



“Advancing Regional Cooperation in Ensuring Energy Security and Accelerating Decarbonization for a Just and Inclusive Energy Transition”

**PL-3: “Just and Inclusive Transition towards Net-Zero and Resilient Societies
in ASEAN”**

IGES ISAP 2025

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The ASEAN Centre for Energy

Intergovernmental organization within ASEAN structure that represents the 10 ASEAN Member States' (AMS) interests in the energy sector.



ASEAN Center for Energy Role



Catalyst

To unify and strengthen ASEAN Energy Cooperation by providing platform for sharing, policy advisory, best practices, capacity building.



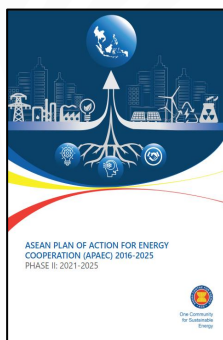
Knowledge Hub

To provide a knowledge repository for ASEAN Member States (AMS) and services through data Management, publication, dissemination.



Think Tank

To assist AMS on research and identifying practical & specific solution policies, legal & regulatory framework, technologies, innovative Solutions



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

Accelerating Energy Transition and Strengthening Energy Resilience Through Greater Innovation and Cooperation

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

Focus	Program Area & Key Strategy
	ASEAN Power Grid: Expand MPT, Grid resiliency and clean & renewable energy integration
	Trans ASEAN Gas Pipeline : Develop Common Gas Market by LNG connectivity and accessibility
	Clean Coal Utilization: Optimize the role of Clean Coal in energy transition
	Energy Efficiency: Reduce energy intensity by 32% in 2025 based on 2005 level
	Renewable Energy: Achieve 23% share of RE in ASEAN energy mix and 35% share of RE in ASEAN installed Capacity
	Regional Energy Policy and Planning: Advance energy policy and accelerate region's energy transition & resilience
	Nuclear Energy: Build human resources capabilities on nuclear technology for power generation

AEO8 Highlights & Scenarios



- ❑ Updated historical data 2005-2022, with projection period up to 2050.
- ❑ Updated modelling (equations, technology options, assumptions, etc.)
- ❑ Thematic chapters designed to address 7 APAEC programme areas.
- ❑ Official ASEAN Outlook, in collaboration and endorsed by AMEM

Baseline Scenario [BAS]

Historical achievement excluding any policy interventions — Exploring pathway of **no additional efforts on the energy efficiency (EE) and renewable energy (RE) policies**.

AMS Target Scenario [ATS]

Achievement of **existing ASEAN Member States (AMS) targets** — Exploring impact of current national policies & measures from **official documents** on Power Development Plan, EE & RE.

Regional Aspiration Scenario [RAS]

Least-cost optimisation in **power sector**, while keeping the **regional targets and standards**, and using **accelerated AMS policies**.

Carbon Neutrality Scenario [CNS]

Decarbonisation efforts using optimisation of net zero technologies, aligned with **ASEAN Strategies for Carbon Neutrality**.



