

Next Steps for US-Japan Collaboration on Energy Infrastructure

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SUMMARY China's Belt and Road Initiative (BRI) has re-centered discussion of geopolitical competition in Asia around infrastructure. Responding both to BRI and the region's well-known infrastructure gap, the United States has launched efforts to unlock US private investment for infrastructure. Japan's engagements in the region emphasize highquality infrastructure and best practices (an implicit criticism of China's sometimes less rigorous standards). The foreign policy approaches of the United States and Japan dovetail nicely and have led to many new initiatives and institutional partnerships, as well as the quality-focused Blue Dot Network. But despite the two countries' intentions to work collaboratively, their efforts have been held back by differences in organizational practices, the lengthy overhaul of US financing, and a lack of immediate movement from US-Japan consortia. For now, a less ambitious approach of closely coordinating technical assistance and conditional funding on proposed projects may serve as a model for closer US-Japan collaboration as efforts mature.

The Energy Infrastructure Gap in Southeast Asia

Even as China's Belt and Road Initiative has reignited infrastructure as a zone of geopolitical competition, aid providers and multilateral development banks are helping to fill a well-known infrastructure gap and on-the-ground needs in many developing countries across Asia. The infrastructure gap is the difference between the level of investment in power, transportation, telecommunications, and water/ sanitation infrastructure that is needed to maintain economic growth and the current level of investment in these sectors. Energy is a major part of the gap as it underpins the industrialization and urbanization that drive economic growth. Sector-specific analysis from the International Energy Agency (IEA) estimates that Southeast Asia needs \$2.7 trillion invested in electricity transmission, power generation, and energy efficiency measures through 2040.1 Addressing the energy gap alone would require approximately 6 percent of the region's annual GDP, significantly more than the average of 2.1 percent of GDP (\$184 billion) spent by regional governments throughout the early 2010s across all types of infrastructure.² While public spending has increased, foreign investment will be key to filling this gap.

No individual development partner can singlehandedly fill the region's energy infrastructure gap. Key partners such as the Asian Development Bank (ADB), World Bank, and individual donor and investor countries China, Japan, and the United States face limitations on funding, given their global and multisector mandates. To put this financial limitation into perspective, the average annual funding for infrastructure from the ADB, World Bank, Asian Infrastructure Investment Bank (AIIB), Japan International Cooperation Agency (JICA), Japan Bank for International Cooperation (JBIC), 15 major European development finance institutions, and the US Development Finance Corporation totals approximately \$24 billion per year. Even if the total were applied only to energy projects in Southeast Asia and added to existing public spending levels, this amount would still leave a gap of approximately \$52 billion each year compared to IEA estimates. Even the Belt and Road Initiative does not have sufficient funds or political will to meet this gap every year. Thus, unlocking

private sector interest and investment will be vital for meeting Southeast Asia's energy infrastructure needs. In this light, the US-Indo Pacific Strategy, launched in 2018 and prioritizing private sector engagement, is practical.

US Indo-Pacific Energy Infrastructure Initiatives

The US Free and Open Indo-Pacific (US FOIP) a term used interchangeably with the US Indo-Pacific Strategy—is often portrayed as America's answer to China's Belt and Road Initiative. The motivation to provide an alternative to China is no secret, but economic engagements under US FOIP are not resourced to compete dollar for dollar with China's policy banks in funding physical infrastructure projects abroad. The motivation is not simply to directly fund infrastructure but rather to help countries to establish an environment conducive to high-quality infrastructure that meets international best practices in terms of economic, social, and environmental sustainability. US FOIP hopes to drive economic development and sustained growth by bolstering the rule of law, supporting high standards, and taking steps to catalyze the American private sector.

