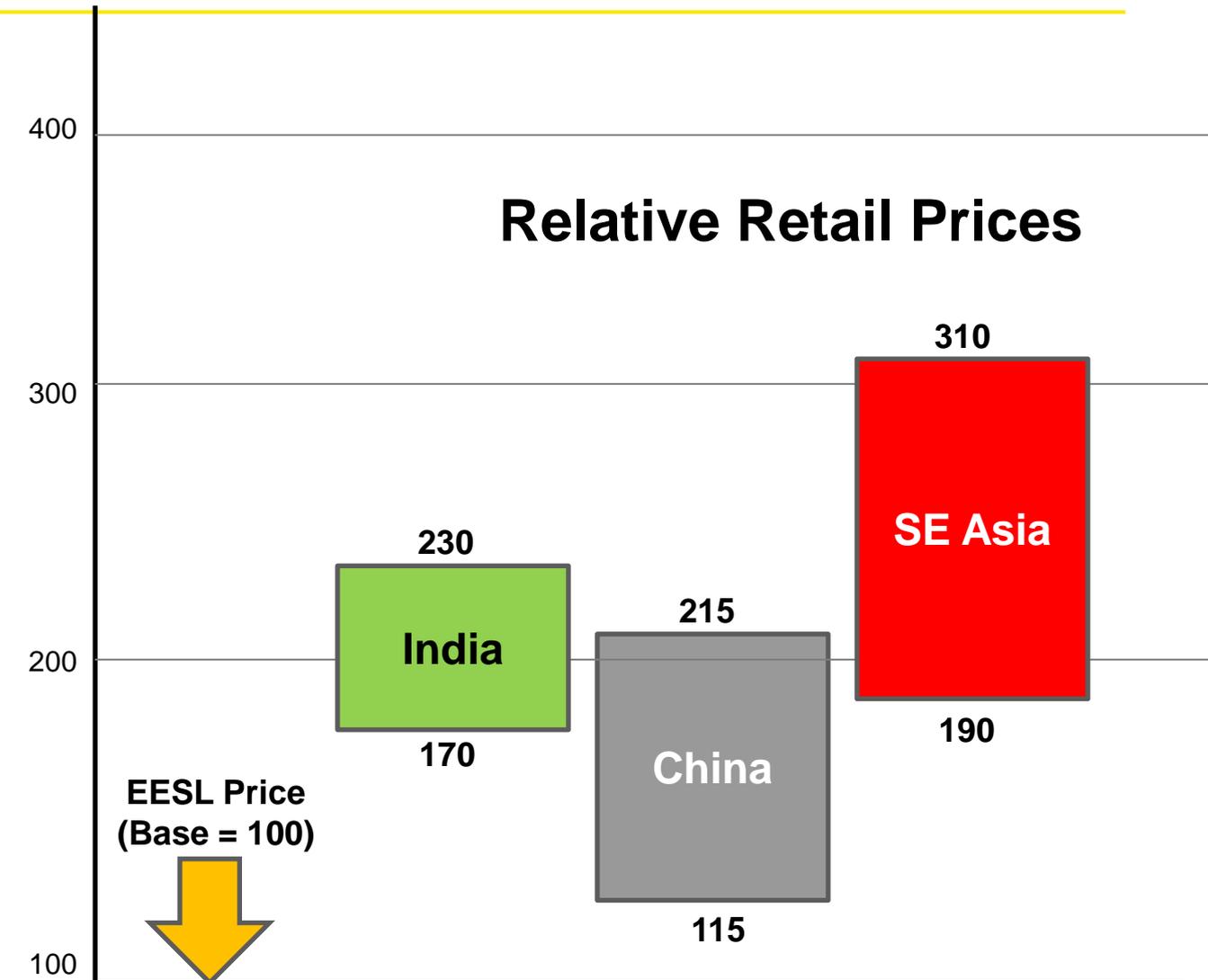




# UJALA : Huge Cost Reduction with Same Quality Product !!!



► Investment done : \$ 300 mn



**EESL's price is much lower than the Retail Price in SE Asian Region**

# Impact of UJALA



Price

**1/8th**

**Reduced**

Due to Bulk-Procurement through Demand Aggregation

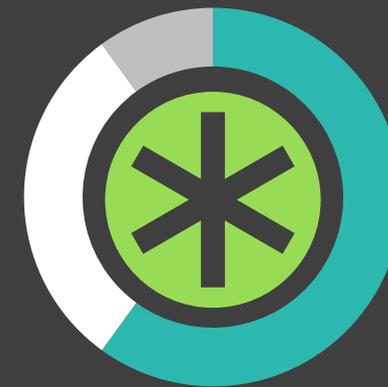


Agencies

**300+**

**Deployed**

Across the Country for distribution, On-Bill-Financing Model through DISCOMs, Other distribution channels like Post-Offices, Petrol Pumps



