



Regional Initiatives for EE&C and RE for Accelerating ASEAN's Energy Transition

**8th CEFIA Forum
Kuala Lumpur, Malaysia
17 October 2025**

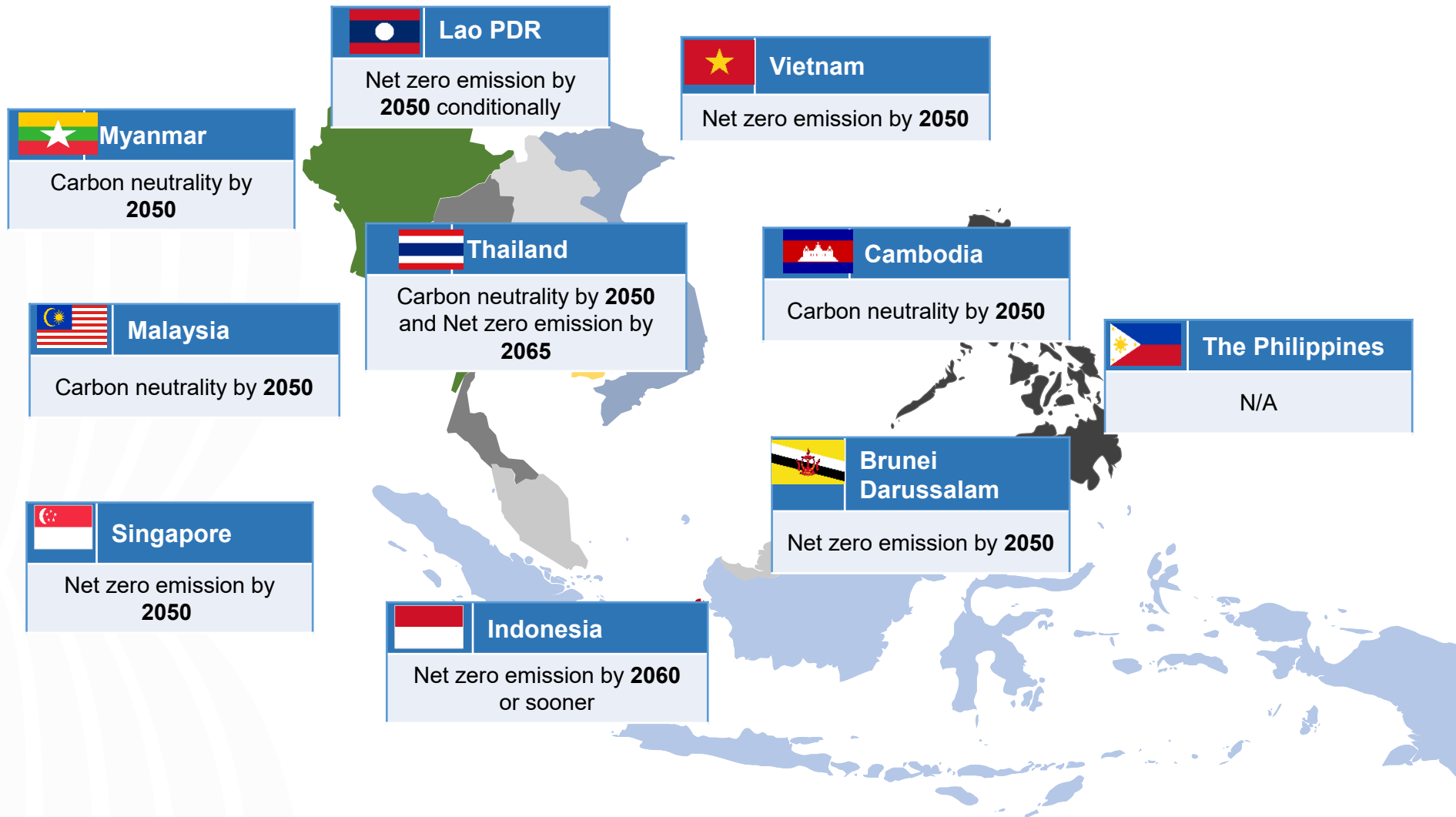
Presented by:

Mardika Firlina

Technical Officer, Energy Efficiency and Conservation Department

ASEAN Centre for Energy

ASEAN Carbon Neutrality or Net Zero Target



The majority of the 10 ASEAN Member States have set carbon neutrality or net zero targets by 2050