METI

Ministry of Economy, Trade and Industry

ACCEPT II

ASEAN Climate Change and Energy Project



ENERGY FOUNDATION
能源基金会



USAID

FROM THE AMERICAN PEOPLE



Australian Government

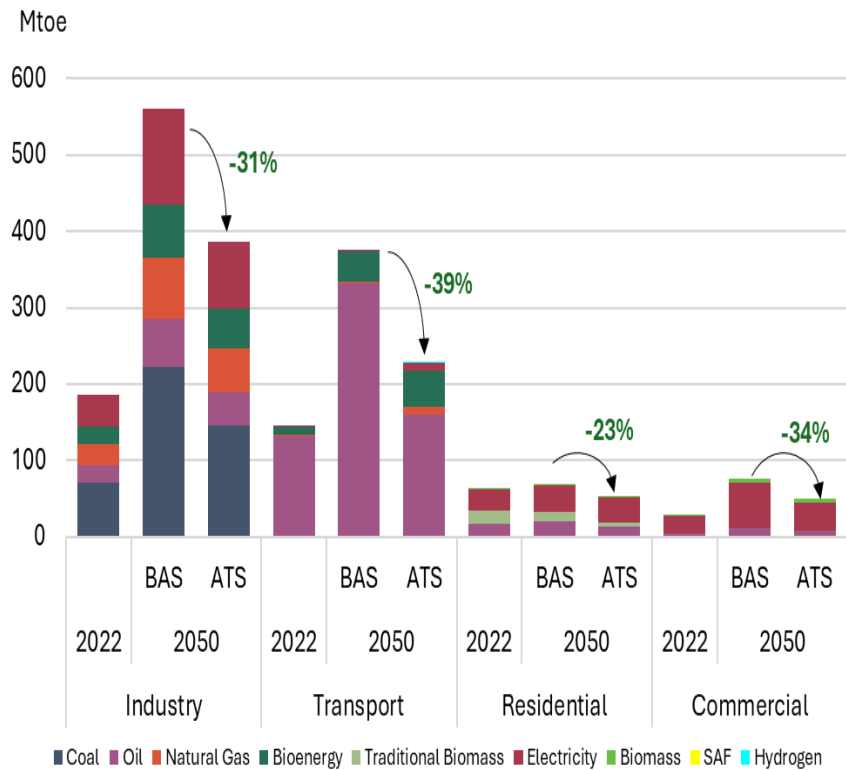


Partnerships for
INFRASTRUCTURE

Future energy demand and ASEAN Carbon Neutrality



Final Energy Demand in 2050



Source: [8th ASEAN Energy Outlook](#)

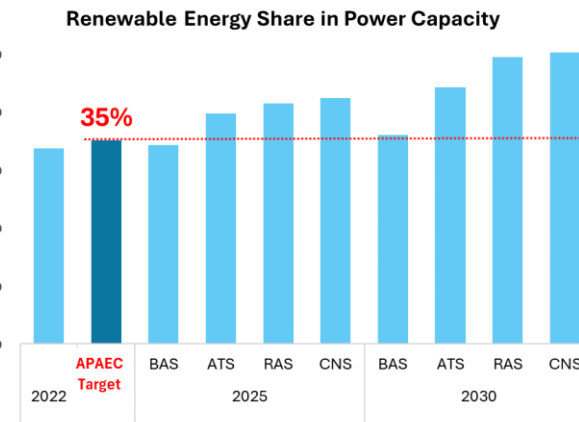
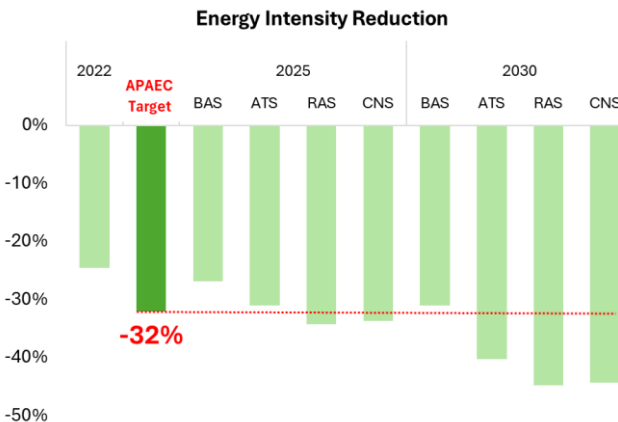
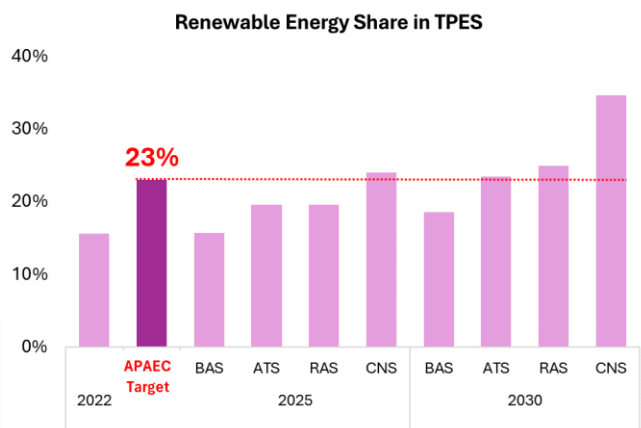
Sector-Wise Actions for ASEAN Carbon Neutrality

