



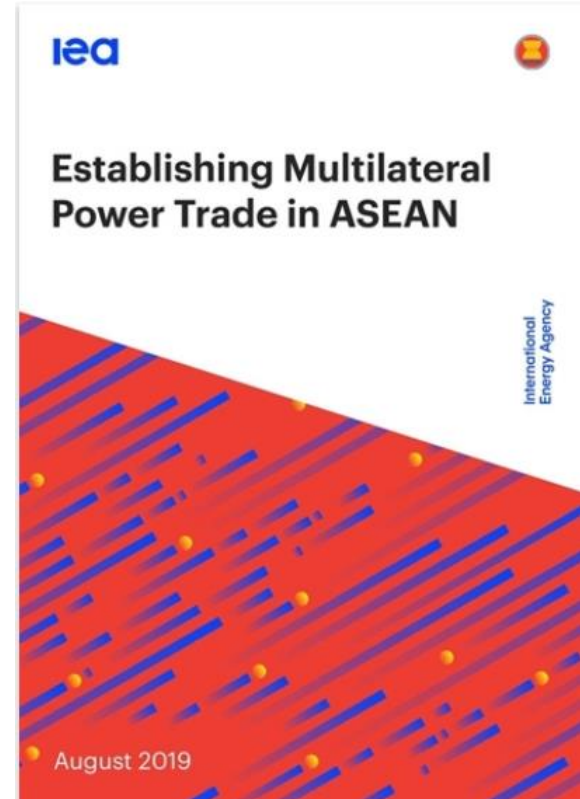
Over coming barriers to power trade and regional markets in South East Asia

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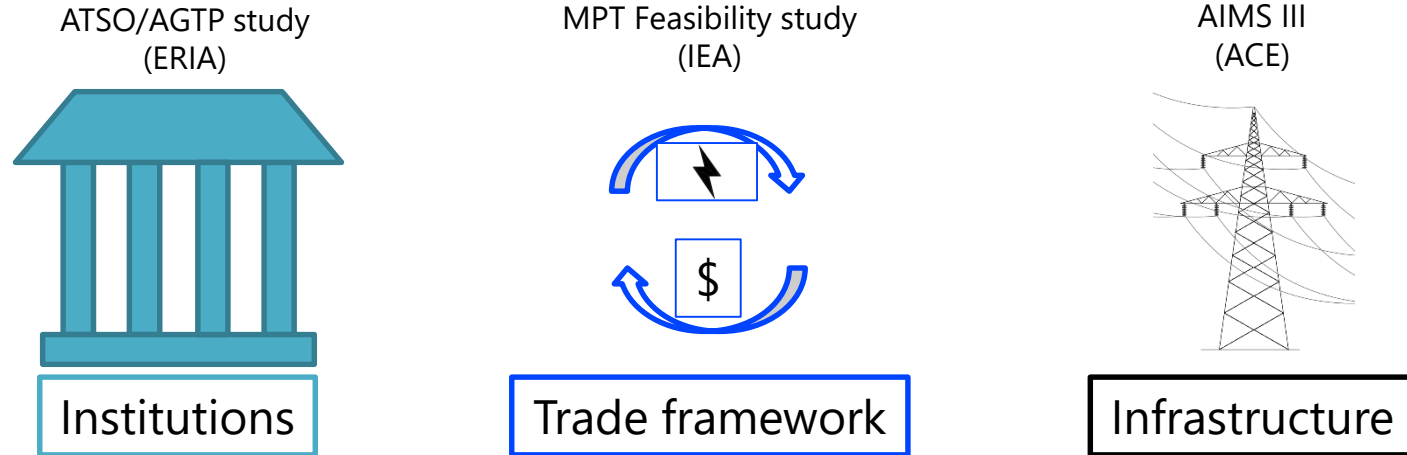
Establishing Multilateral Power Trade in ASEAN

