

# **Recommendations for Advancing the AZEC Initiative**

For the 2nd AZEC Ministerial Meeting

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一般社団法人 日本経済団体連合会

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## **I. Expectations for AZEC**

As natural disasters intensify and become more frequent worldwide, addressing climate change is more urgent than ever. Many countries and regions, including Japan, have announced their commitment to achieving carbon neutrality with specific target dates. Within this context, decarbonization in Asia, which accounts for nearly 50% of global greenhouse gas emissions, is the key to achieving global carbon neutrality. Among these, the Association of Southeast Asian Nations (ASEAN) is expected to see an increase in energy demand due to population growth, economic development, and the expansion of AI and data centers. As such, ASEAN faces the challenge of ensuring a stable energy supply and steadily promoting decarbonization without hindering economic growth. Furthermore, with a few exceptions, most countries in the region rely heavily on fossil fuels for their energy sources, and some countries are not necessarily blessed with resources and suitable locations for renewable energy. In light of this, it is necessary to realistically and steadily advance decarbonization by forming projects tailored to each country's circumstances and needs in a wide range of fields, including the utilization of hydrogen and ammonia, CCUS<sup>1</sup> / DAC<sup>2</sup>, energy conservation, and power grid development.

In January 2022, the Japanese government proposed the Asia Zero Emission Community (AZEC) initiative<sup>3</sup> with the aim of ensuring that Asian countries share a common philosophy of promoting carbon neutrality and cooperate to advance energy transition. Subsequently, AZEC was launched with nine ASEAN countries and Australia as partners, aiming for optimal energy transitions tailored to the unique circumstances of partner countries and based on the basic principles of simultaneous achievement of decarbonization, economic growth, and energy security and realizing the goal of net-zero emissions through various and practical pathways. AZEC, initiated by the Japanese government, has gained understanding from partner countries based on Japan's long-

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<sup>1</sup> Abbreviation for Carbon Dioxide Capture, Utilization and Storage.

<sup>2</sup> Abbreviation for Direct Air Capture of carbon dioxide from the atmosphere.

<sup>3</sup> Proposed by Prime Minister Fumio Kishida in January 2022.

<https://www.kantei.go.jp/jp/headline/copazec/index.html> (in Japanese)

standing track record and trust in economic cooperation and public-private partnership projects, and the groundwork is being laid for mutual dialogue. As ASEAN continues to advance its industrialization, there is a need for interactive discussions based on the realities of Asia's energy and industry sectors. The Japanese business community has high expectations for this initiative.

As many Japanese companies and various entities have already begun projects contributing to carbon neutrality in partner countries, steady promotion of these projects is required. To further materialize the initiative, partner country governments should work on *policy and institutional cooperation* as a community and *individual project support*, as two complementary approaches.

Under this understanding, Keidanren has compiled recommendations on policy coordination areas to be addressed AZEC-wide, support measures that the Japanese and partner country governments should undertake to promote individual projects, and implementation structure for policy coordination and individual projects, based on survey results from Keidanren member companies.

We Keidanren urge partner country governments to give thorough consideration to the following recommendations and reflect them in concrete actions towards the upcoming AZEC Ministerial Meeting. In particular, we expect the Japanese government, as the country that initially proposed AZEC, to work together across relevant ministries and demonstrate strong leadership for partner countries.

## **II. Promotion of AZEC-Wide Policy Coordination**

It is important for each partner country to collaborate and cooperate in rule-making and finance to pursue the optimal path towards achieving carbon neutrality. This will lead to accelerated decarbonization in Asia. Moreover, it is crucial for AZEC to speak and communicate externally as a unified body to link these efforts to multilateral frameworks and rule-making. We hope to promote understanding of AZEC activities beyond partner countries and to work on expanding partners to include India and other countries in the

future.

The Asia Zero Emission Center<sup>4</sup>, to be established at ERIA this summer, is expected to support the development of visions, roadmaps, and policies for decarbonization in each partner country. Promoting the development of visions and roadmaps by presenting an overall picture including specific options for low-carbon transition is important as a foundation for advancing policy coordination and individual projects in partner countries.

## **1. Rule-Making**

### **1) Zero-Emission Supply Chains**

To promote carbon neutrality AZEC-wide, it is essential to reduce greenhouse gas emissions from entire supply chains (including Scope 3) spanning Asia. This requires visualization of emissions, auditing, and continuous monitoring. Unifying within AZEC the calculation and reporting rules for emissions (Scopes 1 and 2) that companies operating in the country report to the government is extremely important as it will help reduce the burden on businesses. Also, in considering unifying the calculation and reporting rules, AZEC partner governments should refer the discussion about them in the GX League in Japan. While deepening discussions on what kind of unified rules are desirable for AZEC, support measures such as capacity building by the government will be required for companies that find it difficult to apply unified rules.

