



Crystal Wong Wai Chin
Partner

International Arbitration

E: wwc@lh-ag.com



Lim Jia Yun Ruth
Pupil

International Arbitration

E: jylim@lh-ag.com

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Energy Exchange Malaysia (“ENEGEM”): Introducing Malaysia’s Newly Launched Energy Exchange

Introducing ENEGEM

Just a few days ago, on 15 April 2024 (Monday), the Ministry of Energy Transition and Water Transformation of Malaysia (“**PETRA**”) announced the establishment of ENEGEM¹, in line with national agendas such as the National Energy Transition Roadmap (“**NETR**”) and the National Energy Policy 2022 - 2040. ENEGEM will operate as Malaysia’s first cross-border platform to facilitate the sale of renewable energy (“**RE**”) to neighbouring ASEAN countries through a bidding mechanism.

The establishment of energy exchanges is a familiar phenomenon globally. Many jurisdictions have established their own energy exchange as a marketplace for electricity, such as the European Energy Exchange (“**EEX**”)² or the European Power

¹ [Ms Bil.13 2024 Energy Exchange Malaysia \(Enegem\) Established For Cross-Border Sales Of Green Electricity To Singapore.Pdf](#), pg 1

² <https://www.eex.com/en/>

Exchange (**EPEX SPOT**)³. A key highlight of EPEX SPOT is its coupling to other European power exchanges, enabling cross-border electricity sales and deliveries. Initially tied to the Dutch (**APX**) and French (**Powernext**) power exchanges, subsequent geographical expansions and additions of other European power exchanges broadened its scope and increased its liquidity in the European spot market. Starting with its participation in the Tri-Lateral Market Coupling (“**TLC**”) in November 2006, which initially linked the French, Belgian, and Dutch Day-Ahead markets, to the integration in 2010 of the Central West Europe (“**CWE**”) region, followed by the launch in 2014 of price coupling in North-Western Europe (“**NWE**”), EPEX SPOT has been central in driving market harmonization efforts. EPEX SPOT currently collaborates with 7 other power exchanges on the Price Coupling of Regions (“**PCR**”) initiative, covering 24 European countries. PCR is used to calculate energy allocation, net positions, and electricity prices across Europe.⁴

Further, the concept of cross-border sales to a single buyer via an auction mechanism bears resemblance to the cross-border auctions associated with the Capacity Remuneration Mechanism (“**CRM**”), as implemented in Belgium. In 2021, Belgium introduced a capacity remuneration mechanism to ensure security of electricity supply after the planned closure of all its nuclear power plants, while supporting energy transition. The CRM aims to compensate electrical capacity holders for the portion of their relevant costs that are not compensated by their revenues, known as “missing money”, through a yearly remuneration for their capacity. That mechanism awards support from 2021 through annual auctions to units that can supply or save electricity from 2025. It is a CRM based on “reliability options”. This means that the mechanism

³ <https://www.epexspot.com/>

⁴ [European Market Coupling | EPEX SPOT](#)

is technology-neutral, market-wide, and centralised, as well as avoids excess profits by providing for an obligation to repay the support received in case of high prices.

An annual auction for CRM has been taking place from 2021. Capacity must be available four years later for security of supply and will receive a subsidy in return. From the first “Delivery Period”, 2025-2026 (Auction in 2024), so-called “Indirect Foreign Capacities” are also allowed to participate. Indirect foreign capacity is capacity located in one of the neighbouring countries with which the Belgian electricity grid is interconnected (France, Germany, the Netherlands, and UK) and which has no direct physical connection to the Belgian grid.⁵

It is delightful to see Malaysia enter this global energy market.

The launch of ENEGEM is kickstarted by a pilot auction scheme to export 100 megawatts of RE to Singapore. Interested Singaporean electricity entities may register with PETRA or the “Single Buyer”⁶ to participate in this auction from 16 April 2024 (Tuesday) onwards.⁷

The primary regulation governing ENEGEM sales would be the latest “Guide for Cross-Border Electricity Sales (“CBES”)⁸ issued by the Malaysian Energy Commission, which emphasises adherence to the Electricity Supply Act 1990.

⁵ For more information on the Belgian CRM see G.Block and M. Vandersmissen, *Two Hours to Understand the Belgian CRM – practical guide for producers, investors and bankers – risk assessment*, EdiPro, May 2021

⁶ The Single Buyer is an entity authorised by the Minister pursuant to the Electricity Supply Act 1990 to conduct electricity planning and manage electricity procurement services for Peninsular Malaysia. It is assigned to operate the ENEGEM platform.

⁷ [Ms Bil.13 2024 Energy Exchange Malaysia \(Enegem\) Established For Cross-Border Sales Of Green Electricity To Singapore.Pdf, pg 2](#)

⁸ As of the date of this e-alert, the latest CBES is located herein: [Guide For Cross-Border Electricity Sales \(St.Gov.My\)](#)

⁹ www.singlebuyer.com.my/enegem.php

The envisioned scheme of RE sales to countries such as Singapore and Thailand is illustrated in the diagram below. This scheme includes, among others, RE Supply Agreements between a Purchaser and Single Buyer, as well as Power Purchase Agreements (“PPAs”) between the Single Buyer and RE Plants, such as those from Tenaga National Berhad (“TNB”) and other independent power producers.