ASEAN Energy Efficiency Database and Investment Matchmaking Platform

Malaysia's Chairmanship 2025 Annual Priority for EE&C



ASEAN BUILT
BUILDING INVESTMENT FOR LOW-CARBON
TRANSITION IN ASEAN

[Home](#) [About Us](#) [Building Project Database](#) [Knowledge Sharing](#) [Low Carbon Building Calculator](#)

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Project Matchmaking
BEAT Tools

Unlocking Green Investment in ASEAN

The Future of Low-Carbon Buildings

A Regional One-Stop-Shop Platform that Connects Stakeholders in the Buildings Sector to Accelerate the Mobilisation of Investment and Financing for Low-Carbon Building Project across ASEAN.

[Get Started](#) →

A regional one-stop-shop platform that connects stakeholders in the buildings sector to accelerate the mobilisation of investment and financing for low-carbon building projects across ASEAN

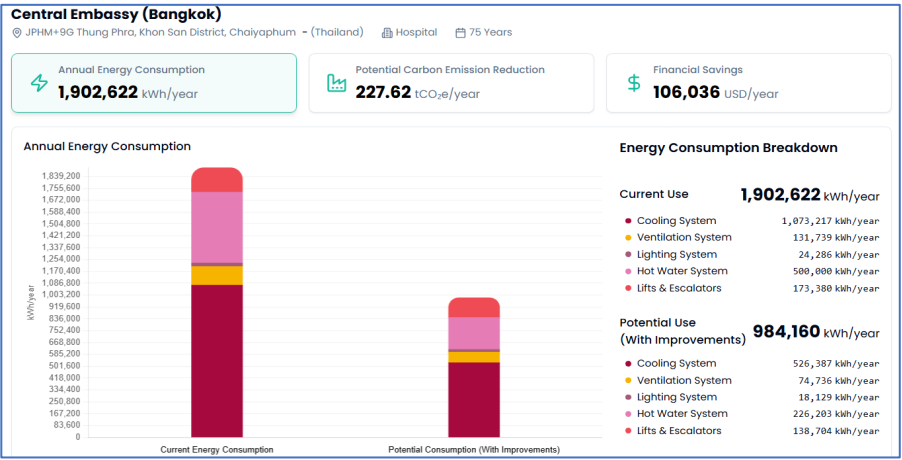
ASEAN Energy Efficiency Database and Investment Matchmaking Platform

Malaysia's Chairmanship 2025 Annual Priority for EE&C



#1: Building Energy Efficiency Project Database

Buildings Project Database						
Country	Building Type	No Of Building	Total GFA	Total Potential Energy Saving In kWh	Total Potential Emission Reduction in tCO ₂ e	Total Investment Cost In USD
Cambodia	Education	1	1,000	308 kWh	159.15 tCO ₂ e	260,790 USD
Cambodia	Hospital	1	5,000	161 kWh	71.98 tCO ₂ e	28,196 USD
Cambodia	Retail	1	2,000	648 kWh	338.24 tCO ₂ e	61,982,280 USD
Indonesia	Hospital	1	2,000	383,281 kWh	290.96 tCO ₂ e	97,675,670 USD
Indonesia	Hotel	1	50,000	24,915 kWh	10,961.37 tCO ₂ e	49,083,196,060 USD
Indonesia	Office	1	6,000	2 kWh	0.004 tCO ₂ e	120,000 USD
Thailand	Government Bu...	1	2,000	682 kWh	267.9 tCO ₂ e	296,240,622 USD
Thailand	Hospital	1	1,300	964 kWh	227.62 tCO ₂ e	150,535 USD
Thailand	Hotel	1	2,000	103 kWh	52.17 tCO ₂ e	74,544 USD
Vietnam	Hotel	1	850	2,186 kWh	1,096.08 tCO ₂ e	52,435,518 USD
Vietnam	Office	1	2,020	26,411 kWh	13,000.46 tCO ₂ e	944,711,740 USD
Vietnam	Retail	1	2,000	21,193 kWh	5,564.59 tCO ₂ e	16,697,480 USD



#2: Building Energy Efficiency Calculator

#3: Energy Efficiency Project Matchmaking

Financing Options	
	Cambodia Digital & Automation Scheme (CDAS) Phnom Penh Trading & Services Co., Ltd. Application Deadline: 30/10/2025 View Details
	Green Energy Transition Loan Scheme Smart Axiata Application Deadline: 01/11/2025 View Details
	Green Building Innovation Grant (GBIG) Smart Axiata Application Deadline: 31/12/2025 View Details

