



## Workshop on Smart Grid Technologies and Implications for Inclusive Development in Sri Lanka

3-4 April 2018 • Galle, Sri Lanka

# Session 10: Demand Side Management (DSM) & the prosumer – what, who and the GESI implications

## Sri Lanka Experience on DSM

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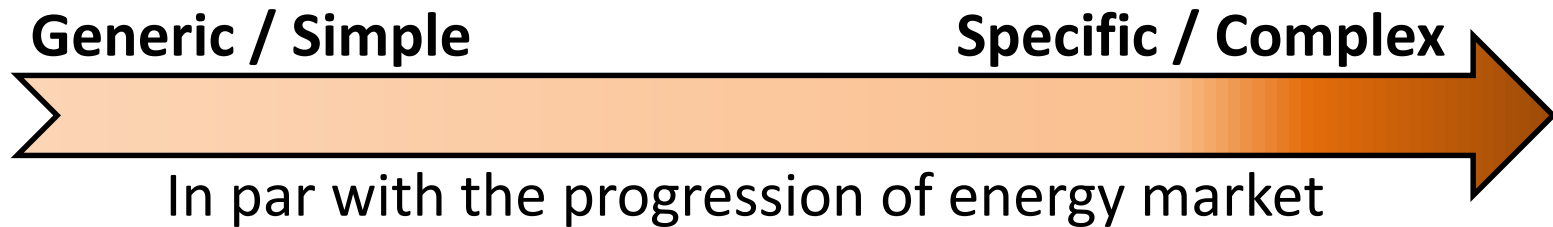
Thusitha Sugathapala  
University of Moratuwa



# THE BACKGROUND

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- Evolution of DSM in Sri Lanka



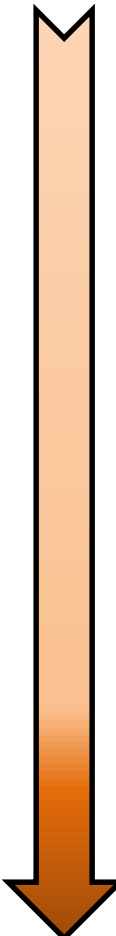
- Drivers

- Learning through experience
- Economic and technological progression
- Cost of energy / economic impacts
- Global commitments / targets (SDGs, NDCs).

# THE BACKGROUND

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- Some Highlights

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- ICS programmes (Estate sector-1950s; National-1986)
  - Energy Conservation Fund (1985) ←
  - Utility driven CFL promotion programme (1996)
  - EE Building Code; Energy Labeling (2000)
  - Public Utilities Commission of Sri Lanka (2002)
  - National Energy Policy & Strategies (1995; 2005)
  - National Energy Conservation Programme (2006)
  - Sri Lanka Sustainable Energy Authority (2007) ←
  - Operation DSM (2016).

# THE GOVERNANCE (SLSEA)

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## Object

Identify, promote, facilitate, implement and manage EE improvement and energy conservation programmes for use of energy in domestic, commercial, agricultural, transport, industrial and any other relevant sectors

## Power & Duties

Implementation of EE improvement and conservation programmes.

Establishment of energy consumption benchmarks.

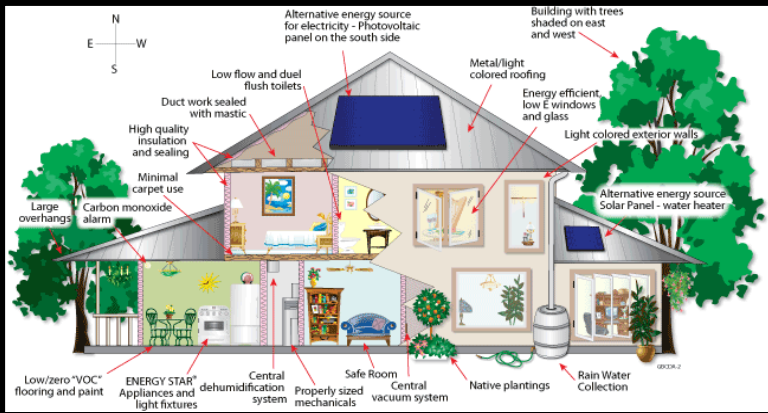
Energy Auditing / Consumption Data Reporting

