

The 33rd "Clean Coal Day in Japan" International Symposium (2024)

Carbon Neutrality Policy Updates of Malaysia 2nd September 2024

By Dato' Ir. Ts. Abdul Razib bin Dawood

Chief Executive Officer Energy Commission / ASEAN Forum on Coal Chairman

HISTORY OF THE ESTABLISHMENT OF ENERGY COMMISSION

1st May 2001 ▶

A statutory body established under the Energy Commission Act 2001, Suruhanjaya Tenaga (ST) is responsible for regulating the energy sector, specifically the electricity and piped gas supply industries, in P. Malaysia and Sabah.

1st Jan 2002 ▶

Taking over the role of the Department of Electricity and Gas Supply, the Energy Commission started its operation.

2nd Jul 2018 ▶

ST under Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC)

10th Mar 2020 ▶

ST under Ministry of Energy and Natural Resources (KETSA)

1st May 2021



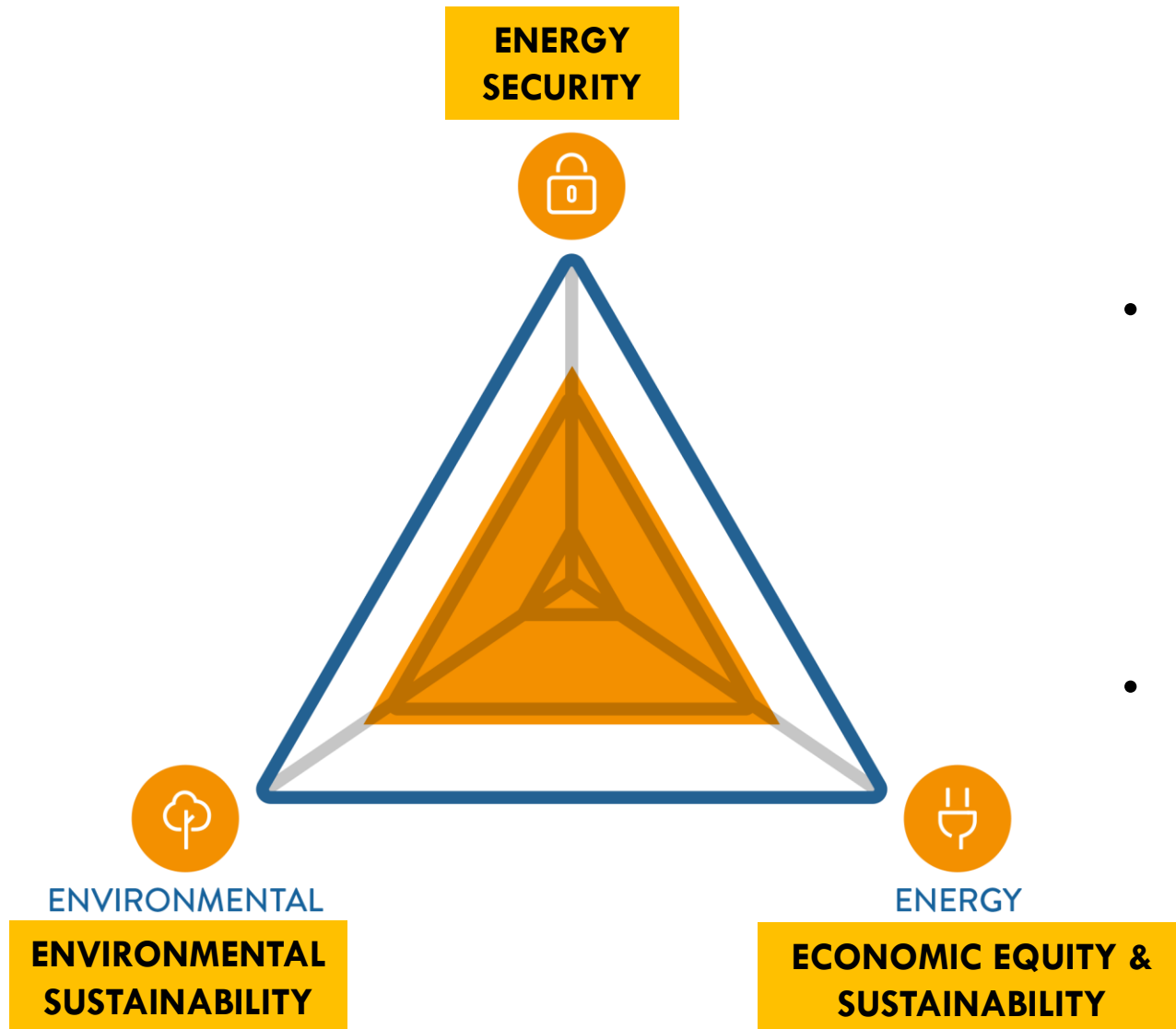
2nd Dec 2022 ▶

ST under Ministry of Natural Resources, Environment and Climate Change (NRECC)

12 Dec 2023 ▶

ST under Ministry of Energy Transition and Water Transformation (PETRA)

CHALLENGES: ENERGY TRILEMMA PERSPECTIVE

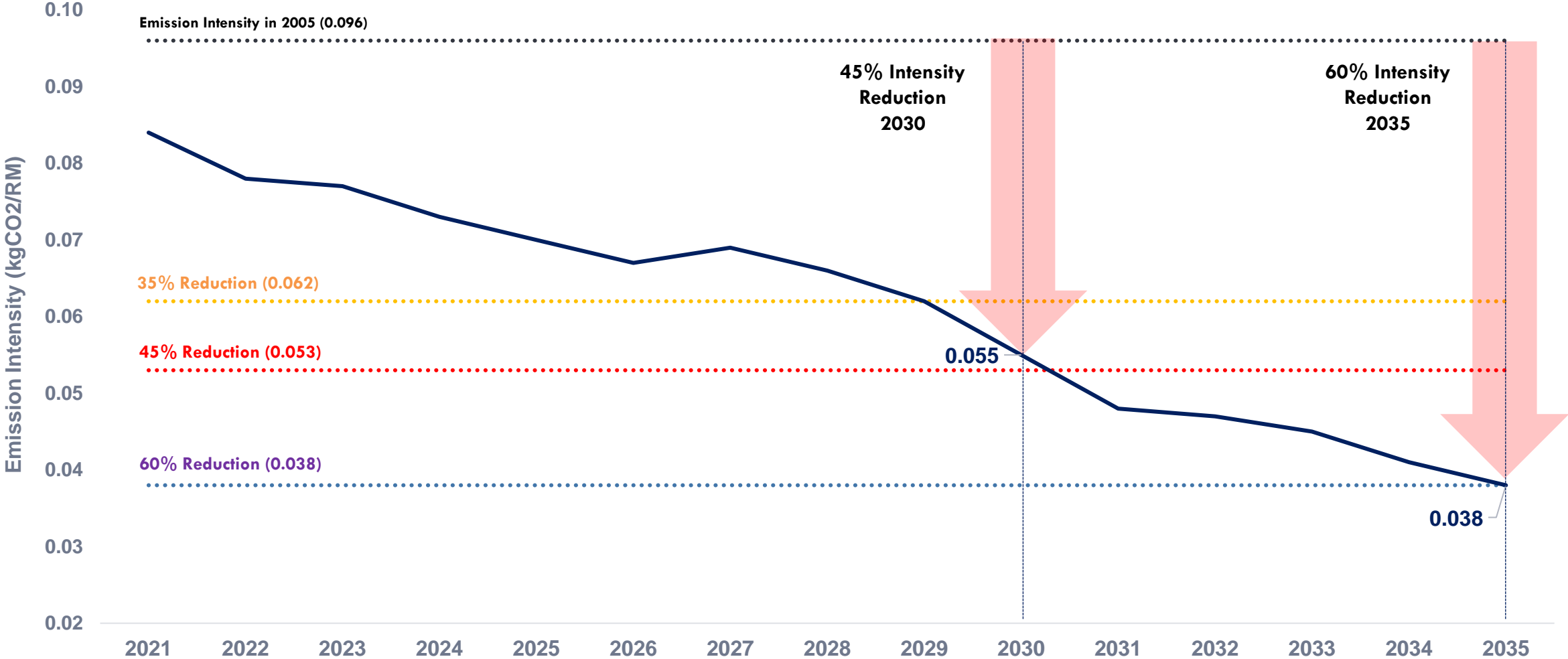


- **ENERGY SECURITY** – management of primary **energy supply** from domestic and external sources, **reliability** of energy infrastructure, ability to **meet** current and future **demand**
- **ECONOMIC EQUITY AND SUSTAINABILITY** – a **FAIR** tariff framework across all consumer groups ensuring equal access (affordability) and long-term fiscal sustainability (weaning off subsidies)
- **ENVIRONMENTAL SUSTAINABILITY** – reduction in energy and CO2 intensity, transition to **renewable** and low-carbon **energy sources**

