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New Policy and Market Risks for U.S. LNG Project Sponsors in Emerging Asia

Projects Depending on Continued U.S. Government Support May Fall Short

Executive Summary

The United States natural gas industry faces mounting financial and market challenges, both at home and abroad. The outbreak of COVID-19 exposed the underlying financial vulnerability of the U.S. oil and gas industry, causing drill rig counts to plummet and pushing bankruptcies to their highest level since 2016.[1] Looking ahead, the Biden administration's plans to decarbonize the power sector by 2035, regulate the climate impacts of natural gas infrastructure, and accelerate deployment of clean energy technologies could limit domestic natural gas demand growth.[2]

U.S. natural gas players have relied increasingly on liquefied natural gas (LNG) exports to fill gaps in domestic demand,[3] but export growth is also becoming more challenging. In Europe, prospects for gas imports—once viewed as a transition fuel to low-carbon energy sources—have faltered as European governments adopt aggressive government climate targets. Meanwhile, the falling cost of renewables threatens gas demand in Europe's power sector. Together, these trends have led many analysts to conclude that the continent's LNG ambitions have already peaked;[4] as the president of the European Investment Bank recently declared: "To put it mildly, gas is over."[5]

Changing policies under the new U.S. administration could delay or limit the federal government's support for LNG import projects in Asia.

[1] Totalled from Q1-Q4 of each year since 2016. Haynes and Boone, LLP. Oil Patch Bankruptcy Monitor, p. 3. March 2021.
[2] IEEFA. U.S. Power Outlook 2021. March 2021.
[3] Reuters. Column: U.S. gas industry increasingly relies on LNG exports. March 26, 2021.
[4] Bloomberg. Peak LNG Looms in Europe With Investors Wary of New Projects. May 6, 2021.
[5] EURACTIV. 'Gas is over', EU bank chief says. January 21, 2021.

As prospects for LNG exports to Europe have faced new challenges, U.S. exporters have zeroed in on Asia, where China, India, and emerging Asian buyers are expected to drive global LNG demand growth over the next decade. In 2018, the U.S. government began to aggressively pursue LNG exports in the region, using strong rhetoric and confrontational foreign policy moves—including tariffs, trade threats, and currency manipulator designations—to support bilateral trading commitments with regional governments (discussed in detail on pages 8-9 of this report). In China, those tactics appear to have backfired, with China's imports of U.S. LNG falling to zero during 2019 due to the U.S.-China trade war. The government then refocused its attention on trade imbalances with Southeast Asian nations, again using aggressive tactics that risked souring relations between the U.S. and countries in the Association of Southeast Asian Nations (ASEAN).[6] [7] [8]

In Vietnam, several new entrants into the LNG industry have attempted to capitalize on the rising trade tensions, proposing multi-billion-dollar LNG-to-power projects anchored by long-term commitments to buy U.S. LNG and alleviate trade deficits. Several of these LNG consortia claimed to have years of project development experience, as well as the firm backing of U.S. agencies, including the Development Finance Corporation, Export-Import Bank, and the State Department. Yet many of these claims raise important questions, both about the ability of these new players to execute their ambitious proposals and the direction of U.S. federal policy under the new administration. Several of these development consortia appear to have little practical experience in launching complex overseas projects, and may not have firm or lasting support from the U.S. government. These new players continue to seek publicity in Vietnam based on enthusiastic claims about progress on their Vietnam projects.[9]

New LNG players have sought to capitalize on U.S. trade tensions with Asian countries.

This could prove to be a risky strategy. In IEEFA's view, the Biden administration is likely to take a more restrained approach to development finance for fossil fuel-

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[6] The Diplomat. US Must Recapture Lost Ground in Southeast Asia or Risk Being Shut Out. February 14, 2020.

[7] According to the State of Southeast Asia 2020 report, which surveys Southeast Asian nationals from various professions involving regional affairs: "The region's confidence in the US is low. Close to half of the respondents (47%) have little or no confidence in the US as a strategic partner and provider of regional security. 77% observe that US engagement with Southeast Asia has declined under the Trump administration compared to the Obama administration."

[8] Current ASEAN member states are Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.

