

**2<sup>nd</sup> Asia Zero Emission Community (AZEC) Ministerial Meeting**  
**Joint Statement**  
**August 21, 2024, Jakarta**

We, the Ministers of Australia, Brunei Darussalam, Cambodia, Indonesia, Japan, Lao PDR, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam met in Jakarta, Indonesia on August 21, 2024, to hold the 2nd Asia Zero Emission Community (AZEC) Ministerial Meeting, with Ministry of Energy and Mineral Resources of Indonesia and Ministry of Economy, Trade and Industry of Japan serving as Co-Chairs.

**Reaffirming AZEC Principles**

We welcome the consensus reached at the 28<sup>th</sup> United Nations Climate Change Conference (COP28) held in United Arab Emirates (UAE) and are committed to accelerating efforts, in line with the CMA.5 decision on the Global Stocktake (GST). We recognize the urgent need for deep, rapid, and sustained reductions in greenhouse gas emissions in line with 1.5°C pathways. In this context, we underscore the significance of the “AZEC principles”, which emphasize the importance of achieving a “triple breakthrough”, namely addressing climate change, promoting inclusive economic growth, and achieving energy security simultaneously. We also embrace the concept of “one goal, various pathways”, acknowledging that there are various and practical pathways towards carbon neutrality/net-zero emission, taking into account each country’s unique circumstances, existing targets or policies and developmental challenges including, but not limited to, geographic, economic, technological, institutional, social and equity factors.

We welcome the outcome of the first AZEC Ministerial Meeting held in March 2023 and the AZEC Leaders Meeting held in December 2023 in Tokyo, which set out these common understandings among AZEC partner countries.

We will promote cooperation through the AZEC platform which builds on the mutual trust cultivated over the years while sharing the above common understandings as guiding principles. Recalling the AZEC Leaders’ Joint Statement in December 2023, which invites the Economic Research Institute for ASEAN and East Asia (ERIA) to set up the Asia Zero Emission Center in ERIA as a platform to

share information, conduct studies on policies and projects and help AZEC partner countries develop vision, roadmaps, or policies towards decarbonization to promote energy transitions, we welcome the launch of the Asia Zero Emission Center this August, as well as endorse the Terms of Reference (ToR) and activities as attached to this joint statement.

We welcome, as important steps under the AZEC platform, initiatives to achieve energy transition in Asia, including the Asia Energy Transition Initiative (AETI) and Asia Green Growth Partnership Ministerial Meeting (AGGPM).

### **AZEC Partner Countries Supporting Global Decarbonization**

We acknowledge the commitment of AZEC partner countries to accelerate the global energy transition and follow through on the collective commitments of the GST on global efforts including tripling renewable energy capacity globally, doubling the global average annual rate of energy efficiency improvements, accelerating zero- and low-emission technologies and transitioning away from fossil fuels in energy systems in a nationally determined manner, taking into account the Paris Agreement and their different national circumstances, pathways and approaches.

We recognize that the transition to net zero emissions presents economic opportunities for all countries, and that ambitious NDCs linked to clear national transition plans that are aligned with long term low greenhouse gas emission development strategies, will help identify investment priorities and opportunities, drawing in public and private capital to underwrite the transition to net zero.

### **Promoting Policy Support and Collaboration in Tangible Projects**

To accelerate efforts towards energy transition in line with the CMA.5 decision on the GST, we welcome the AZEC sectoral initiatives as attached to this joint statement, namely, AZEC Initiative to promote Zero Emission Power, AZEC Initiative to create Sustainable Fuel Markets, and AZEC Initiative to establish Next-Generation Industry. We encourage AZEC partner countries to make progress on energy transition efforts by coordinating policy development or conducting projects related to these initiatives, taking into account different national circumstances. We confirm that we will promote access to financial, human resources, and technical cooperation based on these initiatives.