Furthermore, to link such emission data across supply chains, we should aim to build an Asian data collaboration platform. Japan should provide insights from the Ouranos Ecosystem<sup>5</sup> and develop a certification system to ensure interoperability and

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<sup>4</sup> The AZEC Leaders' Joint Statement (December 2023) defines it as a platform to share information, conduct studies on policies and projects, promote energy transitions in AZEC partner countries, and help AZEC partners develop visions, roadmaps or policies towards decarbonization, where applicable.

<sup>5</sup> An initiative in which industry, academia, and government collaborate to design architectures, conduct R&D and testing, and implement and disseminate social systems for sharing and leveraging data across companies, industries, and national borders.

compatibility with European data spaces such as Catena-X<sup>6</sup>.

## **2) Establishing Green Product Markets**

As part of efforts towards carbon neutrality, it is necessary to develop markets (both B2B and B2C) that prioritize green products. This development requires mechanisms that effectively communicate and promote the value of environmentally friendly goods.

Carbon Footprint (CFP) exists as a standard for expressing greenhouse gas emissions of products, and while it is one indicator for choosing products with lower absolute emissions, it cannot be used for simple comparison between different products.

During the energy transition period, it is preferable to use indicators that quantitatively evaluate the results of emission reduction efforts as the green value of products. From this perspective, Reduced Emissions of Product (REP), which indicates the amount of emission reduction compared to conventional products, is an appropriate indicator for the demand side when choosing green products. The Avoided Emissions of Product (AEP)<sup>7</sup>, which shows the emission reductions achieved outside the company, such as during the product use phase, is also considered an important indicator. By adopting these indicators and expanding them to partner countries, we expect Japan to lead the discussion on building green product markets in Asia. In the future, it is desirable for REP and AEP to be referenced in Asia and globally. To promote the international standardization of the Reduced Emissions of Product (REP), it is crucial to reflect this concept in the greenhouse gas emission calculation rules of the GHG Protocol and various ISO standards. It is essential to consider the perspective of international rule-making based on the realities of each industry sector when working towards the international standardization of REP.

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<sup>6</sup> A platform for standardizing the data exchange mechanism and sharing data across the entire automotive industry supply chain. 172 companies and organizations are participating (as of February 2024). It handles comprehensive data including traceability information for materials and parts, environmental impact information, production volumes, and demand. In the future, it is expected to enable tracking of CO<sub>2</sub> emissions across the entire supply chain.

<sup>7</sup> AEP visualizes the future emission reduction potential of decarbonization technologies and products for the entire society, linking it to evaluations by financial institutions and governments to create technological and corporate value.

Moreover, there are industry-specific ISO standards, therefore, as a prerequisite for incorporating REP into the GHG Protocol and various ISO standards, it is desirable for partner countries to collaborate and cooperate within each industry sector.

### **3) Promotion of Joint Crediting Mechanism and Expansion of Partner Countries**

While carbon credits are being increasingly introduced in AZEC partner countries as a complement to corporate decarbonization efforts, JCM is expected to be a mutually beneficial system for Japan and partner countries. However, the environment surrounding JCM is changing, with some credits being restricted from international transfer as a result of the systems within JCM partner countries, and similar bilateral initiatives being developed by other countries such as Europe.

Therefore, the Japanese government should make an effort to expand JCM partner countries and, while leveraging Japan's knowledge and track record in JCM, standardize rules as much as possible among AZEC partner countries to promote credit trading under AZEC.

In doing so, the JCM's sectoral scope<sup>8</sup> should also incorporate technologies contributing to decarbonization, such as hydrogen, ammonia, synthetic fuels like e-fuel and e-methane, CCUS/DAC, and upgrades to environmentally friendly equipment.

### **4) Other Standards**

#### **(a) CO<sub>2</sub> calculation methods for low-carbon hydrogen, etc. (hydrogen, ammonia, e-methane, synthetic fuels):**

Low-carbon hydrogen and related technologies are key technologies for advancing carbon neutrality, as they contribute to decarbonizing not only thermal power but also industrial heat demand and the transport sector. Japan has established a policy for calculating CO<sub>2</sub> emissions from low-carbon hydrogen and related products, specifying different calculation ranges for various fuel types. For hydrogen and ammonia, it uses a

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<sup>8</sup> Technologies and projects eligible under the JCM.

