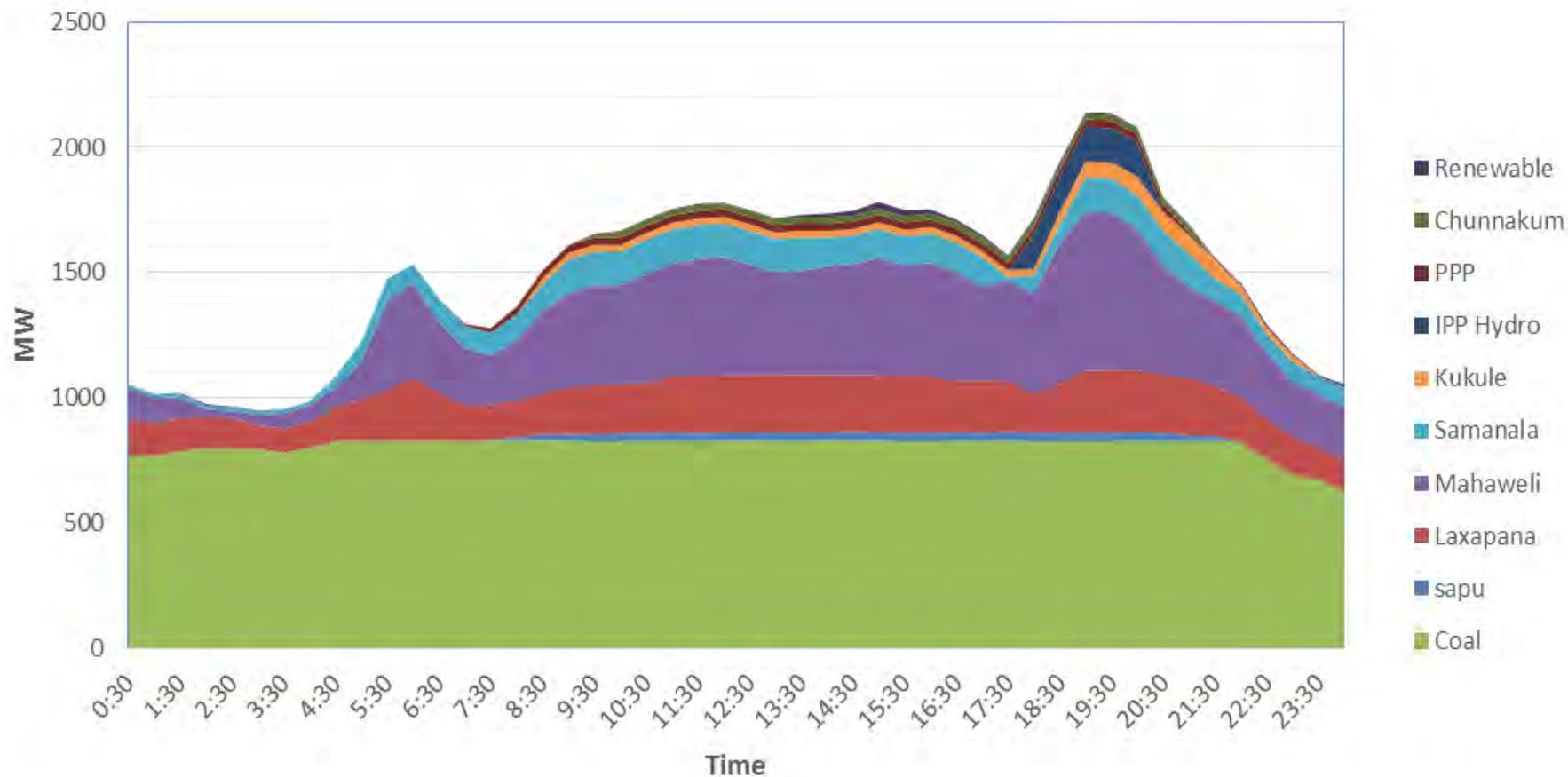# Demand-side Management in Sri Lanka

Ronald Comester

Deputy General Manager (R&D)

