

## Joint APEC-IRENA Training Workshop on Renewable Energy Statistics

### “Biomass and Biogas Data Collection, Estimation and Validation for Malaysia”

**14 - 17 December 2020**

# OUTLINE

- **Country's Background**
- **Malaysia's Energy Statistics (2018)**
- **RE in Malaysia & Data Collection**
- **Estimation and Validation**
- **Challenges**

## Country's Background

# MALAYSIA

GDP  
Current Prices  
RM 1,510,693

GDP  
Constant 2015 Prices  
RM 1,421,454

GDP Per capita  
RM 46,367

### % GDP BY SECTOR



14 states  
2 Federal Territories

Population  
32.6 Million

51.5% 48.5%

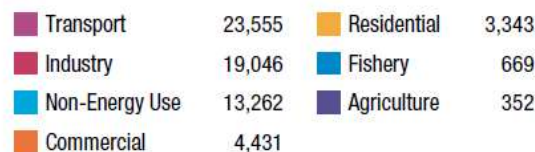
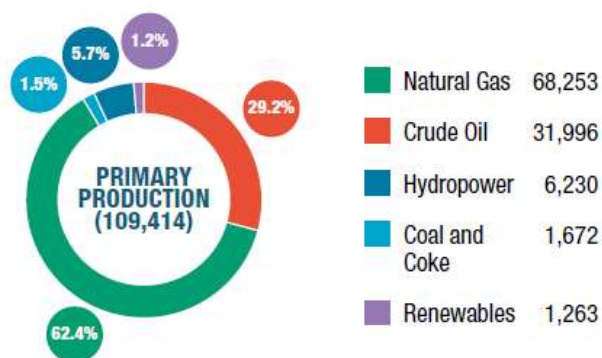
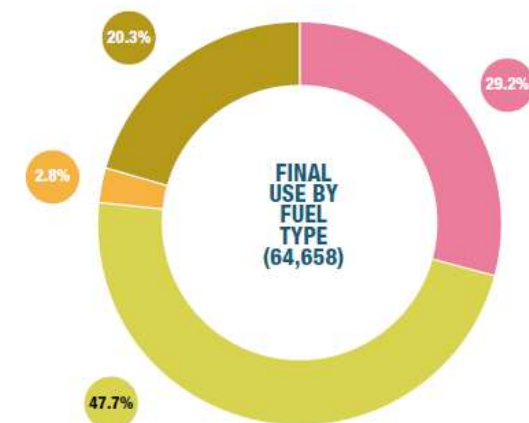
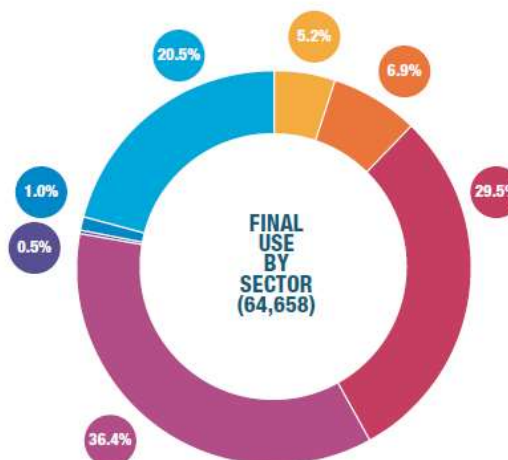
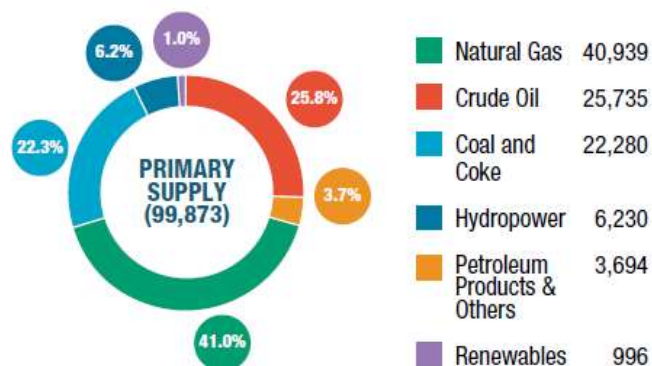
Area  
330,525 km<sup>2</sup>  
[98 people/km<sup>2</sup>]