Well-to-Gate approach, covering emissions from raw material production to the hydrogen production process. For e-methane and synthetic fuels, it considers the entire supply chain. However, other partner countries have not yet established clear standards for these calculations. To promote cross-border supply chain projects, discussions on unified calculation methods based on carbon intensity should be deepened among stakeholders such as companies and governments, and model cases should be developed. We ask the Japanese government to take leadership in promoting common calculation standards for low-carbon hydrogen, etc., through government-to-government dialogues.

**(b) Regulations on hazardous material import/export and handling:**

In energy projects, there may be cases where hazardous materials or high-pressure gases such as next-generation fuels (e.g., hydrogen, ammonia, biodiesel, synthetic fuels) are experimentally imported or exported from the testing phase. In such cases, if safety regulations differ for each partner country, it can be a burden on businesses and impact the progress of projects. To facilitate the smooth implementation of decarbonization projects, when there are differences in domestic regulations related to hazardous materials or high-pressure safety, consideration should be given to harmonizing regulations within the partner country region, with safety as the fundamental premise.

**5) Promotion of Trade and Investment**

To promote environmentally friendly goods and encourage investment in green infrastructure, partner countries are urged to accelerate tariff reduction schedules for goods in EPAs/FTAs in which they participate, and eliminate investment barriers, including foreign investment regulations.

**2. Finance**

While there is a demand for \$3 trillion in green investment across ASEAN between 2016 and 2030, it remained at \$40 billion annually as of 2016<sup>9</sup>, necessitating a huge

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<sup>9</sup> DBS estimate.  
[dbs.com/iwovresources/images/sustainability/img/Green\\_Finance\\_Opportunities\\_in\\_A\\_S\\_E\\_A\\_N.pdf](https://www.dbs.com/iwovresources/images/sustainability/img/Green_Finance_Opportunities_in_A_S_E_A_N.pdf)



amount of funding. Expectations for transition finance are particularly high. However, even in the transition phase, developing innovative technologies and products involves technical risks, time, and costs, while advancing transition projects carries potential risks associated with policy changes. For this reason, private financial institutions tend to be reluctant to invest as it is difficult to foresee the recovery of investment in such projects, resulting in a shortage of private funds for transition.

Therefore, it is necessary to expand funding supply measures that can serve as a catalyst for private funds, such as the promotion of blended finance by multilateral development banks (MDBs) like the World Bank and Asian Development Bank. It is also important to deepen discussions in the Asia Transition Finance Study Group (ATFSG)<sup>10</sup> and Asia GX Consortium<sup>11</sup> and have them lead to the formation of specific projects towards carbon neutrality, including appropriate responses to LNG, hydrogen, and ammonia projects during the transition period. Furthermore, by linking these discussions with the ASEAN Taxonomy (Version 3)<sup>12</sup>, it is necessary to gradually apply hydrogen, ammonia, CCS, etc. to existing assets in line with the realities of the transition period, including positioning the use of hydrogen and ammonia, which are effective in decarbonizing coal-fired power plants, as environmentally friendly projects.

In addition, the Blue Dot Network (BDN) is being discussed within the OECD as a framework for giving international certification to high-quality infrastructure projects, and evaluation criteria<sup>13</sup> related to climate change should be revised to recognize diverse transition pathways.

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<sup>10</sup> A private sector-led initiative of Asian and global financial institutions, providing recommendations to complement existing international frameworks, including standards and taxonomies.

<sup>11</sup> A framework for discussing transition finance, primarily among private financial institutions with public sector participation, to develop specific methods and structure projects.

<sup>12</sup> Developed by the ASEAN Taxonomy Board, which was established by ASEAN Finance Ministers' and Central Bank Governors' Meeting (AFMGM) and comprises financial authorities from 10 ASEAN member countries.

<sup>13</sup> The essential requirements include thresholds for NDC consistency and lifecycle emissions of thermal power generation based on the EU Taxonomy.

### **III. Recommendations to Governments for Promoting Individual Projects**

In parallel with considering policy coordination, it is also important to strongly promote individual projects aimed at carbon neutrality. For this, it is essential that each partner country implements support measures such as reforming regulations and systems that are barriers to project advancement and taking tax and fiscal measures.