Ceylon Electricity Board

16 June 2015
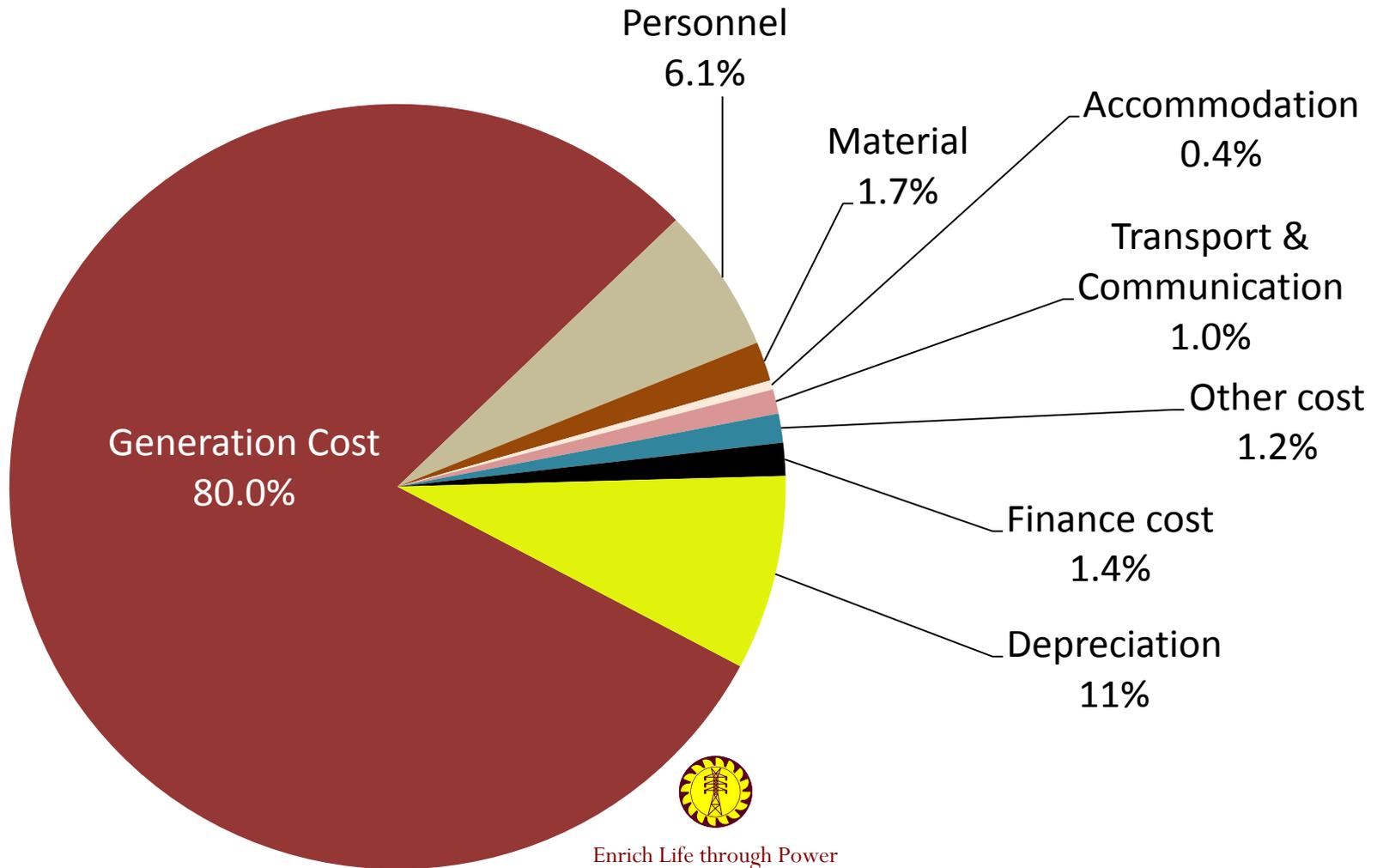
Load Profile of Sri Lanka

on 7th of May, 2015

Source: Control Centre, Ceylon Electricity Board

A summary of CEB Operational Costs

Personnel
6.1%

Material
1.7%

Accommodation
0.4%

Transport &
Communication
1.0%

Other cost
1.2%

Generation Cost
80.0%

Finance cost
1.4%

Depreciation
11%

Enrich Life through Power

Energy Efficiency Programme

Regulations | Energy Services | Awareness | Financing

			Industry

Industry

- Accreditation of Energy Manager / Energy Auditor
- Mandatory Energy Auditing / Consumption Data Reporting
- Sector specific energy efficiency programmes (Hotel, Tea, Water Pumping, Gove. Sector buildings etc.)
- Provide sophisticated instruments for energy auditing
- Project formulation and implementation through ESCOS
- Implementing National Energy Award
- Training and awareness programmes
- Sustainable Guarantee Facility

Commercial

- Energy Efficient Building Code

General Public

- Energy Labeling of Appliances
- Introduction of Energy subject to school curriculum

Transport

- Fuel economy standards

Target – Reduction of 20% energy consumption of year 2010 by 2020

Energy Savings Potential and Technologies

Technology / Process	Annual Saving Potential – GWh
Energy Labeling Program	
Ceiling Fans	35
Tubular Fluorescent Lamps	65
Ballasts	80
Refrigerators	16
Efficient lighting	173
Air Conditioning	250
ISO 50001 (1600 Institutions)	375
Efficient motors and controls	185
Building Management System (BMS)	20
Efficient office equipments	16
Solar water heaters	5
Telecomunication	11
Efficient air compressors	11
Eliminating Incandescent Lamps	205 (225 MW)
Green Buildings	550
Total	**1991**

Impact on DSM Programmes

- ✓ **Estimated budgetary requirement for 5 years is around LKR 1.2 billion. (Million 9 US$)**

- ✓ **Anticipated financial saving:**

  – LKR 13 billion in the 1st yr, will exceed LKR 34 billion at the 5th yr, (Million 261 US$)