ESCOs Services	
	Comprehensive ESCO capabilities Guidehouse Insights Top Vendors Application Deadline: 31/10/2025 View Details
	CAPRED ESCO Pilot Demonstration Program GreenYellow Cambodia Application Deadline: 01/12/2025 View Details
	UN / Joint SDG Fund "Accelerating Energy Efficiency in Buildings" Schneider Electric Cambodia Application Deadline: 30/12/2025 View Details

The ASEAN Energy Awards for Energy Efficiency and Conservation

This page provides official information on the regional awards program for recognizing best practices in energy efficiency and conservation. The ASEAN Energy Award is a regional award intended to encourage and recognize greater private sector participation and interest in the energy development of the ASEAN region.

Overview of the ASEAN Energy Awards

Southeast Asia's Highest Reward

The ASEAN Energy Awards program is designed to encourage and bring about recognition of greater private sector participation and interest in energy development of the ASEAN region, in partnership with the public sector.

Energy Efficiency and Conservation Categories

- Best Practices for Energy Efficient Buildings (BEE)
- Best Practices for Green Buildings (BGR)
- Best Practices for Energy Management (BEM)

EcoCool VVR System

By GreenTech Solutions Ltd.

- ✓ Super Premium Efficiency (SE4)
- ✓ 30% lower energy consumption compared to baseline
- ✓ Uses eco-friendly R-32 refrigerant
- ✓ Smart self-monitored monitoring

Product Description

EcoCool VVR System is designed for large commercial and government buildings. It reduces operational costs through advanced inverter technology and delivers superior comfort with smart zoning. The system aligns with international green building standards and supports ultimate low-carbon operation.

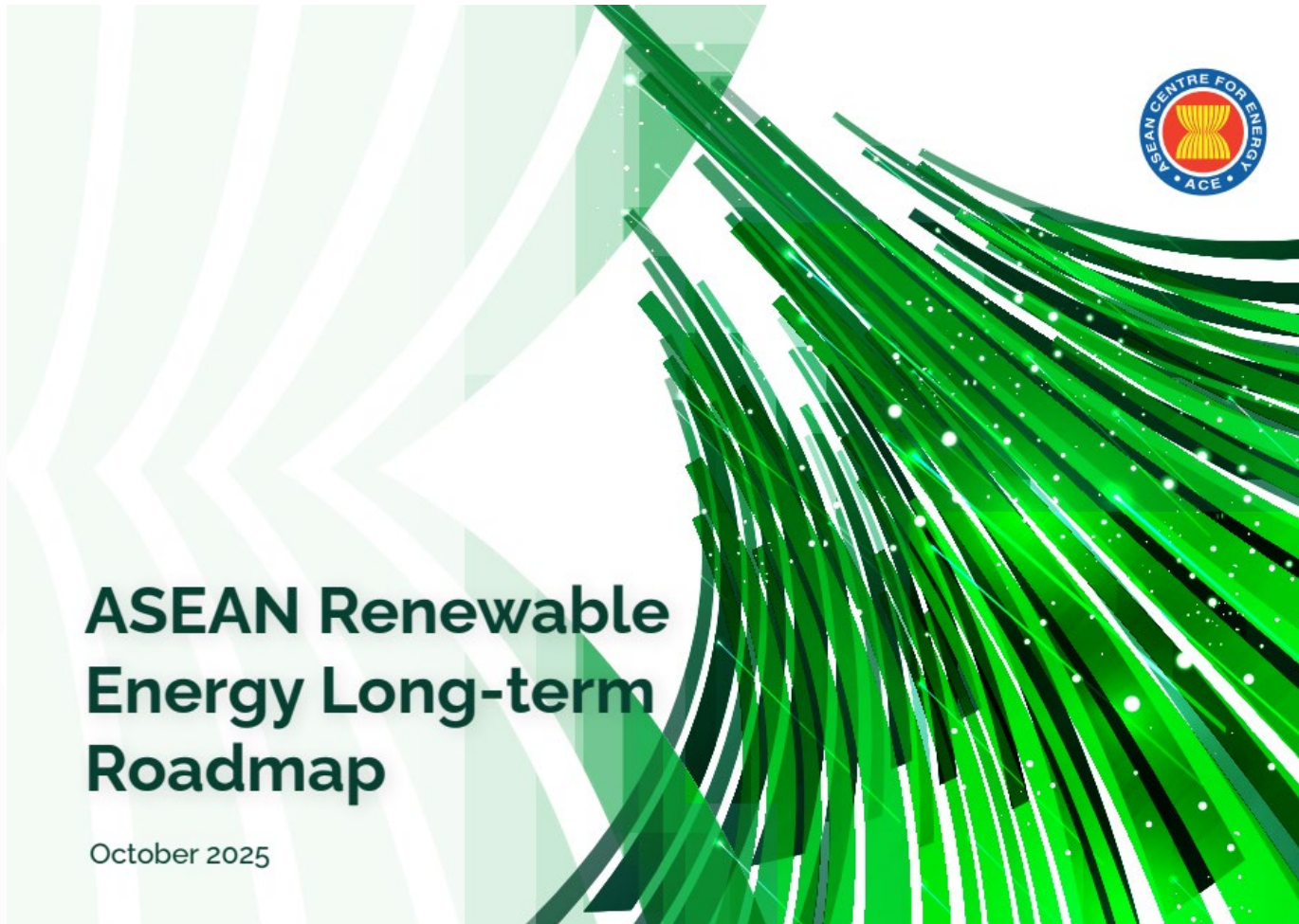
- EcoCool VVR System (VAV)**
Efficient VVR system with inverter technology, reducing energy use and ensuring comfort for large buildings.
- Intelligent LED Panel (Lighting)**
Long-lasting LED panels that save energy and provide uniform, smart-controlled lighting.
- SuperPower Max Solar PV Module (Renewable Energy)**
High-efficiency solar panels designed for tropical conditions with strong durability.
- Thermathield Insulation Board (Insulation)**
Eco-friendly insulation that lowers cooling loads and improves indoor comfort.
- SmartGrid Energy Controller (Energy Management)**
AI-powered controller for real-time monitoring and optimized energy use.

