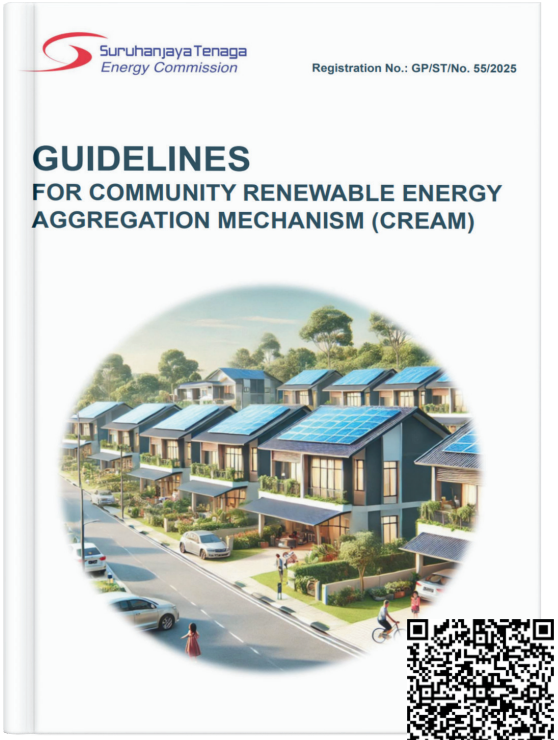
Policy Insight - Malaysia

Guideline on Corporate Renewable Energy Aggregation Mechanism (CREAM)

Introduction to the Guidelines for Community Renewable Energy Aggregation Mechanism (CREAM)

The “Guidelines for Community Renewable Energy Aggregation Mechanism (CREAM)” was established in March 2025, aimed to provide a comprehensive framework to facilitate consumers participation in renewable energy generation. By incentivising individuals to lease their rooftops for solar photovoltaic installations, this scheme enables communities to produce renewable electricity via solar PV rooftops and earn additional income by selling excess solar power directly to Local Green Consumer.



The guidelines could be accessed here

Supporting Guidelines for Renewable Energy (RE) Aggregation in Malaysia

Guidelines for New Enhanced Dispatch Arrangement (NEDA)

- NEDA is a mechanism used by the Single Buyer for scheduling the dispatch of generation under the Single Buyer Market. The CREAM Framework follows the NEDA guidelines, as the generated RE within the CREAM Framework will be procured through the Single Buyer Market.

Guidelines for NEDA could be accessed here >>>

Guidelines for Single Buyer Market

- The generated RE in the CREAM Framework will be distributed by the Electricity Utility Company (EUC) to the Local Green Consumer through the Single Buyer Market, thus need to comply with the market rules.

Guidelines for Single Buyer Market could be accessed here >>>

How does the CREAM Framework support Malaysia's RE adoption?

The CREAM framework, under the Electricity Supply Act 1990 (Act 447), regulate the direct procurement of green electricity generated from Local Community Solar Plant (LCSP) owned by Local Energy Generator and Aggregator (LEGA) to the Local Green Consumers registered with the Electricity Utility Company (EUC) via Electricity Supply Network in Peninsular Malaysia enabling communities to participate in achieving Malaysia's 70% RE share in the energy mix target.

Benefits of the CREAM Framework

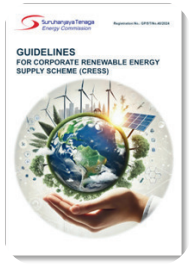
1. **Promoting renewable energy (RE) growth in the domestic market by enabling community participation in the RE supply market.**
2. **Enabling communities to generate additional income from selling excess RE**
3. **Promoting competition in the RE supply market by allowing aggregated RE sales to the Local Green Consumer**

Related initiatives supporting the growth of RE in Malaysia

1 Corporate Green Power Programme (CGPP)

Initiative by the government to provide opportunity for business entities to participate in the promotion and use of RE in their business operation through virtual power purchase agreement using the existing New Enhanced Dispatch Arrangement (NEDA) Framework.

2 Corporate Renewable Energy Supply Scheme (CRESS)



The CRESS initiative is aimed to offer broader green electricity supply options to help eligible RE developer (RED) and green consumer meet their ESG goals through Third-Party Access (TPA) mechanism.

More information are available in our Policy Insight:

Who are the parties involved in the CREAM Framework?

