U.S. Chamber of Commerce International Affairs | U.S.-Japan Business Council | JUBC Japan-U.S. Business Council

Energy and Infrastructure

Industry and governments around the world have been working hard to meet ever-growing energy demand while simultaneously ramping up efforts to reduce greenhouse gas emissions in pursuit of carbon neutrality. At the same time, countries have renewed their policy focus on energy security due to the increasingly unpredictable geopolitical environment.

With the advancement of technology such as generative AI and the expansion of data center utilization, there is an urgent need for stable energy supplies to meet accelerating demand. It is crucial to strengthen energy resilience as well as achieve the energy transition through the entire energy supply chain.

The U.S.-Japan Business Council and the Japan-U.S. Business Council (hereafter "the Councils") believe that the U.S. and Japan must remain global leaders in promoting a stable and responsible global system that prioritizes achieving a more sustainable power sector and ensuring an affordable, reliable, and stable energy supply for both developed and developing countries.

Achieving carbon neutrality and enhancing energy security requires careful planning and international collaboration on pragmatic policies to advance a sustainable transition as well as designing an overall concept which includes energy production, power grids, efficiency measures and consumption. Every country has a different resource mix and is at a different stage of its energy transition pathway. Obviously, there can be no one-size-fits-all approach or collective pace, so we need to advance solutions that complement efforts to enable a balanced energy transition.

In addition, the Councils remain committed to U.S.-Japan cooperation in support of a Free and Open Indo-Pacific (FOIP) for the prosperity and security of the region. The Councils also see Southeast Asian countries as important stakeholders in achieving FOIP.

1. Continuing Efforts for Strengthening Energy Security

The Councils welcome that the U.S. and Japanese governments continued their Energy Security Dialogue and held a 1.5 track dialogue with the private sector last year. Considering the current uncertainties related to energy security, such as volatile energy prices and global competition over resources, it is important to continue these dialogues to promote stability and predictability.

We further acknowledge that natural gas and liquefied natural gas (LNG) play, and will continue to play, a vital role globally in helping countries reconsider reliance on coal and advance their economic growth and decarbonization objectives. The 2024 G7 communique reflects these sentiments when, it stresses "the important role that increased deliveries of LNG can play and acknowledge[s] that investment in the sector can be appropriate in response to the current crisis and to address potential gas market shortfalls provoked by the [current] crisis."

As the International Energy Agency (IEA), and numerous other credible energy forecasting entities, sees a role for natural gas in paving the way to a renewables-heavy energy mix, as well as a backup power source, LNG will continue to be important not only in the short term, but also in the long term. This is especially true for countries that have limited alternative low carbon energy sources to meet growing demand. This fundamental view was recognized in the final negotiations of the 2023 United Nations Climate Conference in Dubai (COP28), which concluded that "transitional fuels can play a role in facilitating the energy transition while ensuring energy security"- a clear signal of support for the role of natural gas in emissions reductions.

Meanwhile, the lack of consistency and transparency in the measurement and reporting of methane emissions has been a challenge for the LNG market. The Councils support the work of the U.S. Department of Energy's Measurement, Monitoring, Reporting, and Verification (MMRV) Working Group, which aims to create an internationally recognized standard for certifying the carbon emissions of natural gas products. This standard is an important step toward enabling LNG suppliers to compete on the basis of verifiably lower emissions than their competitors and will open new opportunities to lower emissions across the value chain.

Addressing emissions and carbon intensity throughout the natural gas value chain are an important priority for countries, investors, off-takers, and suppliers looking to ensure energy security and move projects forward. The Councils further support the progress of the Japan-U.S. Clean Energy and Energy Security Initiative (CEESI), which was established in May 2022 as the preeminent Japan-U.S. ministerial-level energy dialogue and which has thus far initiated knowledge sharing in carbon capture, utilization and storage (CCUS) / carbon recycling and civil nuclear energy.

