Identifying the Enabling Frameworks for Renewable Energy Multilateral Power Trade

How National and Regional Renewable Energy Certificates (RECs) frameworks can unlock RE-MPT

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In cooperation with

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Global transition to renewable energy

“REC: Key to Unlocking”

Renewable Energy Potential and Market Integration in ASEAN
Outlook for an ASEAN Regional REC Market

ASEAN REC Vintage 2023 Issuance


Electricity Generating Authority of Thailand (EGAT)

B r u n e i

S I N G A P O R E

M A L A Y S I A

I N D O N E S I A

M Y A N M A R

L A O S

T H A I L A N D

C A M B O D I A

V I E T N A M

P H I L I P P I N E S

M a l a y s i a

P h i l i p p i n e s

C a m b o d i a

M Y A N M A R

L a o S

T h a i l a n d

V i e t n a m

S i n g a p o r e

B r u n e i
The ASEAN REC market is evolving with a strong push towards regional integration, supported by national initiatives and growing corporate demand. However, achieving a fully integrated and internationally recognized REC market will require overcoming technical, regulatory, and infrastructural challenges.

**Grid Connectivity**
One of the significant challenges is ensuring that the REC systems are supported by robust grid connections between countries, which is essential for the credibility and effectiveness of a regional REC system.

**Market Integration**
The regional REC system has the potential to reduce the cost of RECs by leveraging the diverse renewable energy resources available across ASEAN countries. This could make renewable energy more affordable and accessible, driving further adoption.
A voluntary REC market started in 2016 via I-TRACK and TIGRs. Geothermal generations dominated RECs issued, in which one of the geothermal plants has already been operating since 1983.

The economy has established the REM to regulate the RECs and to designate PEMC (the Philippines Electricity Market Corporation) to operate REM and manage the domestic REC registry.
A voluntary REC market started in 2018 via I-TRACK Standard. In 2020, Utility started selling unbundled REC via TIGRs exclusively to its customer.

- RECs issued were dominated coming from hydro and geothermal generations.
A voluntary REC market started in 2016 (I-TRACK & TIGRs).

Malaysia Renewable Energy Certificate (mREC) is a trademark for RECs sourced from RE generation in Malaysia.

mREC provides benefits of aligning the Malaysian markets with international standards and will future realignment of ASEAN Standards.
Utility Green Tariff (UGT) is Thailand’s New Option for Green Energy Procurement. It is a voluntary utility program that allows eligible customers to buy both the energy and associated renewable energy certificates (RECs) from a large-scale renewable energy project through a customer’s current electricity bill.

Note: A voluntary REC market started in 2016 (I-TRACK & TIGRs)

Sources: https://www.erc.or.th
National REC Markets: Initiatives Support

- REC Voluntary Market in Singapore, Laos PDR., Vietnam, Cambodia, Brunei darussalam
- The Singapore Standard on Renewable Energy Certificates (SS 673)
- Guide in Manually Validating the Renewable Energy Certificates (REC) from Voluntary Generators in Philippines
- Renewable Energy Certificate System (RECAP) in BIMP-EAGA

Source: https://doe.gov.ph/
Source: https://www.singaporestandardsshop.sg
Source: http://www.aseanenergy.org/
The dynamics of the REC market, impacting both the supply and demand sides. The market for RECs is driven by several key factors:

**Regulatory Compliance**

- **Policy and Regulatory Support**
  Providing strategic frameworks for enhancing renewable energy deployment across ASEAN

- **Incentives and Subsidies**
  Providing financial incentives for RE production can drive the generation of RECs. i.e., tax credits, grants, and feed-in tariffs

**Voluntary Market**

- **Corporate Demand**
  Growing demand from corporations looking to reduce their carbon footprints and meet sustainability goals

- **International Standards**
  Initiatives like RE100, are pushing ASEAN to develop credible REC systems that align with international standards
Cross-Border RECs in ASEAN and beyond

Physical grids are substantially interconnected

Attributes and account recognition*

Consistency of legislation

Source: https://cdn.cdp.net
Key Takeaways

- There is an active and growing REC market in ASEAN countries.
- The robust grid connections between countries is essential for the credibility and effectiveness of a regional REC system.
- ASEAN REC market must adhere to international standards to be credible.
- National REC markets for renewable energy and multilateral power trade must be carefully designed, and collaboration between countries is crucial.
ASIA CLEAN ENERGY FORUM 2024

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