



# Financing the Transition to Efficient Lighting

**Rajiv Garg**

*UNEP, ROAP, Bangkok*



# Long and Short Term Financing Options

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- International Programmes – CTCN, GCF, GEF
- Domestic Effective funding mechanism for EE Lighting
  - Government Funding
  - Utility Administrated
- Super ESCO Approach – The Standard Offer Programme

# ORIGINS OF THE CTCN

## UN Framework Convention on Climate Change

The Conference of Parties mandates...  
“that the Climate Technology Centre shall facilitate a network of national, regional, sectoral and international technology networks, organizations and initiatives with  
a view to engaging the participants of the Network effectively”

- COP 15 (Copenhagen) 2009: agreement to establish a “Technology Mechanism”
- COP 16 (Cancun) 2010: Technology Mechanism further elaborated (TEC and CTCN) and Technology Executive Committee created
- COP 17 (Durban) 2011: establishment of the Climate Technology Centre and Network; selection procedure for host agreed
- COP 18 (Doha): formal selection of UNEP as host of the Centre
- COP 19 (Warsaw): CTCN open for business

# MISSION OF THE CTCN

To stimulate technology cooperation and enhance the development and transfer of technologies to developing country parties at their request

Technology transfer “*comprises the process of learning to understand, utilize, and replicate the technology, including the capacity to choose it, adapt it to local conditions, and integrate it with indigenous technologies*”.

Technology includes “*any equipment, techniques, practical knowledge and skills needed for reducing greenhouse gas emissions and adapting to climate change*”.



# CTCN's CORE SERVICES

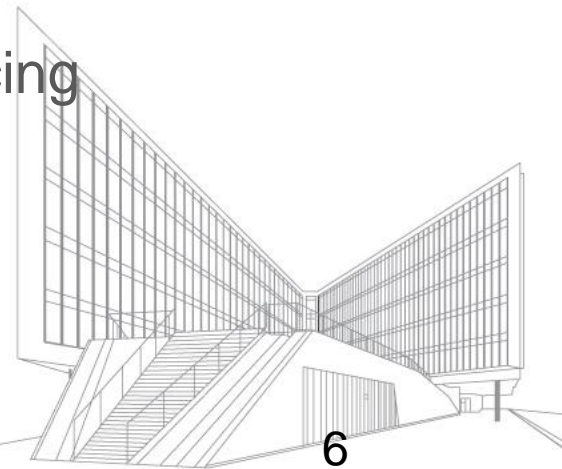
1. Provide technical assistance to developing countries to enhance transfer of climate technologies
2. Provide and share information and knowledge on climate technologies
3. Foster collaboration and networking of stakeholders on climate technologies



# CTCN SERVICES – TECHNICAL ASSISTANCE

Assistance provided on country request, along all stages of the technology cycle to:

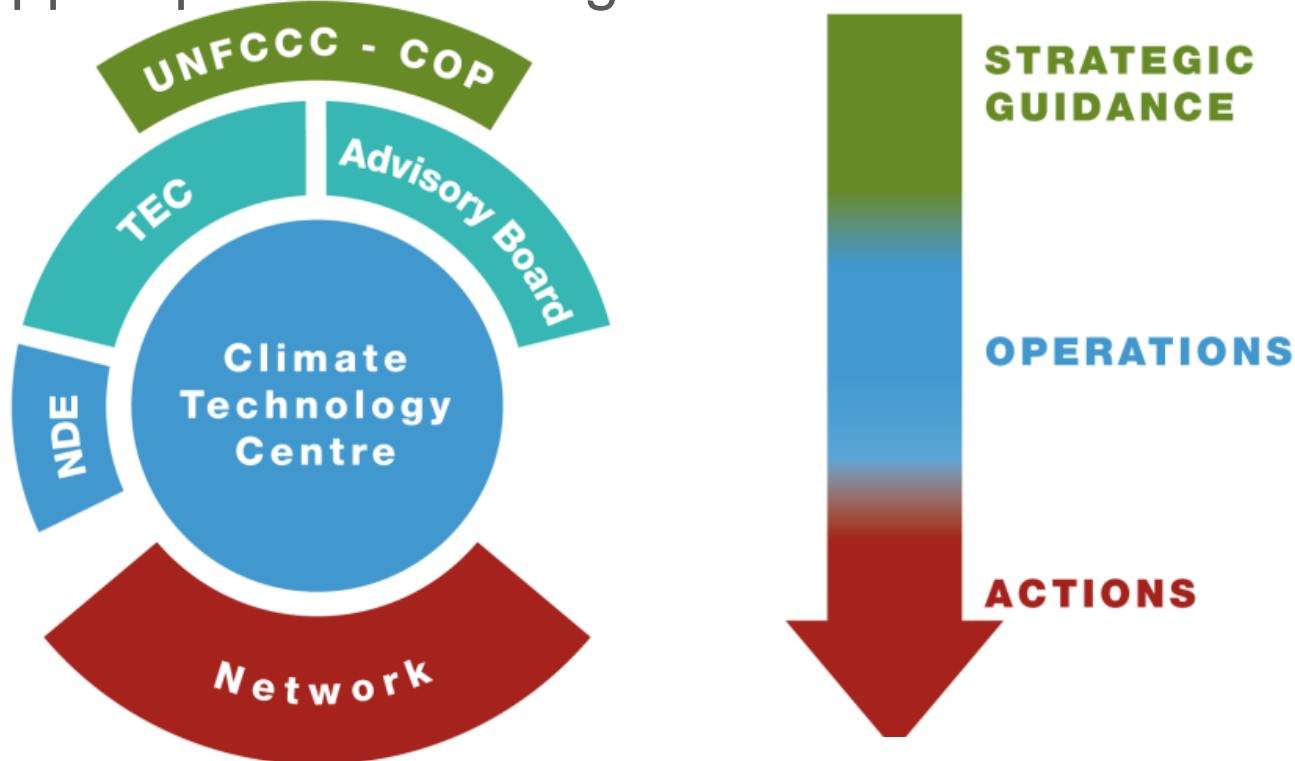
- Strengthen human and institutional capacities for generating, diffusing, adapting and utilizing technologies
- Reinforce policy, legal and regulatory frameworks to enable the effective transfer of climate technologies
- Support mitigation and adaptation planning and policy development
- Facilitate access to climate technology financing



# CTCN STRUCTURE

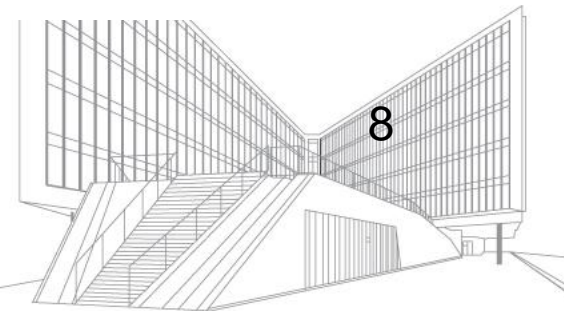
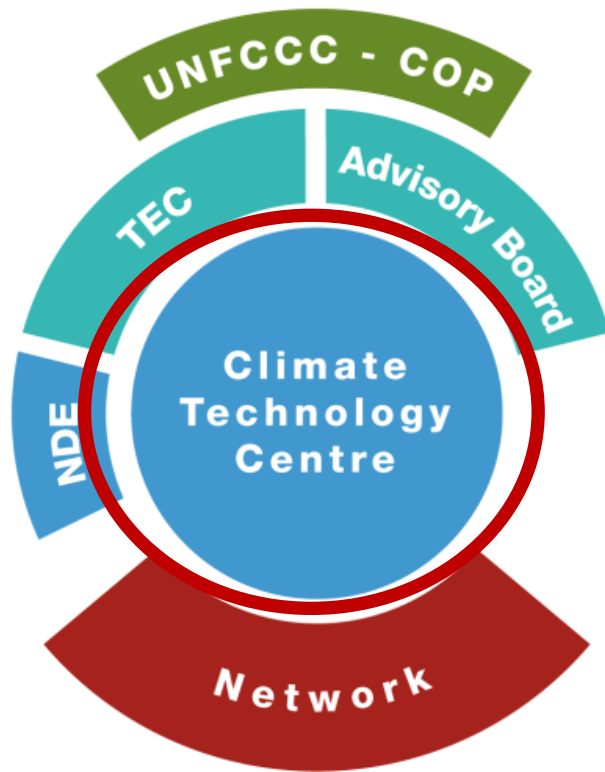
Core Centre co-managed by UNEP and UNIDO, backed by the Consortium of partner institutions