Accreditation of energy managers, energy auditors and energy service providers

# THE PRINCIPLE

## Use Efficient Equipment

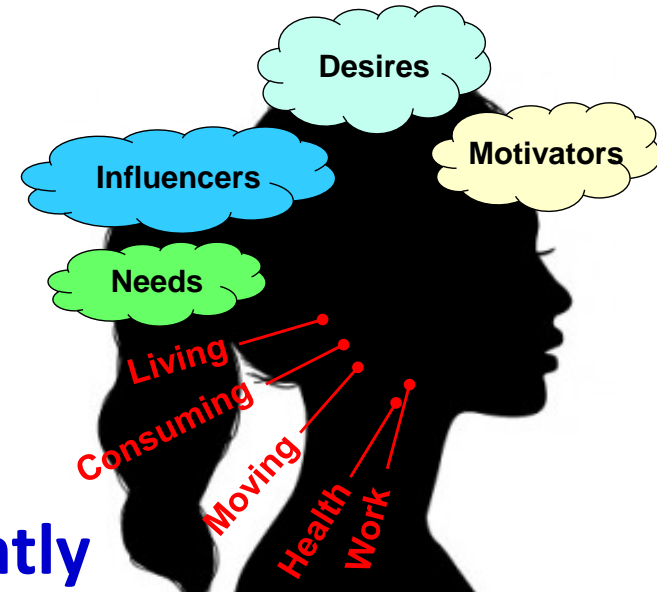
### Technological Interventions



kWh

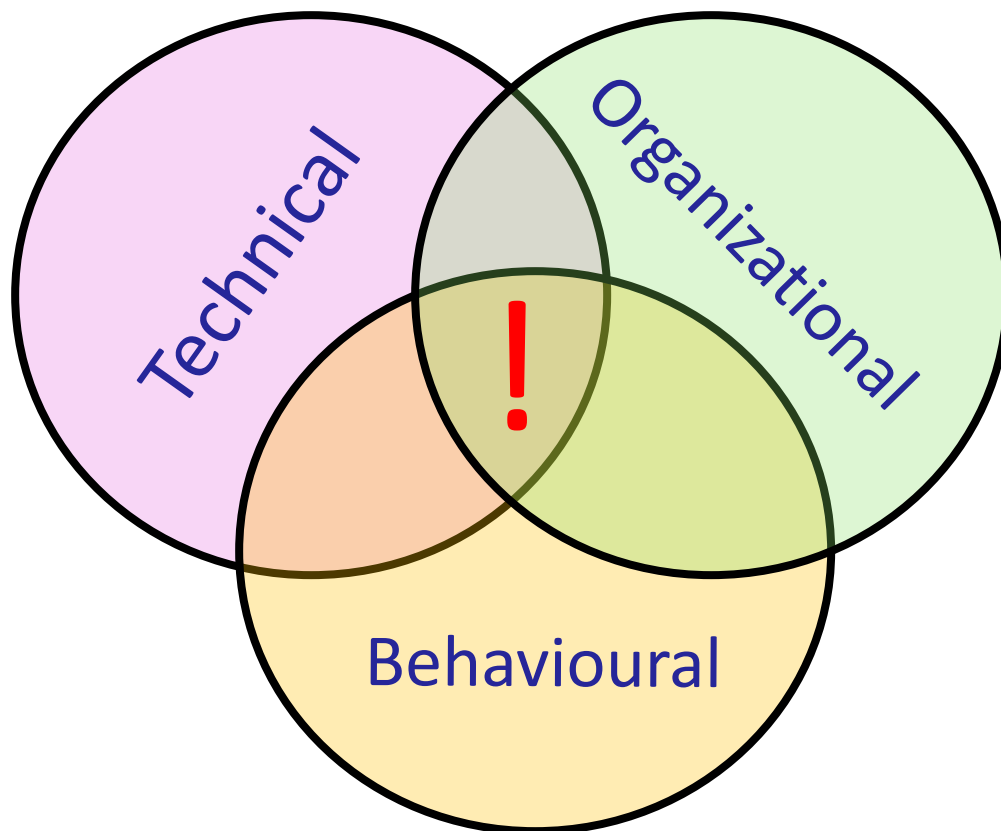
## Use Equipment Efficiently

### Systems and Behavioral Changes



# THE DIMENSIONS

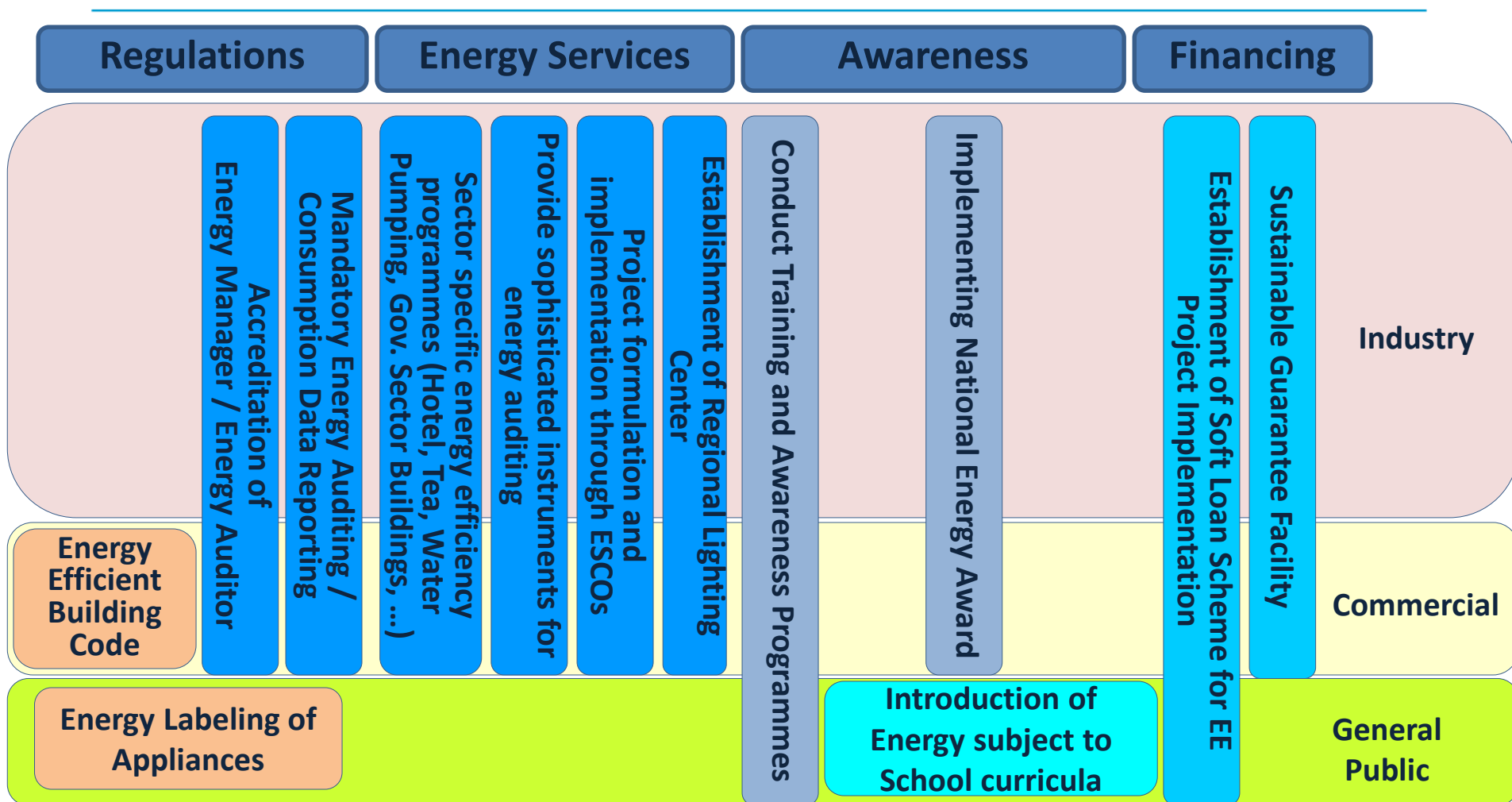
The energy consuming devices and systems that use energy efficiently



The structure and management systems that can support the achievement of energy efficiency goals

The personal values, attitudes and practices of individuals in the organization that impact on energy use