Source: World Energy Council

CARBON EMISSION INTENSITY

Pen. Malaysia Power Sector Carbon Emission Intensity of GDP 2021-2035 Projection (kgCO₂/RM)



Note

- The GDP projections are based on a moderate recovery scenario of the Malaysian economy (range from 5.7% - 4.0% in 2021-2035) following the COVID-19 pandemic.

RENEWABLE ENERGY POLICY AT A GLANCE



8th Malaysia Plan

Small Renewable Energy Power (SREP) and Biomass Power Generation & Cogen (BIOGEN) project .



NREPAP

National Renewable Energy Policy and Action Plan (NREPAP) – guide for RE development in Malaysia



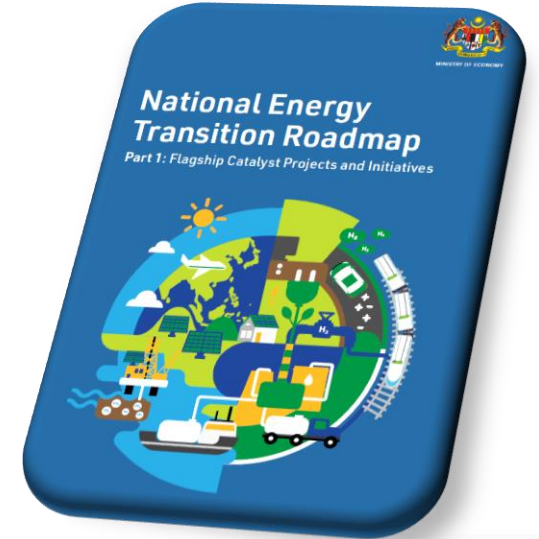
11th Malaysia Plan

Large Scale Solar (LSS), Net Energy Metering (NEM) and Self Consumption (SELCO) programme was introduced



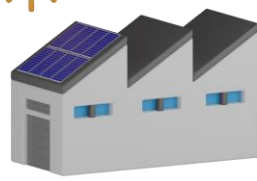
Energy Transition

National Energy Transition Roadmap (NETR) introduced in July 2023



9th Malaysia Plan

Malaysia Building Integrated Photovoltaic (MBIPV) project - grid connected PV system



RE & SEDA Act 2011

Feed in Tariff (FiT) was introduced. Paris Agreement on Climate Change (2015)



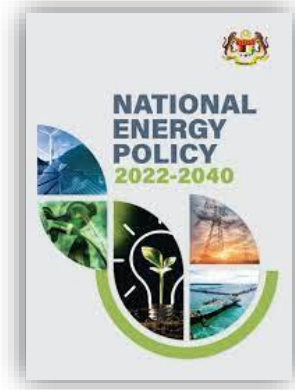
MyRER

In year 2021 Malaysia Renewable Energy Roadmap (MyRER) – projected 31% RE share. National Energy Policy (NEP) introduced in 2022