Manufacturing

**30000+** times

**Increased**

Domestic manufacturing increased from 10,000 to 30 million per month



Revenue

**INR 2918 Cr**

**Earned**

In last 6 financial years.

# NATIONAL UJALA DASHBOARD



Total LEDs distributed as on 05 OCT 2020 01:45

# 36,64,55,302



47,590 mn kWh

Energy saved per year



INR 19,036 Cr

Cost saving per year



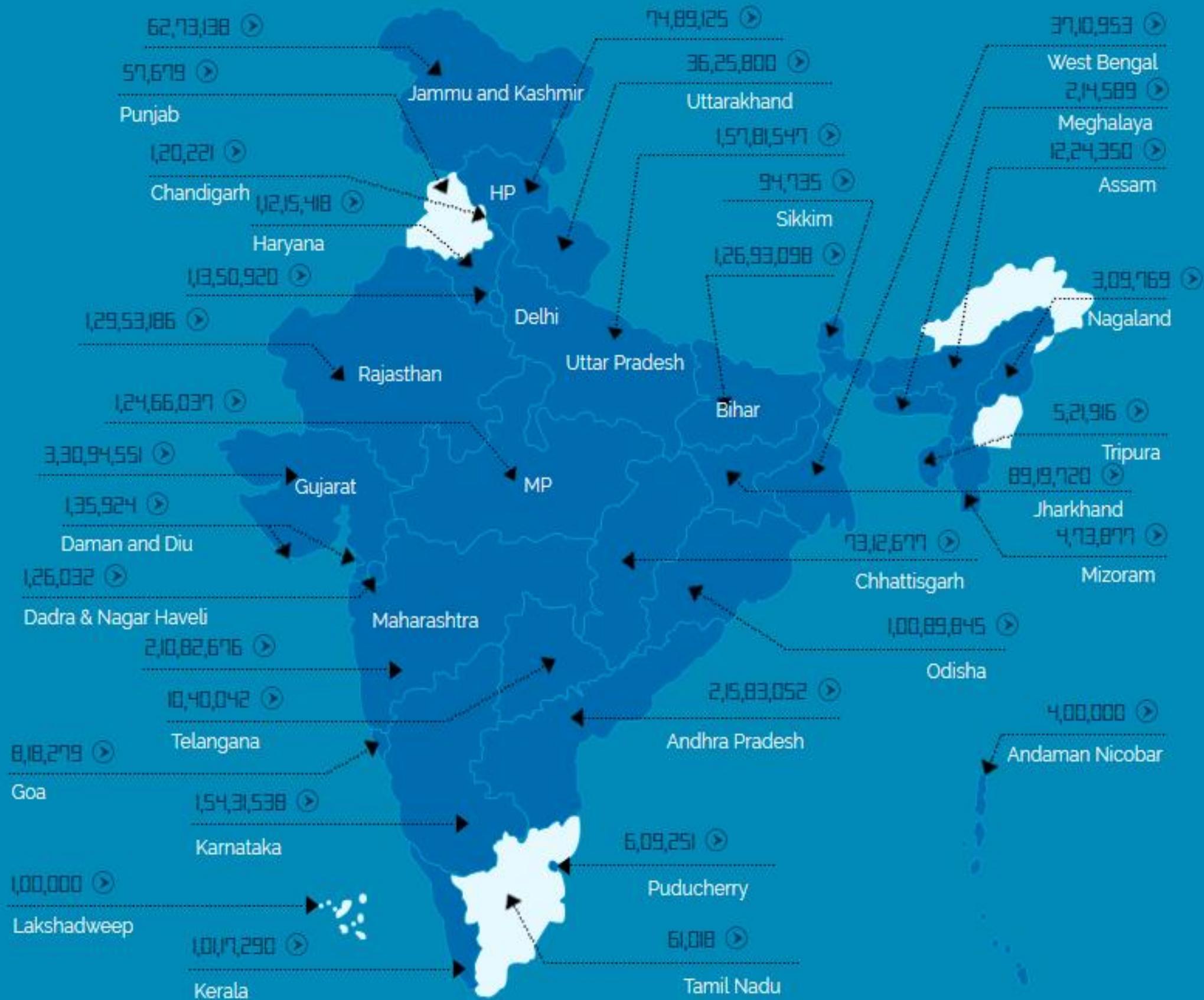
9,528 MW

Avoided Peak Demand



3,85,48,273 t CO<sub>2</sub>

CO<sub>2</sub> Reduction per year



# Gol mandated EESL to Implement BEEP

## LED Lights Installation

2 Million

## Investment

INR 350 Crores / \$ 50 Million



## Estimated Energy Saving

360 Million kWh per annum

## Estimated CO2 Reduction

184000 Tons per annum

## Payback Period

About 24 months

F.No. 25(24)/E.Coord/2017  
 Ministry of Finance  
 Department of Expenditure  
 (E.Coord)  
 North Block, New Delhi  
 Dated: 4th August, 2017

**OFFICE MEMORANDUM**

Subject: Economy Measures - Mandatory installation of LED based lighting in all Government buildings - regarding

The Hon'ble Prime Minister on 5th January 2015 launched the National LED programme to facilitate rapid adoption of LED based home and street lighting across the country. The programme components, Unnat Jyoti by Affordable LEDs for All (UJALA) and Street Lighting National Programme (SNLP) are under implementation in 34 States and UTs. This programme along with Building Energy Efficiency Programme (BEEP) is being implemented by Energy Efficiency Services Limited (EESL), a joint venture company of four power sector Central PSUs. EESL works on Energy Services Company (ESCO) model wherein upfront investment is done by EESL and the investment is recouped on annuity basis with performance based guaranteed energy saving during the project period.

- Pursuant to the above the Central Government has taken a decision for mandatory installation of LED based lighting and energy efficient equipments (Fans & ACs) in all Government buildings.
- Government buildings is a major source of energy consumption. Usage of LED based lightings and energy efficient equipments in Government buildings will lead to economy in expenditure and savings in the long run through reduction in energy consumed.
