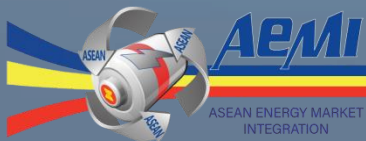


Feasibility Study for an ASEAN Electricity Exchange (AEE)

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AEE Work: Three Main Phases

Each phase ends up in a clear decision point – to be submitted to ASEAN Energy Ministers for approval before proceeding to the next phase.

AEE Three Main Phases

Feasibility phase

Examine Feasibility of the AEE to inform a Ministerial decision to start the detailed design.

Design phase

Design AEE governance and operational structures; and identify requirements for its deployment (e.g., national and regional regulations, market rules).

Implementation phase

Implementation of AEE design, setting up and testing operational procedures ready for AEE deployment.

AEE Feasibility Phase – Main Tasks

Indicative Basis

- ❑ Investigation and information gathering (e.g. requirements, regulatory and operational frameworks, international experience)
- ❑ Common workshops/meetings discussing the fundamentals of the potential market framework and agreeing on the main outcome of the feasibility phase
- ❑ Proceed with an AEE Feasibility Study and formulate recommendations to be presented to the decision makers

AEE Design Phase – Main Tasks

Indicative basis

- Detailed product offerings
- Definition of the legal and regulatory frameworks
- Development of AEE organization and governance
- Development of a capacity building program
- Development of required operational rules
- Creation of a detailed business case for the market

AEE Implementation Phase – Main Tasks

Indicative Basis

- Setting up the AEE organization (including hiring the required staff, location for the market operator)
- Creation of detailed operational procedures for AEE
- Capacity building of all relevant stakeholders (including market participants, regulatory authorities, ministries)
- Establishing the required technology tools, communication infrastructure, and office equipment.
- Preparation for the market opening with market trials, and dry runs.

AEE Feasibility Study

AEE Feasibility Study

Main Purpose

The AEE Feasibility Study is to allow ASEAN policy-makers to determine whether the creation of an electricity exchange can enable the APG to operate on a multinational basis.

AEE Feasibility Study – Main Components

Why would ASEAN wish to create an AEE ?

- Establish the rationale for the creation of the AEE and identify the potential benefits it would deliver to AMS.

What are the core principles for an ASEAN electricity exchange?

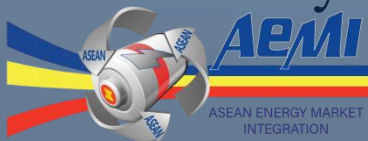
- Identify principles and key operational rules, based on ASEAN aspirations; and on lessons learned from around the world.

How would the AEE look like?

- Develop initial options for the market design and high-level operational structures of a prospective AEE.

What would be the next steps?

- Identify the next steps for design and phased implementation.



AEE Feasibility Study – Draft Outline

- Context
- Objectives of the AEE
- National Perspectives
- International perspectives
- Implications for Utilities
- Core Features
- Operational Structures
- Organizational Structures
- Phased Approach
- Pre-conditions for the creation of the AEE

AEE Feasibility Study – Draft Outline

I. Context

- ASEAN energy situation and development plans over the next 20 years
- Prospective electricity flows among ASEAN Member States and regions
- Challenges to ASEAN connectivity
- Challenges for the Laos, Thailand, Malaysia and Singapore Power Integration Project (LTMS-PIP)

AEE Feasibility Study – Draft Outline

II. Objectives of the AEE

- ASEAN needs and AEE goals
- Phased approach and anticipated end state

AEE Feasibility Study – Draft Outline

III. National Perspectives

- Analysis of strengths and opportunities
- Identification of weaknesses and threats
- Conduct national SWOT analyses
- Identify AMS energy security requirements
- Develop mechanisms to secure AEE long-term reliability

AEE Feasibility Study – Draft Outline

IV. Implications for Utilities

Analyse implications on utilities and governments at the national and ASEAN levels, including on existing liberalized electricity markets, and on current investment and business planning.

AEE Feasibility Study – Draft Outline

V. Core Features

Key principles

- Voluntary and Stepwise approach
- Trading gaps and excesses
- Regulations and national regulatory authorities
- Planning expansion of regional power infrastructure
- Transparent pricing models
- Sustainable regional power trading

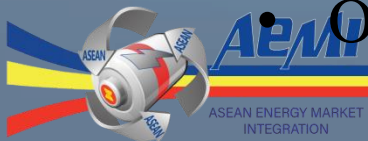
Key operational roles

- TSO or independent Regional Exchange operator
- Utilities in the national electricity market
- Agreements and Licenses

AEE Feasibility Study – Draft Outline

VI. Operational Structures

- Business model for the AEE
 - Revenue model
 - Operational costs
 - Investment model
- Products and Draft Market rules
 - Market structure, trading tools, ancillary services
 - Day-Ahead Market as a tool for connecting ASEAN
 - Monitoring and settlement functions
- Legal setup
 - Governance
 - Ownership structure



AEE Feasibility Study – Draft Outline

VII. Organizational Structures

- Ownership model
- Legal framework
- Governance structure

IIIX. Phased Approach

- Initial implementation
- Process for continued development
- Timeline and milestones for phased development and implementation

AEE Feasibility Study – Draft Outline

IX. Pre-conditions for the creation of the AEE

- Legal and Regional regulatory frameworks
- Capacity building and IT requirements
- Cost estimates AEE design and implementation
- Decisions for Ministerial considerations

AEE Feasibility Study – Draft Outline

What have we missed?