



COUNTRY ASSESSMENT REPORT Malaysia

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1.1 Country Assessment Report Template

Country Name	Malaysia
Introduction	Malaysia is situated in Southeast Asia, bordered by Thailand, Singapore and Indonesia. It has a population of over 31.5 million and a GDP worth 358.5 billion, driven by manufacturing, services, commodities, and trade. Malaysia is a key regional hub for electronics, palm oil, oil and gas, and financial services, and is closely integrated into global and ASEAN supply chains. Geographically, Malaysia is split into Peninsular Malaysia and East Malaysia (Sabah and Sarawak on the island of Borneo), separated by the South China Sea. The country features tropical rainforest terrain, mountainous interiors, extensive river systems, and long coastlines. Malaysia's geography, natural resources, and economic structure strongly influence its infrastructure development, energy demand patterns, and exposure to climate and environmental considerations.

1.2 Electrical Generation and Demand

Generation	Technology	Capacity (GWh)
	Hydro	16.5% - 31 896.0
	Fossil/Thermal	46.1% - 88 932
	Natural gas	34.9% - 67 428.0
	Biofuel	0.68% - 1312.0
	Solar	1.77% - 3 417.0
		192985
Demand	Sector	Demand (TJ)
	Residential	23.1% - 151 498.0 TJ
	Commercial/Service/Public Sector	29.7% - 194 950.0 TJ
	Transport	0.3% - 2 112.0 TJ
	Industrial	46.4% - 304 006.0 TJ
	Agriculture and Forestry	0.5% - 3 223.0 TJ (IEA, 2023)
	Total	655789

1.3 Electrical Interconnection and Import/Export

Connected country	Capacity (MW)	Annual import from country (GWh)	Annual export to country (GWh)
Indonesia	Physical grid link (Sarawak–Kalimantan)		~883 GWh
Thailand	Grid link exists; limited		~1 GWh
Singapore	~1,000 MW		~438 GWh (WITS, 2024)
Additional information	Indonesia exports: Malaysia's largest electrical energy export partner by volume, largely reflecting grid-to-grid trade (especially between Sarawak and West Kalimantan). Thailand exports: Very small electricity export volumes are recorded by customs data (hundreds of MWh). Singapore trade: Modern cross-border trade includes new renewable electricity exports via ENEGEM, estimated at around 438 GWh per year from a 50 MW contracted supply, intended to expand up to ~300 MW using the existing link.		

Through the Lao PDR-Thailand-Malaysia-Singapore Power Integration Project (LTMS-PIP), up to 200 MW of hydropower flows via Thailand to Singapore.

1.4 Market Structure

In Malaysia, the electricity market is structured around a single-buyer model. This essentially means that utilities are the only entities permitted to transmit and distribute electricity to end-users. The market is divided into three separate geographical systems, each with its own generation, transmission, and distribution networks.

Tenaga Nasional Berhad (TNB) manages generation, transmission, and distribution in Peninsular Malaysia. TNB is publicly listed on Bursa Malaysia. Sarawak Energy (SESB), a public utility, manages all electricity operations in Sarawak and is owned by the Government of Sarawak. Sabah Electricity (SEB) operates in Sabah and Labuan, with 80% ownership by TNB and 20% by the Government of Sabah.

Private participation is significant in the energy generation sector through Independent Power Producers (IPPs). IPPs enter into long-term supply contracts with the respective utility. In Peninsular Malaysia, approximately 38% of generation capacity is operated by privately-owned IPPs, while TNB operates around 51%.

Transmission and distribution remain largely under the control of the main utilities with limited private sector involvement.

The electricity market in Malaysia is semi-liberalised, with a significant participation from the IPPs. There is limited competition in the wholesale market as participants buy electricity using PPAs. Retail prices remain regulated for most residential and small commercial consumers; some large users may procure power through negotiated agreements. Emerging reforms are geared toward greater private participation and renewable procurement flexibility, including mechanisms like virtual PPAs and third-party access to grid for renewable generators ([KWM, 2025](#)).

Malaysia Green Attribute Trading System (mGATS) functions as a central tracking and trading platform for RECs, supporting unbundled certificate transaction scheme that currently utilises the I-REC registry to verify that energy comes from specific renewable generators. mREC (Malaysia Renewable Energy Certificate) is issued under the I-REC Standard. mREC is a locally used term for I-RECs ([TNB](#)).