- Study on Multilateral Power Trade (MPT) published by the IEA in August 2019
- MPT in ASEAN is feasible as has several benefits
- There are minimum requirements that need to be fulfilled for MPT to begin
- IEA found three models that could form the basis for MPT



Overview of the feasibility study

- In 2017, the IEA was asked by the ASEAN Power Grid Consultative Committee (APGCC) and Heads of ASEAN Power Utilities/Authorities (HAPUA) to develop a feasibility study on establishing multilateral power trade among the AMS
- This is one of three studies supporting development of the ASEAN Power Grid (APG)



- The feasibility study is designed to provide enough context and direction to support development of MPT right away – no need to wait for ASEAN Interconnection Masterplan Study (AIMS) III

Why establish MPT?

- Establishing Multilateral Power Trade in ASEAN points to specific actions that can be taken to further cross-border trade in ASEAN
- The study is relevant for a wide range of stakeholders including but not limited to policymakers, regulators and utilities
- The benefits of MPT include



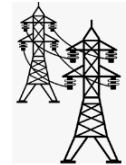
Environmental



Economic



Flexibility



Security

Minimum requirements for establishing multilateral power trade



Political

- Political will
- Intergovernmental agreement(s)
- Common working language



Technical

- Harmonised technical standards (grid codes)
- Wheeling methodology
- Third-party access agreements for external resources
- Data and information sharing
- Interconnector capacity calculation methodology



Institutional

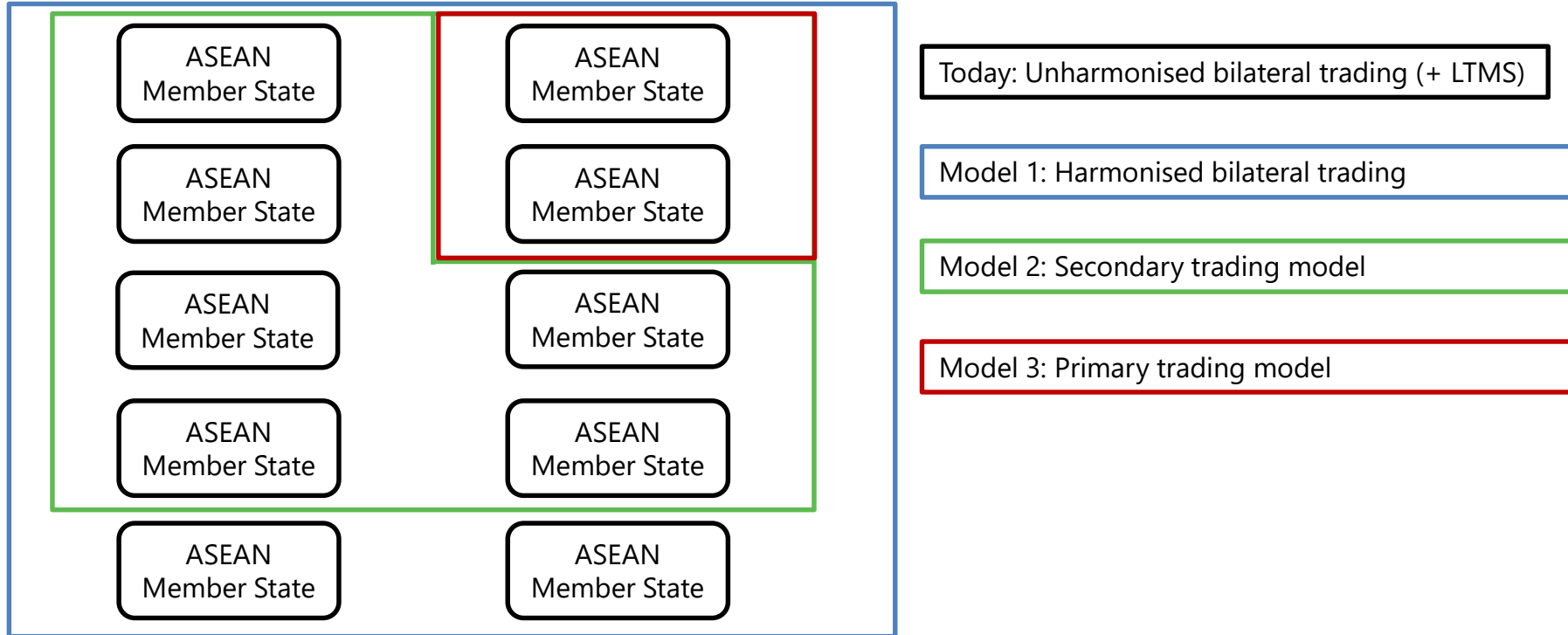
- Institutional arrangements
 - Leverage existing (e.g. HAPUA)
 - Leverage + develop (e.g. ASEAN Energy Regulators' Network (AERN))
 - Develop (e.g. Regional Coordinator/Market Operator)
- Settlement and payment mechanism