  – Over a period of 5 years: Around LKR 135 billion. (Million 1,038 US$)
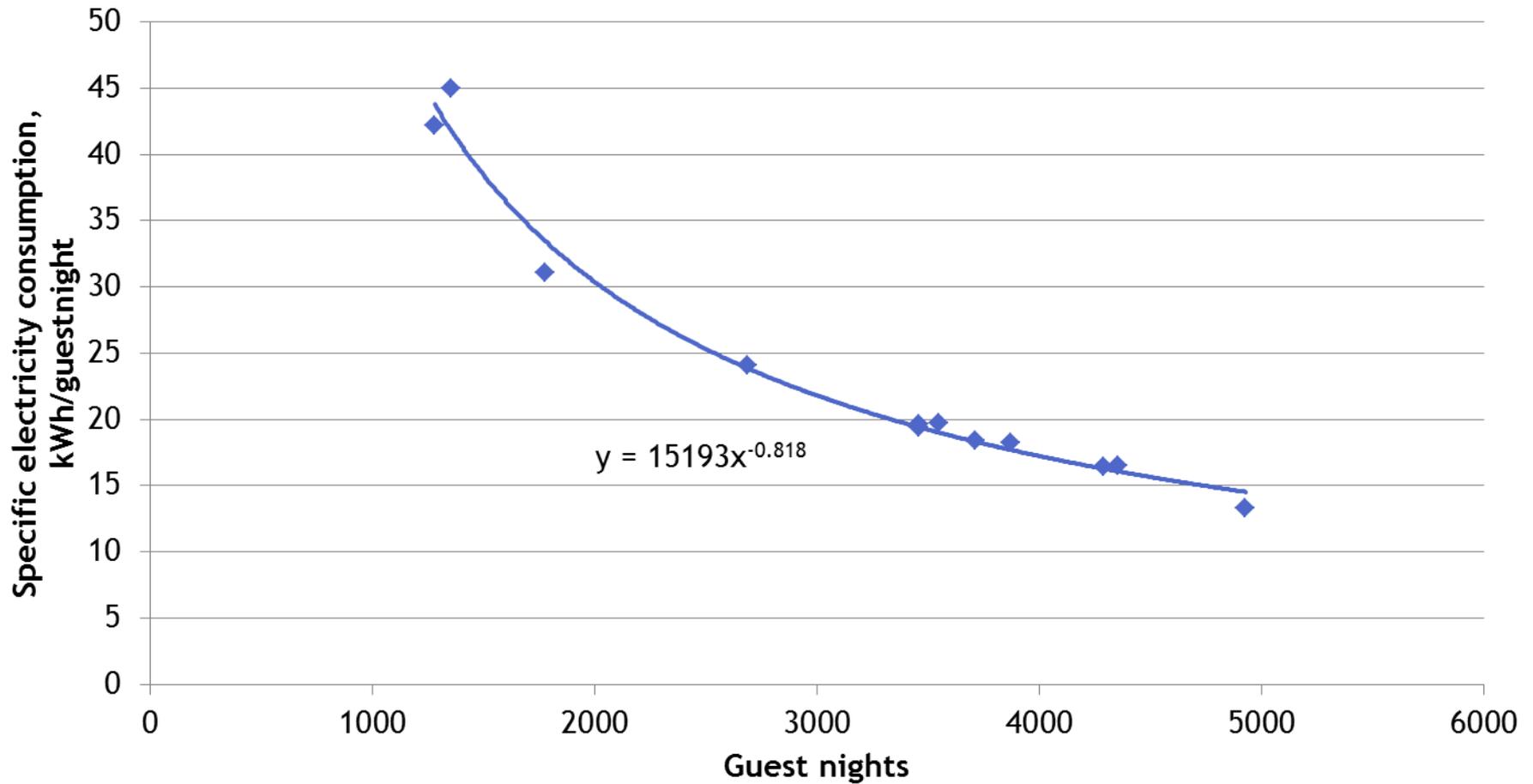
Responsibility of Energy Manager

* Submitting energy consumption reports annually in relation to the Consumer to whom he/she is working for, in the form as prescribed by the Authority under section 36(2)(b) of the Sri Lanka Sustainable Energy Authority Act, No. 35 of 2007.

* Monitoring the day to day operations of the Consumer with a view to reducing energy cost and maintain records pertinent to the overall energy consumption of such Consumer

* Conducting training and awareness programmes for the employees of the Consumer relating to energy efficiency, at all operating levels

* Obtaining the services of an Accredited Energy Auditor from time to time, in order to identify energy conservation opportunities available to the Consumer

Responsibility of Energy Manager Cont.

* Advising the Consumer on the purchase of energy efficient equipment

* Ensuring that any new constructions put up by the Consumer complies with the Code of Practice for Energy Efficient Buildings