Industries (% ASEAN GHG emissions)	Decarbonization Solutions (abatement levers to reduce CO ₂ , CH ₄ , & other GHGs)	ASEAN Actionable Plan
Power (35%)	Increased use of renewable energy	Power grid interconnection
	Carbon capture, utilization & storage (CCUS)	Carbon reduction strategy
	Energy Efficiency	Energy efficiency standard
Transport (10%)	Transport electrification (e.g., EV, public trans)	EV ecosystem development
	Increased use of biofuels	Sustainable sourcing standards
Industrial processes (6%)	Low carbon cement (e.g., clinker substitution)	Sustainable product standards
	Low carbon steel (e.g., electric arc furnace)	
Waste (5%)	Increased recycling rate of waste	Waste management integration

The remaining industries are land use and forestry (31%) and agriculture (13%).

Source: [ASEAN Strategy for Carbon Neutrality, 2023](#)

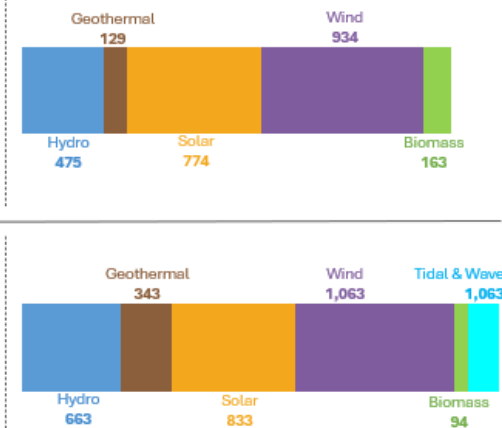
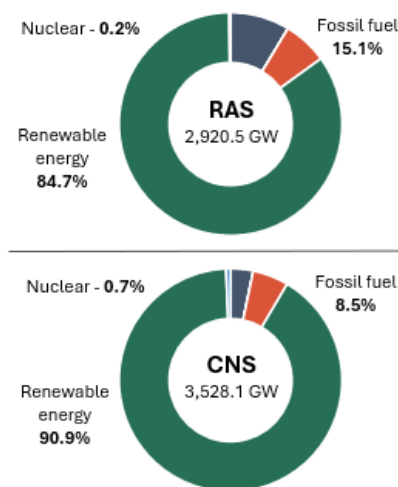
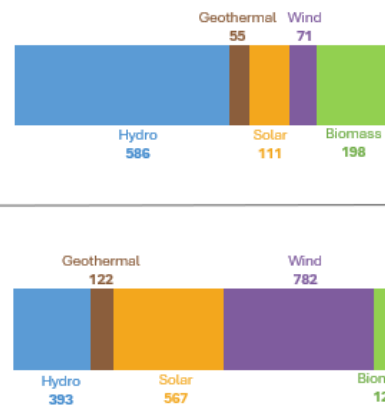
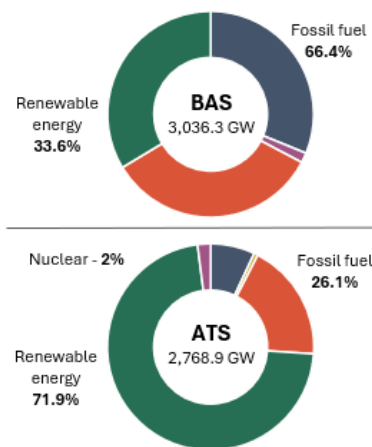
APAEC Targets, 2025 and 2030 Projections



APAEC targets for 2025 are projected to be **met** or **exceeded** under specific scenarios by **2030**, with particularly strong outcomes under ATS, RAS and CNS

Electricity Generation in 2050 Across Scenarios

Electricity generation is **reduced** from Baseline to **ATS** due to **energy efficiency** efforts but **increases** across the **remaining scenarios**. Such phenomena can be attributed to the increase in **electrification** policies and marked **shift** towards **renewable energy** sources under more ambitious scenarios.