Technical Specifications

#4: Knowledge Sharing Hub

ASEAN Renewable Energy Long-Term Roadmap

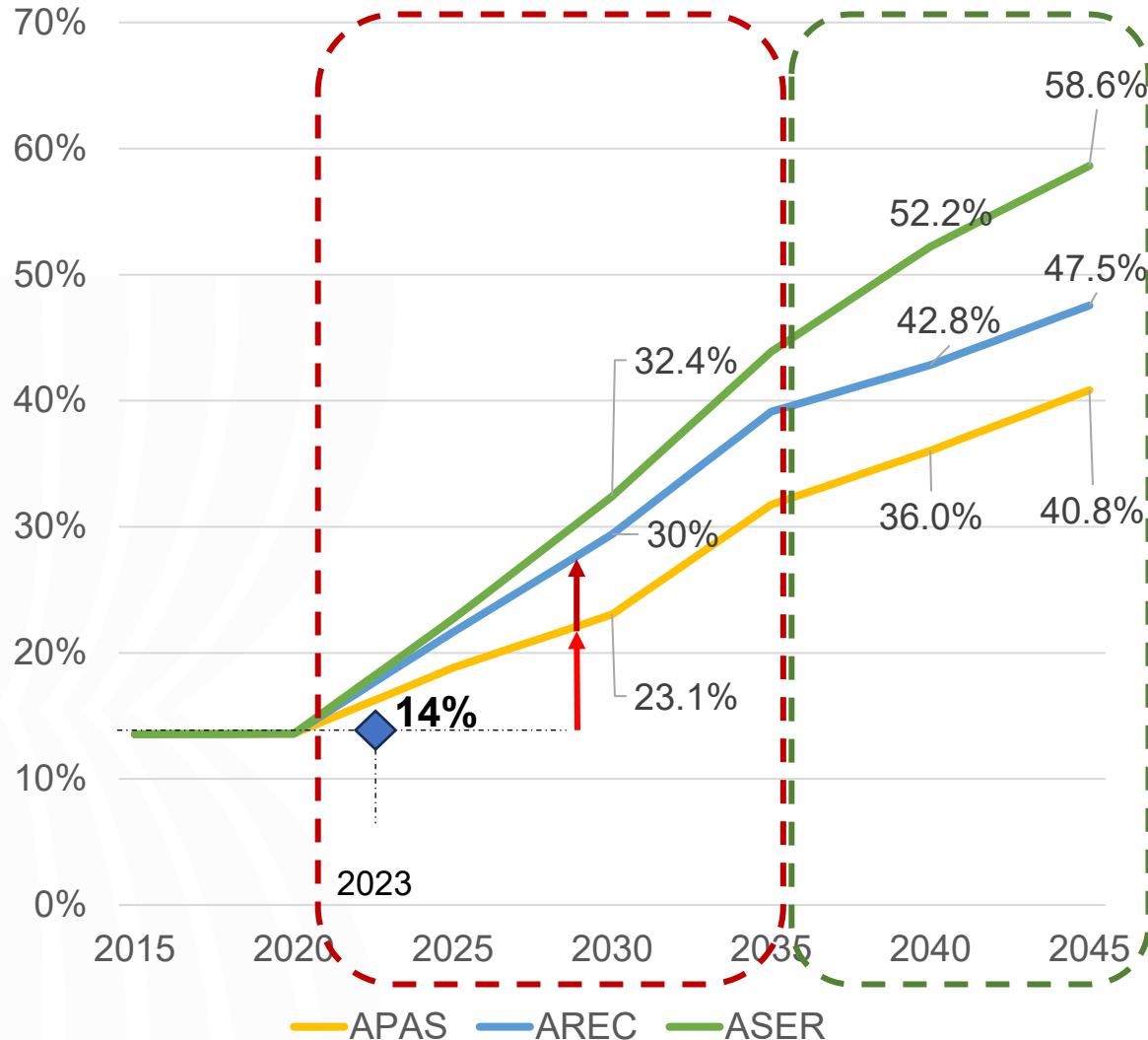
Malaysia's Chairmanship 2025 Annual Priority for Renewable Energy