[9] IEEFA. Beyond the Noise: Setting the Right Expectations for Vietnam's LNG Project Pipeline, p. 9. January 2021.

related projects. A more scrupulous approach could ultimately delay or limit the U.S. government's financial exposure to LNG import projects in Asia, particularly those proposed by new industry players banking on U.S. financial support. Without direct U.S. government financing, the more ambitious LNG import projects in Vietnam with huge funding needs could fall by the wayside, revealing far less bullish prospects for U.S. LNG exports to Southeast Asia.

U.S. LNG Exports Have Historically Been Closely Tied to Foreign Policy

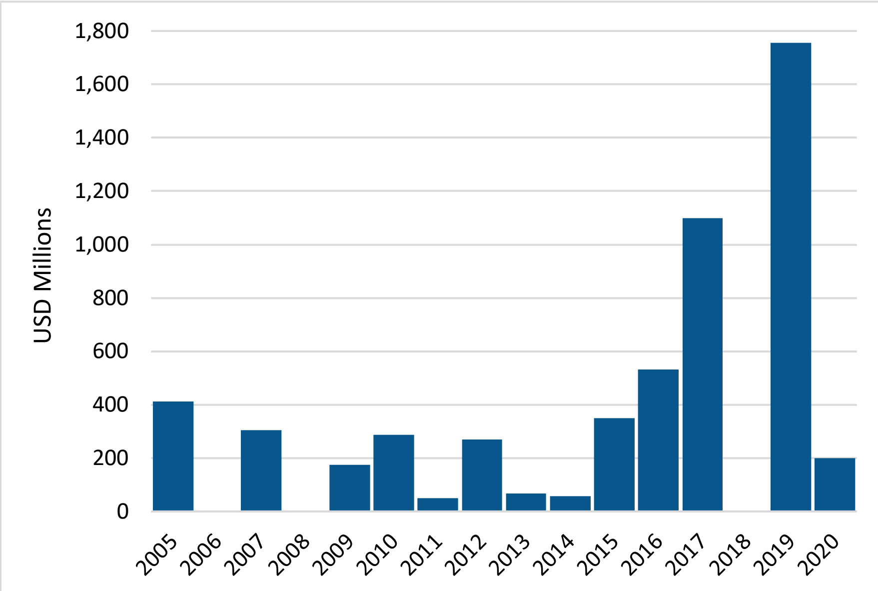
Since the Department of Energy granted the first LNG export permit in 2011, LNG exports have been closely tied to U.S. foreign policy goals. For the Obama administration, U.S. LNG exports served as a tool to wean Europe off Russian piped gas and advance the Obama administration's "Pivot to Asia" strategy, which prioritized bilateral partnerships with Asian governments to address energy security and global climate goals.

However, LNG did not emerge as a major geopolitical focus of U.S. foreign policy until the Trump administration. Under the administration's so-called "energy dominance" agenda,[10] rapid increases in fossil fuel exports became central to achieving geopolitical objectives. Exports of LNG, labelled "freedom gas,"[11] were used as a bargaining chip in diplomatic negotiations, particularly in Asia. Energy dominance, coupled with an enhanced "free and open Indo-Pacific" strategy, entailed demands for economic reciprocity in trade balances and a defense strategy focused on competition with China along its Belt and Road Initiative.

The Trump administration relied on two major policy initiatives to advance LNG and the energy dominance agenda in the Asia Pacific region. First, the Better Utilization of Investments Leading to Development (BUILD) Act of 2018 created the Development Finance Corporation (DFC) to replace the Overseas Private Investment Corporation (OPIC). The BUILD Act doubled the DFC's exposure cap to $60 billion from OPIC's former cap of $29 billion, and DFC priorities included support of the government's Indo-Pacific strategy. In its first year of operation, $5.4 billion—or nearly 20%—of the agency's investment commitments were located in the region.[12] Moreover, U.S. financing for fossil fuel increased dramatically in 2019 (see Figure 1 below), while references to climate change were left out of DFC's inaugural five-year Development Strategy.[13]

[10] Trump White House Archives. The Value of U.S. Energy Dominance. July 29, 2020.
[11] The New York Times. 'Freedom Gas,' the Next American Export. May 29, 2019
[12] Congressional Research Service (CRS). U.S. International Development Finance Corporation (DFC). January 12, 2021.
[13] Development Finance Corporation. DFC's Roadmap for Impact. January 2020.