#### **1. Recommendations to the Japanese Government**

Japanese companies have signed numerous MOUs (Memorandums of Understanding) with partner country companies on cooperation in the decarbonization and carbon neutrality fields. While these projects are positioned as AZEC projects, they are not differentiated from other projects, and the benefits of being an AZEC project, such as preferential support or procedural exceptions, are not clearly visible. For example, in the Global South Future-Oriented Co-Creation Project (Global South Budget), AZEC projects may receive additional points in evaluation, but this does not guarantee adoption.

Therefore, to promote AZEC projects, the Japanese government needs to provide clear economic incentives for these projects and encourage the governments of countries where projects are implemented to take support measures such as tax and fiscal policies. Specifically, efforts should be made to continue to support AZEC projects by encouraging the acquisition of related budgets in each country, expanding Japan's Global South budget specifically for AZEC projects, increasing budgets for human resource development and pilot projects, and considering additional points for AZEC projects during selection.

Furthermore, using the Inter-ministerial Meeting for the Promotion of the Asia Zero Emission Community (June 2024), the government should accelerate cooperation as a unified body in a wide range of fields for partner countries' decarbonization, including transition finance, transportation such as ships and aviation, and agriculture and forestry, with future summit meetings in mind.

## 2. Recommendations to Other Partner Country Governments

### 1) ASEAN Region

Project Area	International Power Grid Development
<b>Recommendations:</b> The ASEAN Power Grid Initiative <sup>14</sup> is being promoted to enable cross-border power exchange among ASEAN countries. However, progress has been delayed due to technical challenges and high costs associated with connecting long-distance undersea cables. To accelerate the achievement of this initiative, we recommend AZEC partner countries to consider providing support for technical cooperation and rule-making for inter-country power transmission.	
<b>Related Laws and Regulations:</b> <ul style="list-style-type: none"><li>• None</li></ul>	

Project Area	Energy Efficiency Standards
<b>Recommendations:</b> As an indicator to evaluate energy efficiency, ASEAN countries have adopted the Minimum Energy Performance Standard (MEPS) <sup>15</sup> , and ASEAN as a whole has set MEPS target values <sup>16</sup> . It is desirable to implement early and gradual raising of MEPS targets based on the circumstances of each country. In addition to setting MEPS targets, further energy savings can be achieved by, for example, raising the temperature setting of air conditioners. Therefore, it is necessary to consider policies that encourage changes in consumer behavior along with promoting the introduction of appropriate air conditioning systems. Furthermore, as air conditioners and other highly energy-efficient appliances become more widespread, it is crucial to consider legal frameworks and support measures for supply chains to properly implement the recovery, reuse, or destruction of fluorocarbons to prevent their impact on global warming when released into the atmosphere.	
<b>Related Laws and Regulations:</b> <ul style="list-style-type: none"><li>• None</li></ul>	

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<sup>14</sup> An international power grid concept initiated by ten ASEAN countries (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam) through a memorandum of understanding signed on August 23, 2007.

<sup>15</sup> A widely adopted global energy efficiency standard requiring all products to meet set criteria or face suspension of shipment.

<sup>16</sup> Target values set by U4E (United for Efficiency), a UNEP-led international initiative.

## 2) Indonesia

Project Area	Renewable Energy
<b>Recommendations:</b> While renewable energy introduction projects are being considered in industrial parks and power plant sites, country-specific approval processes and local rules <sup>17</sup> exist. Additionally, systems related to power procurement (e.g., offsite PPA, DPPA <sup>18</sup> , etc.) are not in place, which is hindering the introduction of renewable energy. As renewable energy demand is expected to increase in the future, we recommend clarification of approval processes, elimination of local rules, and consideration of developing systems related to power procurement.	
<b>Related Laws and Regulations:</b> <ul style="list-style-type: none"><li>• ESDM 50/2017</li><li>• Presidential Regulation 112/2022</li><li>• MEMR Regulation 2/2024</li></ul>	

Project Area	Hydrogen and Ammonia
<b>Recommendations:</b> While projects related to the production and utilization of hydrogen and ammonia, such as co-firing in thermal power plants, are being considered, related regulations and government support are not in place. To promote hydrogen and ammonia, we recommend expanding public support for pilot projects, support for equipment introduction costs and fuel price gaps, and developing schemes to realize low-cost renewable energy supply for green hydrogen and green ammonia production.	
<b>Related Laws and Regulations:</b> <ul style="list-style-type: none"><li>• None</li></ul>	

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<sup>17</sup> An Indonesian local rule attributes all environmental value of solar-generated electricity to PLN (Indonesian State Electricity Company).

<sup>18</sup> Direct Power Purchase Agreement between renewable energy generators and electricity users.