The Councils recommend that the U.S. and Japanese governments consider the following measures to enhance energy security and resilience for a stable worldwide energy supply:

- Support the development and deployment of infrastructure to increase the capacity and efficiency of exporting U.S. LNG to the Indo-Pacific while accelerating the deployment of clean energy technologies in the region;
- Elevate and advance the U.S. Department of Energy's Measurement, Monitoring, Reporting, and Verification (MMRV) Working Group, which aims to create internationally comparable and reliable information on the methane, carbon dioxide and other greenhouse gas emissions of the natural gas lifecycle, and to enable natural gas providers to compete on the basis of verifiable claims of lower carbon emissions in their products;
- Increase energy supply through inter-governmental frameworks among like-minded countries and support investments in energy infrastructure to diversify supply chains and sources of energy, instead of depending on a single source;
- Expand utilization of nuclear power and promote the new generation of safer reactors which can contribute to the enhancement of energy security as a key source of safe, resilient, and green baseload power;
- Continue the Japan - United States Energy Security Dialogue, which strengthens the two countries' bilateral partnership on energy security and maintain its 1.5 track dialogue with related private sector partners in order to exchange thoughts and achieve alignment between governments and the private sector;
- Boost activities of the Coalition for LNG Emission Abatement toward Net-zero ("CLEAN") – an initiative by buyers and producers of LNG which aims to reduce methane emissions in the value chain; and,
- Drive discussions for managing and reducing carbon intensity through expansion of low carbon hydrogen and CO_2 capturing solutions. Each country, considering its own energy and economic situation, should work toward establishing carbon intensity targets for the production, import and consumption of low-carbon hydrogen in an effort to advance decarbonization activities.

2. Developing Schemes for Sustainable Transition

The Councils are aware that the energy transition is far more complicated than simply turning off fossil fuels and switching on renewables. It requires a balancing act between decarbonizing our society and ensuring secure, stable and affordable energy supplies for each country. Every country has different energy requirements and resource constraints which require a pragmatic, transparent and phased approach toward carbon neutrality.

Various solutions are available, including e-methane/e-natural gas, biogas, carbon capture systems, nuclear power, batteries, low-carbon hydrogen, and ammonia in addition to employing natural energy resources such as solar, wind, geothermal, and pumped storage hydropower. Technology development and innovation are critical to expanding adoption of these solutions, and we must also offer the private sector a fair return in order to increase the number of actual projects using these solutions, because limited incentives and support make it hard for commercial developers to greenlight resources and capital for such projects.

The Councils acknowledge the need to expand and modernize power grids and energy infrastructure to keep pace with ambitious goals for both renewables deployment and stable energy supply, and it is expected to explore means to boost investment in power grids and share best practices for grid modernization.

The Councils welcome that the governments of the U.S. and Japan have started a high-level policy dialogue on the synergies between the U.S. Inflation Reduction Act (IRA) and Japan's Green Transformation (GX) Promotion Strategy. These synergies will be one of the key thoughts and approaches for decarbonizing the power sector in both countries and reducing reliance on less resilient sources of supply in other goods. The approach must be to enhance flexibility and affordability, achieve industrial competitiveness, promote decarbonization and circularity, and strengthen economic and energy security.

The U.S. and Japan's continued efforts to achieve a carbon neutral world through "the policy dialogue on the synergies between the U.S. IRA and Japan's GX Promotion Strategy" will be the new core of U.S.-Japan cooperation in this area. The Councils urge the two governments' support for the following initiatives to accelerate decarbonization:

- Support continued implementation of the Memorandum of Cooperation between the Ministry of Economy, Trade and Industry of Japan and the U.S. Department of Energy concerning collaboration in the field of CCUS / conversion and recycling, and CO_2 removal;
- Continue commitment on switching to natural gas, a stable and dispatchable cleaner power supply which can be utilized as a baseload power, and methanol from other fuels with higher emissions; and deploying cutting edge technologies such as dual-fuel gas turbines capable of combusting both natural gas and hydrogen, or hydrogen-only combustion;
- Activate incentives for CCUS and other decarbonization pathways for cleaner utilization of existing infrastructure, decarbonization of hard-to-abate sectors such as the industrial and transportation sectors, energy saving for buildings and production of cleaner fuels including hydrogen/ammonia, e-fuels such as e-methane/e-natural gas, sustainable aviation fuel and biogas;
- Promote cross-sectoral cooperation, such as the recent consortium announcement between U.S. and Japanese companies, to develop an entire hydrogen value chain from production to transportation, storage and utilization, and mobilization of all technologies related to hydrogen, ammonia, and e-methane/e-natural gas to quickly realize a hydrogen economy;
- Establish a 1.5 track dialogue for the IRA-GX Coordination Ministerial Meetings so that industry can share pragmatic commercial expertise with the ministers to maximize the value of the policy dialogue. This effort would promote further the U.S.-Japan collaboration on investment for clean energy projects by addressing bottlenecks and challenges each country's private sectors face, especially related to the timing of the implementation of their respective measures;
- Add an inflation adjustment clause into the IRA with respect to tax credits for hydrogen and ammonia production and CCUS to attract needed investment to such decarbonization projects. For example, by the addition of an inflation adjustment clause (as in the case of renewables) and by the relaxation of the proposed "three pillars" regulatory requirements for hydrogen production, such as the production of simultaneous quantities at the same time of day;
- Set a framework which enables carbon footprints of investments by Japanese companies in decarbonization projects in the U.S. to be measured and returned to Japan, so that Japan can achieve visibility for its global contribution toward realizing a carbon neutral world; and,
- Ensure a clear and sustainable rules-based approach so that each country has predictable policies toward reducing emissions or introducing a price for carbon, and develop mechanisms for emissions trading and environmental value trading, so-called 'Corresponding Adjustment', across countries.

3. Implementing Proven Technologies into Society at Scale

The Councils emphasize that disruptive innovation which supports an orderly energy transition is necessary to achieve the carbon neutrality targets set for 2050 by the U.S. and Japanese governments. Also, no single technology can achieve this target, and an "all-of-the-above" approach is required.

The U.S. and Japan lead the world in low- and zero- carbon energy innovations, and both governments should promote policies that advance this leadership through support for implementation of existing technologies and investment in research and development of future solutions. Implementation at scale and at a reasonable cost are two of the largest barriers to carbon neutrality, and support for both the deployment of existing solutions and R&D simultaneously will enable industry to deploy, review and evaluate, and then iterate on existing solutions to reach the breakthroughs needed tomorrow.

It is important for the two governments to look carefully at technologies and projects which will realistically contribute to the energy transition. The Councils recommend the two governments promote the following policies to accelerate implementing proven technologies:

- Implement digital technologies in the energy and infrastructure sector, including power grids, for the improvement of efficiency, utilization of limited resources, and promotion of smart, modern, and resilient infrastructure;
- Utilize AI and IoT technologies to decarbonize value chains such as hydrogen and CO_2 and optimize demand management of power grids. Investment is required for further optimization of power generation, transmission, and distribution;
- Establish a CO_2 value chain, one of the key pillars toward carbon neutrality and decarbonizing hard-to-abate sectors, by promoting development of business models utilizing captured CO_2 and creating a circular economy for CO_2 which has e-methane/e-natural gas as one solution;
- Cooperate to realize a mutual authentication for batteries which have become a strategic material. Batteries also contribute to overcoming the intermittency of renewables;
- Ensure a secure and sustainable supply chain for critical minerals that will better support expanded development of renewables and battery storage technologies. The Councils recognize the efforts of the Mineral Security Partnership in furthering this goal. In addition, industry requires support for developing technologies and products which can reduce the usage of critical minerals;
- Increase nuclear power usage with proven and advanced technologies including both new and existing plants and new technologies such as advanced and small modular reactors (A/SMRs), fast reactors, high temperature gas-cooled reactors and nuclear fusion that meet stringent safety standards;
- Develop risk-based standards incorporating private sector consultation to enhance cyber security resilience and readiness against cyber-attacks on critical infrastructure. The U.S. and Japan should take the lead in promoting the strengthening of cybersecurity for critical infrastructure such as Post Quantum Cryptography (PQC) and Quantum Key Distribution (QKD) in the G7, Southeast Asia and the so-called 'Global South' and,
- Provide subsidies to proven technologies and projects which will contribute to decarbonization in the U.S., Japan and other countries so that companies can scale solutions.

