

Asia Zero Emission Community (AZEC)

June 2023

Agency for Natural Resources and Energy, METI

The importance of decarbonizing Asian region

- Asian region has more than tripled its greenhouse gas emissions from 1990 to 2021 due to its economic growth and increasing energy demand.
- In 1990, emissions from the developed countries accounted for two-thirds of global emissions. Asian region is now accounting for more than half of the emissions.
- Decarbonizing Asian region is key to aim for Carbon Neutrality at global level.

GDP and Population Growth Forecasts

	GDP Growth 2020→2050	Population Growth 2020→2050
S.E Asia	3.8%	0.6%
World	3.0%	0.8%
North America	2.1%	0.5%
EU	1.5%	▲0.2%

Source : IEA World Energy Outlook2021,

NDCs and CN Commitments of SE Asian Countries

Country	NDC Submission	Emission Reduction Target	CN	Energy originated CO ₂ (2018)
Thailand	April, 2021	20% reduction compared to BAU by 2030 *25% reduction with international support	2065 <small>2050 for CO₂</small>	240 Mt (0.7%)
Indonesia	July, 2021	29% reduction compared to BAU by 2030 *41% reduction with international support	2060	540Mt (1.6%)
Malaysia	November, 2016	45% reduction of GHG economic intensity in 2030 compared to 2005 level	2050	230Mt (0.7%)
Brunei	December, 2020	20% reduction compared to BAU by 2030	-	7Mt (0.02%)
Singapore	March, 2020	Peaking out GHG emission by 2030 with less than 65 million tons of CO₂e emission 36% reduction of GHG economic intensity in 2030 compared to 2005 level!	Later in this century	50Mt (0.1%)
Lao PDR	May, 2021	60% reduction compared to BAU or reducing 62 million tons of CO₂ equivalent by 2030	2050	20Mt (0.05%)
Cambodia	December, 2020	41.7% reduction compared to BAU by 2030	2050	10Mt (0.03%)
Vietnam	September, 2020	9% reduction compared to BAU by 2030 *27% reduction with international support	2050	230Mt (0.7%)
The Philippines	April, 2021	Peaking out GHG emission by 2030 75% reduction compared to BAU	-	130Mt (0.4%)
Myanmar	September, 2017	No nation wide target (specific actions are listed)	2050	30Mt (0.1%)

Importance of approaching energy transition reflecting the actual situation of each country

- While the goal of CN is the same, the pathways should be various and realistic in accordance with the different situation of each country.
- Given the difference in various conditions, Asia should have different approaches from Europe. An approach to pursue a balance among the 3Es (environment, economy, and energy security), may well fit into the Asian context.
- It is important to aim for carbon neutrality while ensuring economic growth and energy security.

Situation in Asia

- Rapidly growing energy demand
- Uneven distribution of renewable potential
(Wind potential is generally weak, flat areas are mostly populated.)
- Small grid size. Weak in inter grid connections.
- Limited availability in pipeline gas and shifting to LNG
⇒ Because no single source can secure 3Es, various approaches should be considered.

Asian countries should form “one team” to aim for carbon neutrality.

(Ref) Prime Minister Fumio Kishida's Speech on the Concept of Asia Zero Emissions Community

Policy Speech by PM to the 208th Session of the Diet, Jan. 17, 2022 (Excerpt)

- One more important point is that Japan will make use of its technologies, systems and know-how in hydrogen and ammonia and other areas to contribute to the decarbonization of the world, especially Asia, and lead the world in technical standards and international infrastructure development, together with the countries of Asia.
- We aim to join forces with like-minded countries in Asia in creating something that can be called the "Asia Zero Emissions Community."

Speech by PM at "Davos Agenda", Jan. 18, 2022 (Excerpt)

- I am also aware that many Asian countries have energy structures that are similar to Japan. Just as the European Union started as the European Coal and Steel Community during the Cold War, Japan envisions an "Asia Zero Emissions Community" in Asia where both geopolitical and geo-economic challenges are intensifying. This community would become a platform to advance efforts such as international joint investment on development of zero-emission technologies and hydrogen infrastructure, joint financing, standardization of related technologies, and establishment of an Asian emissions trading market.



