Webinar – Malaysia: A New Energy Hub in ASEAN

CCI France Malaysia

9 October 2025

Suruhanjaya Tenaga
Energy Commission

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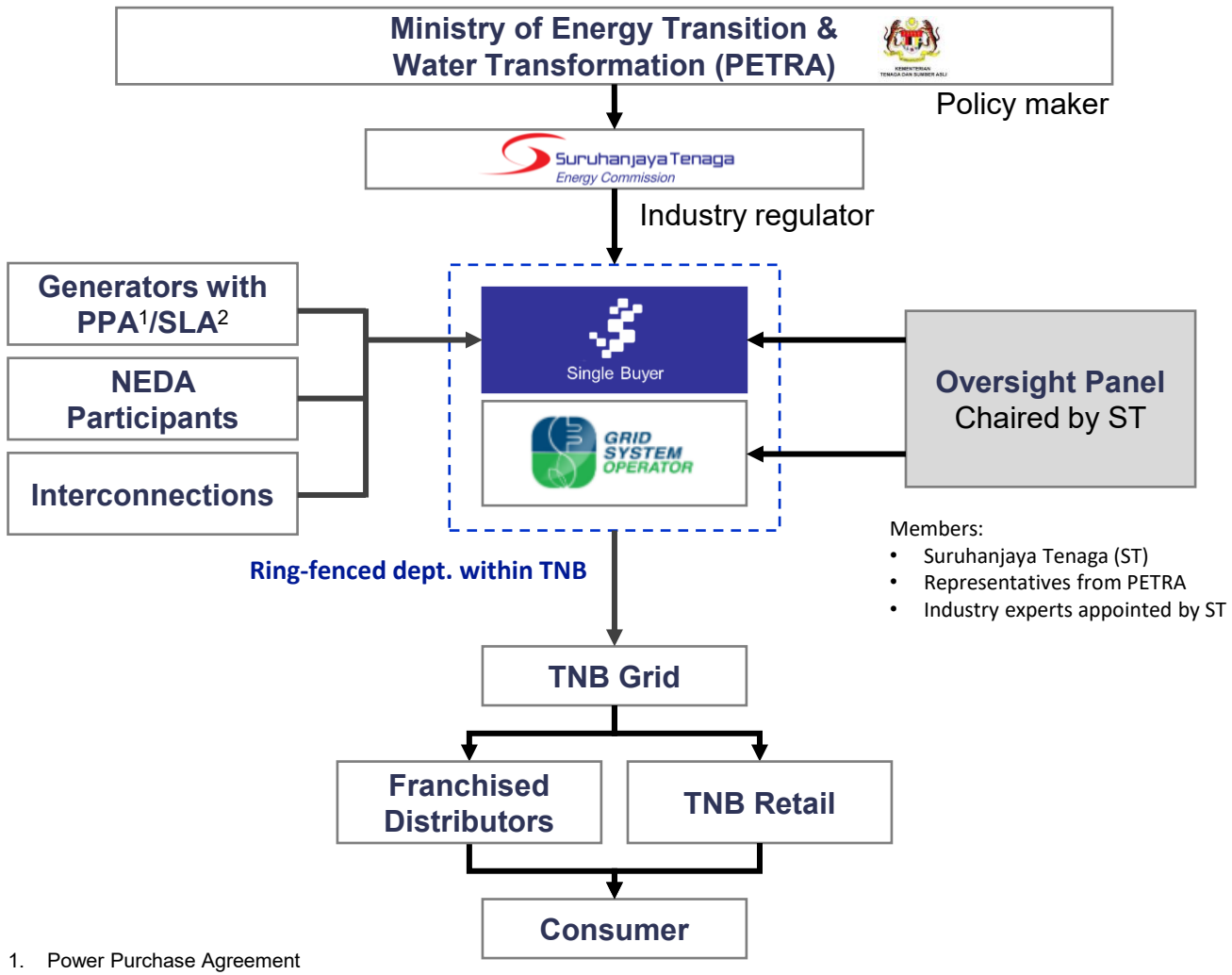
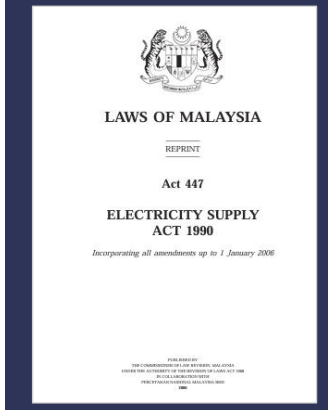
Electricity Supply Industry Structure in Peninsular Malaysia