1.5 Responsible Government Department

In Malaysia, the Energy Commission (**Suruhanjaya Tenaga**) is the primary entity responsible for regulating the energy and electricity sector. The Ministry of Energy, Green Technology and Water (**KeTTHA**) is charged with creating policies and the legal framework for regulating the energy sector.

The **Ministry of Natural Resources and Environment** (RE) is responsible for the management and conservation of natural resources, wildlife protection, land surveying and mapping administration.

The Malaysian Green Technology Corporation (**GreenTech Malaysia**) is a government agency under the purview of KeTTHA. Its purpose is to encourage the development of green technology as an engine of socio-economic growth and sustainable development.

1.6 Existing/Planned Legislation

There does not appear to be a Renewable Portfolio Standard (RPS) or Renewable Purchase Obligation (RPO) mechanism in place in Malaysia.

The Feed-in Tariff (FiT), guarantees access to the grid and provides a stable, long-term investment opportunity for renewable energy producers. The FiT provides different rates dependent on the technology and the agreement will typically last for 21 years for new applications, ensuring long-term revenue for producers. Eligible renewables include: biogas, biomass, small hydropower, and solar photovoltaic facilities.

The national utility have incorporated I-REC(E) into the **Green Electricity tariff (GET)** mechanism which is the system for selling bundled Renewable Energy Certificates (RECs). When a consumer (domestic, commercial, or industrial) subscribes to the GET program, they pay a premium on their regular electricity bill to receive green electricity. **This purchase automatically includes the associated mRECs (which are I-RECs in practice) as a "bundled" product.**

Changes have been made in 2025 in an attempt to ensure that the GET mechanism is affordable and applies to as many consumers as possible.

1.7 Environmental and Renewable Electricity Legislation

- National Climate Change Bill (2025/2026): This landmark legislation, expected to be fully operational in 2026, institutionalizes climate governance by establishing legally binding GHG targets and a national climate committee.
- Carbon Tax (Implemented 2026): Effective from 2026, a carbon tax targets high-emission sectors, including energy and iron/steel. It is designed to incentivize industrial decarbonization.
- Renewable Energy Act 2011 (Amended 2023): Remains the primary statute for the Feed-in Tariff (FiT) system and other RE development incentives.
- Starting July 1, 2025, the Green Electricity Tariff (GET) was restructured into GET Greenpath. This update reduced premium rates by up to 80% (as low as 3 sen/kWh for a 3-year subscription) to make mRECs more accessible to commercial and industrial users.
- Launched on January 1, 2026, this succeeded the NEM 3.0 scheme. It removes fixed national quotas for rooftop solar, allowing businesses to self-generate up to 100% of their maximum demand and receive credits at market rates.

1.8 Existing/Planned Certificate or Support Systems

As referenced above, the mGATS acts as a one-stop platform for Malaysia's renewable energy market, but it does not operate in isolation. The scheme currently utilizes the I-REC registry to verify that energy comes from specific renewable generators.

In Malaysia, certificates redeemed through this system for customers are often branded as mREC. While mREC is the local branding, the underlying technical standard and verification process follow the I-REC Registry (and GCC) protocols, ensuring they are accepted by global frameworks like the RE100, CDP, and the GHG Protocol.

1.9 Extent of Engagement with Government

At the time of drafting, the I-TRACK Foundation have been consulting with a potential local issuer in Malaysia. The entity will be announced following official onboarding, but is an entity under the purview of national actors and well positioned to support robust and ongoing alignment with between I-REC(E) activities and the preferences of government.

Stakeholders in government, ranging across Peninsular and non-peninsular regions of the Federal territory have been consulted extensively over the years, and the government has supported robust market growth by effectively leveraging REC instruments (including I-REC(E)) to deploy energy sector policies and renewable energy provision of services. Engagement with government has been robust, and is expected to continue following appointment of a Local Issuer.

1.10 Expected Response from Government

Appointment of a Local Issuer by a national authority is anticipated during 2026.

1.11 Proposed Restrictions

Currently – standard GCC checks

1.12 Any Other Relevant Information

N/A

1.13 Author

Organization Name

Signature



Name Mary Jones

DATE

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