The implementation of the CREAM Framework will involve various parties from the government, private sectors, and electricity consumers. The relations of each party involved in the CREAM Framework are illustrated in the graph below.

Suruhanjaya Tenaga (ST)

Agency responsible in issuing license for the development and operation of the Local Community Solar Plant

Local Energy Generator and Aggregator (LEGA)

Rooftop solar PV plant owner whose plant is connected to the system under CREAM.

Single Buyer

An entity responsible in conducting electricity planning and manage electricity procurement services for Peninsular Malaysia

Single Buyer

- EUC Retail
- EUC Network Operator

Holder of a license to distribute and supply electricity in Peninsular Malaysia with the electricity supplied from the Single Buyer Market

Local Green Consumer (LGC)

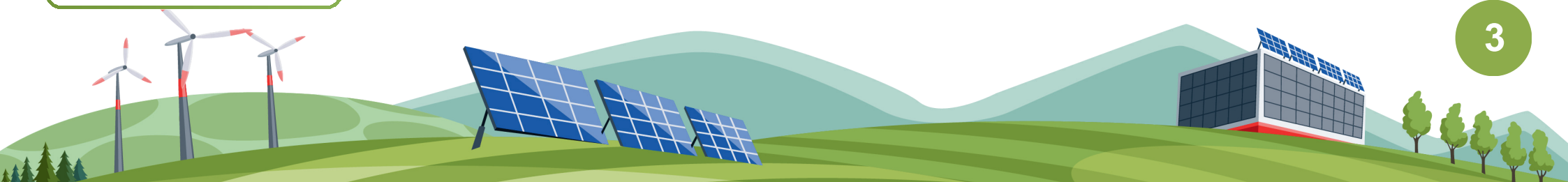
Parties to be supplied with electricity by EUC or LEGA

Homeowner

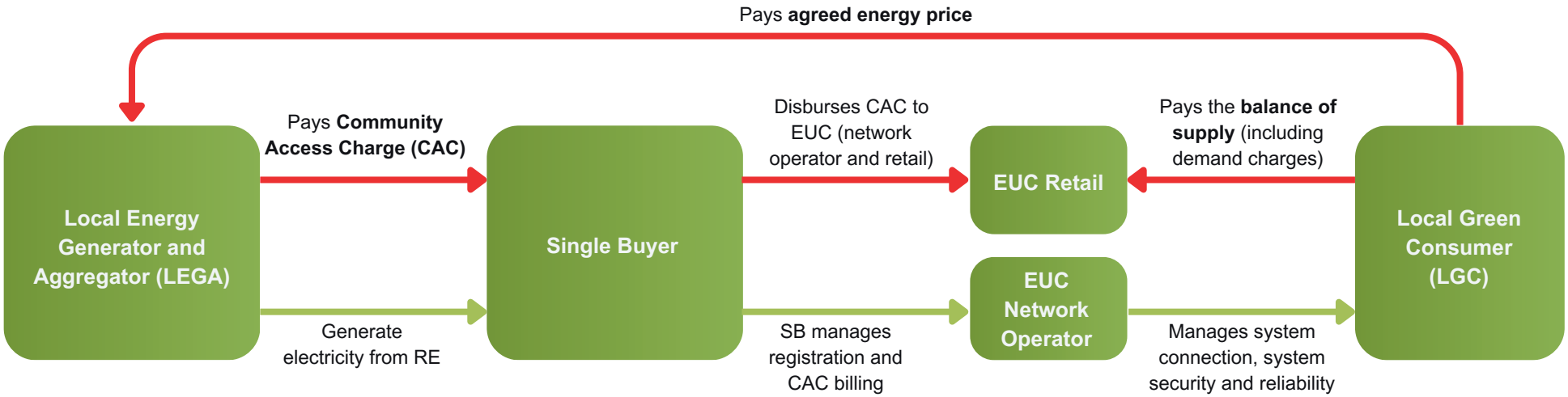
Individual or legal entity with rights to lease or manage property for the CREAM programme.

