Country Presentation of Sri Lanka

M.M.N Munawwara - Chief Engineer (Const) Central Province
S.P.Pathirana – Deputy General Manager (Corporate Affairs)
Ceylon Electricity Board
Sri Lanka

SAARC WORKSHOP ON ENERGY BASED LIVELIHOODS CONTRIBUTING OF ECONOMIC EMPOWERMENT OF MARGINALIZED SECTORS AND WOMEN IN SRI LANKA
Situation of energy in relation to Women and Marginalized Groups

SAARC Workshop on
Energy Based Livelihoods Contributing to Economic Empowerment of the Marginalized Sectors and Women in the SAARC Region

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Countries hit by the tsunami - 26th December 2004

- Indonesia
- Thailand
- Maldives
- Somalia
- Kenya
- Sri Lanka
- Tanzania
- Seychelles
- India
- Burma
- Andaman and Nicobar Islands

Click on links to find out more.
- Latitude 5-10 N
- Longitude 79-82 E
- Area: 65,606 km²
Climate

- Tropical
- Temperature 24 - 30°C
- Humidity 60 - 90%
Rain Fall

- Two Monsoons
  - North-East - Dec. to Feb.
  - South-West - May to Sep.

- Average Rain Fall
  - Wet Zone 2425 mm
  - Dry Zone 1450 mm
Physical Features

- Costal Plains
- Central Hills
  Highest peak 2,524m
- About 100 rivers flow radially
Natural Resources

- Gem Stones
- Minerals
- Sandy Beach about 1600km
- About 100 rivers
- Tropical Forests
- Inland lakes
- Biological diversity
Population

- About 20.2 Million

- Ethnic Structure
  - Sinhalese 74%
  - Tamil 18%
  - Moor 7%
  - Others 1%

- Religions
  - Buddhist 69%
  - Muslim 8%
  - Hindu 7%
  - Christian 6%

- Literacy Rate 89%
Economic Indicators

- GDP: US$ 39.6 Billion
- GDP real growth rate: 6%
- GDP per capita: US$ 1972
- Population below US$ 2/day: 45.4%
- Inflation rate: 9%
- Labour Force: 8 Million
Economic Indicators

GDP composition by sector

- Services: 60%
- Agriculture: 21%
- Industry: 19%

Labour Force by occupation

- Services: 45%
- Agriculture: 38%
- Industry: 17%
Organization of the Power Sector
Ceylon Electricity Board

- Government Organization
- Established in 1969
- Responsible for
  - Generation
  - Transmission
  - Distribution
Electricity - 2014

- **Installed Capacity**: 4050 MW
  - Coal 900 MW
  - Thermal Power: 1335 MW
  - Hydro Power: 1375 MW
  - Renewable: 442 MW
- **Maximum Demand**: 2152 MW
- **Gross Generation**: 12357 GWh
- **Domestic & Industries**: 38% Domestic & 39% Industries
- **Commercial**: 20% Commercial
- **System Energy Loss**: 10.5%
- **No. of Consumers**: 5.5 Mn
- **Household Electrified**: 98.4%
<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to Electricity</td>
<td>98.4%</td>
</tr>
<tr>
<td>Elec. Consumption per Capita</td>
<td>519 kWh</td>
</tr>
<tr>
<td>Avg. Cost per unit (at selling point)</td>
<td>19.97 Rs/kWh</td>
</tr>
<tr>
<td>Avg. selling price</td>
<td>18.50 Rs/kWh</td>
</tr>
</tbody>
</table>
Electrification Level in December 2014

98%
Present Transmission Network -2014

- Transmission voltage levels
  - 220 kV
  - 132 kV

- Transmission Lines/Cables – 2348 km
  - 220 kV – 502 km
  - 132 kV – 1846 km
    - OH – 1796 km
    - UG – 50 km

- Grid Substations No | MVA
  - 132/33 kV | 48 | 3045
  - 220/132/33 kV | 5 | 2100
  - 220/132 kV | 2 | 405
  - 220/33 kV | 1 | 70
  - 132/11kV | 5 | 369
2014 Sri Lankan Transmission System

The Map of Sri Lanka Transmission System in Year 2013

- 220kV Line
- 132kV : Underground Cable
- 132kV Line (not in operation)
- 220/132 kV Sub Station
- 132kV GS
- Hydro Power Station
- Thermal Power Station
Sri Lanka Economy and Electricity

Sri Lankan Economy

Demographic and Economic Indicators of Sri Lanka

<table>
<thead>
<tr>
<th>Units</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-Year Population</td>
<td>Millions</td>
<td>20.22</td>
<td>20.45</td>
<td>20.65</td>
<td>20.87</td>
<td>20.32</td>
<td>20.483</td>
</tr>
<tr>
<td>Population Growth Rate</td>
<td>%</td>
<td>1.0</td>
<td>1.1</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>GDP Real Growth Rate</td>
<td>%</td>
<td>6.0</td>
<td>3.5</td>
<td>8.0</td>
<td>8.2</td>
<td>6.3</td>
<td>7.2</td>
</tr>
<tr>
<td>GDP /Capita (Market prices)</td>
<td>US$</td>
<td>2,014</td>
<td>2,057</td>
<td>2,397</td>
<td>2,836</td>
<td>2,922</td>
<td>3.283</td>
</tr>
<tr>
<td>Exchange Rate (Avg.)</td>
<td>LKR/US$</td>
<td>108.33</td>
<td>114.94</td>
<td>113.06</td>
<td>110.57</td>
<td>127.60</td>
<td>132.05</td>
</tr>
</tbody>
</table>

Electricity and Economy

Forecast of GDP Growth Rate in Real Terms

<table>
<thead>
<tr>
<th>Year</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP Growth Rate (%)</td>
<td>7.2</td>
<td>8.0</td>
<td>8.3</td>
<td>8.5</td>
</tr>
</tbody>
</table>

Source: Annual Report 2014, Central Bank of Sri Lanka
ENERGY DATA - 2013

• Total Energy – 11,125 ktoe
  • Bio Mass – 4814 ktoe
  • Fossil Fuels - 4582 ktoe
  • Hydro - 1442 ktoe

• 56% Total Energy – Bio Mass+ Hydro
• 44% Fossil Fuel - Import
Major Challenges in the Energy sector in Sri Lanka

- Increasing demand trends across all sub-sectors
- Energy Wastage and losses
- Unsustainable consumption patterns
- Large Investment need for infrastructure development in the power and energy sector
- High Cost Electricity
- 100% depend on imported oil for the transport sector
The Power & Energy Sector of Sri Lanka is looking forward to an energy self-sufficient nation by 2030 an...
Total Energy Supply by Source

Primary Energy Supply 2013

Primary Energy Supply 2030
Thank You