



SESSION I:
**Updates and Achievements of the ASEAN Plan of Action for
Energy Cooperation (APAEC) Phase II: 2021 – 2025**

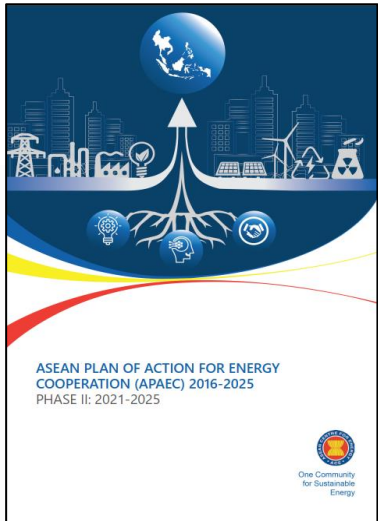
6th CEFIA Forum
Bangkok, Thailand
23 July 2024



**One Community
for Sustainable
Energy**

ASEAN Plan of Action for Energy Cooperation 2021-2025

Guiding policy documents to support the implementation of ASEAN multilateral energy cooperation under the framework of the ASEAN Economic Community (AEC)



APAEC Phase II Theme and Sub-theme

Enhancing Energy Connectivity and Market Integration in ASEAN to Achieve Energy Security, Accessibility, Affordability and Sustainability for All

Accelerating Energy Transition and Strengthening Resilience Through Greater Innovation and Cooperation

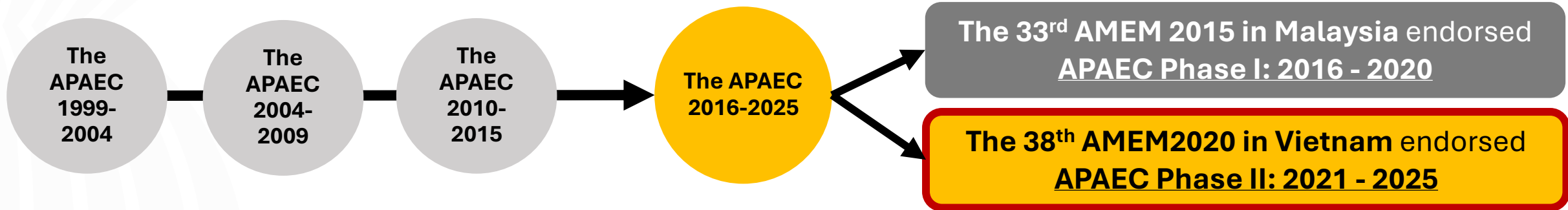
Programme Areas
1. ASEAN Power Grid
2. Trans ASEAN Gas Pipeline
3. Coal and Clean Coal Technology
4. Energy Efficiency and Conservation
5. Renewable Energy
6. Regional Energy Policy and Planning
7. Civilian Nuclear Energy

Energy Efficiency and Conservation

To **reduce energy intensity** by 32% by 2025 and encourage EE&C efforts, especially in transport and industry