The roadmap offers guidance and direction beyond RE development, covering the alignment and coordination of the cross-sectoral workplan for seven programme areas in APAEC

ASEAN Renewable Energy Long-Term Roadmap

Malaysia's Chairmanship 2025 Annual Priority for Renewable Energy



The decarbonisation of end-use options is foreseen to play a greater role in longer term **due to limited perspectives.**

APAEC 2026 – 2030

→ Tackling the implementation gap doubling RE (14% vs 30%)

It is driven by:

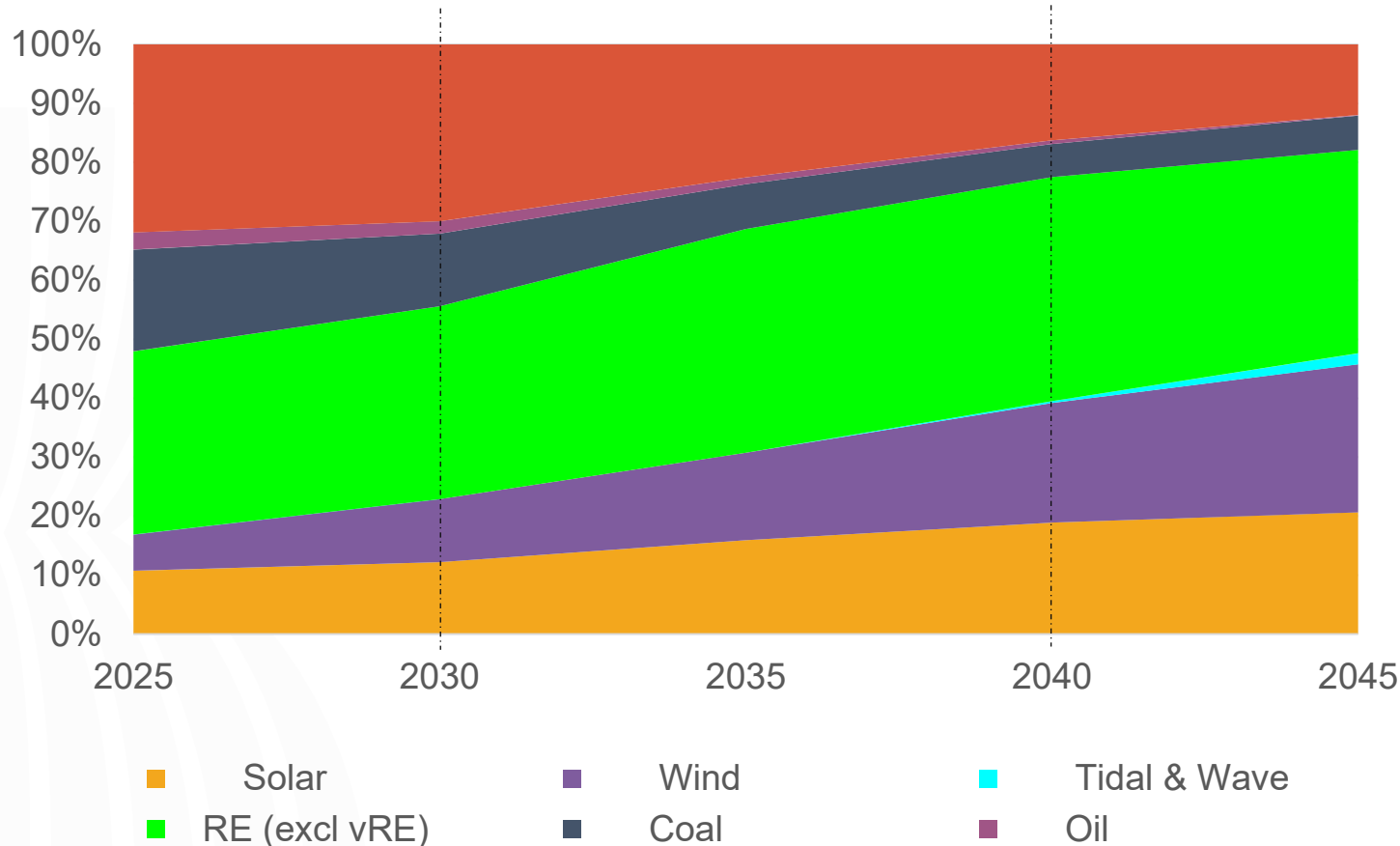
- ✓ The member vision and readiness to accelerate RE.
- ✓ Surge of renewable electricity demand from cooperates.
- ✓ More coordinated electrification of transport and low-heat industry (better energy efficiency).
- ✓ More optimum resource sharing via APG (less need of supply)

ASEAN Renewable Energy Long-Term Roadmap

Malaysia's Chairmanship 2025 Annual Priority for Renewable Energy



The ↑ share of RE in power generation and the retreat of fossil fuels use by 2045 will call for a reorientation of power system planning and flexibility strategies to ensure system reliability



Phased Transformation

Next APAEC (2026 – 2030)

→ RE & gas generation grow in tandem