Legend:

- Contracting parties
- Coordination
- Supervision



The Physical and Financial Framework of the CREAM Programme



Legend:

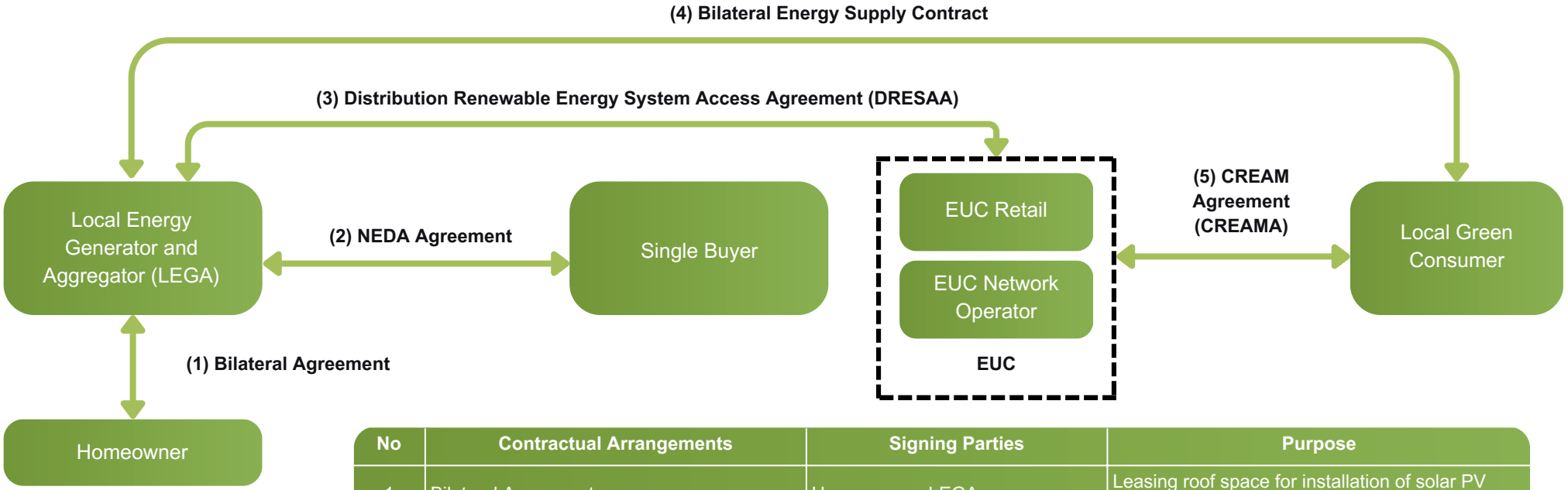
- Financial Flow
- Physical Flow

Key Insights:

- The LEGA shall develop, own, and operate a new Local Community Solar Plant (LCSP) with a Direct Connection (to the Distribution Network) for its Local Green Consumer. The export of energy through the Electricity Supply Network shall be in accordance with **NEDA Guidelines** and relevant codes and agreement, subject to the Community Access Charge (CAC).
- The LEGA is allowed to contract with **more than one (1) Local Green Consumer** and a Local Green Consumer is allowed to source RE from **more than one (1) LEGA** up to its maximum energy as declared in the CREAM Agreement with the EUC.
- EUC Retail manages electricity supply for consumers and meter readings (for both generators and consumers), carries out the billing process, and issues relevant bill to the LGC based on the meter readings.

The Contractual Framework of the CREAM Programme

There are five main contractual agreements for the procurement of renewable electricity through the CREAM Framework. Although the CREAM Framework inflict the rise of aggregated distributed energy resources (ADERs), these contractual agreements ensure that the distributed RE do not violate the technical codes/guidelines, as well as providing legal certainty on the purchase of community-based RE.