US FOIP explicitly addresses two needs long neglected by US policy in the region: technical and human capacity building in terms of best practices for infrastructure development, and overhauling official US development finance to better coordinate capacity-building efforts and get private sector investment off the ground. These changes were emphasized in an address by US Secretary of State Mike Pompeo in a 2018 speech at the Indo-Pacific Business Forum where he highlighted the Trump Administration's defining energy initiative, Enhancing Development and Growth through Energy (Asia EDGE).³

Asia EDGE builds on a set of familiar values which have characterized US engagements in the region for decades, including open market access, transparent governance, and rules-based norms. It specifically targets: strengthening energy security through ensuring access to energy sources and supplies; developing rules-based and transparent energy markets that are open to all actors; supporting market-based policy decisions and open access to

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could be developed

markets for US investors and suppliers of technology and fuels; and expanding access to affordable and sustainable energy. Asia EDGE is a whole-of-government effort which draws on expertise and programming from many US federal agencies, but USAID is in the forefront on implementation.

The early phase of Asia EDGE largely consists of behind-the-scenes technical assistance and capacity-building programs, rather than concrete on-the-ground projects or bids for projects. The US strategy is to work collaboratively with recipient countries and development partners to establish an alternative and more sustainable vision for how energy infrastructure could be developed. American engagements in Southeast Asia range from institutionalization of discussions like the US-Vietnam Energy Security Dialogue to more specific and targeted capacity-building programs, such as providing technical assistance to support the integration of new renewable energy technologies into the Indonesian electric power grid.⁵

These programs are backed up by changes to US development finance meant to catalyze private sector engagement and eventually provide support to specific projects. In October 2018 President Trump signed the BUILD Act into law, overhauling American development finance institutions in order to encourage and facilitate private sector investment in developing countries. The US development finance institution—the Overseas Private Investment Corporation (OPIC)—had been using outdated lending practices, which made it increasingly difficult for the United States to coordinate with other development finance institutions or provide competitive terms for aid and loans.

The BUILD Act addresses many critiques and integrates OPIC and other US development finance institutions into the new US Development Finance Corporation (USDFC). It doubles the spending capacity from a previous statutory limit of \$29 billion to \$60 billion; allows the USDFC to provide loans in local currency, avoiding issues of exchange-rate fluctuations; and allows the USDFC to provide political risk guarantees for infrastructure projects in developing economies, which is key to unlocking private financing. The BUILD Act also allows for grants to smaller and medium enterprises and provides some support for capacity-building and institution-building in recipient countries.

Though the USDFC's launch was delayed for more than a year after the passage of the BUILD Act due to budgetary and other regulatory challenges, it officially launched in January 2020. Highlighting Southeast Asia's importance, the new CEO's first international trip included meetings in Japan, Vietnam, and Indonesia to explore projects in the transportation, energy, and digital infrastructure sectors.⁷

Japan's Indo-Pacific Vision and the Partnership For Quality Infrastructure

Although President Trump's Free and Open Indo-Pacific has made the term "Indo-Pacific" popular in the West, Japan's reference to the Indo-Pacific as a region predates the US Free and Open Indo-Pacific by several years. Prime Minister Shinzo Abe first used the term in 2007 within the context of the Indian Ocean connecting Asia to Africa, and this more expansive view of the region has continued in Japan, resurrected by Abe after he become prime minister again in 2012. Like the US FOIP, Japan's vision—also termed a Free and Open Indo-Pacific—emphasizes the importance of the rule of law, free trade, and freedom of navigation to the region's pursuit of prosperity.

Japan has from the beginning prioritized connectivity, with a focus on physical connectivity as well as institutional connectivity through shared standards and norms. This is due in part to Japan's decadeslong and continuing role as an infrastructure investor in Southeast Asia, which contrasts with shifting US support for physical infrastructure. In 2019, pending infrastructure investments in Southeast Asia from Japan totaled \$367 billion—nearly 1.5 times that of investment from China (\$250 billion).

Japan's push for quality infrastructure began to coalesce in 2013 in response both to the takeoff of BRI and the problematic gap between needed investment in physical infrastructure and the current levels of support for energy, transportation, telecommunications, and water infrastructure. Just as the US FOIP has strengthened discussion about the private sector approach to infrastructure, Japan's Partnership for Quality Infrastructure, launched in 2015, laid

the groundwork for a narrative about alternatives to BRI. Japan's infrastructure initiative implicitly, rather than explicitly, critiques China's BRI in presenting a vision that best-practice infrastructure projects should include consideration of: environmental and social impacts, economic and debt sustainability, local benefits in terms of job creation and human resource development, and also life-cycle cost savings.