Figure 1: DFC Financing for Fossil Fuel Projects



Source: DFC, Friends of the Earth (2020).
Note: The lack of financing for fossil fuel projects in 2018 is likely due to the fiscal year in which they were approved, rather than a concerted policy shift from fossil fuels.

The second major initiative was the Asia EDGE (Enhancing Development and Growth through Energy) Initiative, launched in July 2018. The initiative aims to coordinate investment efforts of multiple U.S. agencies—including the U.S. Agency for International Development (USAID), DFC, and the Departments of Energy, State, and Commerce—toward expanding energy access, creating open and transparent energy markets, and increasing trade in the Indo-Pacific region.[14] Although the Asia EDGE initiative does not currently list specific projects, a primary goal is described as the need to expand "the downstream regional market for natural gas and LNG imports."[15]

While these initiatives were intended partly to counter China's growing influence on Southeast Asian infrastructure development, U.S. development financing has historically paled in comparison to Chinese and Japanese investments in the region (see Figure 2 below). Instead, the Trump administration relied more on sticks than carrots; efforts to facilitate and expand LNG trade in the Indo-Pacific region and elsewhere were accompanied by coercive trade tactics and geopolitical strategy.[16]

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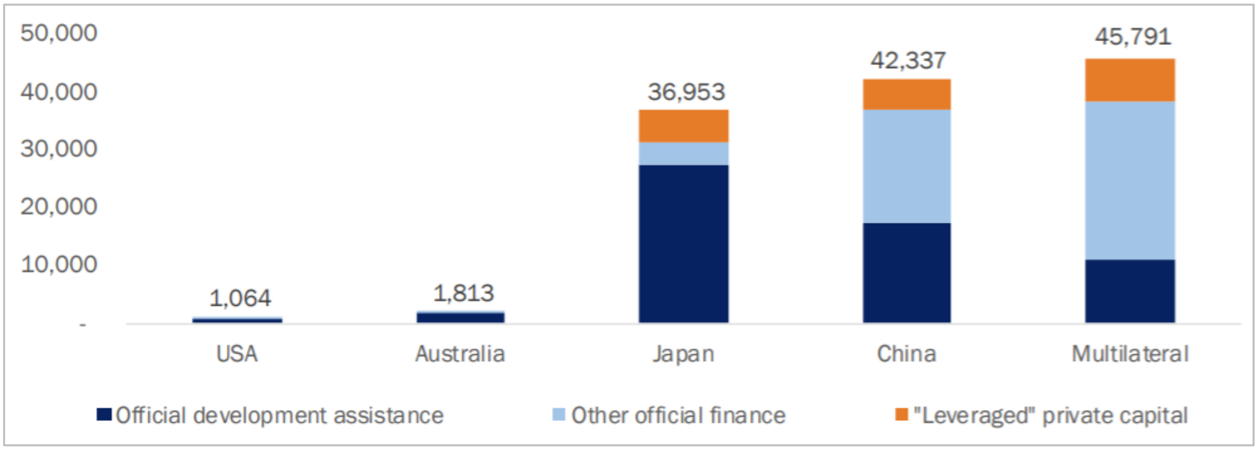
[14] USAID. Asia EDGE Factsheet. July 2018.
[15] USAID. Asia EDGE—Enhancing Development and Growth through Energy. Last updated March 01, 2021
[16] For example, then-Energy Secretary Rick Perry stated that LNG exports could help protect European allies from Russian influence: "We are in a position to be able to clearly create a hell of a lot more friends by being able to deliver to them energy…And not being held hostage by some countries, Russia in particular." LNG Global. LNG Comments from U.S. Secretary of Energy Rick Perry. July 3, 2017.

Figure 2: Official Infrastructure Financing Commitments in Southeast Asia ($ millions, constant 2015 prices, 2008-2016)



Source: Brookings Institute (2020).