- Keeping in view the economy in expenditure and savings that will entail, all Ministries/Departments are requested to convert the existing lightings/equipments into LED based lightings and energy efficient equipments on priority utilizing the services of CPWD/EESL.
- The model Agreement/Contract to be entered in to between the Client Ministry/Department and EESL is enclosed for reference. The Client Ministry/Department and EESL on mutual agreement can modify/amend the provisions of the model Agreement/Contract to suit their specific requirements.
- In respect of those Government buildings maintained by CPWD but where the electricity bill is borne/paid by the respective Ministries/Departments, CPWD (as third party) will countersign the agreement to provide comfort to the Ministry/Department as well as extending help for implementing the contract.
- Action taken in this regard be reported to Ministry of Power and Department of Expenditure by 15.08.2017 for monitoring purposes.

(H. Athali)  
 Director

To  
 All Secretaries of Ministries/Departments

Copy to  
 1. Cabinet Secretary, Government of India  
 2. Prime Ministers' Office, South Block  
 3. Managing Director, EESL, IWA, 1-13, Sector-1, Noida.

Letter from MoF

अजय भल्ला  
 सचिव  
 भारत सरकार  
 AJAY BHALLA  
 Secretary  
 Government of India

श्री अशोक लवसा  
 अर्थ सचिव  
 भारत सरकार  
 श्री अशोक लवसा  
 सचिव  
 श्रम शक्ति विभाग  
 नई दिल्ली-110001  
 टेली : 23710271/23711316  
 फैक्स : 23721487  
 ई-मेल : sncy-power@nic.in

Ministry of Power  
 Shram Shakti Bhawan  
 New Delhi - 110001

D.O.No. 9/6/2017-EC  
 Dated the 2<sup>nd</sup> August, 2017

Dear Sir,

As you may be aware, lighting accounts for about 20% of total electricity consumption in India. Use of LEDs in domestic and public lighting could result in 50-90% reduction in energy consumed by lighting. The National LED Programme was launched on 5<sup>th</sup> January, 2017 by the Hon'ble Prime Minister of India, to facilitate rapid adoption of LED based home and street lighting across the country. This programme along with Building Energy Efficiency Programme (BEEP) is being implemented by Energy Efficiency Services Limited (EESL), a joint venture company of four power sector Central PSUs.