In 2015, Japan officially began promoting quality infrastructure on the global stage by partnering with the Asian Development Bank. Quality infrastructure was a priority issue at the G7 Ise-Shima Summit in 2016, where Japan generated consensus among other member countries on the basic principles of quality infrastructure and the need to raise the funding target to approximately \$200 billion over the next five years.¹¹

Japan's success in reframing public dialogue on infrastructure was also evident during its chairmanship of the G20 in 2019, when infrastructure was a key issue on its agenda. During the annual G20 summit, all members signed onto the G20 Principles for Quality Infrastructure, which explicitly recognized the need to consider life-cycle costs, social and environmental impacts, and climate risk resilience, as well as open and transparent governance in the bidding, procurement, and execution processes. 12

While Japan's emphasis on "quality" is in part a critique of China's less rigorous standards, Japanese actors do not espouse the anti-China rhetoric that is sometimes explicit in statements by US officials. Japan's approach is more inclusive. America's FOIP and Japan's Indo-Pacific Vision and Partnership for Quality Infrastructure are complementary but not exclusive; Japan actively engages with China on this issue set. Starting in 2017, the Japan Bank for International Cooperation (JBIC) began signing MOUs for cooperation with China Development Bank for cooperation on projects in China and in third countries. This commitment was reiterated in 2018 with a list of 52 projects that Japan and China aimed to cooperate on in third countries.

US-Japan Cooperation on Infrastructure

The shared principles underlying the United States' and Japan's infrastructure policies have led to several new cooperative initiatives aimed at the

energy sector. The broadest of these is the Japan-US Strategic Energy Partnership (JUSEP). Established in November 2017, the partnership's focus is on developing a global market for natural gas, promoting advanced nuclear technologies, deploying highly efficient and low- emission coal technologies, and improving energy infrastructure in the developing world. JUSEP covers cooperation across an extremely wide geography encompassing both the Indo-Pacific and Sub-Saharan Africa.

The development of a regional liquefied natural gas (LNG) market and support for energy infrastructure in the developing world have received the greatest attention under JUSEP. Throughout 2018 and 2019, a wide range of US and Japanese development agencies including JBIC, JICA, OPIC, and USAID have signed MOUs to allow for concrete collaboration on projects.

Most of the MOUs signed between the United States and Japan are global in nature, but mainland Southeast Asia was uniquely granted an individual high-profile regional initiative. In August 2019, the United States and Japan announced the Japan-US Mekong Power Partnership (JUMPP) to support a more sustainable, reliable, and affordable energy sector throughout the Mekong countries of Cambodia, Laos, Myanmar, Thailand, and Vietnam. 16 JUMPP builds off of JUSEP, FOIP, and the United States' Lower Mekong Initiative, but is also designed to support and build off of locally led infrastructure initiatives such as the Ayeyarwady - Chao Phraya-Mekong Economic Cooperation Strategy (ACMECS) and the ASEAN Power Grid. In one year of operation, JUMPP has prioritized technical assistance for developing an integrated regional power grid.¹⁷

Beyond specific initiatives, the United States and Japan have worked with like-minded countries to normalize the term "quality infrastructure" to discuss an alternative approach to BRI. This became clear at the G20 summit and was reiterated at the Indo-Pacific Business Forum on November 4, 2019, when the United States, Japan, and Australia jointly launched the Blue Dot Network, an initiative to promote global best-practice standards for infrastructure projects and provide evaluation and certification of projects. The language used to describe the network by officials from all three countries clearly referenced both Japan's Quality Infrastructure

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The Case of the Papua New Guinea Electrification Project

While a number of MOUs signed between US and Japanese agencies and the Blue Dot Network lay out a framework for collaboration, there have been limited instances of concrete cooperation at the project level. The example of the Papua New Guinea (PNG) Electrification Project is instructive. Announced in November 2018, the PNG Electrification Project is a four-way partnership among Australia, Japan, New Zealand, and the United States to help PNG meet its electrification target of 70 percent by 2030. PNG's current rate of electrification is only 13 percent, and with its rural population spread out across mountainous terrain, the buildout of a national transmission network will be relatively expensive.