Main support provided through the Network



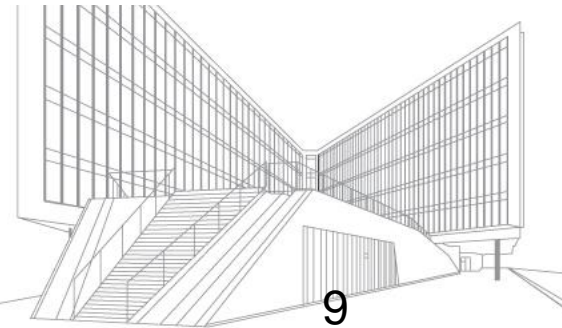
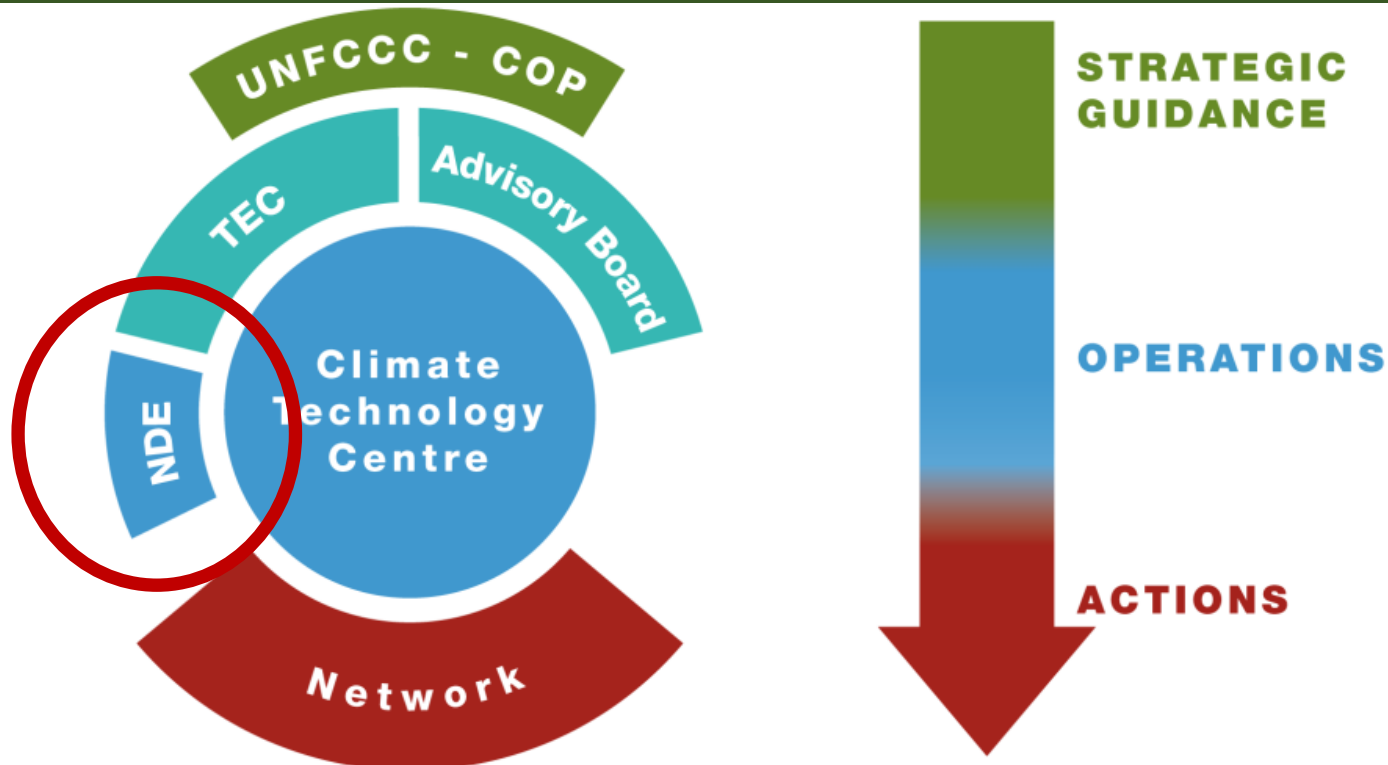


