



ASIA EDGE

Pathways to Energy Security in the Indo-Pacific

Building Sustainable Energy Transitions

Event summary by Micah Sindelar and Thomas Lutken

As countries in the Indo-Pacific manage rising energy demand and the negative effects of climate change, many nations are taking steps toward drastically reducing carbon emissions in the next 30 years by building sustainable and secure energy sectors. As part of its project on Asia EDGE, the National Bureau of Asian Research (NBR) convened a virtual conference on May 4–6, 2021, bringing together senior leaders from government, industry, and academia to discuss these issues.

The conference focused on how the Indo-Pacific can increase cooperation to aid energy transitions amid changing national strategies and priorities. Panels explored energy integration, sustainable supply chains, the technical challenges of renewable goals, opportunities for market liberalization, and the role that public-private partnerships could play.

This event summary highlights the key findings from the conference and presents recommendations for policymakers, industry leaders, and other major stakeholders.



Energy Transition in the Indo-Pacific

The Indo-Pacific will continue to see a massive increase in demand for energy over the coming decades. Determining a pathway for countries to transition to more sustainable energy use is important not only to the people who live there but to the entire globe, particularly as the region accelerates its targets for climate resiliency and clean energy development. Energy and climate security are enmeshed with international relations through energy trading and investment.

RECOMMENDATIONS FROM THE CONFERENCE

Focus on three pillars of development. As Ambassador Virginia Palmer noted in her keynote remarks, “the approaches to energy transitions will vary by country, but there are three pillars of development that can set a good foot forward: decarbonization, energy security, and energy access.” Countries in the region are tasked with providing affordable and reliable clean energy, while continuing to develop their economies. These three pillars do not need to be mutually exclusive. Partnerships in the region must focus on developing infrastructure to facilitate decarbonization, promote energy security through proper investment, and ensure electricity grids meet the entire population.



Ambassador Virginia Palmer
Bureau of Energy Resources
U.S. Department of State

Prioritize climate change considerations, cooperation, and coordination.

All new agreements must consider climate change. As Asia EDGE fellow Mandira Adhikari stated, “the entire world is gearing up for a clean energy transition. Following previous development paths is antithetical to parts of this transition and nations need to explore every possible opportunity.” Climate cooperation can be seen as the most universal common ground among countries that may have strained relationships.

A tailored strategy. The United States needs to tailor its strategy on the Indo-Pacific to be by country. The Association of Southeast Asian Nations (ASEAN) has set a common plan of action on energy cooperation, but each country will have unique technical challenges to solve to achieve this goal. To avoid wasting resources, new agreements between nations should be specific.





Updating Approaches to Energy Markets

Energy is both a large expense and a source of revenue for many countries in the Indo-Pacific. As such, governments frequently subsidize its use to build or protect domestic energy and economic security. Yet problems arise when countries seek international funding for necessary infrastructure and attempt to establish competitive market or enact market reforms. States in the Indo-Pacific will need to liberalize key parts of their energy markets while avoiding political pushback.

RECOMMENDATIONS FROM THE CONFERENCE

Offer targeted rather than blanket subsidies. Subsidies in region need to target the most vulnerable. As Asia EDGE fellow Han Phoumin stated, “often the subsidies in region are blanket subsidies, and this allows for leakage in terms of where funds get allocated and who benefits.” An example was subsidizing transportation fuels to stabilize their prices, which often benefited the rich and harmed the poor through worse pollution.

Remove fossil fuel subsidies. Subsidies for fossil fuels in Southeast Asia total \$51 billion are higher and more robust than subsidies for renewables. This incentivizes investors and developers to capitalize on fossil fuels. Participants called for the replacement of fossil fuel subsidies with more flexible and timely subsidies that incentivize positive community outcomes.

Phase out fossil fuels, but on a timeline. The transition to cleaner energy systems requires the utilization of renewables and the retirement of coal power plants. The energy output of these plants cannot be matched by the current state of wind and solar technologies, but the development of wind and solar in the region has been impeded by the lack of private investment. So as not to place the burden from the early retirement of a plant on citizens, measures should be placed to gradually phase out fossil fuels.





Technical Hurdles to Meeting Renewable Goals

As part of domestic and regional energy transitions, governments are pushing to clean up their energy mixes. Doing so, however, will require more than direct investment in renewable sources or other low- or zero-carbon energy supplies. Governments will need to overcome technical hurdles like grid harmonization to allow cross-border trade and increased flexibility through storage or improved power management.

RECOMMENDATIONS FROM THE CONFERENCE

Establish a linked regional grid. Numerous one-to-one grids already exist in Southeast Asia, but a unified regional grid like the proposed ASEAN Power Grid would provide more secure access to electricity. Given that regional countries have scattered resources and widespread supply chains, no country can achieve its climate ambitions without cooperation. As countries look to provide more green energy to each other, tariffs on renewable technologies need to be lowered.

Train for a 21st-century grid. The majority of the current power grid operators in the region are experienced with 20th-century technologies. With power mixes transitioning, system operators and regulators will need to be trained on power grids utilizing software and running multiple ways. Developed nations can facilitate this transition by transferring their knowledge. Institutional changes will also be required for an overhaul of the workforce as operators and regulators train to utilize the best technologies available.

Support appropriate infrastructure. Beyond modernizing grids for the 21st century, NBR senior advisor Clara Gillispie called for expanding grids and ensuring that appropriate infrastructure is in place for these networks. With larger grids, better tools must be utilized for managing demand by allowing system operators to move energy to where it is needed and storing power for when demand is low. Improvements in battery storage for renewables are critically important if countries want to shift their grids to meet their renewable goals.



What Does a Sustainable and Secure Supply Chain Look Like?

As evidenced by the Covid-19 pandemic, supply chains are globally integrated and vulnerable to local disruptions. The demand for critical minerals will increase as demand for renewables and battery production grows, raising the importance of building diverse and resilient supply chains.

RECOMMENDATIONS FROM THE CONFERENCE

Promote collaboration on problems. It is important to frame the policy discussion as one of “trade-offs” instead of “good and bad” energy or mineral sources. This puts stakeholders in a problem-solving space rather than an adversarial one.

Recognize that new technologies offer change. Supply chains for specific minerals are generally set, with long lead times on opening new mines. Yet direct comparisons with oil exploration and extraction are perhaps unjustified. The existence of alternative technologies and unpredictable markets make tying long-term geopolitical considerations to mineral supply chains premature according to some experts.

Research and recycle. In addition to diversified sources of minerals, Japan’s approach to the 2010 supply shock showed how improved recycling and basic research into alternative sources can build resiliency into the supply chain.



NBR’s project on Asia EDGE is made possible with funding through a cooperative agreement with the U.S. Department of State’s Bureau of Energy Resources (ENR). Through a range of activities—including policy workshops, commissioned research, and year-long fellowship opportunities for rising leaders from the region—this initiative engages high-level stakeholders from government, business, and the research community to craft market-based recommendations for public policy on energy security and access in the Indo-Pacific.



THE NATIONAL BUREAU OF ASIAN RESEARCH
SEATTLE AND WASHINGTON, D.C.
NBR@NBR.ORG, WWW.NBR.ORG

1414 NE 42ND STREET, SUITE 300
SEATTLE, WASHINGTON 98105 USA
PHONE 206-632-7370, FAX 206-632-7487

1819 L STREET NW, NINTH FLOOR
WASHINGTON, D.C. 20036 USA
PHONE 202-347-9767, FAX 202-347-9766