Despite continued attention and discussion of joint support for projects, including a large natural gas power plant, ¹⁹ thus far the four countries have not supported collaborative ventures but have sought to avoid overlap on a series of individual efforts. For instance, in September 2019 Australia announced that it would provide off-grid electricity access to 15,000 households in West New Britain. ²⁰ New Zealand has offered \$38 million USD to support electrification over the next decade. ²¹ The US has committed \$60 million to this project over five years. ²² Japan has been supporting PNG electricity grid buildout and stabilization since 2013. ²³ More than a year into the project, countries are primarily engaging individually. This speaks to the challenges of moving beyond coordination toward a more collaborative joint approach to infrastructure development.

language on transparency, sustainability, and social/environmental responsibility, as well as the prioritization of private sector leadership that defines the American approach. When the Blue Dot Network's criteria are finalized, the Blue Dot Network will certify projects to identify successful quality infrastructure case studies. Certification will help ensure that the Blue Dot Network label includes rigorous and standardized review and is therefore meaningful.

While the coronavirus pandemic has slowed forward momentum on many infrastructure projects, multinational initiatives such as the Blue Dot Network are an opportunity to build better infrastructure when economic activity rebounds. However, the anti-China rhetoric in some US statements about the Blue Dot Network may pose a political challenge for partners and recipient countries which seek to benefit from close economic relations with both the United States and China. The initiative would benefit from a public indication that regardless of geopolitical tensions, individual Chinese projects meeting the stringent benchmarks could receive certification.

Challenges to Collaboration

Notwithstanding the significant and clear political will focused on collaborative ventures, obstacles are significant. Interviews with more than 30 people knowledgeable about US and Japanese foreign policy, international development, and Asia's energy sector reveal three major challenges to moving beyond coordination at the policy level and operationalizing collaboration on individual projects. These are organizational obstacles, the lengthy timeframe of the US development finance overhaul, and the lack of pre-existing partnerships between private companies.²⁴

Organizational obstacles and mismatches.

Despite significant interest in international cooperation in principle, most development finance organizations share a goal of promoting the national brand and national interests abroad. Historically, this has produced coalitions of national companies that can manage projects from start to finish. The result is a network of contacts and habits of cooperation between national-level private sector actors, but not between different international development partners. This preference for national branding was identified in three interviews as an obstacle for development agencies seeking to build effective US-Japan collaboration on concrete investments in third countries. And when partnerships are sought, firms often prefer local host-country partners, rather

than international firms, due to local market access. A preference for local partners among consortiums looking to invest abroad was cited by five out of thirty interviewees, though in some cases this was due to the way that supporting government initiatives have been structured.

Differences between American and Japanese agencies in organization, regulatory practices, and eligibility requirements for loans have made joint projects complicated to manage. Multiple interviewees identified the lack of existing institutional familiarity between funding agencies as a bureaucratic obstacle to rapid implementation of joint projects. While aid agencies regularly coordinate at the working-level on technical assistance projects to avoid overlap, historically there has not been a similar level of dialogue between investment and financing agencies. At a more granular level, responsibilities for technical assistance, grant assistance, and loans are apportioned slightly differently among Japanese and American aid agencies, which one interviewee cited as a challenge for close collaboration. Two interviewees raised specific concerns over differing funding and eligibility requirements involving sovereign loans and state-owned enterprises, which are often key partners for energy projects in Southeast Asia.

Overhaul of US development finance. The lengthy overhaul of US development finance was raised as a problem by at least ten interviewees. While the BUILD Act and other changes were received with interest and support, OPIC's reorganization and the DFC's launch took more than a year. Various interviewees raised uncertainty about when the DFC would come online, how it would adjust investment behavior in light of its new capabilities, and how it would strategize. Several indicated that this uncertainty delayed their organization's pursuit of new opportunities under US FOIP. These concerns should be somewhat alleviated in 2020 now that the DFC is operational, but the global coronavirus pandemic's impacts on travel may complicate the launch of major new energy projects, at least through the end of 2020.