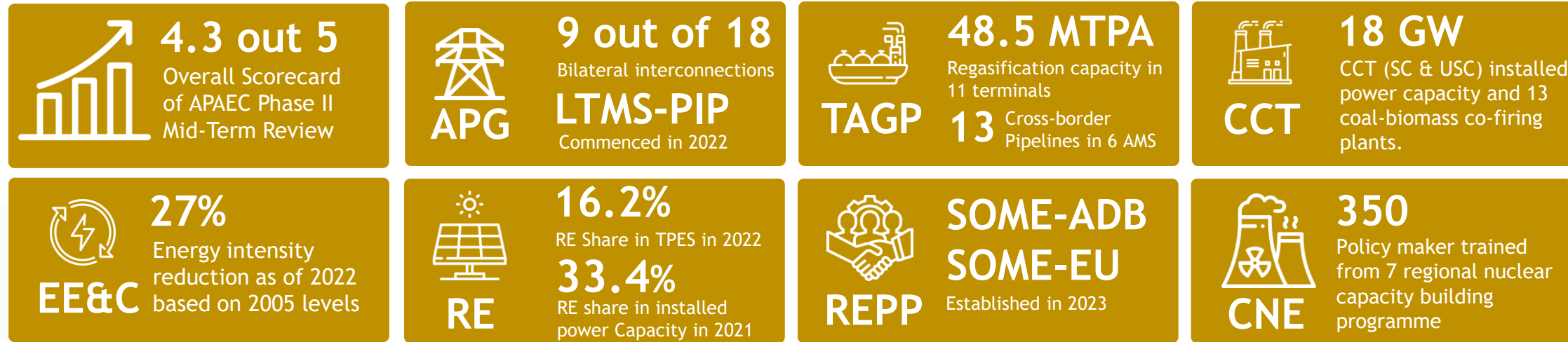
Renewable Energy

To **increase the share of RE** to 23% in TPES and 35% in installed power capacity by 2025



APAEC Phase II: 2021-2025 Mid-Term Review

Incremental progress, substantial efforts and cooperation are needed to achieve regional goals by 2025



Towards APAEC 2026 – 2035:

- Keep abreast with key global and regional trends post-2025.
- Address and integrate cross-sectoral issues through partnership.
- Focus on implementation of initiatives and projects towards greater connectivity and integration.
- Refer to 8th ASEAN Energy Outlook as basis in its development.

Energy Security and Resiliency

- Grid Modernization and Multilateral Power Trading
- Gas Supply Security
- CCUS Hubs and Cross Border Carbon Transport and Storage

Just and Sustainable Energy Transition

- Decarbonisation Technologies and Sustainable Fuels
- Higher RE penetration
- EE&C Measures in Industry and Transport
- Just Coal Transition
- Nuclear for power and industry

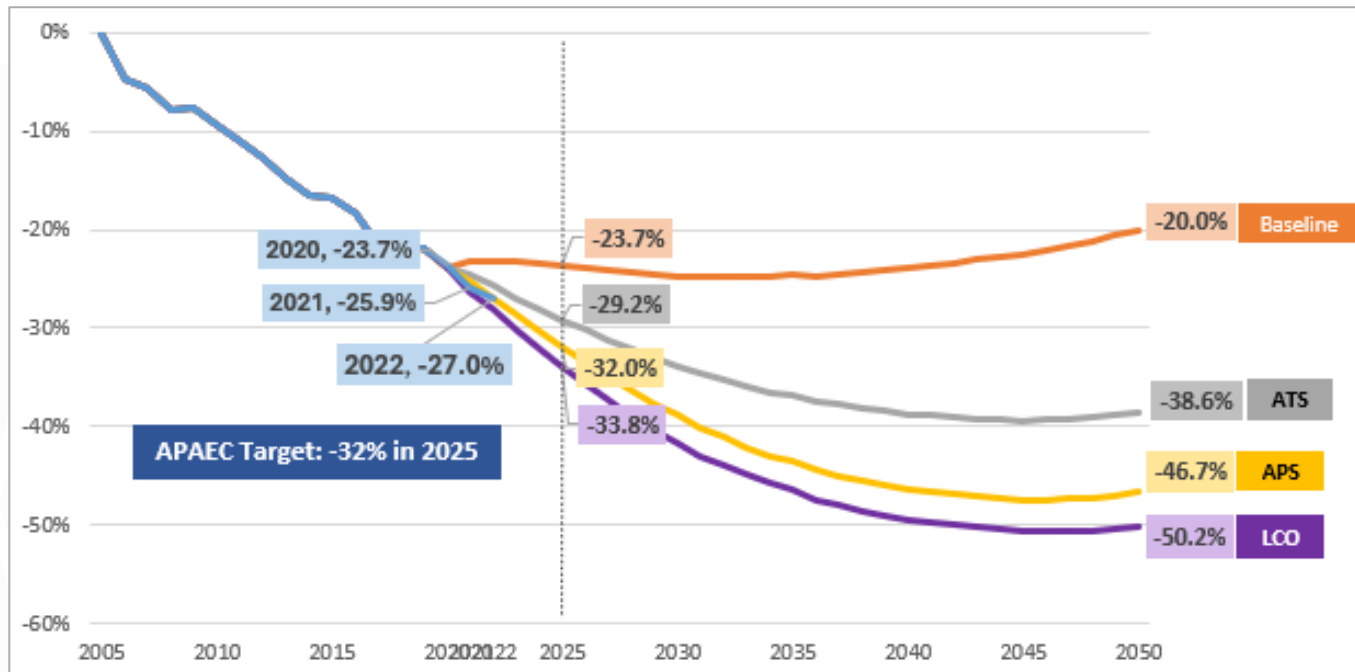
Cross Sectoral Issues

- Supply chain and critical minerals
- Circular economy
- Financing and investment
- Blue Economy
- Carbon market
- Climate Change

