Consumption by Sector

- **Housing**: 39%
- **Commercial**: 27%
- **Government**: 18%
- **Industry (Oil & Gas)**: 16%
Contents

(1) EC Law, Regulation (Brunei Energy White Paper)
(2) Energy Management System
(3) Supporting Activities
(4) Energy Manager Training and Certification Plan
1. Brunei Darussalam Energy White Paper

- Brunei Energy White Paper was launched on the 24/03/2014
  and EEC falls under strategic goal 2
  - **Key Performance Indicator (KPI) 5:**
    - To reduce the energy intensity to 45% by 2035 through Energy Efficiency & Conservations (EEC) initiatives.

- **Key Enabler**
  - **Implementation Of A Comprehensive Set Of Supportive Policy And Regulatory Frameworks.**
    - Policy 1 – Electricity Tariff Reform
    - **Policy 2 – EEC Building Guideline**
    - Policy 3 – Standard & Labeling Order
    - **Policy 4 – Energy Management**
    - Policy 5 – Fuel Economy Regulation
    - Policy 6 – Financial Incentives
    - Policy 7 – Awareness Raising
Policy 2: EEC BUILDING GUIDELINES FOR NON-RESIDENTIAL SECTOR

i. Background:-
   - The guideline was launched on **May 14, 2015**.
   - A collaboration work with the Ministry of Development via the ABCi and the DME.
   - This guideline is mandatory to all government buildings and voluntary to all commercial buildings but later become mandatory as and when it is notified by the government authorities.

ii. Objective:-
   - To promote the improvement of the energy management and performance of the government and commercial buildings.

iii. Challenges:-
   - An absent of Energy Manager for each building to conduct energy audit and prepare recommendations on how to reduce energy consumption.
Policy 4: DEVELOPMENT OF ENERGY MANAGEMENT POLICY.

i. **Background:-**
   - Adopting the **ISO 50001**.
   - Installation of Building Automation Systems (BAS), Controllers (i.e. demand controllers) and Building Energy Management Systems (BEMS).
   - Establishment of the Energy Manager for all buildings in Brunei Darussalam.

ii. **Heads-up:-**
   - Participation in an energy management pilot program in line with ISO 50001 criteria from government, commercial and industrial facilities.
   - Sufficient number of qualified external auditors should be trained to conduct energy auditing and verification exercises.
   - Seek assistant from international experts (ECCJ, Japan, ACE,AMS).
   - The policy is expected to be implemented by 2019.
2. Energy Efficiency Conservation Policy
On Energy Management System

Policy 4: DEVELOPMENT OF ENERGY MANAGEMENT POLICY.

**STEP 1**
Work with upper management to establish Energy Management Steering Committee with wide representation from across the organization.

**STEP 2**
Help the committee develop a strategic plan and set goals in conjunction with building’s primary mission and existing greening efforts.

**STEP 3**
Initiate, track and re-evaluate a comprehensive “whole building” energy management program, addressing all appropriate building systems.

**STEP 4**
Use integrated building design strategies in any future renovation or design projects.
3. Supporting Activities

A. REDUCTION OF ENERGY CONSUMPTION IN GOVERNMENT BUILDING.

i. **Background:-**
   - This initiative started in Early 2016.
   - All ministries were given directive to reduce energy consumption and ministries and departments are required to appoint energy focal point.

ii. **Objectives:-**
   - To increase awareness on the importance of energy saving for all government officers and staff.
   - To share energy consumption pattern for government building to all officers and staff
   - The government aim to reduce electricity consumption.

iii. **Results:-**
   - The government managed to achieve around **15%** reduction
3. Supporting Activities

B. STREET LIGHTING SAVING INITIATIVE.

i. Background:
- This initiative started in February 2016.
- Consulting with Brunei National Traffic Committee.
- Focus on existing street lighting by switching off alternately
- A total of 39,766 street lighting poles in Brunei Darussalam

ii. Objectives:
- To reduce energy consumption for government sector

iii. Results:
- Total saving in 2016 – 18 MWh (48%) equivalent to USD$1.2 million
  (Government Tariff of 10 cents/kWh)
4. Energy Manager Training and Certification Plan

Energy Manager Training and Certification Plan

<table>
<thead>
<tr>
<th>Q3, 2017</th>
<th>Q4, 2017</th>
<th>Q1, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experts to train appointed EM in Brunei</td>
<td>Once the EM are certified, they are required to give training to the focal points.</td>
<td>All focal points will be trained by EM.</td>
</tr>
</tbody>
</table>

RESULT

Type of training courses needed:
- Introduction in the development, implementation and management based on ISO 50001
- Energy Auditor and Energy Manager plus Certification
Thank you for your kind attention