- EESL qualifies as a "deemed Government Company" within the meaning of section 619B of the Companies Act, 1956 [equivalent sections 139(5) and 139(7) of the new Companies Act, 2013 as per clarification dated 31 July 2014 of the Ministry of Corporate Affairs, GoI ( extracts at Annexure-I)]. Further, EESL is subject to oversight of the Central Vigilance Commission, Government of India under CVC mechanism. The MD of EESL is appointed by a committee chaired by Secretary, Ministry of Power, Government of India and Ministry of Power and Bureau of Energy Efficiency (BEE) are represented in EESL's Board of Directors.
- EESL follows a business model of demand aggregation for price optimization and passes the price benefit to end consumers. EESL works on ESCO model where upfront investment is done by EESL and which is recouped on annuity basis with performance based guaranteed energy saving during a project period.
- I would like to mention here that way back in August, 2014, the then Secretary (Power) had written to the then Secretary, Department of Expenditure, GoI, requesting to issue necessary directive to all Ministries/ Departments of the Government of India to procure only LED bulbs in place of CFL and JCL for future lighting (Annexure-II). In view of the emphasis of the Government of India for early conversion of all Buildings to Energy Efficient ones and the above credentials of EESL, I request you to kindly consider issuing suitable directions/guidelines to enable Central Government procuring entities across the country to procure services from EESL for Building Energy Efficiency Programme. In this connection, a copy of the Model agreement between CPWD and EESL for Implementation of Energy Efficiency Measures on deemed energy savings based ESCO model with 100% financing by EESL is also enclosed (Annexure-III).

Yours sincerely,  
 (A.K. Bhalla)

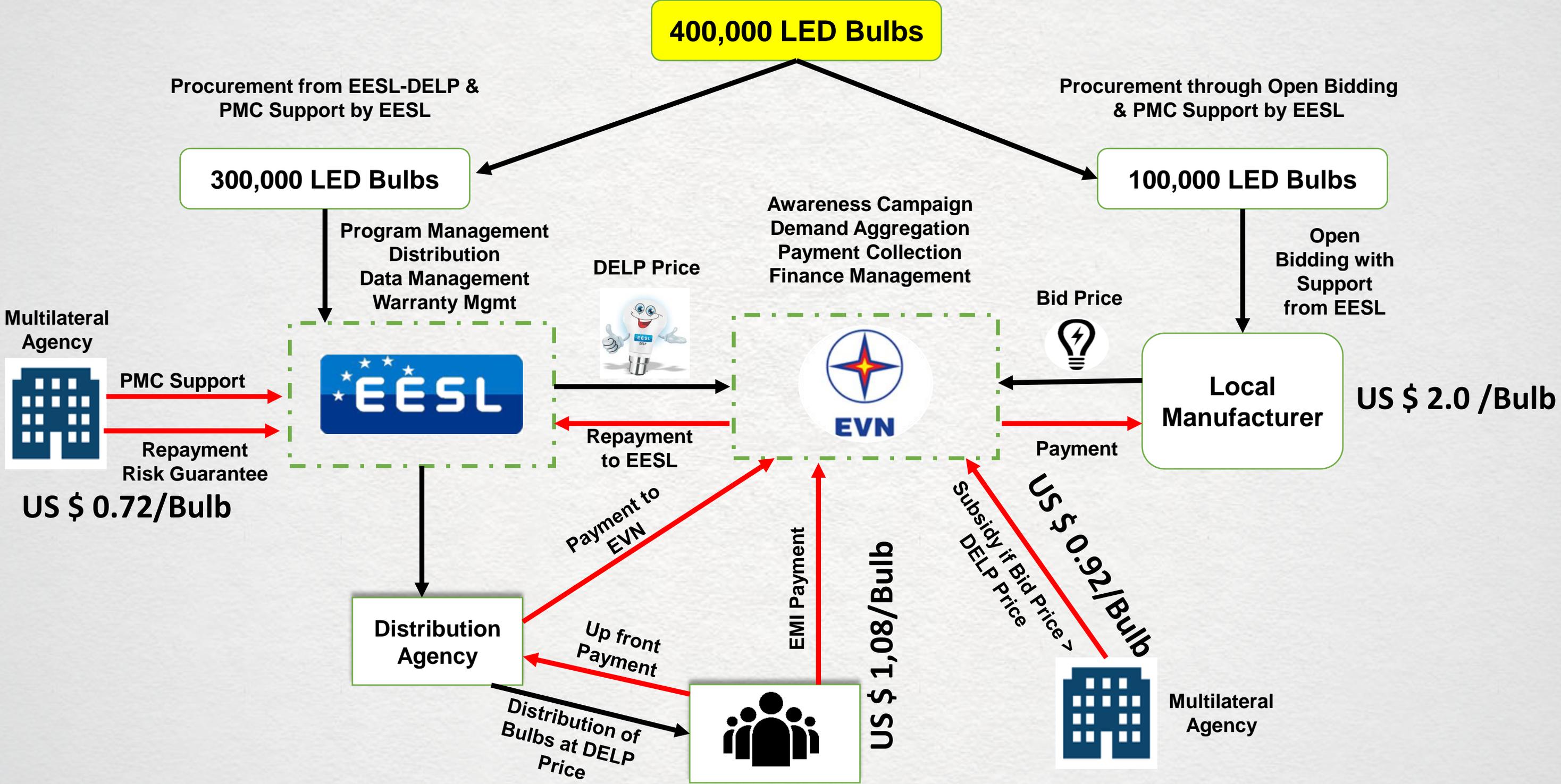
Shri Ashok Lavasa,  
 Finance Secretary & Secretary (Expenditure),  
 Ministry of Finance,  
 North Block,  
 New Delhi