2022 Status of EI Reduction Target



EI Reduction from the 2005 Level Across AEO7 Scenarios

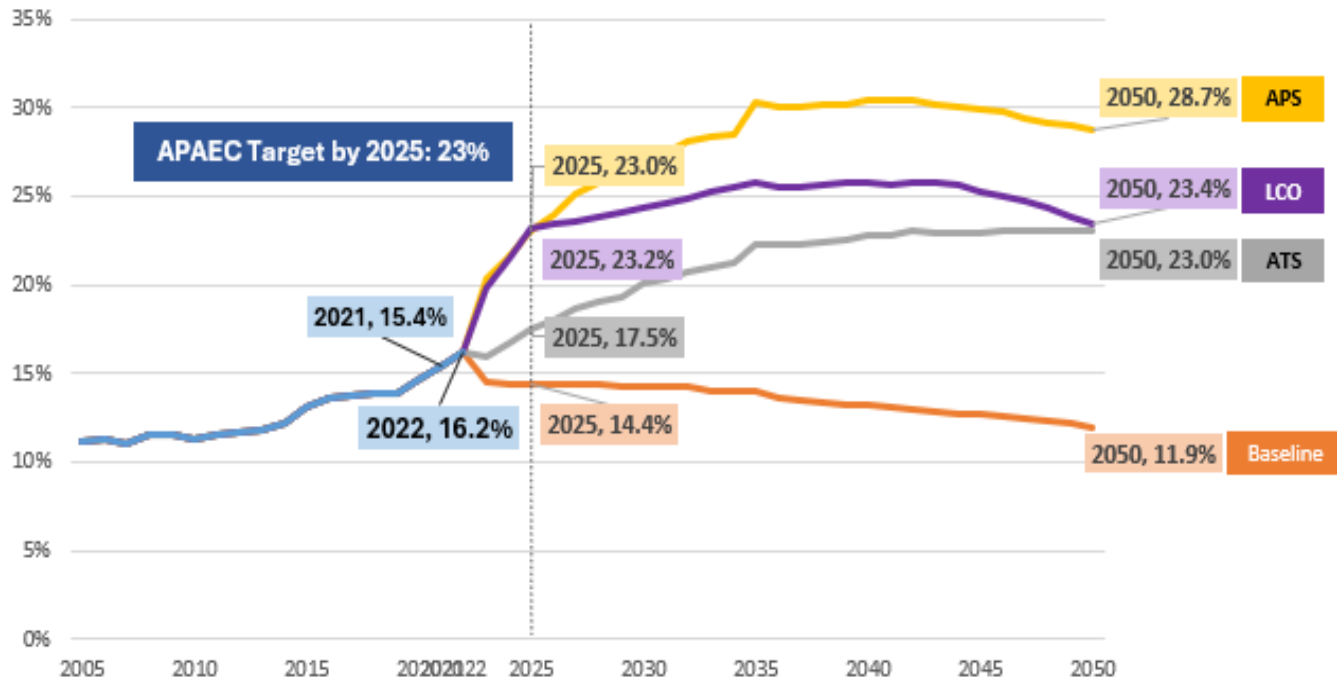


$$\text{Energy Intensity} = \frac{\text{TPES}}{\text{GDP 2005 PPP constant}}$$

- ❑ In 2022, TPES increase 3.4% (675 mtoe) and GDP increase 4.8% from 2021
- ❑ **Energy Intensity (TPES/GDP) reduction in 2022 reached 27.0%** based on 2005 level.
- ❑ Compared to 2021, EI reduction increased by 1.1% in 2022.
- ❑ **Assuming** that the APS trend of AEO7 is followed, the EI reduction in **2025** will be **32.1%** which exceeded 0.1% towards 2025 EI target.
- ❑ With few remaining years to 2025, **EE measures should be maintained to achieve the target.**