# CTCN STRUCTURE – THE CLIMATE TECHNOLOGY CENTRE





# NATIONAL DESIGNATED ENTITIES (NDEs)



# NATIONAL DESIGNATED ENTITIES (cont.)

- Act as national CTCN focal points
- Coordinate activities and services of the CTCN in their countries
- Act as active members of the Climate Technology Network

**The success of the CTCN greatly depends on NDEs**

**It is hoped that NDEs will mainstream climate technology issues in all national climate change-related strategies, policies, and plans and become  
“CLIMATE TECHNOLOGY CHAMPIONS”**

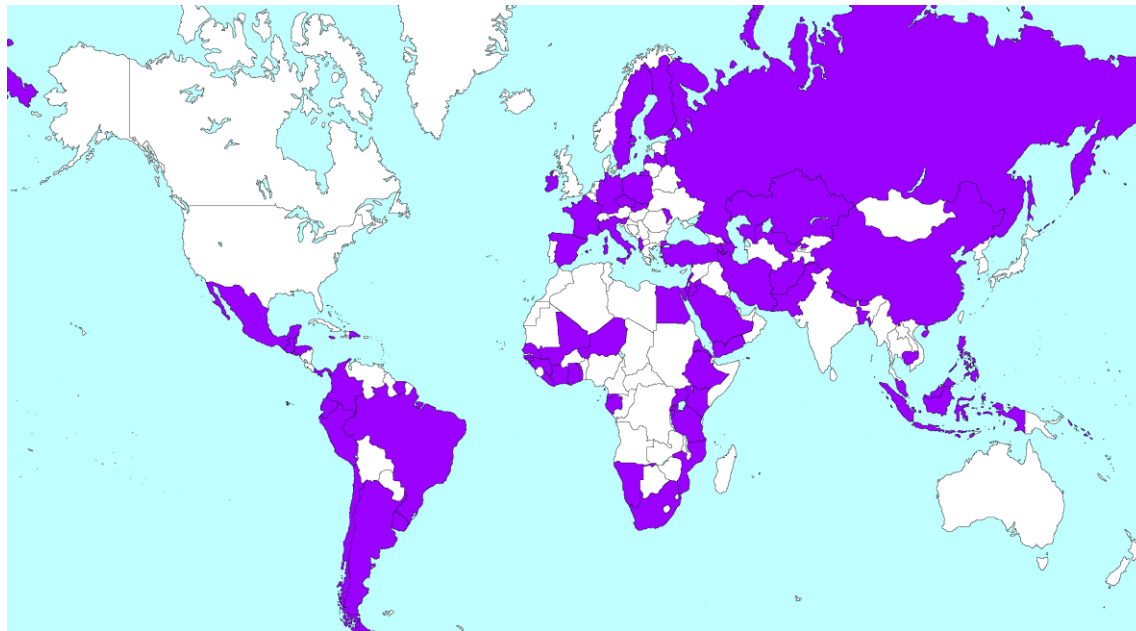


# NATIONAL DESIGNATED ENTITIES (cont.)

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NDE nominations underway by countries; requested by UNFCCC Secretariat