# THE PLAN



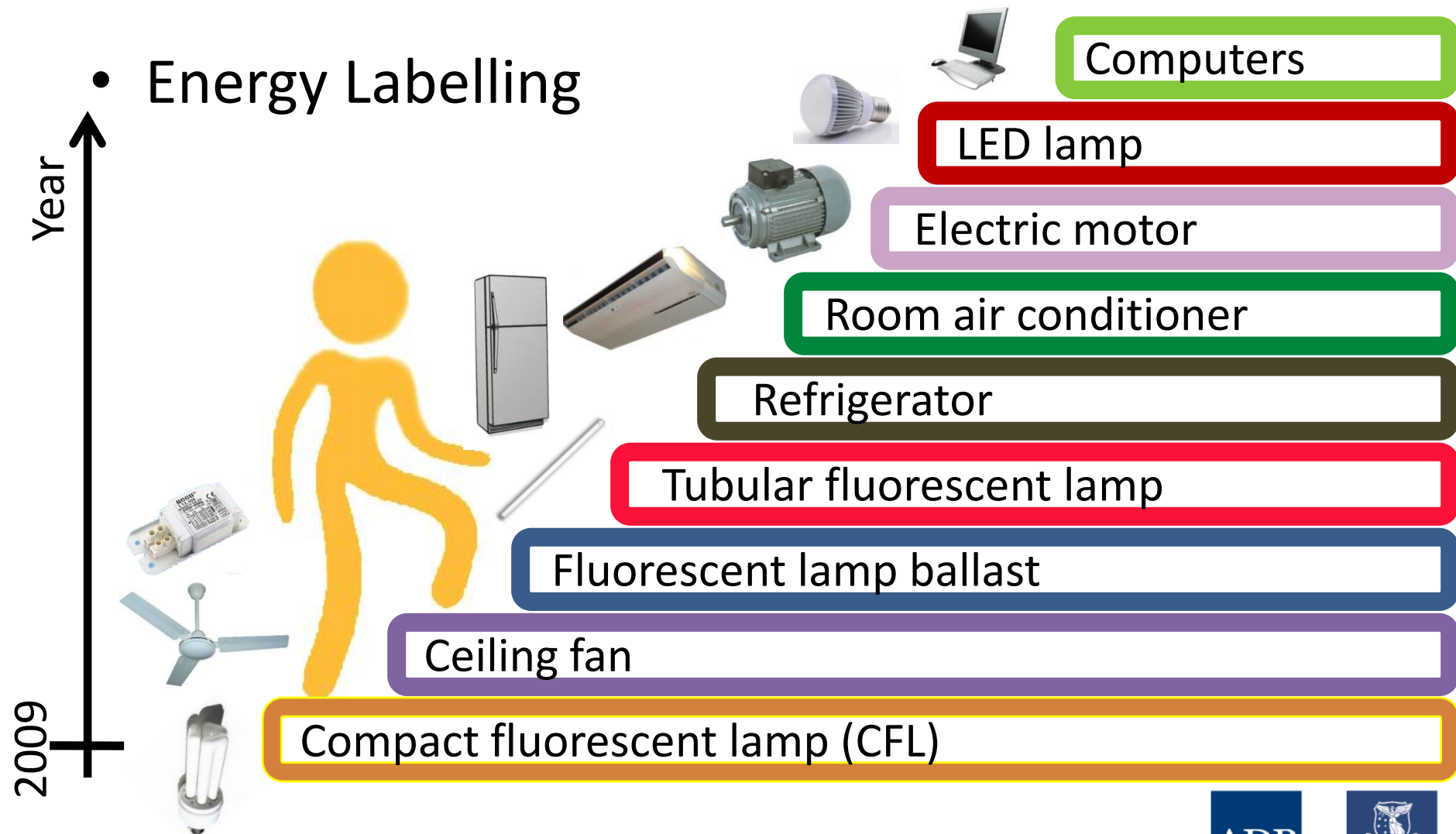
## The EnMAP

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# THE ACTIVITIES

- Energy Labelling

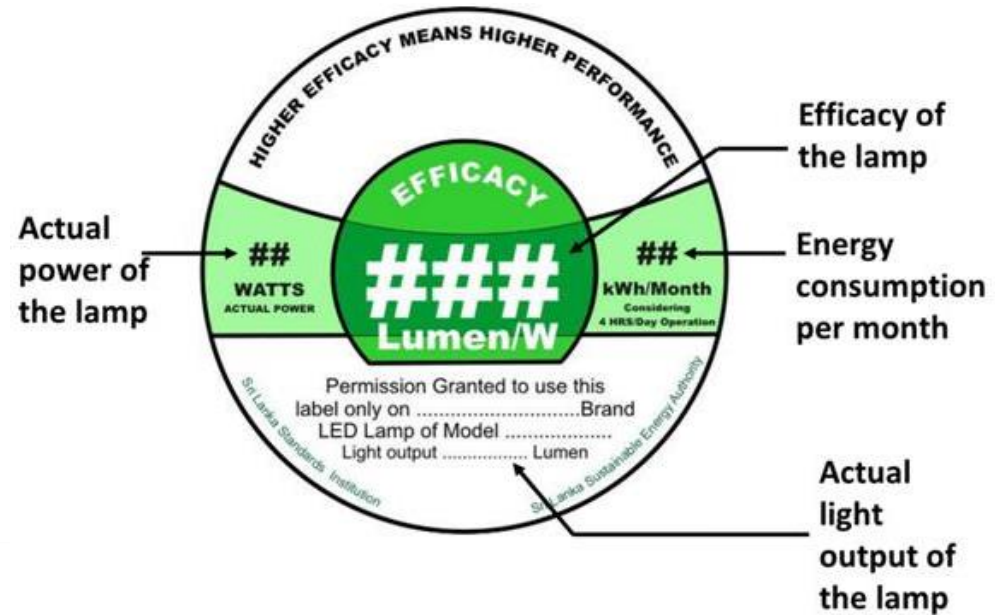
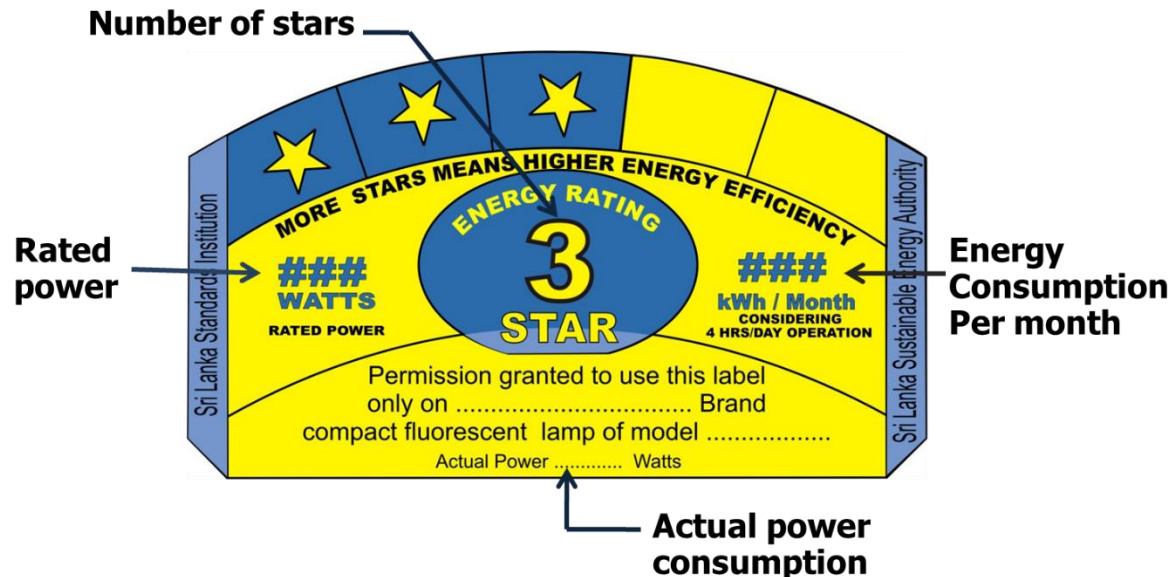