To support and sustain these collective efforts towards carbon neutrality/net-zero emissions among AZEC partner countries, we will take actions holistically by promoting access to finance and inclusive investment to accelerate energy transitions in a sustainable manner. In this regard, we emphasize the importance of transition finance as a financial tool and blended finance as a financial mechanism to achieve the whole-of-economy transition, including the energy sector, and will work to scale-up investment in this aspect through the AZEC platform. We acknowledge and promote integrated efforts through various initiatives by both public and private sectors such as development of regional and national decarbonization roadmaps, cross-sectoral dialogues to enhance transition finance in Asia at the private-led Asia Transition Finance Study Group (ATF SG), and Cleaner Energy Future Initiative for ASEAN (CEFIA). Furthermore, to accelerate sustainable finance, we promote integrated efforts through the AZEC platform to support policy coordination and to reduce emissions while contributing to economic growth.

Moreover, we will promote efforts to create a market where emission reduction efforts are valued and to further promote cooperation among AZEC partner countries, such as sharing our knowledge and existing practices in carbon pricing, which, among various policy instruments and if appropriate, can be effective not only in reducing emissions but also driving economic growth in Asia and the entire world. Additionally, we recognize the importance of managing emissions across the entire supply chain and using recognized emission measurement methodology. We also welcome the progress on the cooperation towards promotion and implementation of high integrity carbon markets and crediting schemes through the recent conduct of AZEC International Conference to Promote the Joint Crediting Mechanism (JCM) and Develop Carbon Markets. We also welcome some AZEC partner countries working together in this regard to accelerate the ambitious use of carbon markets towards net-zero emissions, including by incorporating relevant sectors and initiatives that promote GHG emissions reduction.

We will promote possible cooperation and resiliency in the area of policy, financing, human resources and technologies, to support AZEC partner countries in their respective transitions to net zero emissions. This includes support to accelerate the deployment and uptake of clean and low carbon energy

technologies, including renewable energy, energy efficiency, biofuels, Sustainable Aviation Fuel (SAF), hydrogen and its derivatives such as ammonia, e-fuels and e-methane, and Carbon Dioxide Capture, Utilization and Storage (CCUS)/carbon recycling. In this context, we acknowledge, depending on national circumstances, the important role that natural gas and LNG will play as transition fuels, as part of wider efforts to deliver the goals of the Paris Agreement. We acknowledge that some AZEC partner countries, depending on national circumstances, such as the diversification of their energy mix, the existence of nuclear science and technologies, industries, or programs, as well as their limited renewable energy resource potential, may choose to cooperate on the safe and peaceful uses of nuclear energy. AZEC partner countries may also cooperate in knowledge sharing and policy dialogue to support the development of smart cities, and support for promoting on retrofit in building and industrial equipment towards energy efficient buildings and industries. We will also work towards the development of measurement in areas such as green manufacturing and Carbon Dioxide Removal (CDR)/CCUS/carbon recycling that contribute to the expansion of their market and the promotion of collaborative projects in these fields. In addition, we will promote sustainable production of energy from waste, including waste-to-energy. We will accelerate the reduction of emission from road transport through a range of pathways, including through development of infrastructure and rapid deployment of zero and low-emission vehicles.

To promote steady implementation, we call upon the Asia Zero Emission Center to report at the next AZEC Ministerial Meeting on the progress of above-mentioned research and regional cooperation including the sectoral initiatives, policy options to achieve emission reduction while supporting economic growth, transition/green finance, and high integrity carbon market schemes as well as to review progress and identify common challenges for clean energy projects.

We welcome the recommendations made by the AZEC Advocacy Group, led by ASEAN Business Advisory Council (BAC), Japan Business Federation, and ERIA and will continue to promote stronger public-private partnerships.

In addition, we will work together to communicate AZEC's principles and actions to the public and stakeholders through events such as Singapore International Energy Week, Energy Asia in Malaysia, Indonesia EBTKE ConEx,

Indonesia Energy Efficiency and Conservation Conference & Exhibition, Indonesia International Geothermal Convention and Exhibition, and Sustainable Energy Technology Asia in Thailand to further encourage efforts both in governments and private sectors.