■ Coal ■ Oil ■ Gas ■ Renewable energy

Notes: BAS = Baseline Scenario; ATS = AMS Targets Scenario; RAS = Regional Aspiration Scenario; CNS = Carbon Neutrality Scenario

Projection of Energy Investment Required

Projection Study	Total Investment Required	
	2030	2050
The 8 th ASEAN Energy Outlook (ACE, 2024)	Total Power Investment Cost (2025-2030): USD 446 Billion (CNS)	Total Power investment cost (2023-2050): USD 6 Trillion (CNS)
ASEAN Carbon Neutrality Strategy (ASEAN, 2023)	USD 0.8- 1.1 Trillion	USD 3.7 – 6.7 Trillion
World Energy Investment 2024 (IEA, 2024)	Total energy investment cost (2026-2030) APS: USD 140 billion NZE: USD 190 billion	
Renewable Energy Outlook for ASEAN: Towards a regional Energy Transition (IRENA, 2023)	RE Power: USD 302 billion Grid: USD 182 billion Bio Fuels: USD 66 billion EV (Chargers & Cars): USD 699 billion Total: USD 1.3 trillion	RE Power: USD 3.4 trillion Grid: USD 1.4 trillion Bio Fuel: USD 235 billion EV (Chargers & Cars): : USD 6.8 trillion Total: USD 11.9 trillion
ASEAN Renewables Investment: Opportunities and Challenges (IEA, 2023)	Investment Clean Energy: USD 200 billion	
World Energy Transition Outlook 2024 (IRENA 2024)	RE Power: USD 1.5 trillion Grid & Storage: USD 717 billion EV Charger: USD 110 billion Total: USD 2.4 trillion	

Just and Inclusive Energy Transition in ASEAN



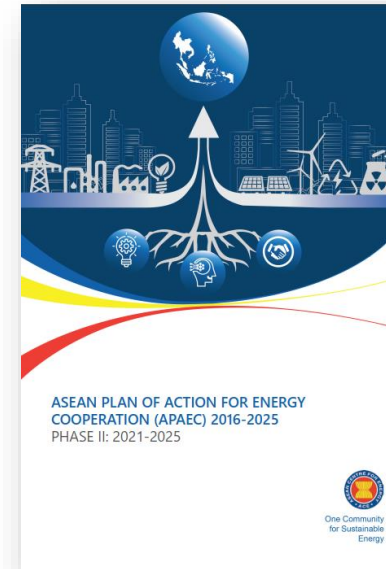
JOINT MINISTERIAL STATEMENT
OF THE 39th ASEAN MINISTERS ON ENERGY MEETING
15 September 2021



JOINT MINISTERIAL STATEMENT
OF THE 41st ASEAN MINISTERS ON ENERGY MEETING
24 August 2023, Bali, Indonesia



JOINT MINISTERIAL STATEMENT
OF THE 42nd ASEAN MINISTERS ON ENERGY MEETING (AMEM)
26 September 2024, Vientiane, Lao PDR



**ASEAN Plan of Action
for Energy Cooperation
Phase II: 2021-2025**

The next phase of APAEC
(2026-2030) is currently
under development

4. The Meeting highlighted the ongoing progress in developing the APAEC Post-2025 referring to the AEC Strategic Plan 2026-2030, emphasising the importance of creating sectoral plan to address the region's evolving energy challenges and the global megatrends. The Meeting acknowledged the importance of consultations with Final stakeholders, including with the ASEAN Member States (AMS), Dialogue Partners (DPs), and International Organisations (IOs), in ensuring that APAEC Post-2025 reflects diverse perspectives and priorities. The Meeting therefore endorsed the theme of the APAEC 2026-2030: 'Advancing Regional Cooperation in Ensuring Energy Security and Accelerating Decarbonisation for a **Just and Inclusive Energy Transition**'.

