

# Long-Term Energy Scenarios (LTES) for developing national energy transition plans in Asia.

Webinar series

Peninsular Malaysia Generation Development Plan

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## **Presentation Outlines**

## 1. Development of scenarios

- Regulatory overview
- Planning governance
- Moving Forward: Integrated System Planning

## 2. Use of scenarios

- Purpose of scenario planning
- Communication of scenario results

## 3. Scenario capacity building

# Regulatory Overview







#### Minister of Natural Resources, Environment and Climate Change

 For matters relating to the supply of electricity

#### **Ministry of Economy**

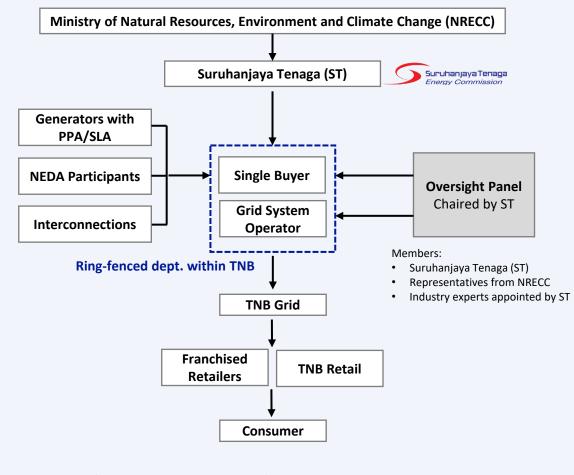
 For matters relating to the supply of gas through pipelines (natural gas & LPG)

Suruhanjaya Tenaga (Energy Commission)

 A statutory body responsible for regulating the energy sector, specifically the electricity and piped gas supply industries, in Peninsular Malaysia and Sabah.

**Electricity Supply and Piped Gas Industries** 

#### **Electricity Supply Industry Structure in Peninsular Malaysia**

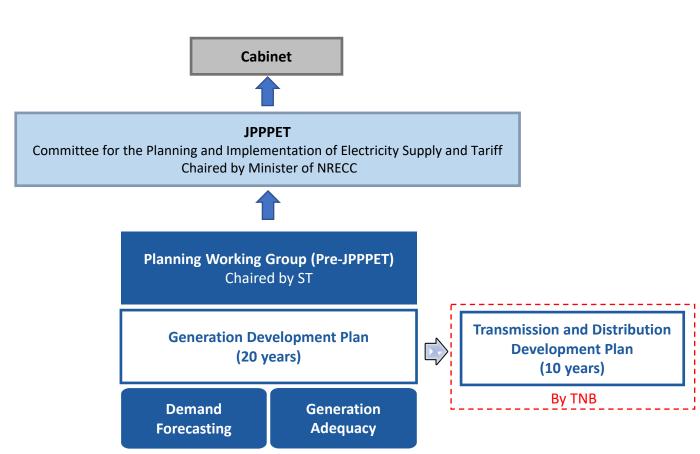


PPA: Power Purchase Agreement SLA: Service Level Agreement NEDA: New Enhanced Dispatch Arrangement TNB: Tenaga Nasional Berhad

# Planning Governance



- JPPPET has been mandated by the Cabinet to determine the planning and direction of the country's electricity supply industry.
- JPPPET membership:
  - 1. Secretariat Ministry of Natural Resources, Environment and Climate Change (NRECC)
  - 2. Ministry of Finance (MOF)
  - 3. Ministry of Economy (MOE)
  - Ministry of Investment, Trade and Industry (MITI)
  - 5. Ministry of Utilities Sarawak
  - 6. Economic Planning Unit Sarawak, Sabah
  - 7. Energy Commission (ST)
  - 8. Sustainable Energy Development Authority (SEDA)
  - 9. Tenaga Nasional Berhad (TNB)
  - 10. Sabah Electricity Sdn. Bhd. (SESB)
  - 11. Petroliam Nasional Berhad (PETRONAS)

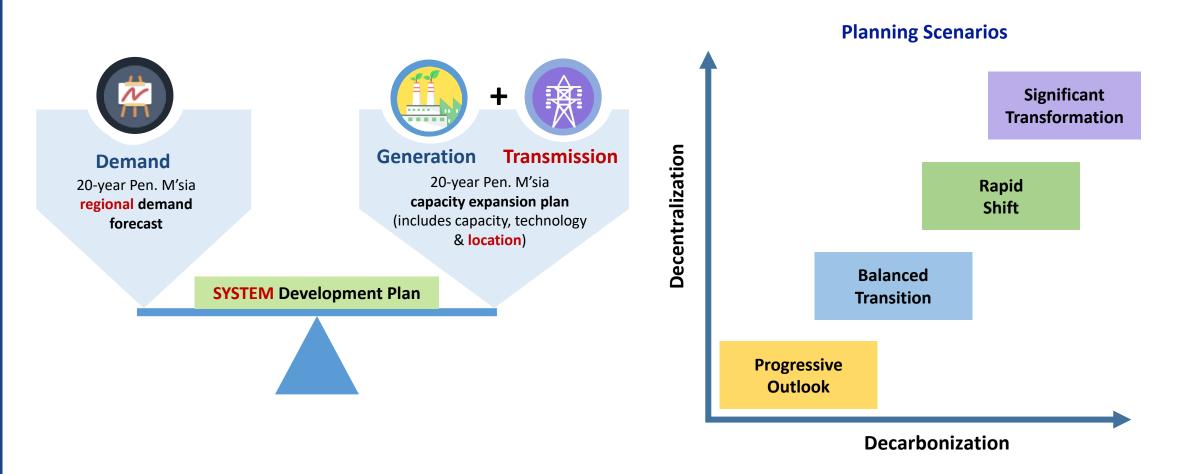


- Demand projection considering emerging trends (e.g., EE, EV, RE)
- System reliability assessment
- Fuels projection
- New capacity requirement



## Moving Forward: Integrated System Planning

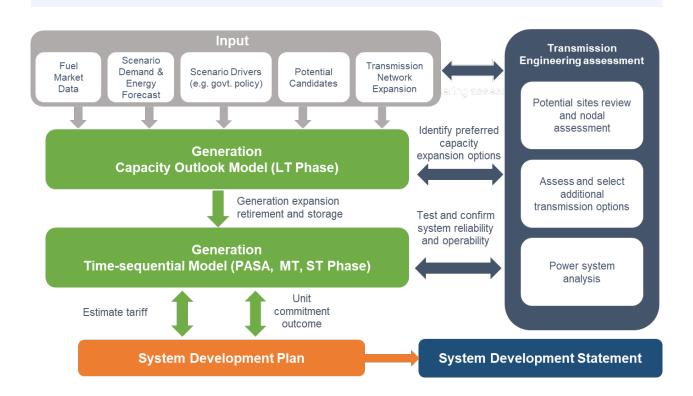
- System Development Plan to be introduced to integrate both the generation and transmission components in the planning process
- Planning scenarios to reflect future uncertainties involving decentralization and decarbonization of demand and supply outlook



## Use of scenarios



#### **Purpose of scenario planning**



LT: Long Term MT: Medium Term ST: Short Term PASA: Projected Assessment of System Adequacy

#### **Communication of scenario results**

Report publications



Stakeholder engagements



# Scenario capacity building



#### **In-house modelling capacity**

 Actively engaged in user group meetings with global industry-leading energy modelers



 Participate in technical training with integrated assessment model consultant



# Collaboration among agencies/institutions for scenario development

























## Thank you for your attention





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