Recognizing the bilateral initiatives such as the AZEC/Green Transformation (GX) Promotion Working Team in Vietnam, the AZEC Japan-Indonesia Joint Task Force in Indonesia, the AZEC Japan-Philippines High-Level Coordination Dialogue in the Philippines, and the Working Group on the Cooperation between the Ministry of Energy (MOEN) and Ministry of Economy, Trade and Industry (METI) to achieve the target of Thailand's Energy Transition, as a useful framework to advance projects with Japanese government or private sector, we push forward the projects under the bilateral initiatives to make concrete steps towards energy transition including monitoring project progress and assisting with problems or bottlenecks that arise while ensuring sound and predictable business environment as well as bankable projects. We also welcome the progress of the tangible demonstration projects that promote energy transition supported by some AZEC partner countries, such as the Global South Future-oriented Co-Creation Project in Japan.

### **Fostering cooperation beyond AZEC partner countries**

We welcome collaboration with all other countries within and beyond Asia that wish to support our region's energy transition and energy security. We further recognize the importance to reach out to countries, including through existing bilateral frameworks, with a view to cooperating on energy transition, and establishing mutually beneficial clean energy trade markets and diversified resilient supply chains in the future, especially via ASEAN Power Grid. We also welcome and further look forward to cooperation with related international institutions and organizations such as ASEAN Center for Energy (ACE), ASEAN Center for Climate Change (ACCC), and International Energy Agency (IEA), including through the Asia Zero Emission Center in ERIA.

### **Way forward**

We express our sincere gratitude to Indonesia for Co-hosting the 2<sup>nd</sup> AZEC Ministerial Meeting as well as to Malaysia for Co-hosting the next AZEC Ministerial Meeting in Malaysia.

**AZEC Sectoral Initiatives towards carbon neutrality/net-zero emissions**  
**\*Attached document to the 2<sup>nd</sup> AZEC Ministerial Meeting Joint Statement in 2024**

**I. Background:**

In December 2023, last year, the Asia Zero Emission Community (AZEC) partner countries affirmed the “AZEC principles”, highlighting the importance of “triple breakthrough”, namely addressing climate change, economic growth and energy security simultaneously, as well as the importance of “one goal, various pathways”, which underscores that there are various and practical pathways towards net-zero emissions, taking into account different national circumstances and starting point of each country, including, but not limited to, its industrial structures, social contexts, geographies, and stages and rates of development.

Energy demand in many AZEC partner countries is expected to grow in the future, due to rapid urbanization, population and income growth. In order to reduce dependence on fossil fuels in the power, transport, and industry sectors while meeting the growing demand for energy and affordable energy access, transitions that utilize new and existing clean technologies are essential.

To foster cooperation among AZEC partner countries in this critical decade as well as taking steps to implement the CMA.5 decision on the Global Stocktake (GST), our Ministers welcome the launch of the following three initiatives, namely, **AZEC Initiative to promote Zero Emission Power, AZEC Initiative to create Sustainable Fuel Markets, and AZEC Initiative to establish Next-Generation Industry.**

Recognizing that there is no one-size-fits-all approach to energy transitions as there is considerable diversity in AZEC partner countries, such as geographical features, industrial structures, and stage of development to shape pathways and approaches towards the decarbonization, the cooperation through these initiatives will be carried out in cooperation with interested AZEC partner countries/relevant entities, in line with their nationally determined energy transition approaches, in cooperation with the Asia Zero Emission Center in the Economic Research Institute for ASEAN and East Asia (ERIA). The initiatives will be conducted by a suit of supporting tools, including support for technology deployment, capacity building, financing and the development of policy and

measures, taking into consideration various national circumstances among AZEC partner countries.