2022 Status of RE Target: RE Share in TPES

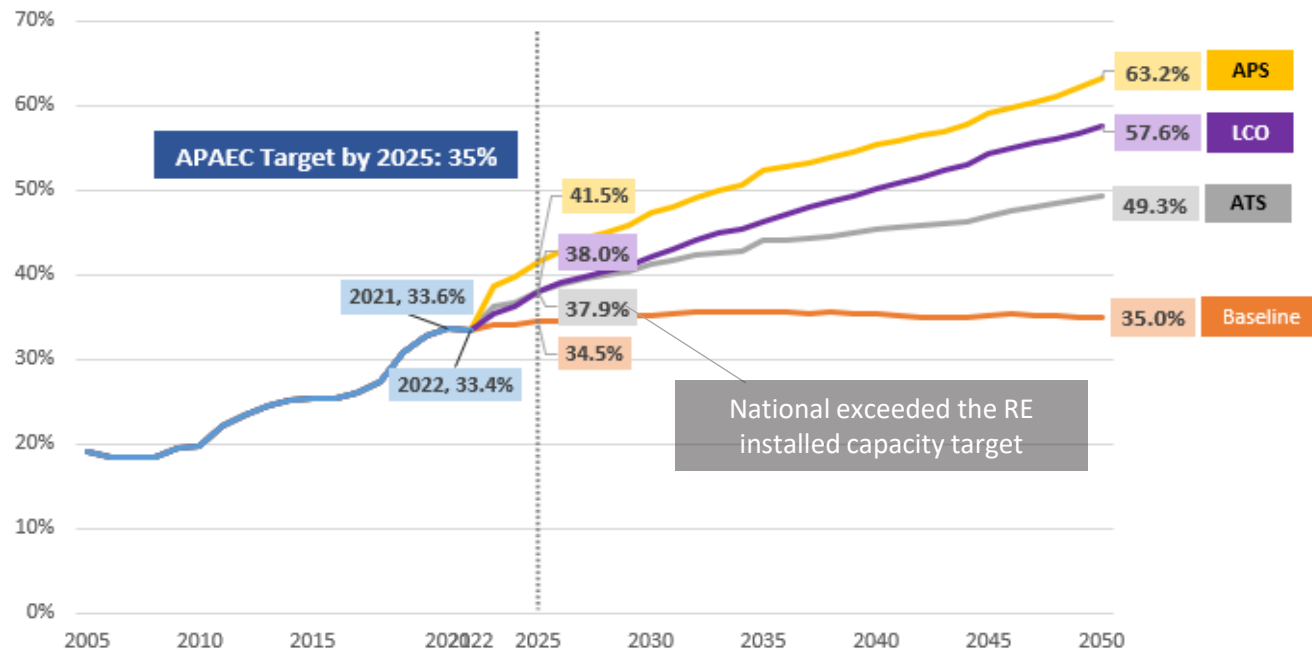
RE in TPES Across AEO7 Scenarios



- ❑ The updated **renewable energy (RE) share in TPES reached 16.2% in 2022.**
- ❑ Compared to **2021**, RE increased by **8.4%** in **2022**. **Wind and solar** contributed to the huge increase, with **47%** and **11%**, respectively. **Vietnam** was the largest contributor in the region.
- ❑ With national policies (ATS), the RE share is projected to reach **17.5%** in **2025**, **5.5%-point gap** of the aspirational target.
- ❑ To fill in the gap in achieving regional targets, **more innovative measures are required, not only in power, but also end-use sectors.**

2022 Status of RE Target: RE Share in Power Capacity

RE in Installed Power Capacity Across AEO7 Scenarios



- ❑ The updated RE share in installed capacity in 2022 reached 33.4%, decreased 0.2%-pt from 2021.
- ❑ Compared to 2021, total RE increased by 3.8% in 2022, wind and bioenergy contributed the largest increase, 15% and 9%, respectively.
- ❑ Continuing national efforts (ATS) would lead to the achievement of the regional target, 37.9% of RE by 2025.
- ❑ In the long term, a maximum of 63.2% RE share can be achieved in 2050.