More than 80 NDES nominated of which around 60 from developing countries



**World Map of NDEs, UNFCCC**

# GEF

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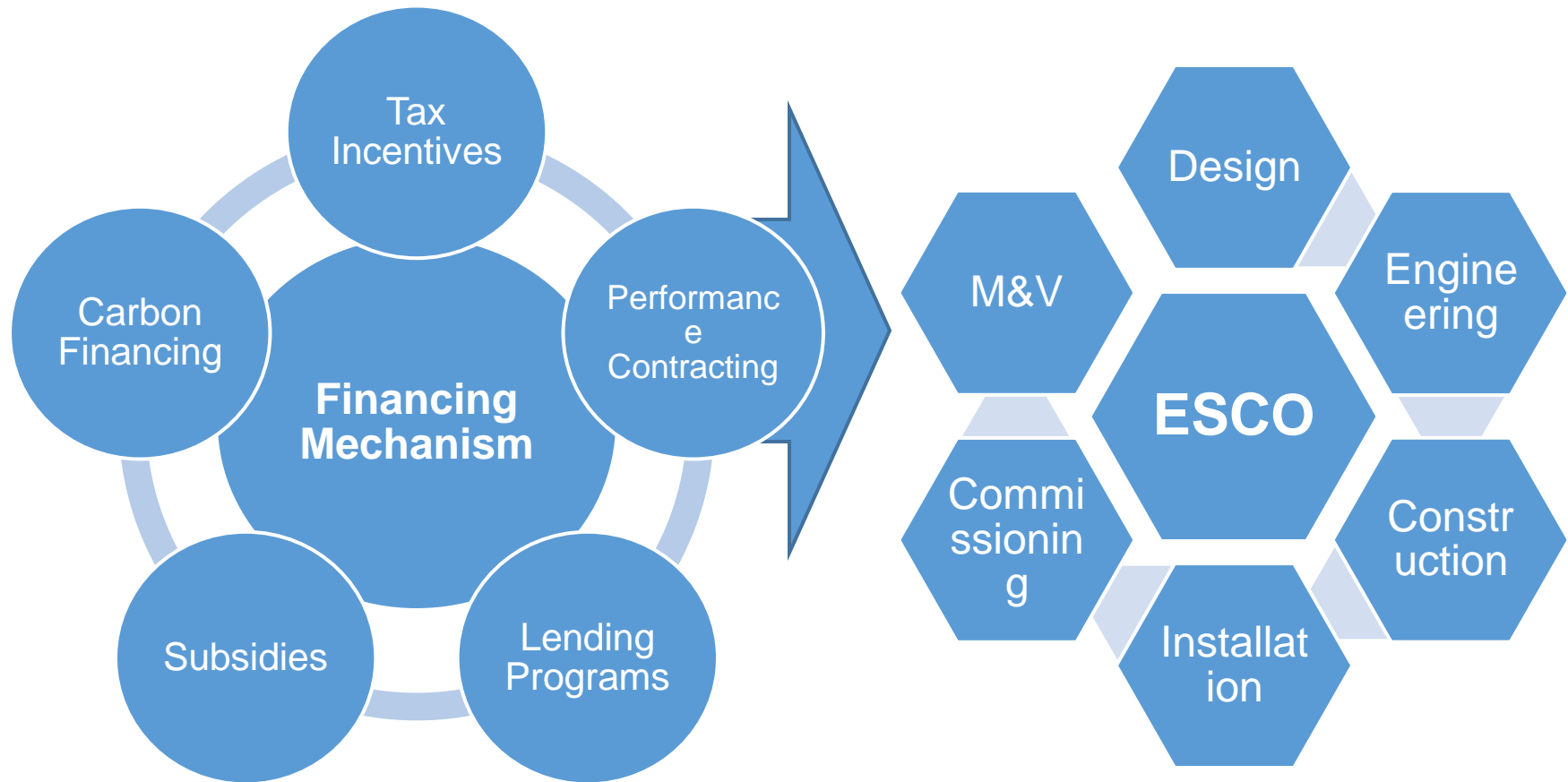
- GEF cycles of funding – presently 6<sup>th</sup> cycle
- Country Star allocations
- Global Umbrella Programme – Lighting And Appliances
- Endorsements from GEF operational focal points
- Region – Vietnam, Pakistan etc. ; discussions with some other countries

*Bangkok, 3-4 February 2015*



# Domestic Financing

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Bangkok, 3-4 February 2015

# Domestic Financing Options - SOP

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- Standard Offer Program (SOP): This mechanism treats energy saving projects in a manner analogous to customer generation of electricity, and considers the energy or demand reductions as resources that the utility will pay for, in lieu of the avoided peak power procurement. SOP is comparable to the feed-in tariffs (FITs) utilized to promote increased implementation of renewable energy resources.
- Energy savings leveraged to pay for upfront investments in 5 to 10 years from Utilities
- Standard Offer Programme (SOP) model used – EE treated as resource
- Revenue risk covered