## **II. Three initiatives to promote carbon-neutrality/net-zero emissions in AZEC partner countries.**

### **i. AZEC Initiative to promote Zero Emission Power (AZEC Zero Emission Power Initiative)**

#### **Purpose:**

AZEC partner countries are taking steps to contribute to global efforts, including to tripling renewable energy capacity globally by 2030. However, considering that many AZEC partner countries are currently dependent on fossil-fuel thermal power plants and most of their thermal power generation fleets are still relatively young, decarbonizing the power sector, particularly thermal plants, is one of the focal points in tackling climate change while ensuring access to affordable energy and addressing energy security. This initiative aims at maximizing introduction of renewable energy and promoting zero-emission thermal power generation in AZEC partner countries through a range of approaches as follows:

#### **Possible areas of cooperation:**

- To publicize updated decarbonization roadmaps towards net-zero emissions including power sector which align with reality of each country.
- To support development of policies and measures to promote clean energy by sharing other countries' examples, such as through improvement of enabling environments for demand side sector to procure renewables, and regulations for hydrogen, ammonia, biomass, biogas, Carbon Dioxide Capture, Utilization and Storage (CCUS).
- To facilitate efforts to use existing power generation systems effectively, such as introducing the concept of "Hybrid Dam" meaning advanced dam systems which are strengthened flood control operations and are promoted hydropower generation.
- To promote zero emission thermal power generation, particularly to decarbonize coal power generation through/combining a range of options, such as using biomass, biogas, hydrogen, and ammonia; repurposing to flexible sources; early retirement together with converting to zero

- emission power; switching to low or zero-emission power generation; and retrofitting with Carbon Dioxide Capture and Storage (CCS)/CCUS.
- To support use of carbon intensity-based emission calculation methodology for hydrogen and ammonia and to exchange knowledge in technology and safety standards of hydrogen and ammonia.
  - To support development of CCS legislation, including dissemination of the CCS guidelines published by Japan Organization for Metals and Energy Security (JOGMEC), and sharing knowledge of cross-border CO<sub>2</sub> transport.
  - To enhance replacement of diesel by distributed renewable-based power and expansion of energy access.
  - To study national and regional electricity grid system to advance grid reinforcement to accommodate renewable energy, including contribution to ASEAN Power Grid.
  - To study institutional design for promoting the use of Distributed Energy Resources (DER) with cybersecurity in ASEAN.

**ii. AZEC Initiative to create Sustainable Fuel Markets (AZEC Sustainable Fuel Initiative)**

**Purpose:**

With the expected increase in passenger vehicles, road fleets, aviation, and shipping in AZEC partner countries, decarbonizing the transport sector is essential to the global effort to transition away from fossil fuels.

Given that large portion of vehicle stock, as well as almost all of aviation and shipping run by oil, supplying sustainable fuels, including biofuels, Sustainable Aviation Fuel (SAF), and e-fuels is considered as one of the practical options to steadily reduce emissions. For example, in the international aviation sector, competition to secure SAF and its feedstock is intensifying in order to achieve the long-term global aspirational goal (LTAG) adopted by the International Civil Aviation Organization (ICAO) Assembly to achieve net zero carbon emissions by 2050. This initiative aims to support AZEC partner countries to secure sustainable fuels using biomass and other resources in Asia, with a view to developing a sustainable fuels supply chain centered on Asia in the future.



**Possible areas of cooperation:**

- To conduct feasibility studies on sustainable fuels for transportation, including aviation, road transport, heavy duty, shipping, and the maritime sectors; such as expanding the use of SAF in the aviation sector, biofuels including biodiesel and bioethanol, and hydrogen and ammonia in more modes of transportation, and to formulate a roadmap of sustainable fuel demand and supply in Asia, based on the sectoral feasibility studies.
- To promote projects, such as demonstration projects, to create sustainable fuels markets, including development of supply chains.
- To share best practices on the production, operation, distribution, and retail of sustainable fuels.
- To explore the potential of the combination of sustainable fuels and high-performance mobility equipment such as flexible/dual-fuel and hybrid engines.
- To identify gaps in fuel supply infrastructure such as bunkering facilities and explore solutions.
- To develop infrastructure for sustainable fuels including bunkering for vessels as measures to decarbonize ports under the Carbon Neutral Port framework.