# THE ACTIVITIES

- Energy Labels

## Energy Star Ratings

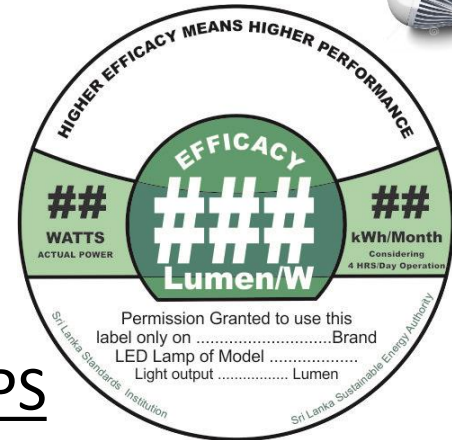
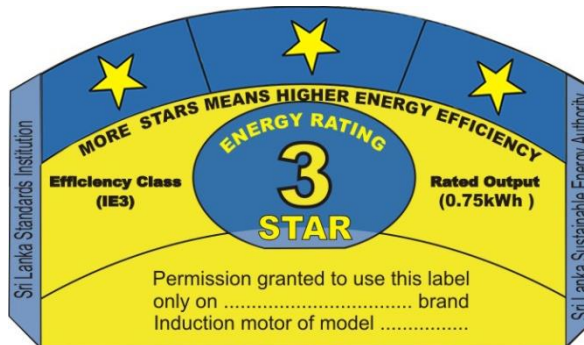
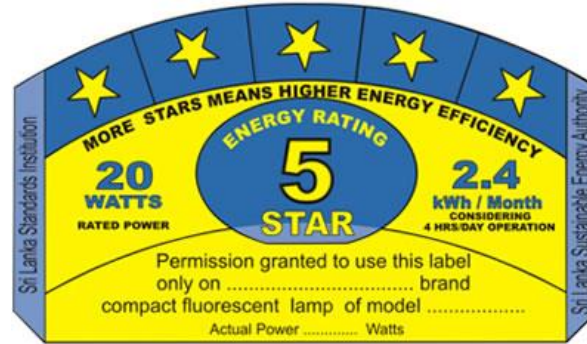
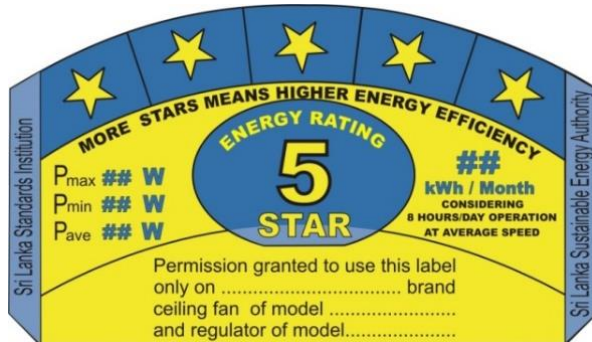
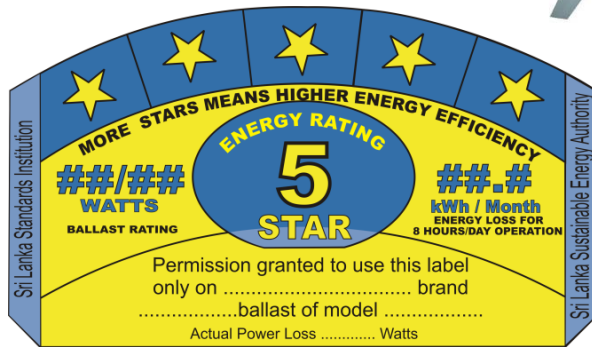