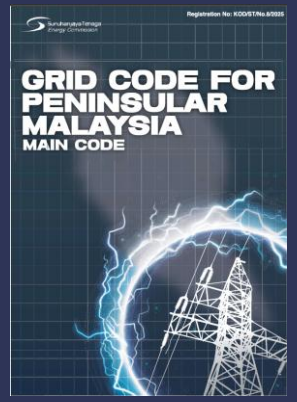
Members:
- Suruhanjaya Tenaga (ST)
- Representatives from PETRA
- Industry experts appointed by ST

1. Power Purchase Agreement
2. Service Level Agreement

Main governing documents

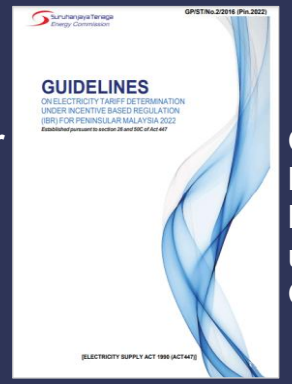


The Electricity Supply Act 1990 (Act 447)



The Grid Code for Peninsular Malaysia

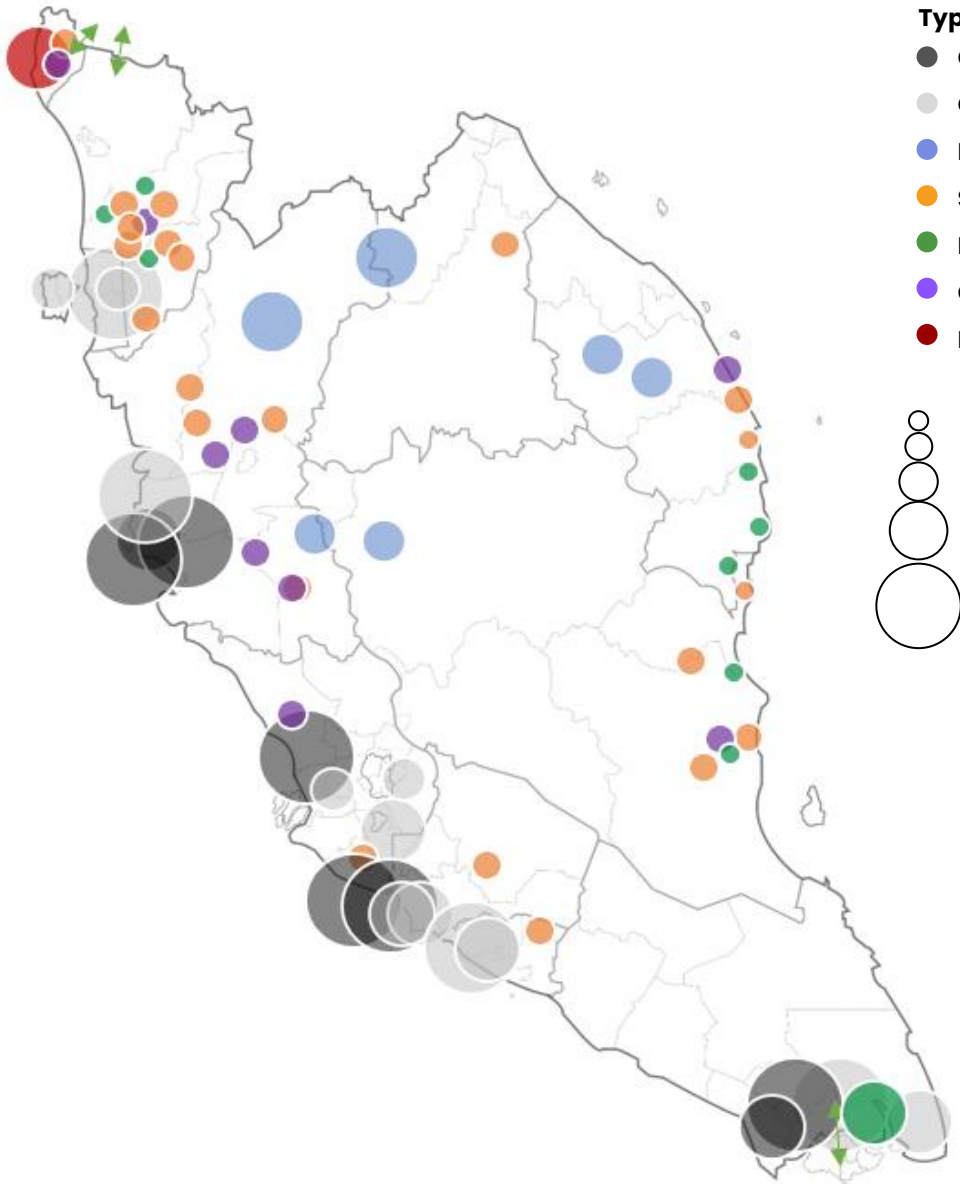
Guidelines for Single Buyer Market



Guidelines on Electricity Tariff Determination under IBR (IBR Guidelines)

Other Documents:
i. Guidelines for NEDA
ii. Single Buyer Code of Conduct
iii. Single Buyer Operations Manual