Dearth of pre-existing cooperative business relationships. Perhaps most challenging is the apparent rarity of US and Japanese private firms with pre-existing business relationships that are

ready to invest together in hard infrastructure projects in third countries. In interviews, many major firms investing in energy and infrastructure around Asia indicated awareness of the new Indo-Pacific economic initiatives, but companies appear unprepared to quickly pursue new projects with multi-country consortiums. Although JBIC and JICA have been actively marketing the US-Japan partnership to companies and are exploring a range of potential projects, no interviewees referenced similar levels of outreach from OPIC in early 2019. The US Department of Commerce has coordinated a series of business matchmaking events around the Indo-Pacific region, which could help fill this gap.

Movement behind-the-scenes on potential projects may yet be announced, but it is currently unclear whether any joint US-Japan consortium is ready to begin a new energy infrastructure project in Southeast Asia. Seven interviewees—mostly from the private sector and finance sector—noted a dearth of American companies active on energy infrastructure in Southeast Asia. While many Japanese companies invest in infrastructure projects in the Indo-Pacific, they have been active for decades and have already-established partnerships with other Japanese or host-country partners. Six interviewees explicitly cited the challenges of moving beyond competition, which has often characterized US and Japanese companies acting in this space, although some interviewees acknowledged existing relationships through the supply chain. While exceptions exist, there was a widespread sentiment that American companies have in recent years participated mainly as supply-chain partners for equipment rather than as co-investors or joint project developers. Changing this will take time.

Next Steps: Opportunities Under JUMPP

Given these challenges, it may be best to adjust short-term expectations for how quickly US -Japan joint ventures can publicly move forward. For now, it may be better to focus on specific openings for closer coordination. Many opportunities already exist to coordinate efforts on capacity building and to lobby with like-minded countries for a shared and strengthened set of norms surrounding quality infrastructure and best practices. The Blue Dot Network, in particular, could be a meaningful joint initiative if

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geopolitical tensions and politically charged language do not distract from its goals of providing clear standards, best-practices case studies, and a standard certification. Continued support to business matchmaking initiatives both as stand-alone events and alongside major events like the Indo-Pacific Business Forum will also plant seeds for future collaboration on specific projects.

The Japan-US Mekong Power Partnership (JUMPP) offers opportunities for the United States and Japan to strategically coordinate on a range of power generation and transmission projects that are complementary in nature but funded and pursued independently. Cross-border power trade in mainland Southeast Asia is currently limited due to regulatory challenges and pricing differences that have stymied past investments in necessary physical infrastructure. The United States and Japan have announced their intent to provide technical assistance in support of cross-border power trade.

In the short-to-medium term, the United States and Japan could utilize the JUMPP framework to invest in a mix of high-quality and sustainable infrastructure through developing a transboundary Clean Energy Zone in southern Laos, northeastern Cambodia, and the Central Highlands of Vietnam. This area is significantly under-developed but is home to substantial hydropower, wind, and solar potential. This presents an opportunity to diversify the energy supply in Laos and Cambodia, support the renewable energy transition, and limit environ-

mental impacts to the Mekong River by providing strategically identified and high-quality infrastructure investment options—all goals explicitly identified in JUMPP's most recent statement.

Key stakeholders such as the Asian Development Bank, International Energy Agency, and the International Finance Corporation have already done initial analysis and studies, which could feed into a coordinated effort. The International Union for Conservation of Nature—supported by the US Department of State—has supported analysis of a few different regional power options. ²⁵ A Clean Energy Zone in this area would fit neatly into regional efforts like ACMECS and the ASEAN Power Grid, as well as national plans in Laos to export electricity to its neighbors.

Under JUMPP, key US and Japanese agencies could coordinate technical assistance and conditional funding on proposed projects to support the development of a Clean Energy Zone. There are US interests in hydropower and solar projects in the region, and some Japanese actors have expressed interest in supporting cross-border power lines. Joint ventures or coordinated but separate funding for different transmission lines and energy projects would both be effective. This type of complementary investment would benefit investors, provide sustainable, high-quality infrastructure for the region, and could serve as a case study which the US and Japan could replicate in other areas of the Indo-Pacific.

The US and Japan could through JUMPP invest in a mix of high-quality and sustainable infrastructure through developing a transboundary Clean Energy Zone

Notes

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