Mid-term (2031-2035)

→ Gas generation peak around 2030 and declines

→ Conventional RE generation & storage reached sufficient level to displace gas

Long-term (2036-2045)

→ Intermittent RE and base-load RE (& storage in installed capacity) ↑↑; gas ↓↓

ASEAN Energy Awards

Regional Initiatives for EE&C and RE



ASEAN
ENERGY
AWARDS

Southeast Asia's highest reward to encourage and bring about recognition of greater private sector participation and interest in energy development of the ASEAN region in partnership with the public sector.

ASEAN Energy Awards Categories

ASEAN Coal Awards

ASEAN Best Practices for Energy Efficient Buildings (EEB) Awards

ASEAN Best Practices for Green Buildings (GB) Awards

ASEAN Best Practices for Energy Management (EM) in Buildings and Industries Awards

ASEAN Renewable Energy (RE) Projects Awards

ASEAN Energy Management Awards for Individual 2025

5th ASEAN Energy Youth Awards (AEYA)

ASEAN Energy Awards Webpage



<https://aseanenergy.org/in-service/awards/asean-energy-awards/>

ASEAN Accelerator Programme

Regional Initiatives for EE&C and RE



Capacity and technical knowledge development for enhancement of MSMSs and start-ups cleantech businesses scale.