Paramount Ruler  
**His Majesty The King**

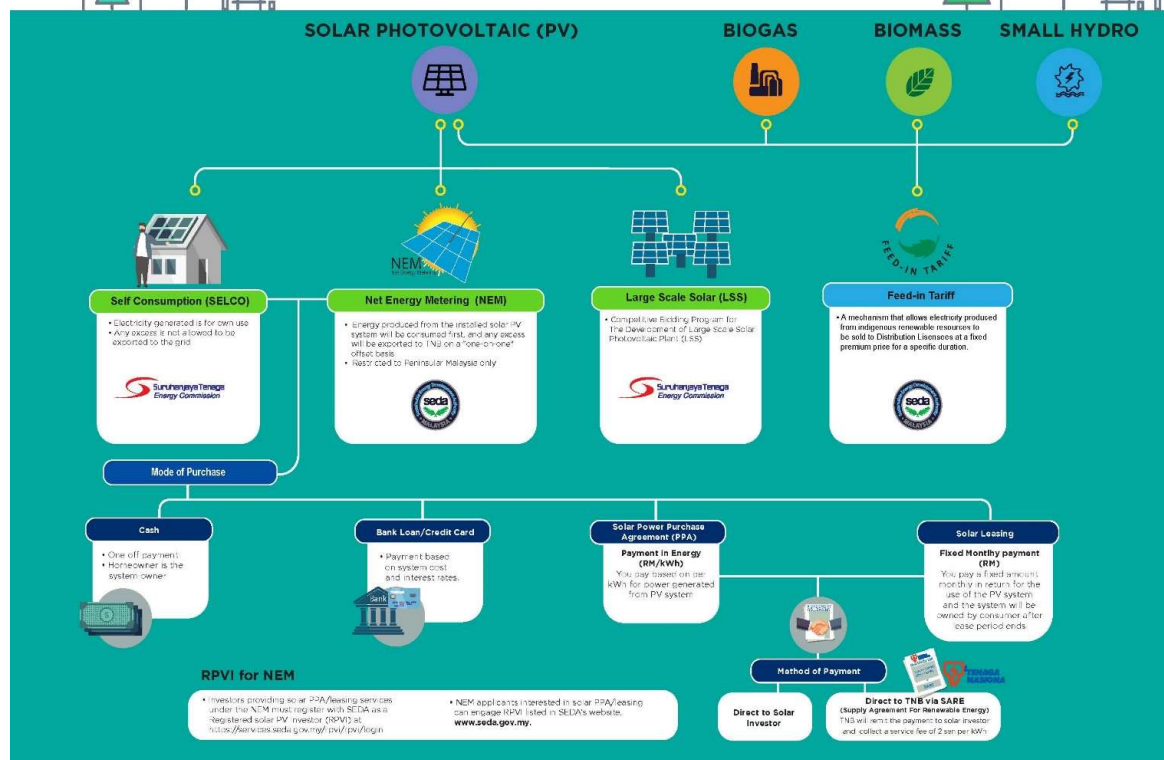
Malaysia practices  
**Parliamentary Democracy with  
Constitutional Monarch**