Copy to MD, EESL with request to follow up with JS (Exp.), Dept. of Expenditure

Letter from MoP

Simple Intervention Big Gains

# Pilot Programme of (300,000 + 100,000 LED bulbs) in a Mixed Model



# DELP in Vietnam : Pilot of 300,000 LED Bulbs Distribution

## 1 Province

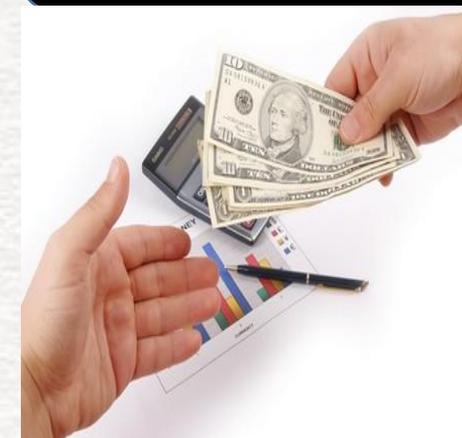
- ✓ Good Visibility
- ✓ Ease of Implementation
- ✓ Political Importance
- ✓ Good Infrastructure

## 2 Awareness Campaign



- ✓ Electricity Bills
- ✓ Print/Electronic Media
- ✓ Pamphlets
- ✓ Appeal by Prominent Person

## 5 Payment



- ✓ Upfront Payment
- ✓ 5 to 6 EMIs added to Electricity Bills

## 3 Procurement

- ✓ Direct Purchase from Retail Market
- ✓ Domestic Bidding
- ✓ Supply from DELP of EESL

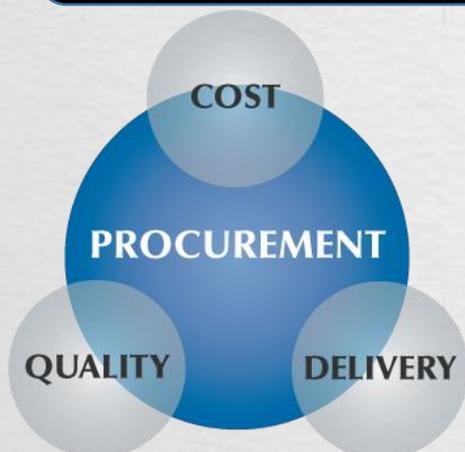
## 4 Distribution



- ✓ KIOSKS by EVN PCs
- ✓ Private Distributors

## 6 Warranty

- ✓ 3 Years Warranty
- ✓ EVN's Complain Management System





Thank You



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