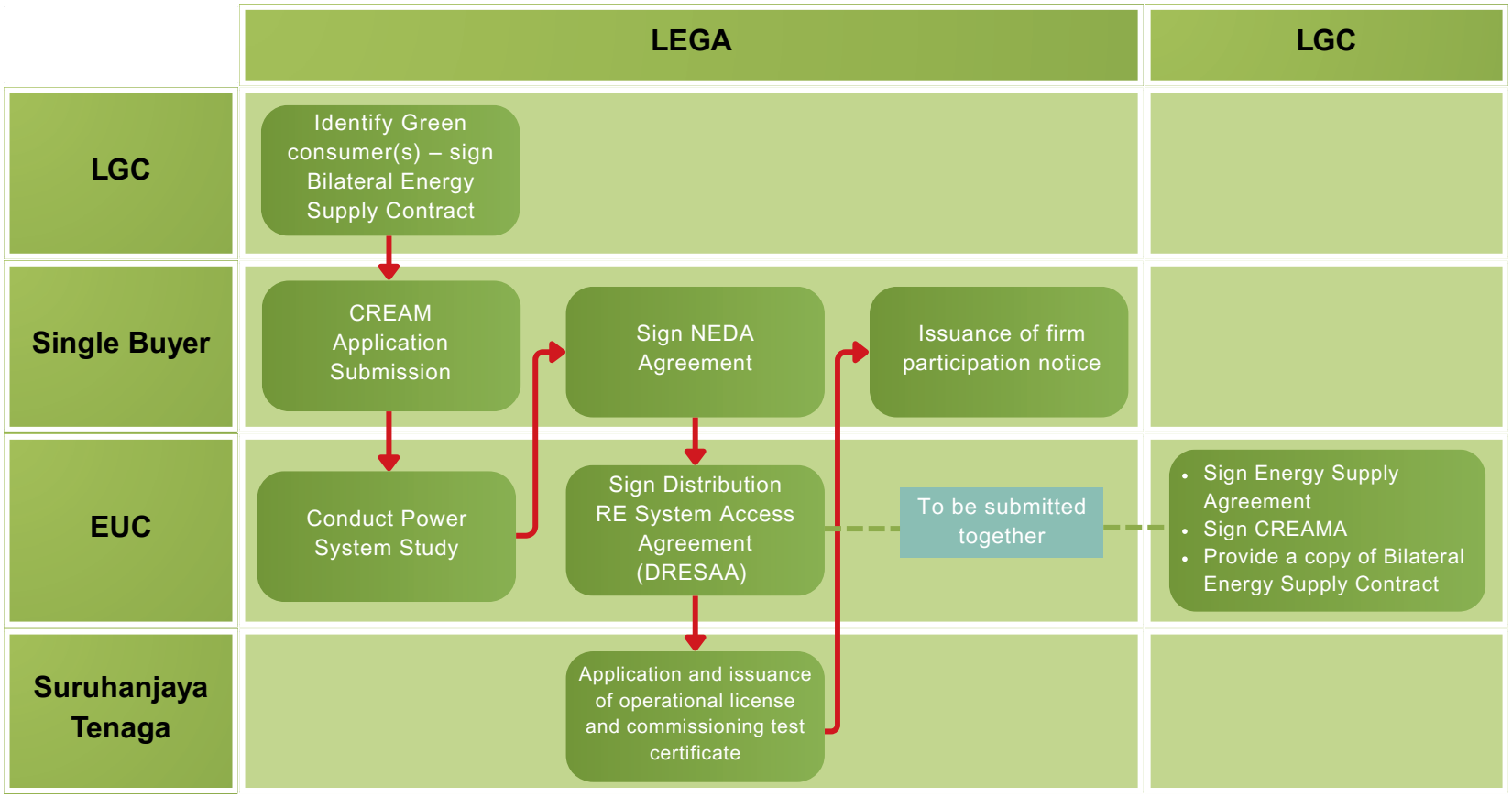
Legend:

Contractual Arrangement

No	Contractual Arrangements	Signing Parties	Purpose
1	Bilateral Agreement	Homeowner - LEGA	Leasing roof space for installation of solar PV systems
2	NEDA Agreement	LEGA - Single Buyer	Invoicing and collecting of the relevant CAC
			Compliance to the NEDA guidelines
3	Disribution Renewable Energy System Access Agreement (DRESAA)	LEGA - EUC	Ensuring compliance to the technical codes for the network access
4	Bilateral Energy Supply Contract	LEGA - Local Green Consumer	Managing RE sales between supplier and consumer
5	CREAM Agreement (CREAMA)	EUC - Local Green Consumer	Ensuring RE supply from EUC as a last resort

Submission of Application for the Participation in the CREAM Programme

The application for participation in the CREAM shall start from 1 June 2025 through the Single Buyer's website at www.singlebuyer.com.my. Based on the guidelines, the LEGA is responsible to submit the application for participation on behalf of its Local Green Consumer with the application flow as illustrated below.



Other documents to be submitted:

- Company profile of the LEGA and LGC
- LCSP project details
- Monthly export energy and allocation to every LGC
- Copy of the rooftop lease agreement
- Default declaration document of the LEGA and LGC
- Decommissioning plan

Provisions on Local Community Solar Plant (LCSP)

Criteria for LCSP

As the CREAM Programme requires the renewable electricity to be generated from rooftop solar PV plants on landed houses, the guidelines provide clear technical requirements for the LCSP and the contractual requirements for the homeowners.