Progress of APAEC Phase II: 2021-2025 towards its finalization (1)

PA	Key Accomplishments	Way forward
APG	<ul style="list-style-type: none"> As of 2022, 9 out of 18 interconnection projects of AIMS III are operational. Commencement of the LTMS-PIP on 23 June 2022 with around 270 GWh electricity has been traded Continued the AIMS III phase 3 through the implementation of ASEAN Power Grid Advancement Program (APG-AP) 	<ul style="list-style-type: none"> Conduct feasibility studies for priority interconnections from AIMS III findings Extend the MoU of APG and continue progressive coordination among APG related bodies including to reach agreement in the harmonization of technical requirements towards MPT
TAGP	<p>Established 13 cross-border pipelines with a total length of 3,631 km connecting 6 countries and 12 regasification terminals in 6 countries with a combined total capacity of 49.5 MTPA</p>	<ul style="list-style-type: none"> Update the TAGP Masterplan and initiate regional activities for APSA assessment and improvement Address cross-sectoral collaboration and partnership to promote decarbonisation technologies and mitigate carbon emission
CCT	<p>18.9 GW of CCT (SC & USC) installed power capacity and 13 Coal-Biomass Co-Firing plants have been operated with the total capacity of 7.3 GW by 2022</p>	<ul style="list-style-type: none"> Assess the impact of coal transition initiative into coal industry and develop pathways/roadmap for just coal transition and decarbonized coal value chain
EE&C	<p>Achieved 24.5% Energy Intensity Reduction by 2021 and projected to reach 29.2% by 2025</p>	<ul style="list-style-type: none"> Explore innovation for EE financing mechanism Enhance the EE related cross-sectoral cooperation and collaboration amongst the transport, agriculture, industry sectors

Progress of APAEC Phase II: 2021-2025 towards its finalization (2)

PA	Key Accomplishments	Way forward
RE	Achieved 14.4% RE Share in Total Primary Energy Supply and 33.6% RE Share in Installed Power Capacity in 2021. It is projected to reach 17.5% in TPES and 37.9% in installed power capacity by 2025.	<ul style="list-style-type: none"> Enhance effort in achieving RE target in TPES, by expanding sectoral specific strategies for end-use sector in industry and transport Adopt RE Long-term Roadmap as a reference for coordinated and harmonised actions to achieve RE targets. Stimulate the creation of favourable environment for renewable energy investment, such as through the renewable energy certificates (REC)
REPP	Enhanced regional energy policy and planning through strengthening collaboration with DPs and IOs including the establishment of the 1 st SOME-EU and SOME-ADB	<ul style="list-style-type: none"> Continue the publication of ASEAN Energy Outlook as main reference of ASEAN Energy Landscape and continue the improvement on energy data management and collection strategies Address cross-sectoral issues by engaging with relevant stakeholders beyond energy sector Improve the capacity building on investment and financing on energy technologies and infrastructure and increase platform/dialogue and business matchmaking to stimulate energy investment
CNE	350 Policy Makers and related stakeholders trained from seven (7) regional Nuclear Capacity Building and Training Programmes	<ul style="list-style-type: none"> Enhance public acceptance and nuclear literacy through nuclear communication strategies Assist AMS in the development of nuclear legal and regulatory framework for power generation through technical assistance programme and explore the regional harmonisation of nuclear regulation and licensing framework

Expected Continuous Support of CEFIA



AMS expected public-private sector collaboration activities to focus more on:

**Capacity Building Activities
and Best Practices Sharing
Knowledge**

**Development of Pilot Projects
and Technology Transfer**

**Policy Framework
Assessment and
Development**

Topics/Areas to be Explored

- Electric Vehicle
- Fuel Economy
- Green Financing
- Geothermal Technology
- Hydrogen Fuel Ammonia
- Regional REC System
- IoT and Digitalisation in Energy
- Technology Deployment Incentives
- Blended Finance Mechanism
- Industrial EE Benchmarking
- Sustainable Aviation Fuel
- RE Project Matchmaking
- Grid Interconnections
- Building Energy Codes



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