Asia Zero Emission Community (AZEC)

- "Asia Zero Emission Community (AZEC)" concept aims for **energy transitions tailored to each country's circumstances**, together with Asian countries that are actively trying toward carbon neutrality while having similar challenges to Japan in decarbonization.
- AZEC is a **platform consisting of Asian countries that are promoting decarbonization**. Japan intends to contribute its resources and experience to AZEC, by **providing support on technology, finance, and human resources** through AETI, JCM, etc., and by **policy coordination** with partner countries. AZEC aims to support new technologies and reduce costs through market expansion.

Examples of supports

- **Financial support by JBIC, NEXI, JICA, etc.**
- **Assistance in developing roadmap** and long-term strategy for CN
- Establishment and dissemination of **Asia Transition Finance**
- **Development, demonstration, and deployment of decarbonization technologies** such as renewable energy, energy saving, hydrogen, ammonia, biomass, and CCUS

Examples of policy coordination

- Share information on **maximizing deployment renewable energies**
- **Establish standards** for energy conservation, energy management, and other decarbonization technologies
- **Share the direction** of utilization of bio-energy, hydrogen, ammonia, etc. in the field of thermal power generation.
- Consider of **effective utilization of power grids**

AZEC Ministerial Meeting

- On 4 March 2023, METI hosted Asia Zero Emissions Community (AZEC) Ministerial Meeting.
- Minister Nishimura, Minister of Economy, Trade and Industry of Japan, who chaired the meeting, made remarks on the importance of decarbonization in Asia, AZEC concept, and Japan's specific efforts.



Participating countries (in alphabetical order)

Australia, Brunei, Cambodia, Indonesia, Japan, Laos, Malaysia, Philippines, Singapore, Thailand, Viet Nam

Participating international organizations (in alphabetical order)

Economic Research Institute for ASEAN and East Asia (ERIA) and International Energy Agency (IEA)

Participating countries and International organizations

AZEC partner countries

Indonesia	Malaysia	Philippines	Singapore	Thailand	Viet Nam
 <p>H.E. Mr. Arifin Tasrif, Minister of Energy and Mineral Resources</p>	 <p>Y.B. Tuan Mohd Rafizi bin Ramli, Minister of Economy</p>	 <p>H.E. Mr. Raphael Perpetuo M. Lotilla, Secretary, Department of Energy</p>	 <p>H.E. Mr. Gan Kim Yong, Minister for Trade and Industry</p>	 <p>H.E. Mr. Supattana Pongthorn, Deputy Prime Minister and Minister of Energy</p>	 <p>H.E. Dr. Tran Hong Ha, Deputy Prime Minister and Minister of Natural Resources and Environment</p>

Australia	Brunei	Cambodia	Laos
 <p>Hon Jenny McAllister, Assistant Minister for Climate Change and Energy</p>	 <p>Mr. Haji Shahbudin Haji Musa, Ambassador Extraordinary and Plenipotentiary</p>	 <p>H.E. Dr. Ty Norin, Secretary of State, Ministry of Mines and Energy</p>	 <p>H.E. Mr. Sinava Souphanouvong, Vice Minister of Energy and Mines</p>

International organizations

ERIA	IEA
 <p>Professor Hidetoshi Nishimura, The President of ERIA</p>	 <p>Ms. Mary WARLICK, the Deputy Executive Director</p>

AZEC Ministerial Meeting (Joint Statement and Chair's Summary)

- The participants launched AZEC as a platform and agreed to AZEC joint statement including the three following common views:
 - 1) Advancing cooperation towards carbon neutrality/net-zero emissions while ensuring energy security
 - 2) Promoting energy transition while achieving economic growth
 - 3) Recognizing there are various and practical pathways toward carbon neutrality/net-zero emissions depending on the circumstances of each country
- After the ministerial meeting, Minister Nishimura issued "Chair's Summary" that reflects the comments and opinions expressed in the ministerial meeting under his responsibility, as for following areas.
 - 1) Energy efficiency and demand-side energy conversion
 - 2) Renewable Energy/Energy Management
 - 3) Natural gas and LNG
 - 4) CCUS/Carbon Recycling
 - 5) Hydrogen and Ammonia
 - 6) Critical Minerals

AZEC Public-Private Investment Forum

- On 3 March 2023, the Asian Zero Emissions Community (AZEC) Public-Private Investment Forum was co-hosted with KEIDANREN (Japan Business Federation). Approximately 700 participants, both local and online, attended.
- Ministers and CEOs of SOEs in Asia explained their efforts toward decarbonization and expectations for cooperation with Japan were made by.
- Japanese companies introduced their decarbonization technologies, including renewable energy, biomass, hydrogen, ammonia, and CCS, and their initiatives to accelerate energy transitions in Asia.
- Japanese government related organizations explained that they are ready to provide all kinds of support measures, including financial support and knowledge sharing, for realistic energy transitions.