Source: Department of Statistics Malaysia

## Malaysia's Energy Statistics (2018)

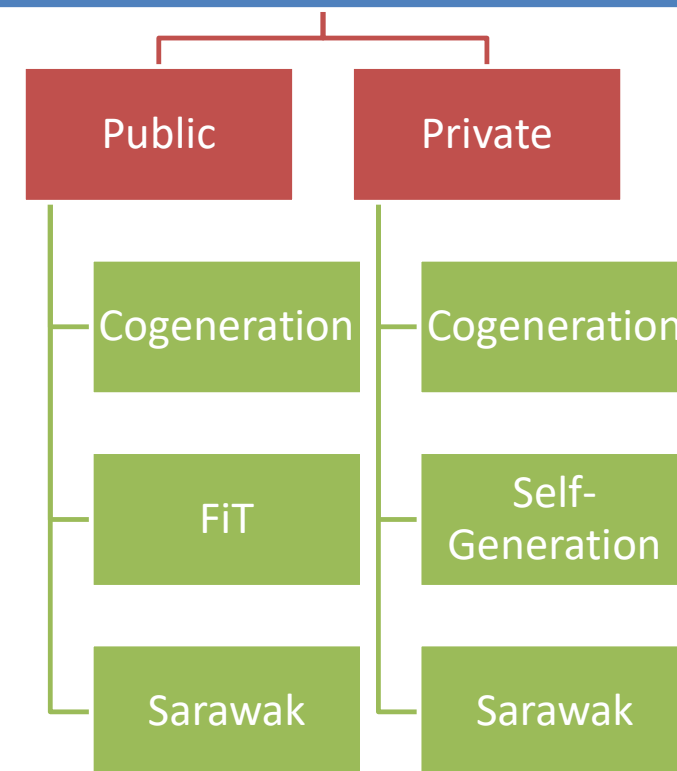


## RENEWABLE ENERGY PROGRAMMES IN MALAYSIA

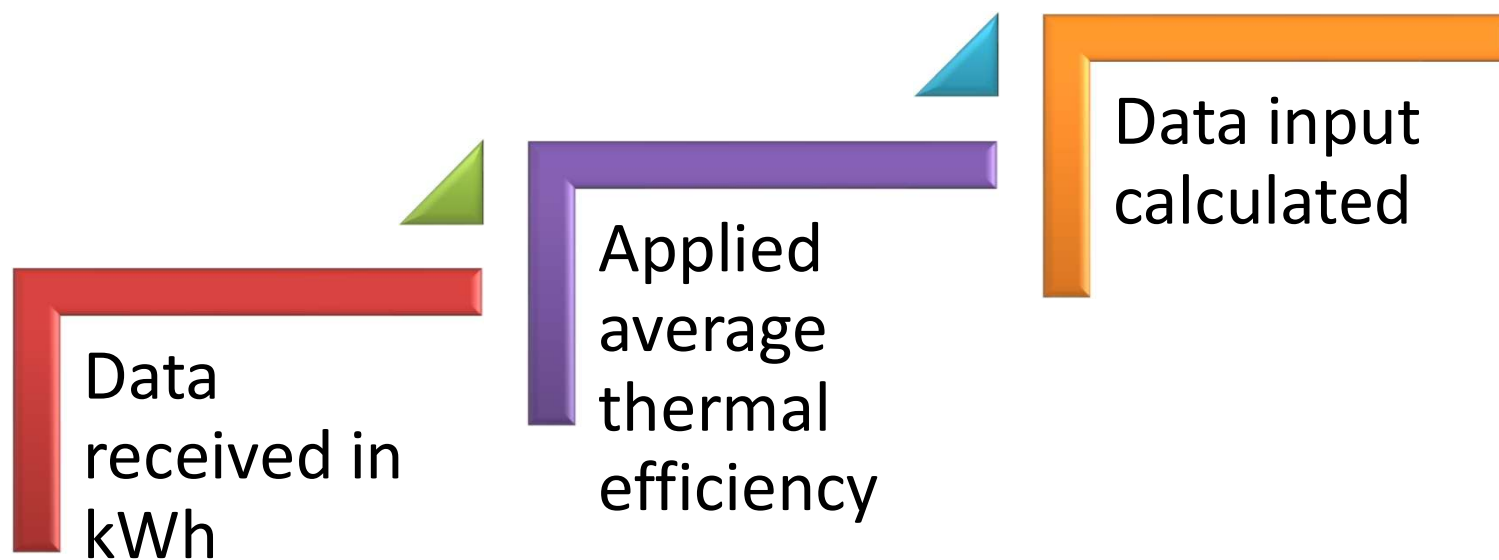


Source: SEDA Malaysia

## Data Collection for Biomass and Biogas



## Estimation and Validation



## Challenges

### Data Collection

- Coverage for Peninsular & Sabah and not Sarawak
- Only for power sector
- Timeliness and completeness

### Estimation

- Partially actual data for fuel input
- Around 30% efficiency based on average thermal

### Validation

- No automated validation data submission
- Time consuming
- Some confusing between biomass and biogas

# THANK YOU

## Energy Data & Research Unit

[zaharin@st.gov.my](mailto:zaharin@st.gov.my)    [fazrina@st.gov.my](mailto:fazrina@st.gov.my)