<b>Project Area</b>	<b>CCUS/DAC</b>
<b>Recommendations:</b>	
<p>The Indonesian government has developed policies and ministerial decrees related to CO<sub>2</sub> storage, and many CCUS pilot projects are underway. However, systems to provide incentives for CCUS/DAC operators and legal frameworks for CO<sub>2</sub> emitters, including power generation companies, are not yet established. For this reason, it is necessary to promote systems such as subsidies and tax credits for CAPEX/OPEX of CCUS/DAC operators, as well as organize legal frameworks for CO<sub>2</sub> utilization and develop regulations and detailed rules for emissions. In formulating these detailed rules, fair rule-making is necessary, with the aim of developing common guidelines across AZEC. Additionally, it is necessary to advance capacity building to develop talent who understand the value of not only CO<sub>2</sub> emission reduction but also CO<sub>2</sub> removal, and discussions to add CCUS/DAC projects to the JCM sectoral scope.</p>	
<b>Related Laws and Regulations:</b>	
<ul style="list-style-type: none"> <li>• Presidential Regulation 14/2024</li> <li>• Ministerial decree of MEMR No.22 (2019)</li> <li>• Ministerial decree of MEF No.8 (2021)</li> </ul>	

<b>Project Area</b>	<b>Power Grid Development</b>
<b>Recommendations:</b>	
<p>In Indonesia, which consists of many islands, areas with renewable energy potential and areas of demand are both unevenly distributed. Additionally, due to capacity limitations in the power grid for each island, it is difficult to connect new renewable energy sources. While inter-island power transmission projects are being considered to exchange electricity between islands, it is difficult for the private sector alone to bear the costs. To reduce risks for businesses, we recommend expanding public funds for power transmission and distribution network development.</p>	
<b>Related Laws and Regulations:</b>	
<ul style="list-style-type: none"> <li>• None</li> </ul>	

<b>Project Area</b>	<b>Mobility</b>
<b>Recommendations:</b>	
<p>In Indonesia, urban railway development and EV adoption are expanding mainly in Jakarta, with the EV market is expected to become the largest in ASEAN. In anticipation of further expansion of railway lines and the spread of EVs and electric buses, it is necessary to consider expanding public support for accelerating the introduction of lithium-ion batteries and EV charging infrastructure.</p>	
<b>Related Laws and Regulations:</b>	
<ul style="list-style-type: none"> <li>• None</li> </ul>	

### 3) Australia

<b>Project Area</b>	<b>Hydrogen and Ammonia</b>
<b>Recommendations:</b>	
<p>Australia aims to become a hydrogen exporting country by leveraging its abundant resources and geographically favorable conditions for renewable energy, to produce hydrogen domestically and export it overseas. In May 2024, Australia announced plans to invest an additional 22.7 billion Australian dollars (about 2 trillion yen) in decarbonization, working to support the development of international hydrogen supply chains. In light of this opportunity, we recommend price gap and other government support, as well as streamlining of approval processes to generate initial demand.</p>	
<b>Related Laws and Regulations:</b>	
<ul style="list-style-type: none"> <li>• Hydrogen Headstart Program</li> <li>• Hydrogen Production Tax Incentive</li> </ul>	

<b>Project Area</b>	<b>LNG</b>
<b>Recommendations:</b>	
<p>While many LNG projects are being considered, reputational risks such as lawsuits by residents and criticism from NGOs have become evident in recent years. We recommend the Australian government clarify its policy direction, support development, and provide assistance for LNG as an important fuel supporting Asia’s energy transition.</p>	
<b>Related Laws and Regulations:</b>	
<ul style="list-style-type: none"> <li>• None</li> </ul>	

<b>Project Area</b>	<b>CCUS/DAC</b>
<b>Recommendations:</b>	
<p>Australia is attracting attention as a suitable location for CCS and CCUS/DAC for Asia, and multiple projects using depleted gas fields are being considered. However, since Australia does not have a system to support CCS and CCUS/DAC projects<sup>19</sup>, we recommend support systems (subsidies, financing, etc.) through cooperation between CO<sub>2</sub>-emitting countries and Australia.</p>	
<b>Related Laws and Regulations:</b>	
<ul style="list-style-type: none"> <li>• None</li> </ul>	

<sup>19</sup> The CCUS Hubs and Technologies program, a subsidy supporting CCS and CCUS projects’ R&D and commercialization, was terminated in 2022.