LNG and the US-China Trade War

Promises to grow the U.S. economy by rebalancing Asian countries' trade deficits were central to the Trump administration's regional approach. In March 2018, the administration levied an initial round of tariffs on Chinese goods, to which China responded by imposing tariffs on $60 billion of American goods, including a 10% duty on LNG. In August 2019, the U.S. government labelled Beijing a currency manipulator, a symbolic designation used to ramp up trade war pressure and warn of the potential for additional consequences.[17] U.S. officials also offered to ease tariffs on China in exchange for commitments to purchase LNG.[18]

However, the administration's attempts to force trade were unsuccessful in stimulating Chinese purchases of U.S. LNG. During the first three years of the Trump administration, U.S. LNG exports to China declined to zero even as both U.S. LNG output and China's LNG demand grew (see Figure 3 below).[19] Even after the signing of the Phase One trade deal in January 2020, China only met 5% of the deal's energy targets and U.S. LNG accounted for 2.4% of China's total LNG imports in the first half

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In a March 2019 speech, then-Secretary of State Michael Pompeo called on U.S. oil and gas companies to help the administration "punish bad actors" in the international arena, including China and Russia. "Our model matters now, frankly, more than ever in an era of great power rivalry and competition where some nations are using their energy for malign ends, and not to promote prosperity in the way we do here in the West." Pompeo added, "We want transparent transactions, not debt traps." U.S. Embassy & Consulates in China. Excerpts: Keynote Address at CERAWeek. March 12, 2019.

For his own part, President Trump stated on the campaign trail in 2015 that China was an economic enemy "because they have taken advantage of us like nobody in history. It's the greatest theft in the history of the world." ABC News. 10 times Trump attacked China and its trade relations with the US. November 9, 2017.

[17] U.S. Department of the Treasury. Treasury Designates China as a Currency Manipulator. August 5, 2019.

[18] Bloomberg. Wilbur Ross to China: Import More U.S. Gas to Cut Trade Gap. March 22, 2018.

[19] Global LNG Hub. China's LNG imports: Can the United States Capture More of the Market? April 2020.

of 2020.[20] [21] China's imports ramped up significantly in the second half of 2020 due to one of the most severe cold snaps in Asia in recent decades, yet China still hit only a quarter of energy import targets envisioned under the Phase One trade deal.[22] [23]

There are numerous reasons China's U.S. LNG imports underwhelmed expectations, including the outbreak of the COVID-19 pandemic and the low LNG price environment, which made it difficult to hit the Phase One deal's dollar targets. However, one of the most important factors was Chinese buyers' unwillingness to sign long-term supply contracts with U.S. exporters. One Chinese energy stakeholder asked, "How would it be possible for Chinese companies to sign long-term deals with the U.S. amid the abnormal China-U.S. relationship?"[24] In July, Sinopec issued a tender for a 10-year gas supply deal beginning in 2023, but reports indicated that Sinopec would not choose a U.S. supplier for political reasons.[25] According to one Sinopec source, it is "too difficult for us to sign long-term deals with U.S. suppliers amid the current tensions."[26] [27]