Technical Requirements for the LCSP

- LCSP installed capacity shall not be less than **100 kWp** and not exceeding **2 MWp per 11 kV feeder.**
- The minimum export capacity from LCSP to the distribution system is **100 kW.**
- The LCSP and the Local Green Consumer must be located within approximately a **5 km radius** of each other.

Contractual Requirements for the Homeowners

- Homeowners must agree to **lease their roof space for the installation of the solar PV systems,** as per agreed with LEGA.
- Any disputes between Homeowners and LEGA shall be resolved between both parties.

Decommissioning of LCSP

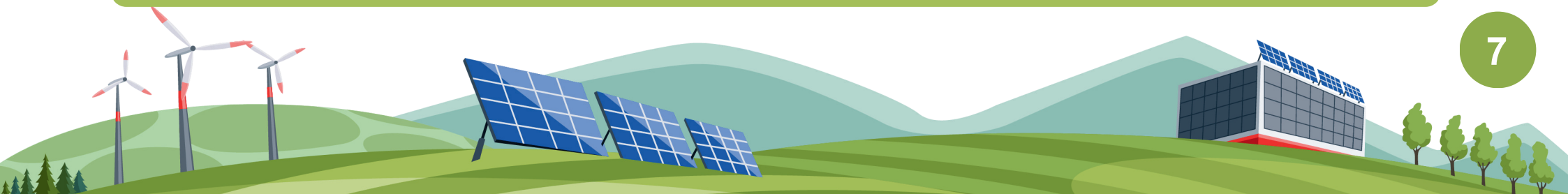
A LCSP shall be subject to decommissioning if it has not been in operation for a period of **twelve (12) consecutive months.** LEGA shall remove the LCSP within a period of twelve (12) consecutive months with a decommissioning plan which consists of the following points:

- Identity of the person(s) or entity(ies) responsible
- Statement of conditions that require decommissioning
- Identification of all components of the LCSP
- A plan with timeline and estimated cost for removing all components of the LCSP
- A plan for recycling or otherwise reusing all components to the greatest extent practicable

The decommissioning plan needs to comply with

- The requirements under the Electricity Supply Act 1990 [Act 447]
- Laws of the relevant local authorities
- Standards, directives, and notices issued by the Commission
- Technical documents published by the EUC for the decommissioning of LCSP.

According to the guidelines, the LEGA manages the overall administration and technical requirements related to LCSP over the Homeowners, thus alleviating administrative burden from the Homeowners and further ease the pathway for community involvement in RE generation.



Provisions on the Technical Obligation of EUC

The implementation of this programme may face significant technical obstacles due to the higher penetration of variable renewable energy (VRE) into the distribution grid, such as frequency **stability issues** and **voltage fluctuations.** However, the guidelines ensures the reliable operation of the distribution grid by stating the technical obligations of the EUC.

Ensuring the integration of RE through the LCSP is seamless and includes localised supply balancing to maintain stability and reliability of the system.

Deploying and maintaining Voltage Regulating Distribution Transformers (VDRTs) to manage fluctuations in voltage caused by intermittent RE generation.

Implementing local balancing solutions such as community-based energy storage systems to optimise energy distribution.

Identifying and implementing necessary upgrades to the distribution system to support LCSP integration

Implementing smart community infrastructure that is essential for real-time monitoring and control and ensuring a reliable and secure supply of electricity.

A clear technical obligation of EUC (as the network operator) provides a clarity on the technical risks to be undertaken by the related parties. Based on the guidelines, the EUC is obligated to enhance smart grid infrastructure and implement advanced technologies to ensure the reliability of the grid, which may inflict additional financial expenses and risks upon the EUC.

Provisions on Environmental Attributes and Community Access Charge (CAC)

Environmental Attributes

Under the CREAM framework, the environmental attributes belongs to the LEGA and may be transferred to the Local Green Consumers in accordance with the Bilateral Energy Supply Contract.