Overview of Generators and Peninsular Malaysia System



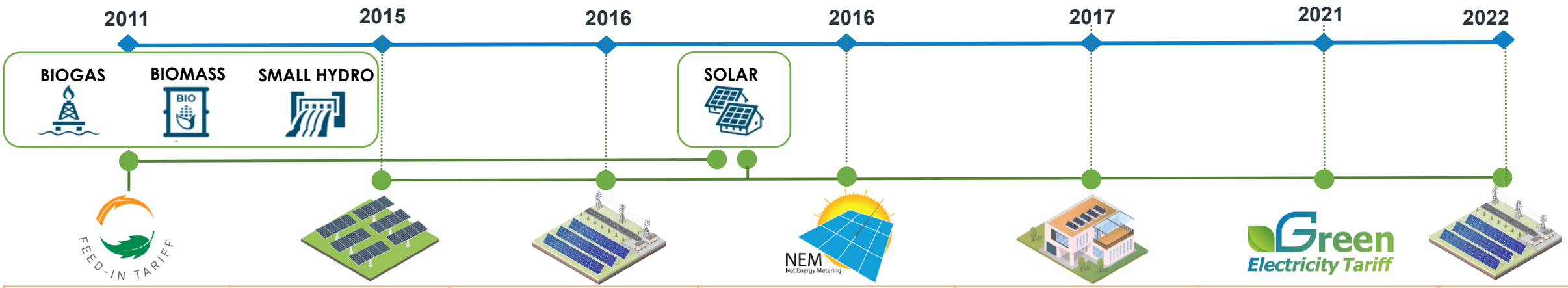
Highest Demand Recorded	**21,049** MW Wednesday, 28 May 2025, 8:30 PM
Highest Energy Recorded	**442,167** MWh Wednesday, 28 May 2025
Current Installed Capacity	**28,479** MW as of 31 May 2025 *Includes 100% of capacity from LSS Power Plants

Capacity Mix (Grid-level)

Coal Fired Power Plants	**12,033** MW	**42%**
Gas Fired Power Plants	**12,210** MW	**43%**
Hydroelectric Power Plants	**2,536** MW	**9%**
LSS Power Plants	**1,700** MW	**6%**

Total operational RE capacity: 6,454MW
- Solar: 5,292MW
- Biomass & WTE: 575MW
- Mini-hydro: 414MW
- Biogas: 174MW

