Financing ASEAN Clean Energy Transition

Rika Safrina
Senior Analyst of Energy Modelling and Policy Planning
ASEAN Centre for Energy
Meeting demand growth requires power capacity expansion and investment.

Based on the PDP of ASEAN Member States (AMS), 60% of the newly installed capacity between 2021-2025 will come from renewables.

With national policies (ATS), 787 GW of power plant capacity is needed to supply the electricity demand in 2050.

On average, RE investment accounts for about 59% in ATS and 77% in APS of the total investment required for the power sector.

Source:
The 7th ASEAN Energy Outlook, 2022
http://go.aseanenergy.org/AEO7
Financing Energy Transition

- The current financial source composition for clean energy investment in ASEAN is dominated primarily by limited public finances.

- The high risk and low return of investment has made most of capital banks in ASEAN reluctant to finance clean energy investment.

- The investment in electricity transmission networks should be prioritised due to their multiplier effect and meeting long term energy security and sustainability in ASEAN.

- Innovations are required to scale up the availability of financial sources, as well as budget allocation and stronger collaboration with the private sector and international donors.

Source: The 7th ASEAN Energy Outlook, 2022
http://go.aseanenergy.org/AEO7
To address the importance of attracting energy investments and sustainable financing for ASEAN
To identify key priority areas in building up regional capabilities on energy investments and financing
To provide insightful guidelines for ASEAN regulators and policymakers to design and make better decisions regarding investment policy in the energy sector

**ASEAN Plan of Action for Energy Cooperation (APAEC) 2016-2025 Phase II: 2021-2025**

- **Aspirational RE Targets by 2025**
  - 23% RE share in Total Primary Energy Supply (TPES)
  - 35% RE share in installed power capacity

- **Energy Investment**
  - Programme Area No. 1: ASEAN Power Grid (APG), Action Plan 1.3: **Promote cross-border technical skills and knowledge transfer as well as promote financial investment for APG projects**
  - Programme Area No. 6: Regional Energy Policy and Planning (REPP), Action Plan 5.1: **Develop a Roadmap for 2021-2025 to enhance capabilities in enabling regulatory environments to attract investment in energy infrastructure and technologies**
<table>
<thead>
<tr>
<th>AMS</th>
<th>Clean energy target</th>
<th>Electrification rate (2020)</th>
<th>Clean energy financing program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brunei Darussalam</td>
<td>Achieve a 30% share of RE in the power generation mix by 2035</td>
<td>100%</td>
<td>• Net energy metering</td>
</tr>
<tr>
<td>Cambodia</td>
<td>25% increase in renewable energy in the power mix (generation capacity) by 2030 (solar, wind, hydro, biomass)</td>
<td>81.1%</td>
<td>• Green microfinance fund</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Increase the share of new and renewable energy in Total Primary Energy Supply to 23% by 2025 and 31% by 2050</td>
<td>99.2%</td>
<td>• Feed-in Tariff or Ceiling Price for Renewable Energy</td>
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<td>• Funds from investment institutions, such as Indonesia Investment Authority (INA), Indonesia Infrastructure Guarantee Fund (IIGF), Indonesia Infrastructure Finance (IIF), and Sarana Multi Infrastruktur (SMI)</td>
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<td>• Clean Technology Fund</td>
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### Summary of AMS Clean Energy Targets and Investment Status (2)

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</table>
| Lao PDR   | Achieve a 30% share of renewables in total energy consumption by 2025               | 95%                         | • Energy Access Solar Home Systems Fund  
• Environmental Protection Fund  
• Laos Energy Promotion Fund  
• Rural Electrification Development Fund |
| Malaysia  | Increase the RE share to 31% in the power capacity mix by 2025 and 40% by 2035      | 100%                        | • Green Technology Financing Scheme 2.0 (GTFS 2.0)  
• Net Energy Metering (NEM)  
• Feed-in-Tariff  
• Large Scale Solar (LSS)  
• Self-Consumption (SELCO) |
| Myanmar   | Increase the share of RE to 39% in electricity generation by 2030                   | 51.6%                       | • Japan Fund for Poverty Reduction Programme  
• Smart Power Myanmar  
• Village Development Myanmar |
| Philippines | Increase the RE share to 35% in the power generation mix by 2030 and 50% share by 2040 | 97.2%                       | • Green Energy Auction Program  
• Renewable Energy Trust Fund  
• Competitive RE Zones |
### Summary of AMS Clean Energy Targets and Investment Status (3)

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| **Singapore** | Increase solar energy deployment to at least 1.5 GWp by 2025 and 2 GWp in 2030     | 100%                         | • Energy Efficient Fund (E2F)  
• Carbon Pricing Act  
• Metering Credit Schemes  
• Renewable Energy Certificates (RECs)  
• Solar Financial Incentives for Energy Efficiency in Singapore |
| **Thailand**   | Increase share of renewables in final energy consumption to 30% by 2037             | 100%                         | • Feed-in-Tariff  
• Promotions through the Board of Investment (BOI)                                                |
| **Vietnam**    | Increase the RE share in TFEC to 32.3% by 2030 and 44% by 2050;                      | 100%                         | • Feed-in-Tariff  
• Incentive Policies for Rooftop Solar Power Systems (RSPS)                                         |
Moving forward, ASEAN will work with Dialogue Partners, International Organisations and other stakeholders for the implementation of each capacity building program.

- Engagement with financial providers on financing terms
- Attracting international investment/funding
- Mature and emerging technologies in power sector
- Mechanisms for nuclear power
- Carbon pricing and trading
- Financing electric vehicle and biofuel deployment
- Clean cooking financing
- Microgrid for rural electrification

Download here: https://aseanenergy.org/asean-capacity-building-roadmap-on-energy-investment/
1. Enhancing capability and capacity to attract clean energy investment
   a. Strengthening regional communication and cooperation amongst the AMS is the most important step to attract clean energy investments into the region. The roadmap presented earlier can serve as the starting point in designing the forms of cooperation and collaboration between the countries.
   b. Regional body, e.g., ASEAN energy transition academy or ASEAN clean energy capacity building network, can be established to develop a syllabus more or create a training curriculum and materials to make capacity-building programmes on clean energy investments and funding more structured.
   c. At the very minimum, the more advanced AMS can disseminate and share the lessons learned with the AMS to expedite the latter’s progress.
   d. Related recommendations include coordination for enabling regulatory environment in relation to capacity building in clean energy investments and funding, and establishment of effective efficiency policies and regulatory frameworks in clean energy transition and clean energy investment.
2. Integrated approach to green fiscal consolidations
   a. Efforts undertaken to reduce GHG emissions can be achieved by a well-designed integrated approach to green fiscal consolidation that includes well-designed tax policies e.g., carbon tax, and non-tax instruments such as emission trading system, feebates or regulations i.e., revenue increment.
   b. Implementing green or any fiscal consolidation at the regional level can be challenging for ASEAN that, for example, does not share common currency, therefore, a more appropriate implementation would be at the national level with general guidance or framework made at the regional level.
   c. The proposed strategic initiatives include establishing a proper entity to establish close collaboration between AMS, such as ASEAN green fiscal policy network, where activities like a dialogue between AMS to exchange and share ideas on instruments, tools and models for green fiscal and budgetary/monetary policy can be conducted.

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