## Minimum Energy Performance Standards (MEPS)

# THE ACTIVITIES

- Energy Labels

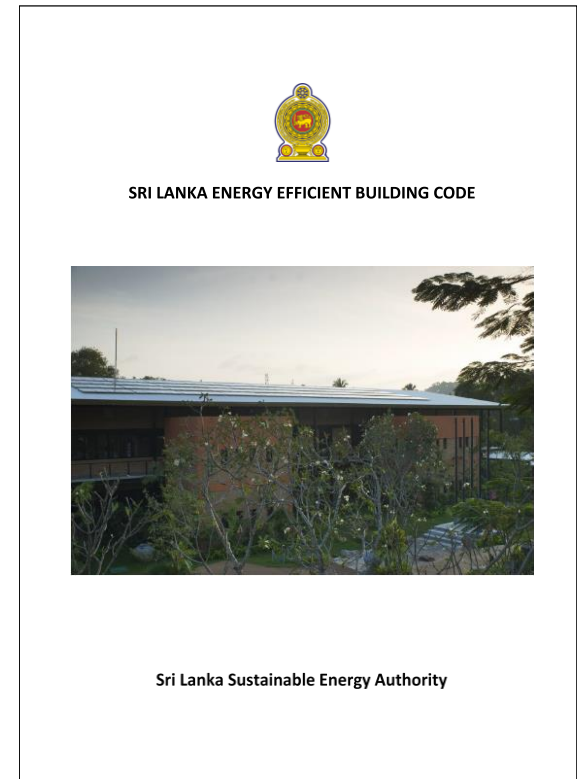
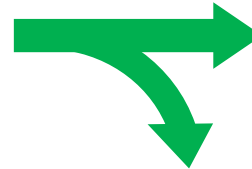
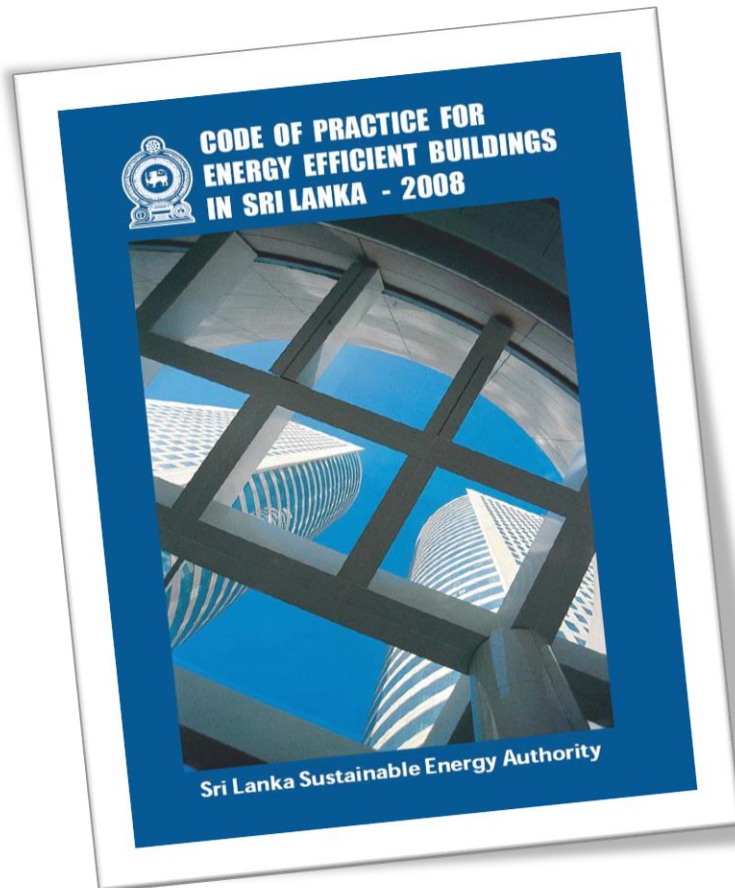
## Energy Star Ratings



MEPS

# THE ACTIVITIES

- Energy Efficient Building Codes



Guideline for Sustainable Energy  
Residences in Sri Lanka

# THE ACTIVITIES

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- Energy Manager, Energy Auditor Accreditation Regulation



First group of energy managers - 2012

- ISO 50001 Energy Management System.