Evolution of Solar Programmes in Peninsular Malaysia

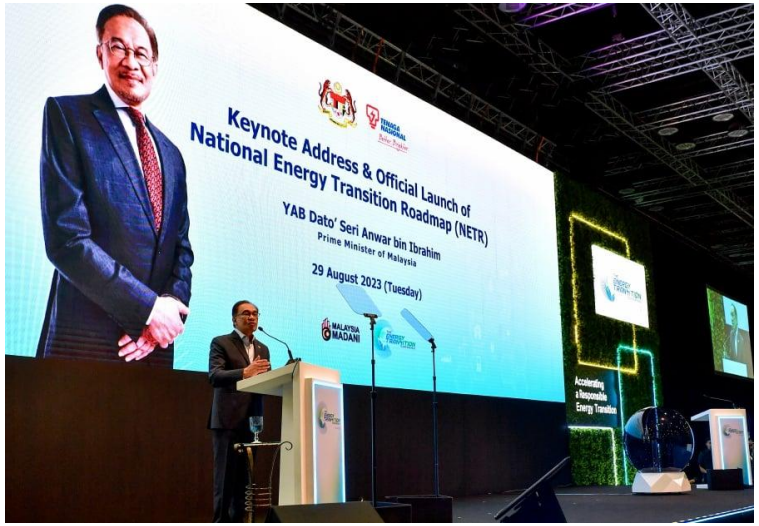


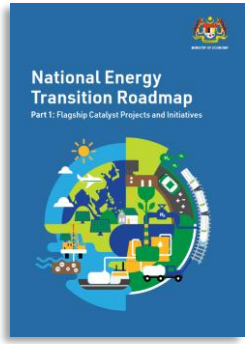
Feed-in Tariff (FiT)	New Enhanced Dispatched Arrangement (NEDA)	Large Scale Solar (LSS)	Net Energy Metering (NEM)	Self-Consumption (SelCo)	Green Electricity Tariff (GET)	Corporate Green Power Programme
▪ Sold to grid at for a fixed period ▪ Based on quota subject to FiT fund ▪ Solar quota ended in 2017	▪ PPA/SLA Generators, SPPs, Merchant plant, Price takers ▪ Export to grid and supply to Single Buyer.	▪ Competitive bidding ▪ PPA based ▪ **Bidding Quota (MW):** Fast Track: 200 LSS1: 250 LSS2: 460 LSS3: 500 LSS MENTARI : 1,000 LSS PETRA: 2,000 LSS PETRA 5+: 2,000	▪ Own consumption ▪ Installation size below own avg. consumption ▪ Only excess export to grid ▪ **Quota offered (MW):** NEM Rakyat: 600 NEM for Government Entities: 100 NOVA: 1,700	▪ Own consumption ▪ No export to grid ▪ **Ground-mounted and floating solar allowed (2024)**	▪ Consumers can buy green electricity from grid ▪ Consumers will receive REC ▪ **Quota offered (MW):** 6,600 GWh	▪ Corporate Customers can purchase electricity virtually from SPP through NEDA. ▪ **Quota offered (MW):** 800

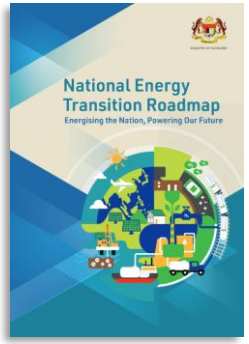
Growing end-user participation

National Energy Transition Roadmap (NETR) 2023

Malaysia is committed to overcoming the challenges of the energy trilemma, and NETR demonstrates the determination to do so and seeks to scale-up investment opportunities in renewable energy.







- Increase the target for installed RE capacity from 40% in 2040 to 70% by 2050.
- Expand RE development based on the concept of a self-contained system to encourage investment in the RE value chain and diversify RE programs according to the principle of willing buyer, willing seller.
- Scale-up the installation of solar systems in government buildings
- Allow cross-border RE trade through the establishment of an electricity exchange system.

