COLLECTION OF RENEWABLE ENERGY STATISTICS IN MAURITIUS

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Presented by:

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AN INTRODUCTION TO MAURITIUS

• Location: South West Indian Ocean
• Population: 1.26 Million
• Area of Republic of Mauritius: 2,040 km$^2$
  – Is. of Mauritius 1865 km$^2$ and
  – Islands of Rodrigues, Agalega and Chagos Archipelago – approx 108 km$^2$
• Major Climatic Conditions: Sub Tropical Summer & Winter
• Average annual rainfall: approx. 2000 mm
• Population Density: 600 inhabitants/km$^2$
Mauritius Economy

For many years the economy has been relying mainly on the sugar and textile industries.

Pillars of Mauritian Economy

- Tourism
- Textile
- Information and Communication Technology
- Offshore
- Sugar
- Ocean Economy/Seafood Hub – coming soon

GDP per capita 7,120 USD (2014) with a GDP growth rate of around 3.9% (Averaged 2001 – 2015)
Data Collection by SM

Statistics Mauritius – responsible for collection, compilation, analysis and dissemination of official statistical data

Publications released by SM:

• Monthly Reports
• Economic & Social Indicators
• Digests of Statistics
• Census & Survey reports
• Mauritius in Figures
Publication by Sectors

Agriculture
Construction
Consumer Price Index & Inflation
Crime, Justice and Security
Education
Elections
**Energy & Water**
Environment
External Trade
Gender
Governance

Health
Household Surveys
Indices
Information & Communication Technology
International Travel & Tourism

Investment
Labour
Manufacturing
Millennium Development Goals
National Accounts
Population & Vital Statistics
Poverty
Productivity & Competitiveness
Public Finance
Purchasing Power Parity (PPP)
Quality of Life and Sustainable Development
Registered & License Businesses
Rodrigues
Social Security
Transport
Youth & Sports

Available on Statistic Mauritius website: statsmauritius.mu
Energy Sector


✓ Central Electricity Board (CEB) - Body Mandated for the generation, transmission, distribution of electricity in Mauritius.

✓ Utility Regulatory Authority (URA) – Yet to be operational
# Renewable Sources of Generation

<table>
<thead>
<tr>
<th>RE Sources</th>
<th>Total Capacity (MW)</th>
<th>Ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydro Power</td>
<td>56</td>
<td>CEB</td>
</tr>
<tr>
<td>Bagasse</td>
<td>170</td>
<td>IPPs</td>
</tr>
<tr>
<td>Solar PV</td>
<td>15</td>
<td>IPPs</td>
</tr>
<tr>
<td>Landfill Gas</td>
<td>3</td>
<td>IPPs</td>
</tr>
<tr>
<td>MSDGs/SSDGs</td>
<td>4</td>
<td>SIPPs</td>
</tr>
</tbody>
</table>

Total RE Capacity Installed: **248 MW**

Most of them are from IPPs (except for Hydro) as policy of the Government to allow private developers to install same.
Collection of RE Data

- The collection of data for renewable power generation is carried out by electronic meters which are installed at the Point of Delivery (POD).

- The data measured by the Current Transformers (CTs) and that from the Potential Transformers (PTs) are sent to the meter.

- An internal algorithm within the meter computes the kWh generated by RE generation source.
SSDG Data Collection
IPP Cogeneration

Bagasse: 1,319,401 tons – (456 GWh)

- Boiler
  - Steam
  - Auxiliary Consumption

- Turbine
- Generator
  - Process steam to sugar factory
  - To CEB Grid
  - 335 GWh
## Generation Mix

### Generation 2014

<table>
<thead>
<tr>
<th>Fuel Type</th>
<th>Units Generated /kWh</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEB Hydro</td>
<td>90,839,302</td>
<td>3.4</td>
</tr>
<tr>
<td>CEB Thermal (HFO)</td>
<td>1,045,172,597</td>
<td>39.6</td>
</tr>
<tr>
<td>CEB Kerosene</td>
<td>1,991,100</td>
<td>0.1</td>
</tr>
<tr>
<td>IPP Coal</td>
<td>1,125,396,542</td>
<td>42.6</td>
</tr>
<tr>
<td>IPP Bagasse</td>
<td>334,529,891</td>
<td>12.7</td>
</tr>
<tr>
<td>IPP Lanfill Gas</td>
<td>21,326,726</td>
<td>0.8</td>
</tr>
<tr>
<td>IPP Sarako (Solar)</td>
<td>20,405,938</td>
<td>0.8</td>
</tr>
<tr>
<td>SSDG/MSDG</td>
<td>2,378,513</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,642,040,609</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Share of RE for 2014: 17.8% (equivalent to 469.5 GWh)
Generation Mix (2014)

- IPP Coal: 43%
- IPP Bagasse: 13%
- IPP Thermal (HFO): 39%
- IPP Lanfill Gas: 1%
- IPP Sarako (Solar): 1%
- CEB Hydro: 3%
- CEB Kerosene: 0%
- SSDG/MSDG: 0%
## Long Term Energy Strategy 2009-2025

<table>
<thead>
<tr>
<th>Fuel Source</th>
<th>Percentage of Total Electricity Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010</td>
</tr>
<tr>
<td>Renewable</td>
<td></td>
</tr>
<tr>
<td>Bagasse</td>
<td>16%</td>
</tr>
<tr>
<td>Hydro</td>
<td>4%</td>
</tr>
<tr>
<td>Waste to energy</td>
<td>0%</td>
</tr>
<tr>
<td>Wind</td>
<td>0%</td>
</tr>
<tr>
<td>Solar PV</td>
<td>0%</td>
</tr>
<tr>
<td>Geothermal</td>
<td>0%</td>
</tr>
<tr>
<td>Sub-total</td>
<td>20%</td>
</tr>
<tr>
<td>Non-Renewable</td>
<td></td>
</tr>
<tr>
<td>Fuel Oil</td>
<td>37%</td>
</tr>
<tr>
<td>Coal</td>
<td>43%</td>
</tr>
<tr>
<td>Sub-total</td>
<td>80%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>
THANK YOU

Your Questions Are Welcomed

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