Project Area	Construction-Related Laws
<p><b>Recommendations:</b></p> <p>In relation to various decarbonization projects' subcontracting construction, lawsuits related to the Security of Payment Act have become frequent and problematic<sup>20</sup>. As this is a major risk factor for foreign investors, we recommend fair and equitable operation of this law.</p>	
<p><b>Related Laws and Regulations:</b></p> <ul style="list-style-type: none"> <li>• Building and Construction Industry Security of Payment Act</li> </ul>	

#### 4) Singapore

Project Area	Hydrogen and Ammonia
<p><b>Recommendations:</b></p> <p>With the formulation of the National Hydrogen Strategy in 2022, efforts to introduce hydrogen and ammonia have intensified, particularly for power generation and marine fuels. This has also accelerated market entry by major trading companies and infrastructure firms, including Japanese corporations. On the other hand, the high CAPEX is a challenge. Therefore, we recommend first mover support at the start of business, support for price gaps considering the price gap with existing fuels and for equipment introduction, as well as support from the Singapore government for projects by Singaporean companies implemented in other countries.</p>	
<p><b>Related Laws and Regulations:</b></p> <ul style="list-style-type: none"> <li>• Singapore's National Hydrogen Strategy</li> </ul>	

Project Area	Renewable Energy and Power Grid
<p><b>Recommendations:</b></p> <p>To achieve its carbon neutrality goal, the Singapore government plans to import 4GW of renewable energy, equivalent to 30% of total power supply, from neighboring countries by 2035. However, there are various diplomatic issues, technical issues, and cost concerns due to Singapore not being connected to other countries and the need for undersea cables for some long-distance power transmission. To realize this early, it is necessary for partner countries to consider expanding support such as project formation and technical cooperation.</p>	
<p><b>Related Laws and Regulations:</b></p> <ul style="list-style-type: none"> <li>• Singapore Green Plan 2030</li> </ul>	

<sup>20</sup> This law allows third-party arbitrators to quickly enforce payments in construction projects if agreed milestone payments are intentionally withheld. After a contractor's application, the project owner must respond within five business days. Misuse cases include claiming non-milestone costs or resubmitting rejected claims to different arbitrators. Notably, the law doesn't penalize applicants for false or defective claims, potentially leading to abuse.

## 5) Thailand

Project Area	Renewable Energy
<p><b>Recommendations:</b></p> <p>While there are high expectations for solar power generation in Thailand, which has abundant sunlight throughout the year, prolonged construction and power generation approval processes as well as regulations such as load-bearing constraints are challenges when installing rooftop solar panels on factories and facilities. Therefore, we recommend simplifying approval processes and relaxing requirements in line with international standards. Also, as means for the demand side to procure renewable energy are limited, we recommend the government urgently consider developing power systems such as power liberalization and development of wheeling systems to enable renewable energy offsite PPAs.</p>	
<p><b>Related Laws and Regulations:</b></p> <ul style="list-style-type: none"> <li>• Notifications of Ministry of Industry</li> <li>• Protection &amp; Fire Fighting Laws</li> <li>• Building Control Act B.E. 2522 (1979)</li> <li>• Energy Industry Act B.E. 2550 (2007)</li> <li>• Renewable Energy Act</li> <li>• Power Development Plan (PDP2018)</li> <li>• National Energy Plan</li> </ul>	

Project Area	Hydrogen and Ammonia
<p><b>Recommendations:</b></p> <p>While feasibility studies are being conducted on hydrogen and ammonia co-firing pilot demonstrations for existing coal and oil-fired power plants, fuel ammonia is not included in the Power Development Plan (PDP2018) formulated by the Thai government. We recommend positioning ammonia alongside hydrogen in decarbonization policies and considering expanding government support.</p>	
<p><b>Related Laws and Regulations:</b></p> <ul style="list-style-type: none"> <li>• Power Development Plan (PDP2018)</li> </ul>	



## 6) Vietnam

Project Area	Renewable Energy and Power Grid
<p><b>Recommendations:</b></p> <p>The development of laws related to renewable energy and grid connection for renewable energy (e.g., Electricity Law, Marine Area Usage Law, Investment Law, DPPA) is delayed. Therefore, we recommend acceleration of these legal developments in accordance with the 8th National Power Development Master Plan (PDP8). Additionally, we urge the prompt consideration of measures to strengthen the power grid and maintain power system stability in line with the increasing generation capacity.</p>	
<p><b>Related Laws and Regulations:</b></p> <ul style="list-style-type: none"> <li>• Electricity Law (No.28/2004/QH14)</li> <li>• Law on Planning (No.21/2017/QH14)</li> <li>• Law on Investment (No.61/2020/QH14)</li> <li>• Law on State Compensation Liability (No.10/2017/QH14)</li> <li>• National Power Development Plan VIII (PDP8)</li> </ul>	