Redemption of the environmental attributes in the form of **Renewable Energy Certificates (RECs)** by Local Green Consumers shall be done in **Malaysia according to international standards.**

In the event that LEGA sells excess energy to the distribution system, the corresponding green attributes shall **belong to the Single Buyer.**

Community Access Charge (CAC)

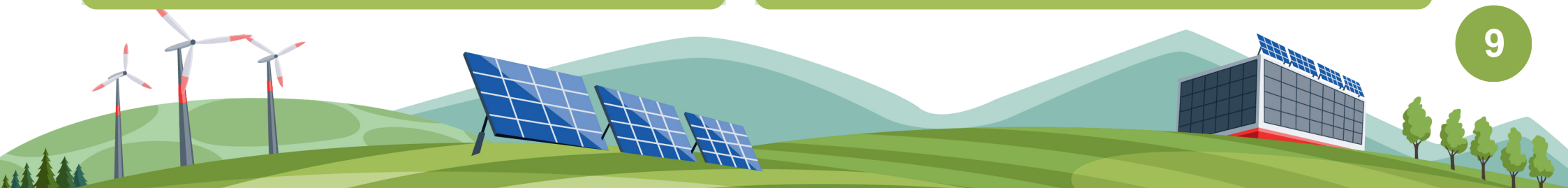
The LEGA shall be charged with CAC for the use of Peninsular Malaysia Electricity Supply Network (and associated services), with the Single Buyer invoicing and collecting relevant CAC based on the amount of energy exported into the Distribution System, excluding excess energy that is sold through NEDA.

CAC (April 2025):
0.15 MYR/kWh

Source: ST, 2025

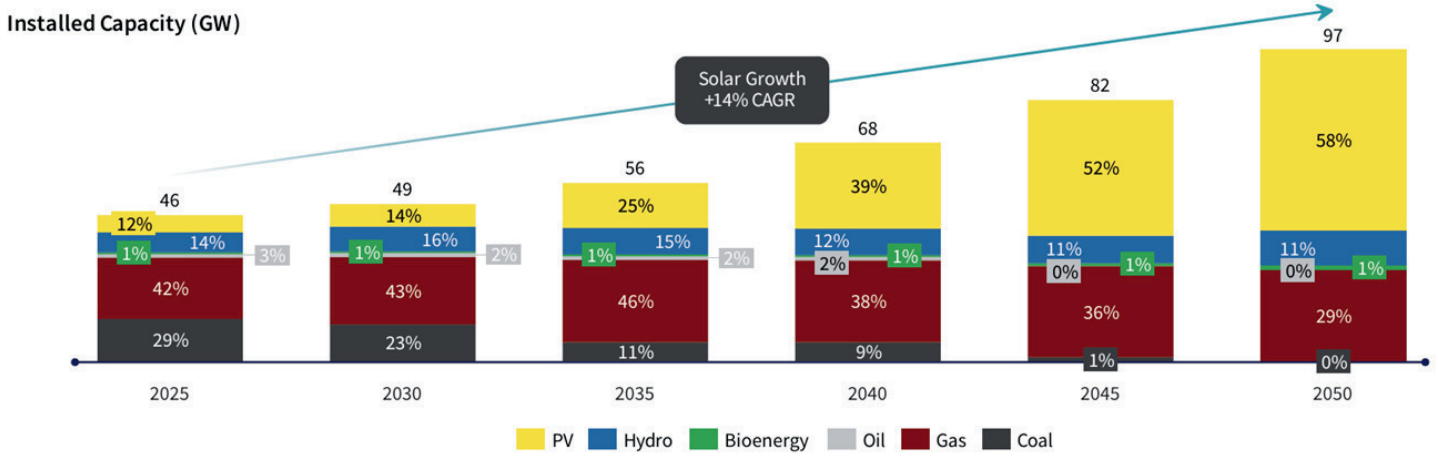
Clearly defining the ownership of environmental attributes would provide legal certainty and prevent double counting. The guidelines also ensures the redemption of RECs complies with internationally-recognised standards and supports Malaysia in achieving its carbon reduction targets through RE.

The CAC is lower compared to the System Access Charge (SAC) applied in the CRESS programme which charges 0.25 MYR/kWh - 0.45MYR/kWh, proportional to the scale of the distributed RE within the network. Consequently, this would incentivise LGC and the LEGA to source and to generate RE through the CREAM programme, respectively due to the lower operational expenses.