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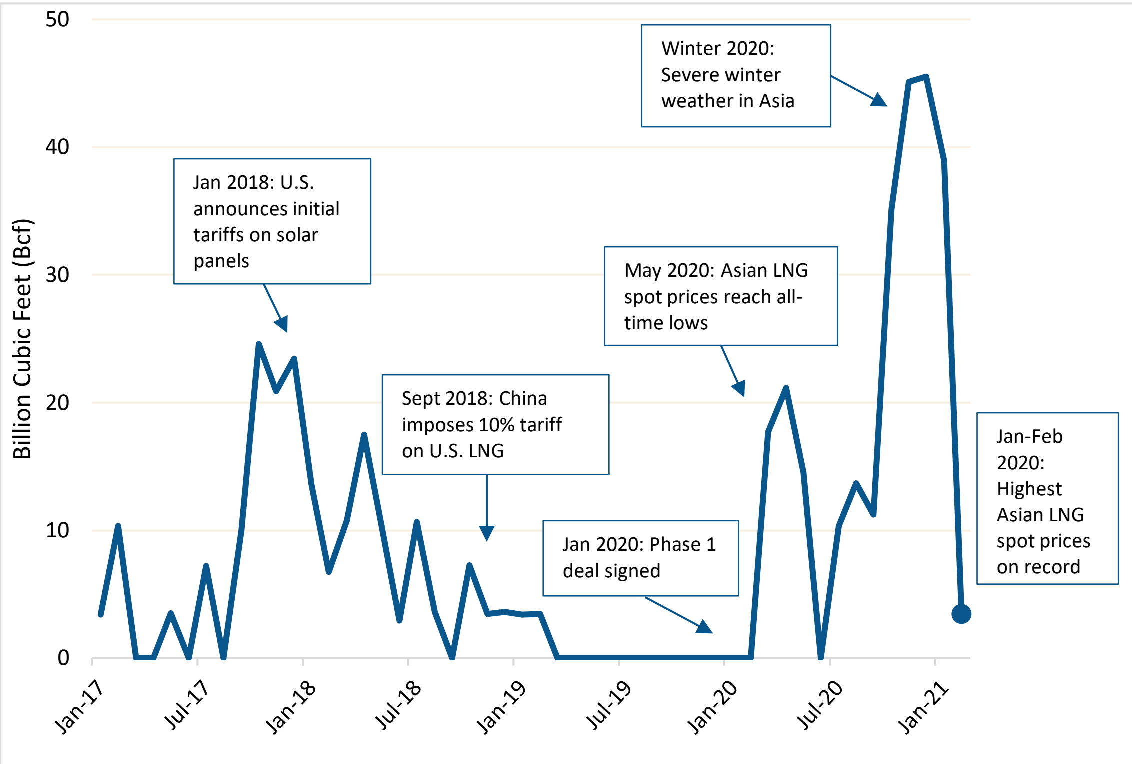
[20] Energy Intelligence. GEOPOLITICS: China Shuns U.S. LNG Despite Trade Deal. September 2, 2020.
[21] Reuters. China only fulfils 5% of Sino-U.S. energy trade deal in first half of 2020. August 4, 2020.
[22] Reuters. China hits 26% of 2020 target for U.S. energy imports under trade deal. November 26, 2020.
[23] Natural Gas Intelligence. China Buying More U.S. LNG to Meet Winter Demand, but Still Far Below Phase One Targets. December 15, 2020.
[24] Energy Intelligence. GEOPOLITICS: China Shuns U.S. LNG Despite Trade Deal. September 2, 2020.
[25] *Ibid.*
[26] *Ibid.*
[27] In September 2020, Sinopec awarded the contract to Qatargas. PetroChina is the only Chinese company with long-term contracts from a U.S. supplier. In July 2018, before China levied tariffs on U.S. LNG, PetroChina reached a 25-year, 1.2 million tons per annum deal with Cheniere. In November 2020, another Chinese buyer, independent utility Foran Energy Group, signed a non-binding agreement with Cheniere to buy 25 cargoes from 2021 to 2025, making it the first preliminary term deal signed since the trade war began.

Figure 3: U.S. LNG Exports to China (Billion Cubic Feet)



Source: EIA, IEEFA.

In addition, the U.S. government's political pressure was ultimately undermined by the fact that U.S. LNG is viewed as uneconomical for price-sensitive buyers in China. A recent IEEFA analysis of PetroChina, the country's largest natural gas company, found that the company has lost money on natural gas imports every year since 2015, limiting potential for significant growth in its LNG import portfolio.[28] To guarantee profitable sales to consumers and justify increased LNG purchases, the company would need to purchase U.S. LNG at or below $7/MMBtu. Yet even at current low costs for U.S. LNG, the total cost of producing LNG in the Gulf Coast and shipping to Asia often exceeds $7/MMBtu.[29]

The U.S. Government Turns to Southeast Asia

When the U.S. government's efforts to galvanize Chinese imports of U.S. LNG failed, officials turned their attention to Southeast Asia. Although a dramatically smaller market for imported gas than China, the International Energy Agency (IEA) expects emerging Asian importers—not including China and India—to account for 35 billion cubic meters per year (Bcm/y) of global natural gas demand growth through 2025, adding to the current regional demand of roughly 240 Bcm/y (see Figure 4 below).[30]