Project Area	Hydrogen and Ammonia
<p><b>Recommendations:</b></p> <p>While the 8th National Power Development Master Plan (PDP8) outlines a policy to phase out coal-fired power by 2050 (stopping new development, retiring or fuel conversion of coal-fired power plants that have operated for 20 years after commissioning) and carry out future hydrogen co-firing/exclusive firing in gas/LNG power plants, detailed roadmaps and legal framework development have not progressed. To further develop hydrogen and ammonia projects from a medium- to long-term perspective, we recommend accelerating consideration of roadmap creation and legal framework development.</p>	
<p><b>Related Laws and Regulations:</b></p> <ul style="list-style-type: none"> <li>• Electricity Law (No.28/2004/QH14)</li> <li>• National Power Development Plan VIII (PDP8)</li> </ul>	

<b>Project Area</b>	<b>LNG</b>
<p><b>Recommendations:</b></p> <p>Electricity consumption in 2030 is expected to double compared to 2020, and there are plans to increase generation capacity to 2.3 times 2020 levels by 2030 (PDP8). On the other hand, the occurrence of serious power shortages and supply instability due to vulnerable power networks are problems, and securing immediate supply capacity is urgent. In this context, the Vietnamese government has requested partner countries to start large-scale LNG-fired power generation projects early. However, even with the latest proposed conditions, project bankability (a loan eligibility criteria) is not sufficiently secured for foreign investors to raise funds from international financial institutions<sup>21</sup>. In addition, while the Vietnamese government is gradually beginning to understand the importance and necessity of LNG-fired power generation, there is little understanding of industry standards, including LNG sales and purchase agreement clauses. As a result, we recommend further understanding and promotion regarding the importance and necessity of LNG-fired power as a baseload power source during the transition period, as well as LNG sales and purchase agreements. We also recommend policy support to improve bankability for project finance composition to promote projects, and to show the path that LNG-fired power generation can take towards carbon neutrality by 2050.</p>	
<p><b>Related Laws and Regulations:</b></p> <ul style="list-style-type: none"> <li>• Electricity Law (No.28/2004/QH14)</li> <li>• Law on Planning (No.21/2017/QH14)</li> <li>• Law on Investment (No.61/2020/QH14)</li> <li>• Law on State Compensation Liability (No.10/2017/QH14)</li> <li>• National Power Development Plan VIII (PDP8)</li> <li>• Methods for determining prices for electricity generation and power purchase agreement (MOIT Circular No.07/2024/TT-BCT, 2024 April 12)</li> </ul>	

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<sup>21</sup> International financial institutions typically require project finance conditions such as take-or-pay agreements (where buyers commit to minimum payments and quantities), fuel cost pass-through (where payment claims and their fluctuation risks are directly reflected between parties), exchange rate risk provisions, and contract termination penalties. However, Vietnam’s standard PPA contract template, as stipulated by ministerial ordinance, does not meet these conditions, creating challenges for project financing.

## 7) Malaysia

Project Area	Hydrogen and Ammonia
<p><b>Recommendations:</b></p> <p>In 2023, Malaysia published the National Energy Transition Roadmap, which positions renewable energy along with hydrogen, ammonia, and CCUS as important investment areas. For more widespread adoption of renewable energy, hydrogen, and ammonia, we recommend the government consider support for equipment installation costs and fuel price gaps, expansion of grid connection capacity, simplification of approval processes, as well as removal of annual adoption limitations and consideration of transmission fee reductions/exemptions to lower costs.</p>	
<p><b>Related Laws and Regulations:</b></p> <ul style="list-style-type: none"><li>• Renewable Energy Act 725 (2011)</li><li>• Electricity Supply Act (1990)</li><li>• New Energy Dispatch Arrangement (NEDA) Rules (2019)</li><li>• Corporate Green Power Program Guideline (2022)</li><li>• Gas Supply (Amendment) Act (2016)</li></ul>	

Project Area	CCUS/DAC
<p><b>Recommendations:</b></p> <p>While Malaysia is said to have the highest CCUS potential in ASEAN and business expansion is expected in the future, JCM has not been established with Japan, and CCUS/DAC is not included in the scope of JCM in the first place. It is necessary to promptly establish JCM, as well as capacity building to nurture human resources who understand the value of not only CO<sub>2</sub> emission reduction but also CO<sub>2</sub> removal, and discussions to add CCUS/DAC projects to the JCM sectoral scope.</p>	
<p><b>Related Laws and Regulations:</b></p> <ul style="list-style-type: none"><li>• None</li></ul>	