Establishing MPT is feasible, but will require some foundational work in both political and technical areas. Additional work on institutional arrangements can help prepare for the next stage.

Proposed trade models for ASEAN

- After the minimum requirements are met, establishing MPT in ASEAN will be possible.
- We propose three trade models. But, some important points first:
 - These should not be seen as a ladder of development. As per the principles of **stepwise and voluntary**, each AMS can and should decide which MPT model to participate in.
 - These models are, to some extent, compatible with each other (it is possible for more than one model to exist in parallel)
- Model 1: Harmonised bilateral trading (near-term)
- Model 2: Establish a secondary trading model (medium-term)
- Model 3: Establish a primary trading model (long-term)

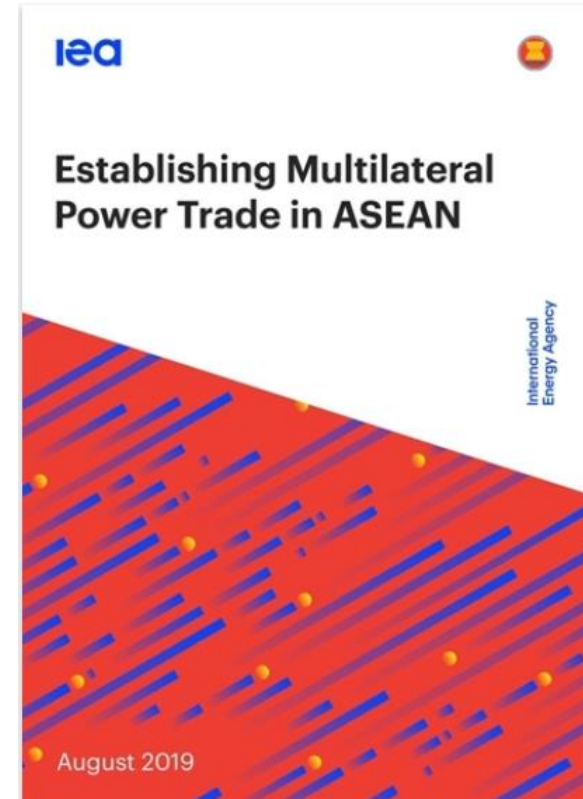
Putting it together: a possible future for ASEAN



A secondary market is a realistic option that can benefit all AMS while respecting domestic autonomy and existing markets/systems. A primary market may only ever make sense for a small number of AMS.

Key messages

- MPT in ASEAN is feasible and has several benefits
- There are minimum requirements that need to be fulfilled for MPT to begin
- IEA found three models that could form the basis for MPT



Next steps and lessons learned

- The mandate was given at ASEAN Ministers on Energy Meeting (AMEM) 2019 to bring forward the minimum requirements
- Work on key minimum requirements should start as soon as possible
- Getting roles and responsibilities defined is key for moving MPT forward
- Transparent market structures for cross-border trading is a key enabling factor for integrating higher shares of RE

Thank you

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<https://webstore.iea.org/establishing-multilateral-power-trade-in-asean>

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