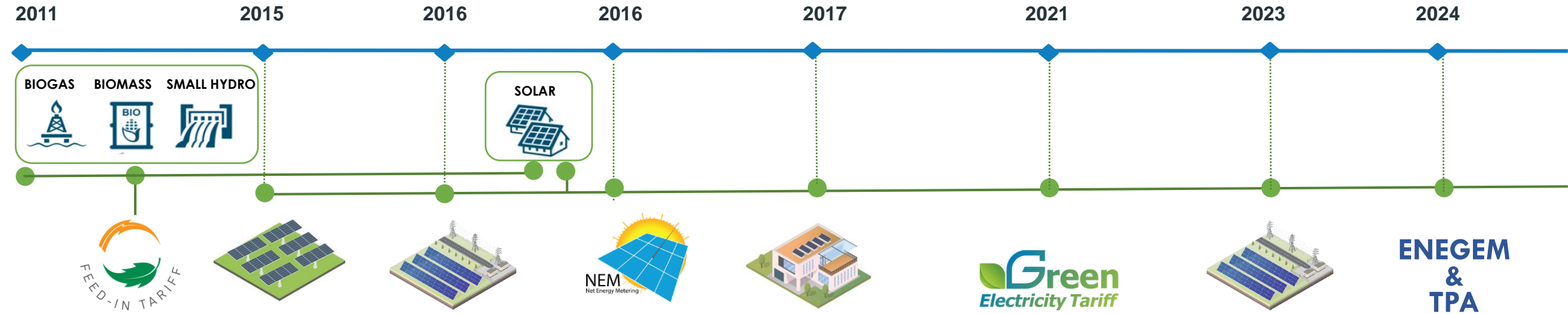


NEP 2022

The National Energy Policy, 2022-2040 (DTN) strategically charts the way forward and outlines key priorities for the energy sector in the coming years.



RENEWABLE ENERGY INITIATIVES IN PENINSULAR MALAYSIA



- 2011: Feed-in Tariff (FiT)**
 - Sold to grid at premium rate for a fixed period
 - Based on quota subject to FiT fund
 - Solar quota ended in 2017
 - Operational (MW):** 634.34 (as of Feb-23)
- 2015: New Enhanced Dispatched Arrangement (NEDA)**
 - Merchant plant / price takers
 - Export to grid and supply to Single Buyer bid on price quantity / declare capacity
 - Operational (MW):** 8 Participant (230MW) (as of Aug -24)
- 2016: Large Scale Solar (LSS)**
 - Competitive bidding
 - PPA based
 - Operational (MW):** 2,160MW (as of July-24)
 - Bidding Quota (MW):**
 - Fast Track: 200
 - LSS1: 250
 - LSS2: 460
 - LSS3: 500
 - LSS4: 1,000
 - LSS5: 2,000
- 2016: Net Energy Metering (NEM)**
 - Own consumption
 - Installation size below own avg. consumption
 - Only excess export to grid
 - Operational (MW):** 750.49 (as of Feb-23)
 - Balance of Quota (MW):**
 - NEM Rakyat: 65.2MW
 - NEM GoMEn: 46.93MW
 - NOVA: 175.63MW
- 2017: Self Consumption (SelCo)**
 - Own consumption
 - No export to grid
 - Operational (MW):**
 - Solar: 343MW
 - Non-Solar: 1180.08MW
- 2021: Green Electricity Tariff (GET)**
 - Consumers can buy green electricity from grid
 - Consumers will receive REC
 - GET 2024:**
 - Quota: 6,600 GWh
 - LV = 10sen/kWh
 - MV & HV = 20sen/kWh
- 2023: Corporate Green Power Programme (CGPP)**
 - Corporate Customers can purchase electricity virtually from SPP through NEDA.
 - Quota:** 800MW
 - Fully Taken up
 - By 32 Participant
- 2024: Energy Exchange Malaysia (ENERGEM)**
 - Designated platform to facilitate sales of renewable energy or Green Electricity between Malaysia and neighbouring countries in the region
 - ENERGEM acts as the marketplace to sell Green Electricity through a bidding mechanism
 - 100 MW Trial

Source: ST, SEDA & TNB

NATIONAL ENERGY TRANSITION ROADMAP (NETR)