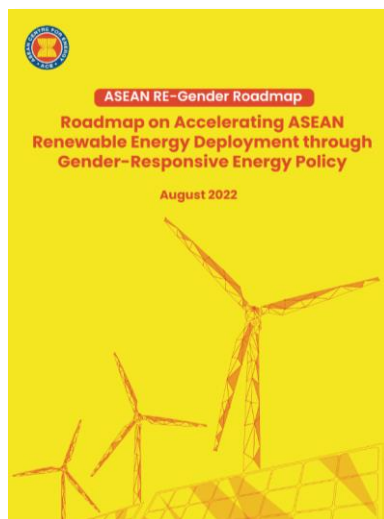
A notion introduced to APAEC

- ASEAN Power Grid
- Trans-ASEAN Gas Pipeline
- Coal and Clean Coal Technology
- Energy Efficiency and Conservation
- Renewable Energy
- Regional Energy Policy and Planning
- Civilian Nuclear Energy

ACE's JIET Journey at a Glance



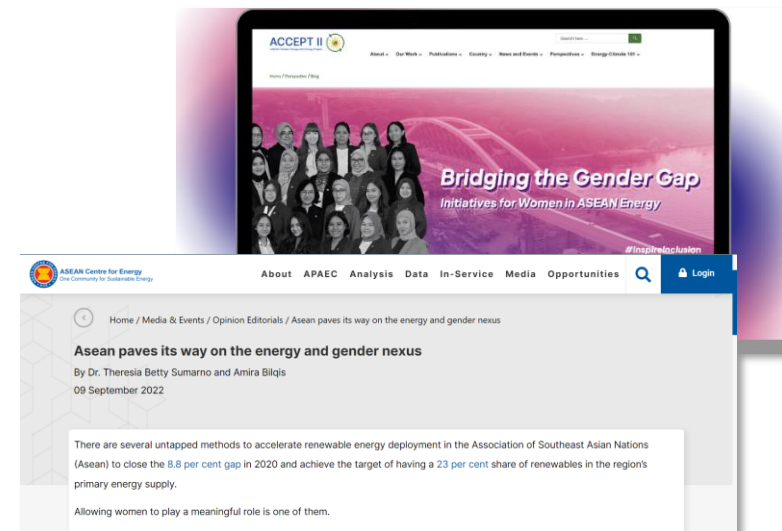
ASEAN Energy and Gender Report 2022



ASEAN RE-Gender Roadmap 2022



ASEAN Energy and Gender Statistics 2023



Policy Briefs and Opinion Pieces

Initial partner on the ongoing works on Just and Inclusive Energy Transition



Other partners supporting energy-gender supported by



Priority Areas on JIET in ASEAN



1. Energy access continued to improve in 2022, but millions of households and people will remain without access by 2050
2. Limited labour supply and shortage of skilled graduates and workers amid positive trends in clean energy jobs
3. Energy workforce transform to clean energy, while fossil fuel-related employment, particularly in coal, is declining
4. Women remain underrepresented in energy sector, including industry's workforce
5. Inclusive policy, inclusive process, inclusive governance

<https://go.aseanenergy.org/JIETReport>



**ASEAN
MALAYSIA 2025**
INCLUSIVITY AND SUSTAINABILITY



Hosted by:



MINISTRY OF ENERGY TRANSITION
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AEBF 25

ASEAN ENERGY BUSINESS FORUM

Powering ASEAN:
Bridging Boundaries, Building Prosperity

15 - 17 OCT 2025 | KUALA LUMPUR CONVENTION CENTRE

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Co-organised by:



IN CONJUNCTION WITH:

- 25TH ASEAN ENERGY BUSINESS FORUM (AEBF-25)
- THE 43RD ASEAN MINISTERS ON ENERGY MEETING (AMEM)



**Sustainable Energy for ASEAN's Prosperity:
Innovation, Inclusivity and Regional Cooperation**

15 OCTOBER 2025

KUALA LUMPUR CONVENTION CENTRE, MALAYSIA



Submission link:
go.aseanenergy.org/AICEE





ASEAN Centre for Energy
One Community for Sustainable Energy

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Thank You