**iii. AZEC Initiative to establish Next Generation Industry (AZEC Next-Generation Industry Initiative)****Purpose:**

Manufacturing industry in Asia plays a significant role in its economy, with a relatively high share of manufacturing value-added in its Gross Domestic Product (GDP). Decarbonization in the manufacturing industry sector is becoming increasingly important as a corporate strategy to respond to the demand from global companies to reduce GHG emissions per product in their whole supply chain. One of the approaches to address the need to establish green manufacturing supply chain and help countries attract foreign direct investment is to create “carbon neutral industrial parks”, where companies in the industrial zone can manufacture their products by using electricity generated from clean power sources and promoting energy efficiency. Furthermore, considering the significant role that automobile industry plays in Asian economy, addressing the

decarbonization in the automotive industry in Asia is also important. This initiative aims to establish next-generation industry in Asia by focusing on the decarbonization efforts in industrial parks and automobile industry through a range of approaches as follows:

**Possible areas of cooperation:**

- To conduct demonstration projects to support the introduction of energy management and CO2 emissions visualization system, energy saving and renewable energy.
- To provide capacity building program to develop human resources in order to promote energy efficiency.
- To formulate a report towards carbon-neutrality/net-zero emissions in industrial parks, sharing the efforts of exemplary industrial parks which use energy efficiency, renewable energy, or DER effectively.
- To support the development of necessary policies and measures to facilitate decarbonization in industrial parks, such as through improvement of enabling environments for demand side sector to procure renewables.
- To promote the use of CCUS/Carbon recycling in industrial sector, and to support development of CCS legislation, including dissemination of the CCS guidelines published by Japan Organization for Metals and Energy Security (JOGMEC), and sharing knowledge of cross-border CO2 transport.
- To develop master plan of energy provision for next-generation automotive industry strategy for ASEAN-Japan to pursue multi pathway transitions by taking advantage of strength of ASEAN and promoting Internal combustion engines (ICEs) and Hybrid Electric Vehicles (HEVs) combined with the use of sustainable fuels while investing in Battery Electric Vehicles (BEVs) for the future.
- To strengthen automotive manufacturing and exportation capabilities in multi-pathways from hybrids to EVs, such as human resource development, supplier support, decarbonization of manufacturing processes, demonstration of EVs and e-fuels.
- To consider the possibility of using hydrogen and ammonia in industrial parks including FCVs.

### **III. The way forward**

Utilizing inputs from AZEC partner countries and related organizations, the Asia Zero-Emission Center in ERIA plays a central role in preparing a report on research progress, and a direction of regional cooperation relevant to the three initiatives, and policy options including transition/green finance and high integrity carbon market schemes, as well as in facilitating stakeholders' engagement in order to serve as the platform articulated in the AZEC Leaders' Joint Statement in December 2023.

## **Terms of Reference of the “Asia Zero Emission Center”**

### **\*Attached document to the 2<sup>nd</sup> AZEC Ministerial Meeting Joint Statement in 2024**

This Terms of Reference provides guidance on main functions and operation of the “Asia Zero Emission Center” (hereinafter referred to as the Center) to be set up in the Economic Research Institute for ASEAN and East Asia (ERIA), pursuant to the invitation by AZEC Leaders on the 18<sup>th</sup> of December, 2023.

1. The Center will serve as a platform to share information, conduct studies on policies and projects and help AZEC partners develop vision, roadmaps or policies towards decarbonization, where applicable, to promote energy transitions. Policy support and projects to be considered, through discussions among AZEC partner countries and with the ERIA, may include those mentioned in the AZEC Leaders Joint Statement.
2. The Center will assist AZEC activities as appropriate, such as administrative and logistical support for AZEC meetings and events, including those through the AZEC Advocacy Group, and public relations.
3. The Center will collaborate with relevant initiatives, international institutions and organizations, private companies, academic institutions and others as required.
4. The Center will be established as a new organization within the existing Energy Unit of the ERIA in Jakarta, Indonesia. Until the formal launch of the Center, the Energy Unit will undertake the functions mentioned in paragraphs 1 to 3 to the best of its capabilities.
5. Initial funding for the Center will be entirely provided by the government of Japan. Contribution from AZEC partners is not mandatory; however, Japan would welcome any future voluntary contribution from AZEC partners to support the Center.
6. This Terms of Reference may be revised as necessary, through discussions among AZEC partner countries and with the ERIA.