The 4 Guiding Principles of NETR



Based on national aspirations and commitments



Just, inclusive and cost-effective

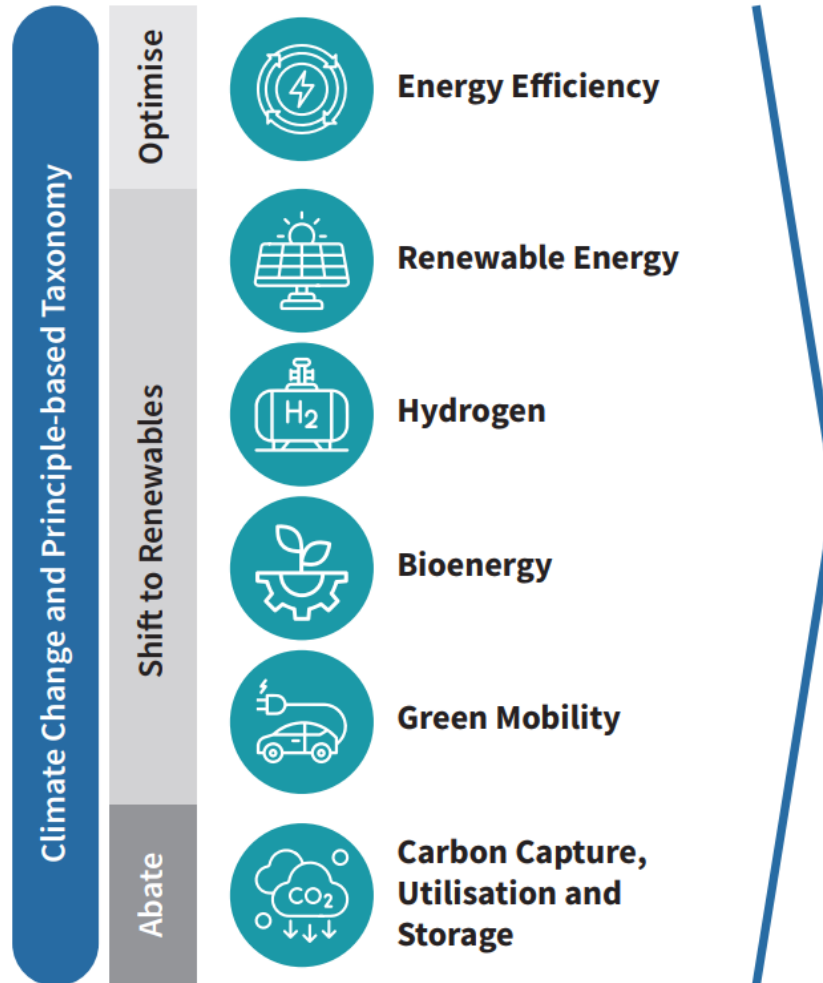


Effective governance and whole-of-nation approach



High-impact job opportunities, SME involvement in the ecosystem

Energy transition levers



Prioritisation criteria

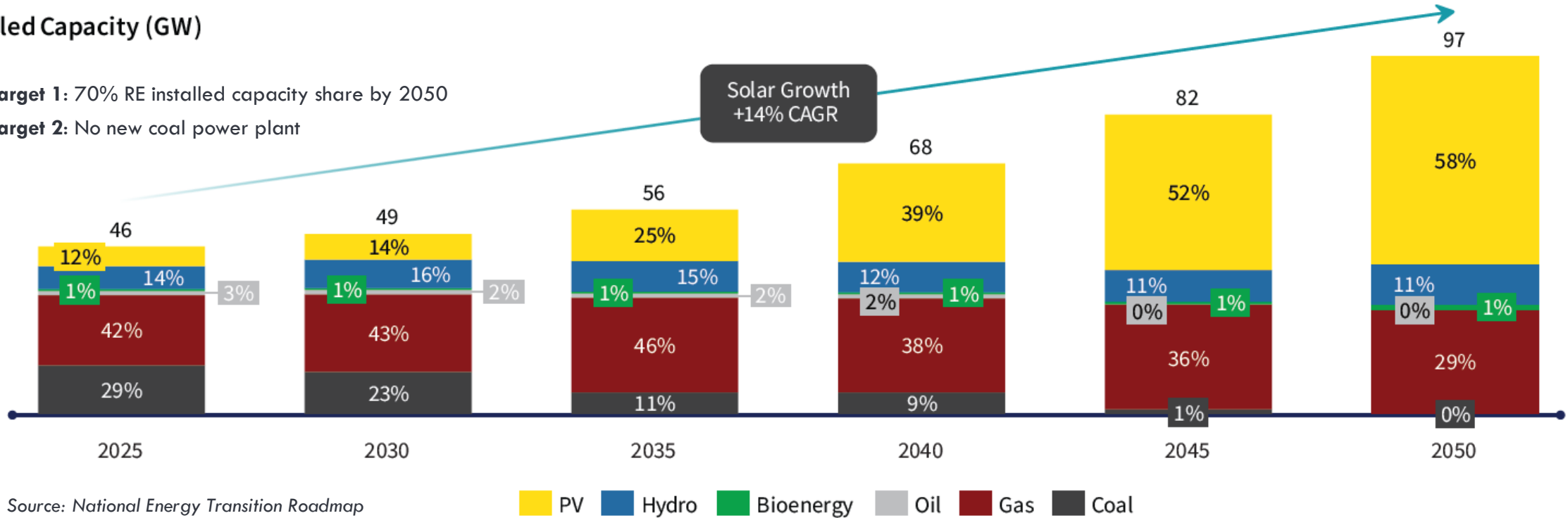
- + Emission reduction potential**
Advancing green growth and enhancing sustainability to become a low-carbon nation while addressing energy trilemma.
- + Economic opportunities**
Propelling strategic and high impact industries, especially for SMEs, strengthening investments and create job opportunities.
- + Cost effectiveness**
Promoting investments, especially in nascent technologies to yield long-term benefits.
- + Social inclusiveness**
Strengthening the security, wellbeing and inclusivity through clean energy sources that would benefit communities without compromising future generations.