Foreseen Impact of the CREAM Framework to Malaysia's RE Landscape

All in all, the CREAM Framework will significantly support Malaysia in achieving 70% of RE installed capacity share by 2050 as presented in the National Energy Transition Roadmap, with solar capacity expected to reach 59 GW (58% of the total capacity) through community involvement in the RE supply business.



Source: National Energy Transition Roadmap (2023)

The CREAM Framework is expected to maximise Malaysia's RE potential by allowing community participation in utilising the available space (roof) for RE generation. This would provide alternative options for green consumers to source RE, lowering reliance for RE supply solely from large-scale generation companies.

Benefits for the Homeowners & LEGAs:

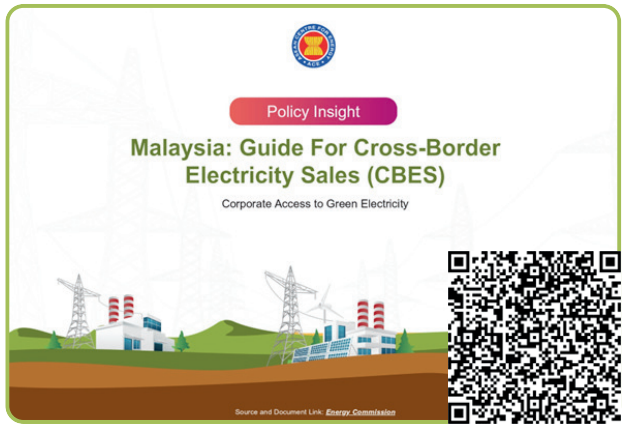
1. **Reduced operational and investment risks:** the CAC is charged at a lower rate than SAC in the CRESS programme and EUC is responsible for maintaining grid reliability, hence reducing risks from LEGAs.
2. **Clarity on the ownership of REC:** allows LEGAs to monetise REC through trading.
3. **Promoting sustainable economic growth:** generating additional revenue stream for the community through RE supply.

Benefits for the LGCs:

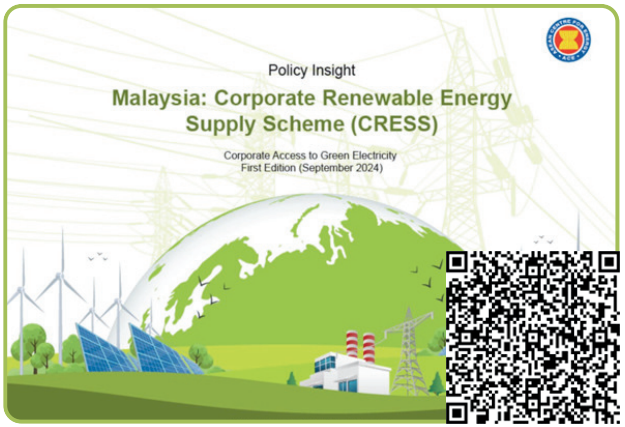
1. **Pathways to fulfil RE obligations:** supporting green consumers in meeting their ESG goals by opening access to community RE generation.
2. **Alternative options for RE supply:** promoting competition in the RE supply business, which may drive down the price for RE.

ACE's latest policy insights

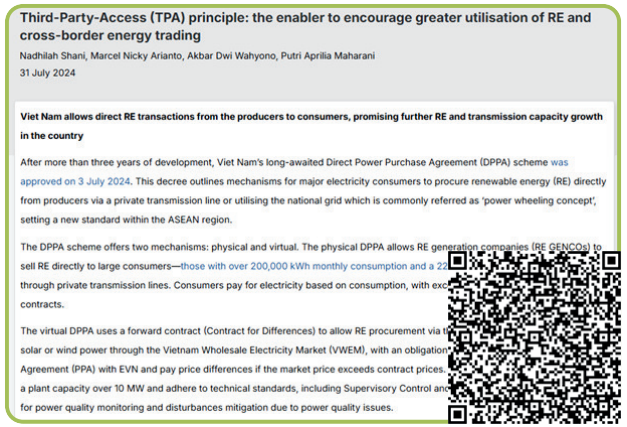
Other than the CREAM Framework, ACE has released several publications that covered Malaysia's policies on renewable energy and power trade in our official website at www.aseanenergy.org/publications/.



Guide for Cross-border Electricity Sales (CBES)



Corporate Renewable Energy Supply Scheme (CRESS)



Blog on Third-Party Access (TPA)

Policy Brief on Malaysia REC Market Assessment

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