4. Cooperating with Southeast Asian Countries in Order to Achieve a Free and Open Indo-Pacific

The Councils believe the cooperation of the U.S., Japan, and Southeast Asian countries in the Indo-Pacific region is essential to realizing a Free and Open Indo-Pacific (FOIP) that brings prosperity and security to the region.

Southeast Asian countries require infrastructure in order to sustain rapid economic growth. It is not enough to just invest in projects across the board; efforts must be focused on promoting quality infrastructure investment so as to support strong, sustainable and balanced growth and to enhance resilience.

Southeast Asia is one of the largest and fastest-growing areas on earth and therefore requires significant energy supplies. U.S. LNG and Japanese decarbonization technologies will help the region to solve the energy trilemma of ensuring energy security, supplying affordable energy, and achieving environmental sustainability.

In particular, the rapid growth in plastics use across Southeast Asia has led to significant pressure on the environment. The U.S. and Japan can play a major role in supporting these nations' efforts to implement circular economy practices that will both protect the environment and create over 1.5 million jobs, as per a study by the Economic Research Institute for ASEAN and East Asia. The Councils urge the two governments to support the

following recommendations:

- Expand U.S.-Japan cooperation with Southeast Asian countries through multilateral initiatives, such as the Asian Zero Emission Community (AZEC), to decarbonize existing coal power plants with CCUS systems and sustainably switch coal power plants to LNG, use renewable natural gas with CCUS systems, and then convert such infrastructure to hydrogen/ammonia infrastructure with minimum modification for further emissions reduction in the long run as well as expanding batteries for sustainable usage of renewables;
- Mobilize financing to accelerate the development of low-carbon and clean energy technologies in Southeast Asia via the "Clean Energy, Decarbonization, and Infrastructure" pillar of the Indo-Pacific Economic Framework (IPEF) in the region. Simultaneously, utilize the "Supply Chain" pillar to secure the sustainable supply chain of energy infrastructure equipment and critical minerals, and ensure freedom of navigation;
- Increase capacity building training, technical assistance, and technology transfers between the U.S., Japan, and Southeast Asia, so that Southeast Asian countries can develop the cleaner, cheaper and more reliable electrical grid, and energy sources they need to advance their economic development;
- Utilize all existing frameworks for public-private dialogue established by the U.S. and Japanese governments to support private energy and infrastructure business projects in the region. This could take multiple forms, including providing business matching opportunities for private companies, encouraging mobilization of private capital, and reducing regulatory barriers in Southeast Asian countries;
- Encourage circular economy approaches, which can synergize with reducing carbon emissions and using natural resources sustainably, to reduce resource extraction as much as possible. In addition, circular economy practices can maximize the value of products and services throughout their entire life cycle;
- Develop common principles such as "Circular Economy and Resource Efficiency Principles (CEREP) and life cycle assessment (LCA) tools to evaluate the circularity and environmental impact of the different alternatives, and additionally support the waste hierarchy by rethinking the traditional, linear "take-make-dispose' way of doing business to adopt new ways of working that maximize the value and use of our resources. As the evaluation method of 'circularity' has a significant impact on the competitiveness of companies, it is necessary to take into account the characteristics of the industry and business sector;
- Pilot increased investment in waste management through available channels such as U.S. and Japanese development funding to create economic value for waste plastic (as a feedstock) and e-waste in the developing economies in the Indo-Pacific region; along with new job creation, while also establishing environmental solutions;
- Support Southeast Asian policymakers in developing and implementing their national roadmap for a circular economy, including the adoption of Extended Producer Responsibility (EPR) and its supporting regulations;
- Provide capacity building and/or technical assistance to enable better policymaking on the circular economy, specifically the use of fiscal incentives and mandates that could promote wider adoption of circular materials;
- Encourage greater investment in recycling technology, including the deployment of advanced recycling which is a more suitable technology to address the complexity in developing economies in the region; and,
- Promote greater public awareness of new cleaner alternatives increasing public acceptance of the role of CCUS, low carbon hydrogen and low emissions fuel as part of the "all-of-the above" solution to achieve a carbon neutral society by 2050.