Philippines, Secretary, Department of Energy, H.E. Lotilla



Pertamina, President Director and CEO, Ms. Nicke Widyawati



Australia, Assistant Minister for Climate Change and Energy, Hon. Jenny McAllister



MOU between NEXI and PLN on cooperation to decarbonize the power sector (From left: Minister of Economy, Trade and Industry Nishimura, NEXI President Kuroda, PLN President Daruwaman, and Minister of Energy and Mines Arifin)

Key Elements of G7' Communiqué

(Ref) Key Elements of G7 Sapporo Climate, Energy and Environment Ministers' Communiqué

● Energy security and clean energy transitions (Para 49)

- highlight **various pathways** according to each country's energy situation, industrial and social structures, and **geographical conditions** should lead to **our common goal of net zero**

● Collective action (Para 58)

- We **reaffirm the critical importance of collective action, and engagement with other developing and emerging countries**, particularly within the G20, to accelerate emission reduction, including by supporting their transition to net-zero GHG emissions through **various and practical pathways taking into account national circumstances**
- take note of initiatives carried out both individually and in partnership with others, such as **Asia Zero Emission Community (AZEC) initiative**

<https://www.meti.go.jp/press/2023/04/20230417004/20230417004-1.pdf>

(Ref) Key Elements of G7 Hiroshima Leaders' Communiqué

● (Para 19)

- We will engage with developing and emerging countries to accelerate emission reduction, including by supporting their transitions to climate resilient, circular, and nature positive economies and net-zero GHG emissions **through various and practical pathways** taking into account national circumstances.
- We take note of initiatives that are intended to support clean energy transition in countries around the world, such as **Asia Zero Emission Community (AZEC) initiative**, the Powering Past Coal Alliance (PPCA), 2050 Pathways Platform, Net Zero World (NZW), and the Global Carbon Pricing Challenge and underscore the importance of actions taken through such initiatives being aligned with a 1.5°C.

<https://www.mofa.go.jp/mofaj/files/100506909.pdf>

Asian Leaders' Remarks on AZEC, etc.

(Ref) Prime Minister Kishida expresses cooperation for relocation of the capital city, Japan-Indonesia summit meeting (May 20, 2023, Nihon Keizai Shimbun) (Excerpt)

On May 20, Prime Minister Fumio Kishida met with President Joko of Indonesia for 25 minutes in Hiroshima City, which is hosting the G7 Summit of the Group of Seven Leaders (G7 Hiroshima Summit).

The two leaders agreed to cooperate in realizing **the "Asian Zero Emissions Community" initiative to promote decarbonization in Asia.**

<https://www.nikkei.com/article/DGXZQOGM200V00Q3A520C2000000/>

(Ref) Lao National President: "Armed Conflict Will Lead to War" (May 26, 2023, Nihon Keizai Shimbun) (Excerpt)

Lao President Thongloun Sisoulith spoke at the 28th "Future of Asia" Nikkei Forum held at a Tokyo hotel on the afternoon of 26th.

Mr. Thonglun expressed the person's gratitude for the support from Japan, which will celebrate the 70th anniversary of the establishment of diplomatic relations in 2025. On 25th, the person met with Prime Minister Fumio Kishida and said they would collaborate on **the "Asian Zero Emissions Community" initiative to promote decarbonization in Asia, among other things.**

<https://www.nikkei.com/article/DGXZQOCB240V10U3A520C2000000/>

(Ref) Global Challenges, Solutions from Asia, Vietnam Deputy Prime Minister Tran Lu Quang (May 29, 2023, Nihon Keizai Shimbun) (Excerpt)

Japan has taken a leading role within the region with its vision of the "Global South." It supports Japan's stance in **"Asian Zero Emissions Community (AZEC)"**, which aims to transform energy in cooperation with Asian countries.

<https://www.nikkei.com/article/DGKKZO71397740X20C23A5M11100/>