# THE ACTIVITIES

- Knowledge Management
  - Formal education:

School Energy Club  
Programme of SLSEA

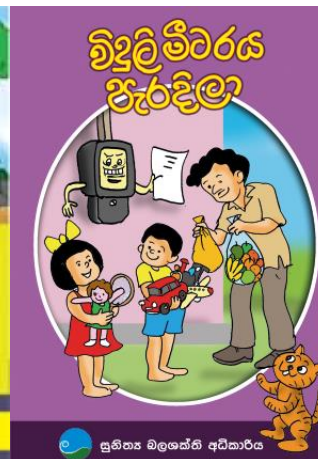
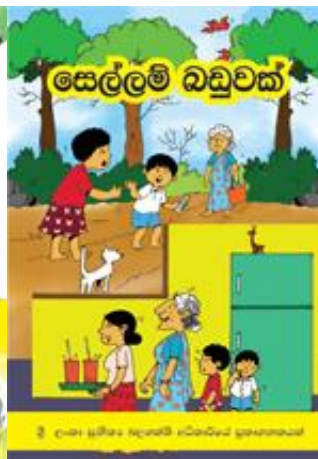
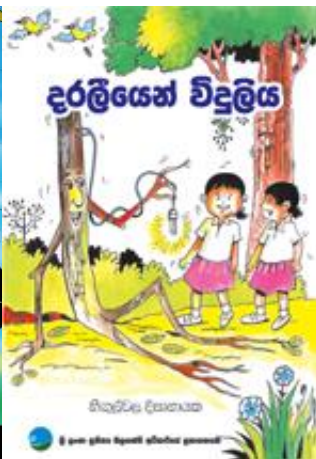


# THE ACTIVITIES

- Knowledge Management
  - Early childhood education:

Pre-school programme

Snakes & Ladders Board on Energy Saving

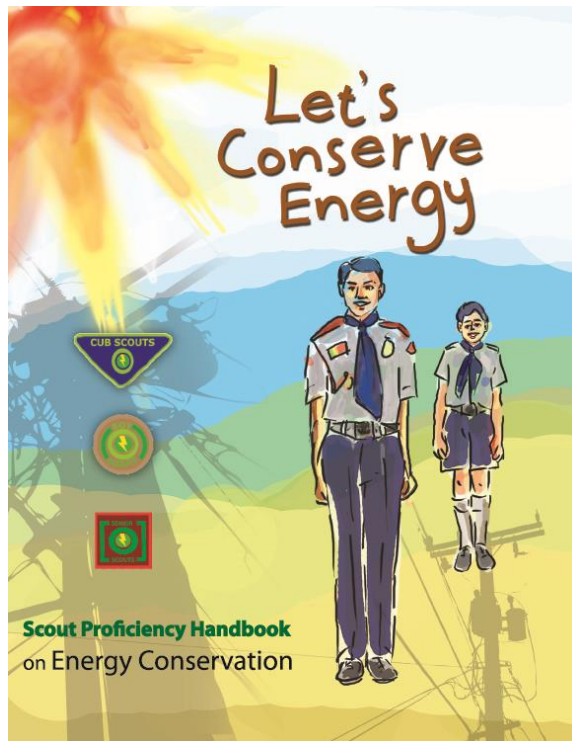




# THE ACTIVITIES

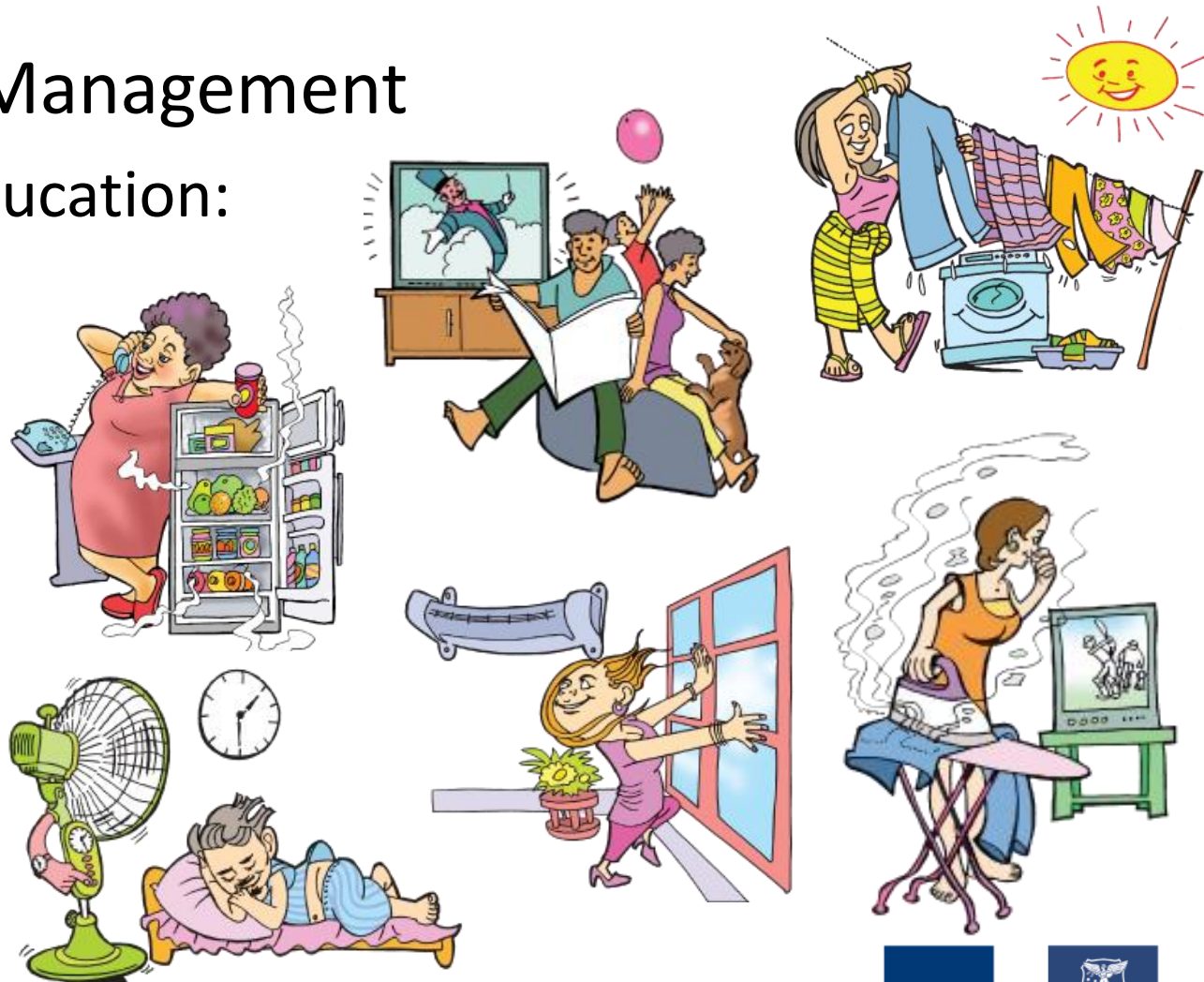
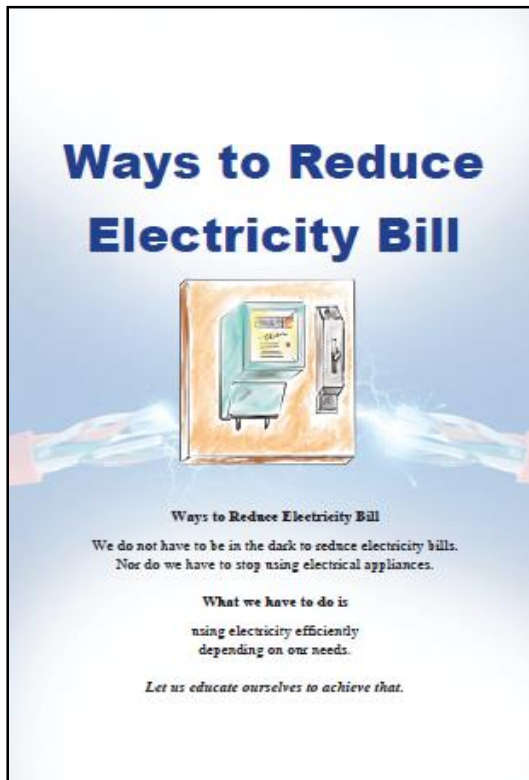
- Knowledge Management
  - Non formal education:

Scout proficiency programme  
in energy conservation



# THE ACTIVITIES

- Knowledge Management
  - Informal education:





# THE ACTIVITIES

- Knowledge Management

Gender dimension in DSM:  
“Energy Efficient Kitchen”



# THE ACTIVITIES

- Knowledge Management
  - Recognition of the achievements

Sri Lanka National Energy  
Efficiency Awards





# THE WAY FORWARD

- Operation DSM



බලශක්ති ඉල්ලුම් කළමනාකරණය පිළිබඳ ජනාධිපති කාර්යසාධන බලකාය  
மின்சாரத்திற்கான கேள்வி முகாமைத்துவம் பற்றிய ஜனாதிபதி செயலணி  
Presidential Task Force on Energy Demand Side Management



Efficient Air-conditioning

Efficient Motors

Efficient Chillers

Efficient Refrigerators

Green Buildings

Efficient Lighting

Elimination of Incandescent Lamps

Smart homes

Efficient Fans

Nine Thrust Areas

Energy Saving Target = 1,250 GWh by 2020 ( ~ 7.5%)

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