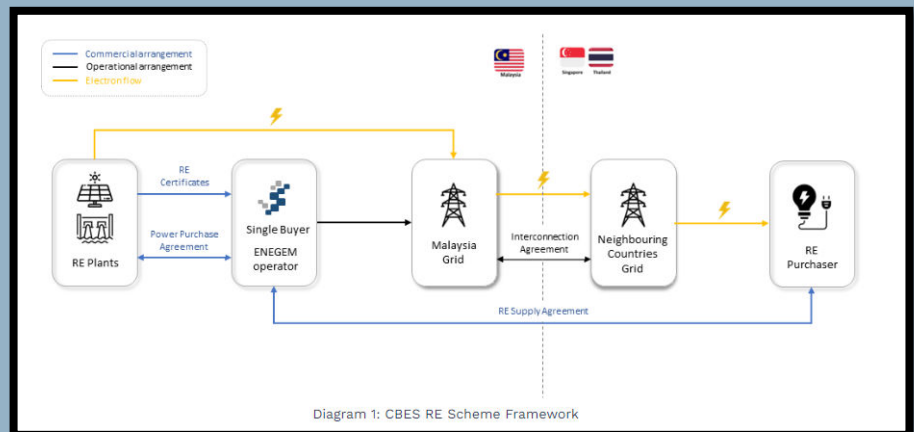


Diagram taken from the Single Buyer website introducing ENEGEM.⁹

It is worth noting that PPAs, as demonstrated in the diagram above, play a significant role in the current global energy market. In recent years, the energy market has seen a sharp rise in prices for oil, gas, coal, and power due to an acute energy shortage worldwide. In response, the energy market has increasingly shifted towards PPAs as a solution for utilizing renewable energy sources to reduce dependence on fossil fuels, which contribute to rising energy prices. The predetermined prices found in PPAs have hence gained popularity to mitigate unwelcome spikes in energy rates. Additionally, global awareness of environmental responsibility and the necessity for green energy in light of climate change have also incentivised investments in renewable energy projects such as PPAs.

Relevant Considerations in light of ENEGEM's Establishment

The expansion of energy market activities through ENEGEM calls for timely consideration of appropriate regulatory mechanisms and innovative measures to facilitate smooth cross-border energy transactions.

Areas of consideration		Mechanisms and/or Measures
1	Legal and Regulatory Framework	<p>i. Harmonised Regulations: Establishing harmonised legal and regulatory frameworks across participating jurisdictions will streamline cross-border energy trading and reduce regulatory barriers.</p> <p>ii. Standardised Contracts: Developing standardised energy trading agreements and contracts will simplify negotiations, reduce transaction costs, and mitigate legal risks for market participants.</p> <p>iii. Dispute Resolution Mechanisms: Implementing effective dispute resolution mechanisms such as arbitration will expedite the meaningful and effective resolution of niche disputes arising from energy trading activities.</p> <p>iv. Compliance and Enforcement: Ensuring robust compliance monitoring and enforcement mechanisms are in place will uphold market integrity, protect consumer interests, and maintain environmental standards.</p>
2	Grid Integration and Management	<p>Smart Grid Innovations: Adopting smart grid technologies will amplify grid adaptability, resilience, and efficiency. Initiatives like TNB's Smart Grid since 2016 aim to improve grid automation and real-time monitoring to manage variable renewable energy sources effectively.⁷</p> <p>Establishing sturdy interconnection</p>

⁷ <https://www.tnb.com.my/smart-grid/>

		agreements and infrastructure with adjacent countries will foster smoother energy transitions and bolster grid stability within interconnected networks.
3	Cybersecurity and Data Protection	<p>i. Cybersecurity Protocols: Adopting globally recognised cybersecurity standards and practices will fortify critical infrastructure and data against cyber threats. Adhering to these protocols will also address concerns regarding control, security, privacy, transparency, and vulnerability of energy data.</p> <p>ii. Data Privacy Compliance: Adhering to data privacy regulations and implementing stringent data protection measures will safeguard sensitive energy transaction information, market participants, and consumer data from exploitation.</p>
4	Environmental and Social Governance (ESG)	<p>Sustainability Integration: Incorporating robust ESG criteria into market regulations will foster sustainable energy development, environmental conservation, and social accountability. Crucially, ESG reporting will assist companies in benchmarking sustainability performance, identifying areas for improvement, and aligning reporting with corporate strategies.</p>

ENEGEM Moving Forward

It will be interesting to see how ENEGEM develops in the international electricity market, with hopes that ENEGEM will expand its operations in subsequent years to play a crucial role in establishing an ASEAN renewable energy network.

If you have any queries, please contact Partner [Crystal Wong Wai Chin](mailto:wwc@lh-ag.com) (wwc@lh-ag.com). The Energy, Projects, Infrastructure & International Arbitration Practice Group at Lee Hishammuddin Allen & Gledhill (LHAG) has advised and acted for players at all stages of the Malaysian power and

construction industry, including national utility companies and independent power producers. We also have considerable experience with power purchase agreements (first to fourth generation) for combined cycle gas-fired power plants, coal-fired power plants, and solar power plants.

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Head Office

Level 6, Menara 1 Dutamas
Solaris Dutamas
No. 1, Jalan Dutamas 1
50480 Kuala Lumpur
Malaysia
Tel: +603 6208 5888
Fax: +603 6201 0122

Johor Office

Suite 21.01
21st Floor, Public Bank Tower
No.19, Jalan Wong Ah Fook
80000 Johor Bahru, Johor
Tel: +607 278 3833
Fax: +607 278 2833

Penang Office

51-12-E, Menara BHL Bank,
Jalan Sultan Ahmad Shah,
10050
Penang
Tel: +604 299 9668
Fax: +604 299 9628

Email

enquiry@lh-ag.com

Website

www.lh-ag.com