## 8) Philippines

Project Area	Renewable Energy
<p><b>Recommendations:</b></p> <p>The National Renewable Energy Program (NREP) 2020–2040 sets targets for renewable energy to reach 35% of domestic energy supply by 2030 and 50% by 2040. However, prolonged and complicated approval processes for renewable energy introduction, as well as ownership issues between local governments pose challenges. Additionally, renewable energy certificates to promote renewable energy use are not clearly distinguished from carbon credits traded for commercial purposes. Therefore, we recommend simplification of approval processes for renewable energy adoption, clarification of ownership based on land management, and clear categorization of renewable energy certificates.</p>	
<p><b>Related Laws and Regulations:</b></p> <ul style="list-style-type: none"> <li>• Renewable Energy Act of 2008 (R.A No. 9513)</li> <li>• Renewable Portfolio Standards (DOE DC 2017-12-0015)</li> <li>• Renewable Energy Market Rules (DOE DC 2019-12-0016)</li> <li>• Executive Order No.21(April 19, 2023)</li> <li>• Policy and Administrative Framework for the Efficient and Optimal Development of the Country’s Offshore Wind (DOE DC 2023-06-0020)</li> </ul>	

Project Area	Biomass
<p><b>Recommendations:</b></p> <p>In addition to hydrogen and ammonia, co-firing of biomass in existing coal-fired power plants is expected. To promote the use of biomass fuels and the spread of low-carbon technologies, we recommend support measures such as tax incentives.</p>	
<p><b>Related Laws and Regulations:</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul>	

<b>Project Area</b>	<b>LNG</b>
<b>Recommendations:</b>	
<p>The construction of new coal-fired power plants has been banned with the exception of those under construction or that have already obtained approval, and there are concerns that the only domestic natural gas field (Malampaya gas field) will soon be depleted. Therefore, multiple new LNG import projects have been launched to secure immediate energy. However, due to the lack of a guaranteed minimum contract amount in the power supply bidding system, operators are exposed to risks of additional LNG procurement and resale, and the roadmap for LNG towards carbon neutrality has not been formulated. Therefore, we recommend establishing a guaranteed minimum contract amount in the power supply bidding system and prompt formulation of the roadmap. This will enable securing financing and lead to stable operation of LNG receiving terminals, which are important for energy security and transition.</p>	
<b>Related Laws and Regulations:</b>	
<ul style="list-style-type: none"> <li>• Meralco's<sup>22</sup> power supply bidding system</li> </ul>	

## 9) Cambodia, Brunei, Laos

<b>Project Area</b>	<b>JCM</b>
<b>Recommendations:</b>	
<p>We seek prompt establishment of JCM with Brunei. Although Cambodia and Laos are JCM signatory countries, for further expansion of JCM projects, it is necessary to clarify and accelerate processes such as determining credit distribution ratios for host countries.</p>	
<b>Related Laws and Regulations:</b>	
<ul style="list-style-type: none"> <li>• None</li> </ul>	

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<sup>22</sup> The largest electric power distributor in the Philippines.

## **IV. Establishing a Framework for Steady Implementation of Policy Coordination and Individual Projects**

### **1. AZEC-Wide**

We Keidanren seek agreement on policy areas and projects that should be addressed cooperatively across AZEC towards achieving carbon neutrality, including decarbonization of power, transport, and industrial sectors, at the 2nd Ministerial Meeting. And deepening discussions on the agreed content at the SOM (Senior Officials' Meeting) is also required. The Asia Zero Emission Center at ERIA should be responsible for following up on these agreements. By implementing a PDCA cycle and publishing progress reports, it is expected that the transparency of AZEC initiatives will be enhanced and that their international recognition will be expanded.

### **2. Partner Countries**

It is also essential to establish a system for each partner country to reliably implement the agreements made at the Ministerial Meeting. In Japan, an Inter-ministerial Meeting for the Promotion of the Asia Zero Emission Community has been established to promote AZEC-related initiatives across ministries and agencies, and an AZEC Ambassador position has also been created. We expect each partner country's government to develop a system to improve its ability to implement AZEC through collaborative efforts across relevant ministries and agencies.

To enhance this implementation system, one effective approach could be to involve not only the primary point of contact ministries but also other relevant government agencies in the joint task forces established with Vietnam, Indonesia, and the Philippines, thereby strengthening the overall implementation capacity of partner countries.