Highlight 2024

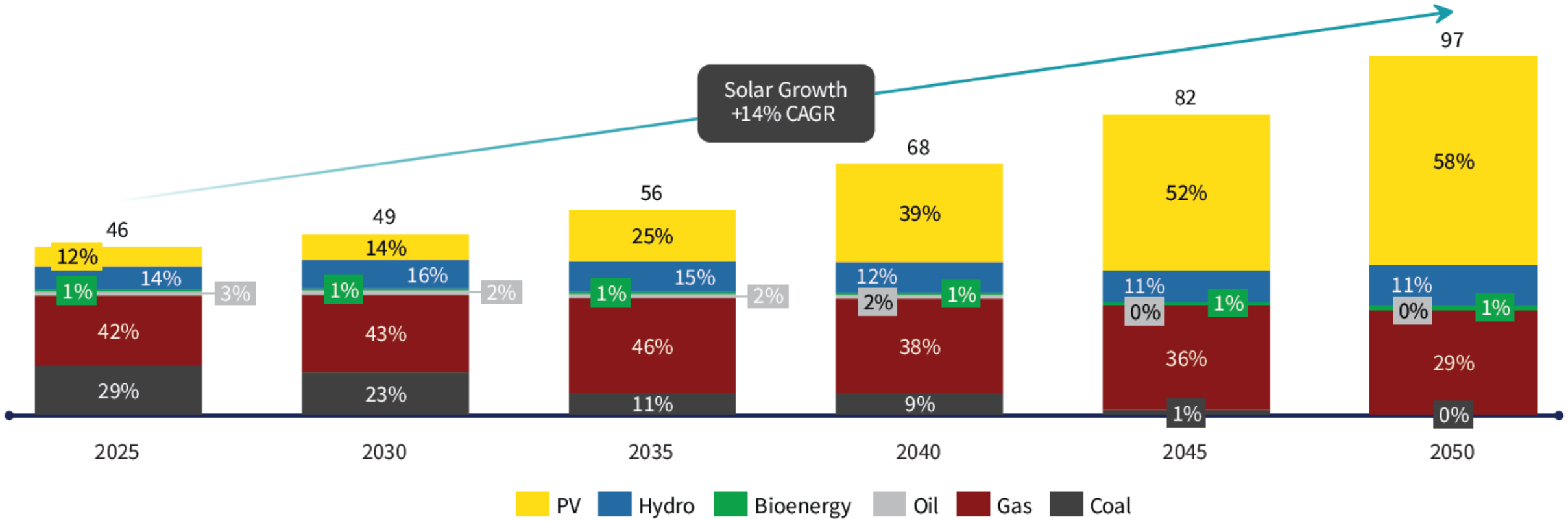
1. **Energy Efficiency and Conservation Act (EECA)** passed in June.
2. Establishment of **Energy Exchange Malaysia (ENEGEM)** for cross-border electricity sales to neighbouring countries.
3. **Corporate Renewable Energy Supply Scheme (CRESS)** for direct procurement of electricity generated from green energy plant to consumer registered with TNB via TNB-owned electricity supply network
4. **LSS PETRA** programme with total quota of 2,000MW (1,500MW ground-mounted, 500MW floating).
5. **Low Carbon Energy Generation Programme under NEDA** with total quota of 400MW for non-solar sources such as wind, small hydro, biogas, biomass, hydrogen etc.
6. **Battery Energy Storage System** pilot project with capacity of 100MW/400MWh followed by MyBeST open bidding with total capacity of 400MW/1,600MWh.
7. **Green Electricity Tariff** to continue with quota offering of 6,600GWh with 5 sen/kWh for subscription of 1 year, 4 sen/kWh for 2 years and 3 sen/kWh for3 years until 2027.
8. Launch commercial trading of REC through **Malaysia Green Attribute Trading System (mGATS)**.

Highlight 2025

1. **LSS PETRA 5+** programme with total quota of 2,000MW (1,500MW ground-mounted, 500MW floating).
2. **Community Renewable Energy Aggregation Mechanism (CREAM) programme** for local consumers to procure green electricity directly from the aggregator/generator through open access to the Distribution System.
3. **Accelerated Transition Action Programme** to continue from NEM programme that was ended in June.
4. **Thirteenth Malaysia Plan**: Introducing nuclear energy as a source of clean electricity.

Electricity Supply Outlook 2025-2050

~5.5GW	~7GW	~14GW	~27GW	~43GW	~56GW



Source: National Energy Transition Roadmap 2023

Thank You

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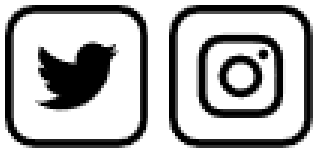

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