* Preparing annual reports or energy consumption by the Consumer

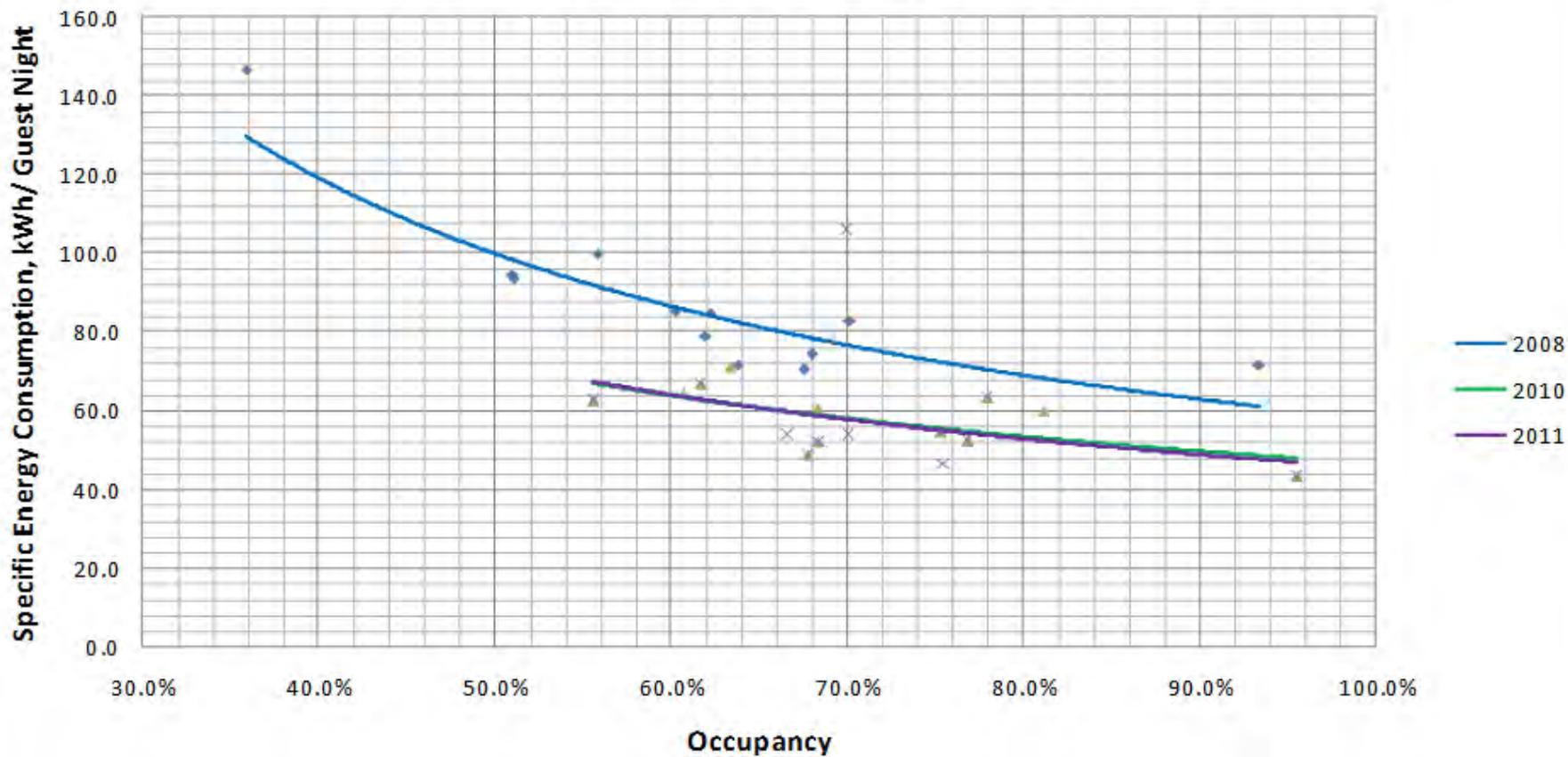* Preparing once in every two years, the energy management plan of the Consumer

Bench Marking

Specific electricty consumption 2012

$$y = 15193x^{-0.818}$$

Specific electricity consumption, kWh/guestnight (y-axis)

Guest nights (x-axis)

Bench Marking

Comparison of Specific Energy Consumption

Prepared for:

USAID-SARI/Energy Program
www.sari-energy.org

**Performance Monitoring &
Verification Protocols**

Sri Lanka
Volume I
Industrial/Commercial Sectors
Concepts and Options for Determining Energy Savings
(Adapted from IPMVP-2002 & Indian M&V protocols)

Ͻ Nexant

Revised March 2003

Energy Conservation Drive – present status

- Sri Lanka recently launched a ten year plan on Energy Sector Development Plan for a knowledge – based Economy.

- Conservation and Efficient use of Energy - a national priority – is one out of eight thrust areas identified in the plan.

- Many DSM programmes are being conducted intensively.

- The theme of the Drive is "A Nation Preserved for Tomorrow" for an "Energy Empowered Nation" .

The End

Thank You