ASEAN Accelerator Programme Phase



Programme Webpage



ASEAN Accelerator Programme

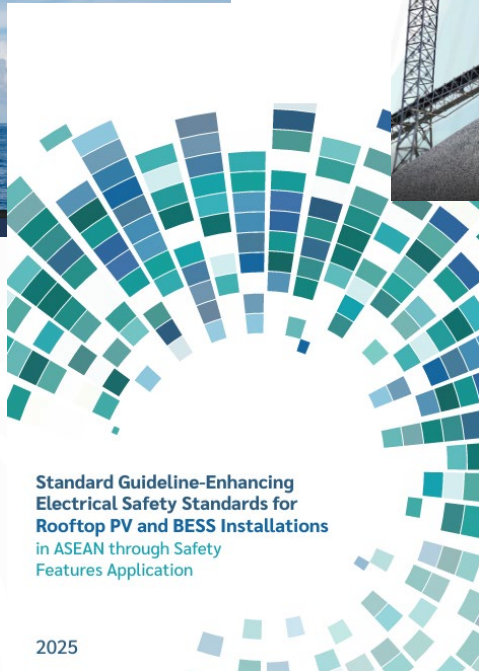
<https://aseanenergy.org/asean-accelerator/about/>

ACE Publications



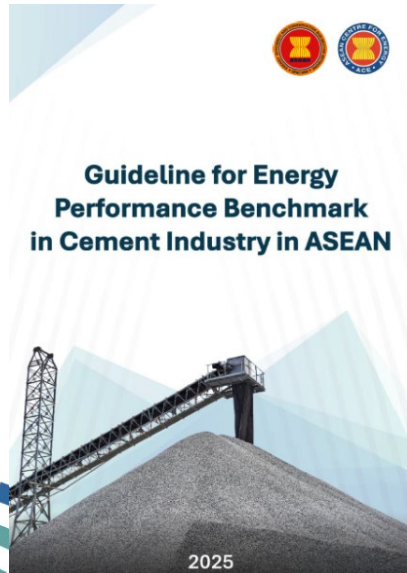
Report
**Bridging Ambition and Action:
Malaysia's CCUS Journey**

August 2025



Standard Guideline-Enhancing
Electrical Safety Standards for
Rooftop PV and BESS Installations
in ASEAN through Safety
Features Application

2025



Guideline for Energy
Performance Benchmark
in Cement Industry in ASEAN

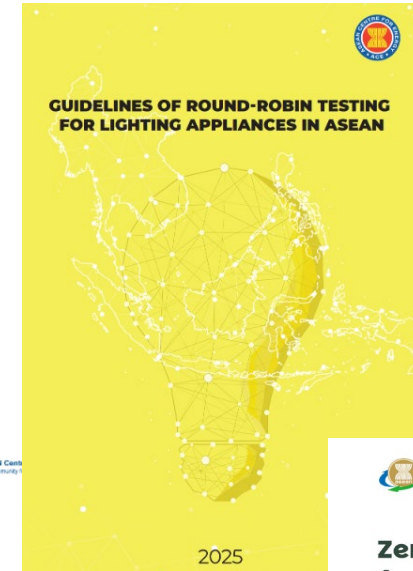
2025



Regional Market
Assessment of Household
Refrigerator in ASEAN



Biofuel Market
Potential for Regional
Cooperation in ASEAN



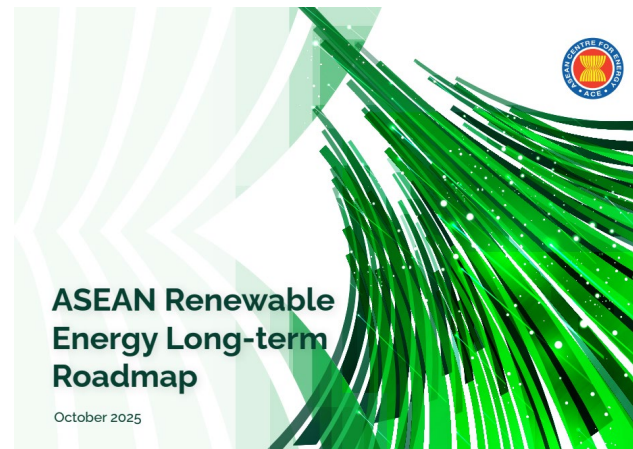
GUIDELINES OF ROUND-ROBIN TESTING
FOR LIGHTING APPLIANCES IN ASEAN

2025



**Zero Energy Buildings
(ZEB) in ASEAN**

Exploring the Potential Benefits, Challenges,
and Strategies for Implementation



ASEAN Renewable
Energy Long-term
Roadmap

October 2025

<https://aseanenergy.org/publications/>



ASEAN Centre for Energy
One Community for Sustainable Energy

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those are available for download from:

aseanenergy.org/publications



For further information or to provide feedback, please contact ACE at
secretariat@aseanenergy.org



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Thank You