CAPACITY MIX PROJECTION BY 2050

Installed Capacity (GW)

Target 1: 70% RE installed capacity share by 2050

Target 2: No new coal power plant



- Coal-fired power plant to be phased out by 2045 with no new development of coal-fired power plant
- Gas is expected to act as a lower-carbon transition fuel to replace coal as source of fuel for baseload power
- 70% RE share of installed capacity by 2050 will be predominantly driven by solar PV installation
- Implement physical and regulatory enablers to accommodate higher VRE

GREEN TECHNOLOGY INCENTIVES: PROMOTING GREEN INVESTMENT

GITA PROJECT (BUSINESS PURPOSES)

GITE

TIER 1

Green Hydrogen

Investment Tax Allowance (ITA) of 100% for eligible qualifying capital expenditure (CAPEX) incurred up to 10 years (5+5).

Offset against 100% or 70% of Statutory Income 10 years (5+5).

TIER 2

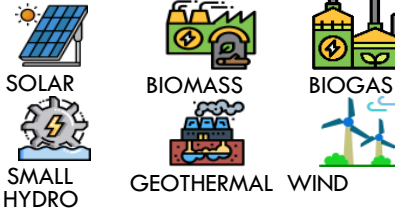
Integrated Waste Management (IWM) & EV Charging Station

Investment Tax Allowance (ITA) of 100% for eligible qualifying capital expenditure (CAPEX) incurred for 5 years from the date 1st qualifying CAPEX incurred.

Offset against 100% of Statutory Income

TIER 3

Renewable Energy (Business Purposes)



Investment Tax Allowance (ITA) of 100% for eligible qualifying capital expenditure (CAPEX) incurred for 5 years from the date 1st qualifying CAPEX incurred.

Offset against 70% of Statutory Income

Solar Leasing

Income Tax Exemption (ITE) of 70% statutory income for solar leasing activity for a period of up to 10 years of assessment. The incentive period shall commence from the date of 1st invoice issued.

Capacity (MW)	Incentive Period
>3MW- ≤10MW	5 years
>10MW- ≤30MW	10 years

GREEN TECHNOLOGY INCENTIVES: PROMOTING GREEN INVESTMENT



Solar For Rakyat Incentive Scheme

SolaRIS Features

- ✓ **One time cash rebate** : RM1,000/kWac up to a **maximum of RM4,000** for NEM Rakyat customers who apply and obtain approval from 1 April 2024 onwards.
**Subject to the terms and conditions of the SolaRIS programme.*
- ✓ Rebate allocation is on a **first come, first served basis** from 1 April until 31 December 2024 and successfully commission their solar PV system installations by 31 March 2025, or until all SolaRIS rebate quotas are fully distributed, whichever comes first.
- ✓ The rebate will be transferred to the preferred local bank account under the registered TNB customer after receiving an email from TNB for SolaRIS application.

SolaRIS Eligibility



TNB Residential Customers (Tariff A)
**Exclude businesses*



Successful first time NEM Rakyat applicants from 1 April 2024 onwards



Malaysian citizens

**Each customer is entitled to only ONE rebate*

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THANK YOU!
TERIMA KASIH!
ありがとう!

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Chief Executive Officer Energy Commission / ASEAN Forum on Coal Chairman