

ASEAN Energy Storage System Model



Overview

This study develops a unified hourly Association of Southeast Asian Nations (ASEAN)-wide energy system model that co-optimizes electricity generation, cross-border transmission, and hydrogen production. Investigating ASEAN's decarbonization strategies is timely. We present a capacity expansion model with hourly resolution for ASEAN to meet net-zero emissions by 2050. In this context, Behind-the-Meter (BTM) Battery Energy Storage Systems (BESS) stands as a key enabler of this transformation, offering innovative solutions to enhance energy security, integrate renewable energy sources, and ensure stable and efficient grid operations.

CO, Jakarta - The Minister of Energy and Mineral Resources (ESDM) Arifin Tasrif rejected the House of Representatives' proposal to create a new renewable energy (NRE) fund management agency, set to be included in the NRE Bill. According to Arifin, Presidential Regulation No.

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[The ASEAN region is the world's economic dark horse. Here's why](#)

ASEAN is on track to emerge as a global centre of growth. To achieve its vast economic potential, ASEAN is leveraging its demographic strength and promoting inclusivity as a catalyst for

How ASEAN is managing the risks and opportunities

The current period of geopolitical transformation presents opportunities and risks for countries worldwide, but perhaps none more so than ASEAN.



What ASEAN offers the world in the Intelligent Age

ASEAN leads in the Intelligent Age with innovation, sustainability and regional stability, driving digital growth, climate action and global collaboration.

Decarbonisation of ASEAN Energy Systems: Optimum

The model has been applied across ASEAN, integrating energy efficiency, electrification, renewable energy expansion, and emerging technologies such as hydrogen, ammonia, and carbon capture,





[What we've achieved and the challenges ahead - 50 years of ASEAN](#)

East Asia has been transformed by the achievements of ASEAN, and yet the greatest challenges still lie ahead.

[Accelerating ASEAN's energy transition in the power sector through](#)

Here, we present an integrated power system capacity expansion model for ASEAN over 2018-2050. The results identify different pathways by strategically pursuing renewable energy,



[ASEAN will drive global growth. Here's how to unleash it](#)

By 2030, ASEAN's digital economy is expected to more than double to \$560 billion. But obstacles in the region remain, such as funding for small businesses.

[Why this is the moment for ASEAN to forge strategic autonomy](#)

ASEAN's fragmented reaction to US tariffs shows the need for greater solidarity and shared economic mechanisms - something shared by regional blocs across the world.



[6 questions for ASEAN Secretary General Kao Kim Hourn](#)

ASEAN has emerged as a major economic and political bloc. At Davos 2025, ASEAN Secretary General Kao Kim Hourn detailed opportunities

and challenges for the region.

How ASEAN can lead the world on plastic pollution

South-East Asia is becoming a hub of action, innovation and cross-border cooperation against plastic pollution.



What is ASEAN? , World Economic Forum

ASEAN has discussed drawing up a code of conduct to be signed with China governing disputes in the South China Sea, but Beijing is reluctant to sign on to a multilateral agreement. What

Why ASEAN's new Digital Economy Framework Agreement is a game

The ASEAN Digital Economy Framework Agreement (DEFA) is a new strategic roadmap for the region to address the complexities and opportunities of the digital economy. The world's first



Charting net-zero pathways for ASEAN's energy sector

This study develops a unified hourly Association of Southeast Asian Nations (ASEAN)-wide energy system model that co-optimizes electricity generation, cross-border transmission, and

ABB BESS Paper

This paper explores the role of BESS in the ASEAN energy landscape, examining current trends, benefits, challenges, and the pathway towards optimising its potential across the region.



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