# Case Study India– DSM Based innovative Financing

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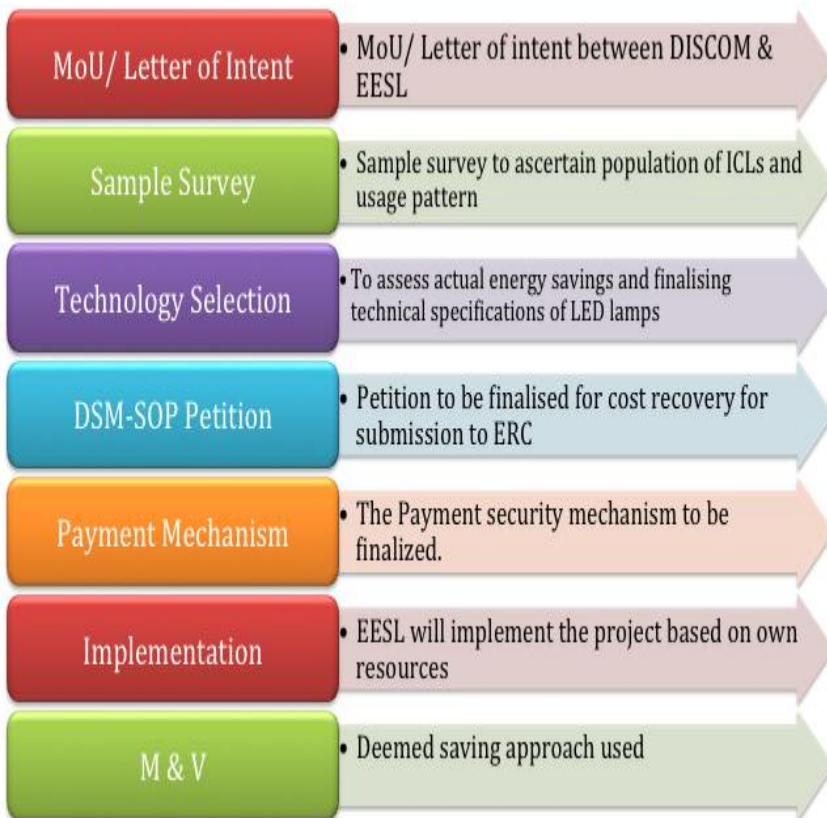
- **Residential Lighting** (LED bulbs given to households as replacements to incandescent for 15 cents (market price \$6 - \$ 10)
  - Energy savings leveraged to pay for upfront investments in 5 to 10 years from Utilities
  - Standard Offer Programme (SOP) model used – EE treated as resource
  - Revenue risk covered through LCs/ ESCROW
  
- **Street Light – Annuity based approach followed**
  - Technology demo with validation to arrive at energy savings and annuity per watt of LED replacement
  - Strong SLA to ensure maintenance and replacements over project period
  - Revenue risk covered through ESCROW/ Guarantees/ LCs



# DSM Based Efficient Lighting Programme (DELP)

## MODEL IN INDIA

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- EESL will, in consultation with DISCOM, select an area for implementation of DELP.
- EESL, DISCOM and Regulatory Body, will agree on a DSM based mechanism to service investments
- EESL will undertake awareness and outreach of the scheme to household. It will provide up to 3 LEDs per household at Rs.10/ lamp as replacement for working ICLs
- EESL and DISCOM will undertake distribution of LEDs to every household and maintain a list of such distribution.
- For monitoring purposes, third-party verifier will select a random sample of household for annual verification.
- Robust mechanism will be built to prevent LED leakage
- ICLs will be collected and destroyed as per relevant environmental norms

Bangkok, 3-4 February 2015

# Impacts of the Programme

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- **Energy savings – 50 m kWh savings from household lighting achieved – 2.4 b KWh expected by March 2016.**
- **Street Light – 22 m kWh achieved – about 200 m KWh expected by March 2016**
- **Demand for LEDs – Domestic demand for household LEDs to increase to 40 m per year in 2016-17 – up from 100,000 now.**
- Demand for LED street lights to increase from 10,000 per annum to 200,000 per annum.
- **Price of LEDs – In domestic lighting, price of LEDs have dropped (on bulk procurement) by 50% (\$ 3.3 per lamp). Street light has dropped by 25%. Further reduction expected – market transformation on the anvil.**
- **Increase in domestic manufacturing – Number of manufacturing facilities witnessed a 2 fold increase – both in numbers and capacity. LED market size to grow from about \$ 0.2 m to \$ 3 b by 2018-19.**

- THANK YOU
- [Rajiv.garg@unep.org](mailto:Rajiv.garg@unep.org)