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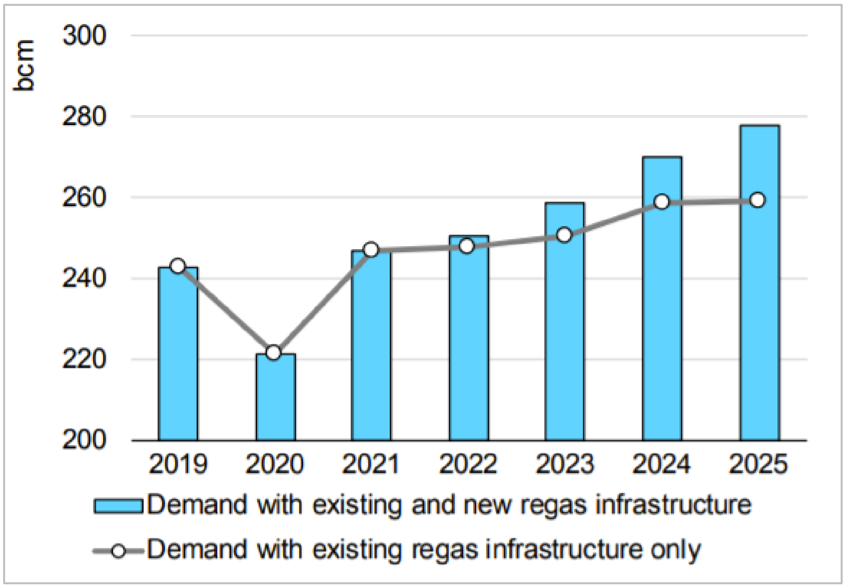
[28] IEEFA. IEEFA report: No Upside: The U.S. LNG Buildout Faces Price Resistance from China. July 29, 2020.
[29] Global Energy Monitor. Gambling on Gas: Risks Grow for Japan's $20 Billion LNG Financing Spree, p. 8. July 2020.
[30] International Energy Agency (IEA). Gas 2020, p. 40. 2020.

IEA notes that demand growth is "power sector driven," with more than 60% of total demand growth coming from the addition of new gas-fired power generation capacity.[31] However, IEA also cautions that demand increases are contingent on the completion of proposed gas infrastructure projects and the availability of external financing. If new LNG terminal and power projects are not completed in the near to medium-term, the region's total demand growth to 2025 could be cut in half.[32]

Figure 4: Natural Gas Demand in Emerging Asia, 2019-2025



Source: IEA (2020).
Note: "Regas" stands for regasification infrastructure.

Through the Asia EDGE initiative, the U.S. encouraged LNG import infrastructure development in the region to open new markets for U.S. exports. In the Philippines, for example, U.S. officials worked closely with the Philippines Department of Energy to publish investor guides and permitting rules for potential LNG investors. In Thailand, the U.S. State Department heavily promoted Asia EDGE as an alternative to China's Belt and Road Initiative, offering technical assistance and capacity building for the country's natural gas regulator.[33] And in November 2019, U.S. Commerce Secretary Wilbur Ross conducted a trade mission through Thailand, Vietnam, and Indonesia to accelerate U.S. LNG commercial activity in the region.[34]

The U.S. government initially approached Vietnam with incentives to explore LNG options, since Vietnam could not purchase U.S. gas due to its lack of existing LNG import infrastructure. In March 2019, the U.S. Department of State and the U.S. Trade and Development Agency (USTDA) began holding "energy security dialogues"

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[31] *Ibid.*
[32] *Ibid.*
[33] The Nation Thailand. American investors eye energy sector under Asia Edge initiative. June 21, 2019.
[34] Offshore Energy. LNGL joins U.S. trade mission to promote LNG industry in Southeast Asia. November 4, 2019.

and in May 2019 provided EVN, the state-run electricity utility, a $1.4 million grant to conduct a feasibility study for an LNG import terminal.[35]

But trade tensions escalated quickly in June 2019, when President Donald J. Trump declared that Vietnam was "the single worst abuser of everybody."[36] U.S. diplomatic pressure triggered expedited commitments from Vietnamese senior officials to purchase U.S. LNG.[37] [38] In September 2019, the U.S. State Department and Vietnam's Ministry of Industry and Trade (MOIT) signed a comprehensive energy partnership MOU. Soon after, MOIT awarded Virginia-based AES Corporation sponsorship of a 2.2GW LNG-fired power project in southern Vietnam, which would import $2 billion of U.S. LNG per year once operational.[39]

As Vietnam's trade deficit with the U.S. continued to widen (see Figure 5 below),[40] the U.S. government maintained an aggressive posture. U.S. officials began investigating whether Hanoi was artificially devaluing its currency, culminating in an official currency manipulator designation in December 2020.

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[35] Vietnam Electricity (EVN). United States grants more than $ 1.4 million to EVN for studying and developing a gas-to-power project in the South. May 22, 2019.

[36] The Guardian. Trump warns China is 'ripe' for new tariffs and suggests Vietnam could be next. June 26, 2019.

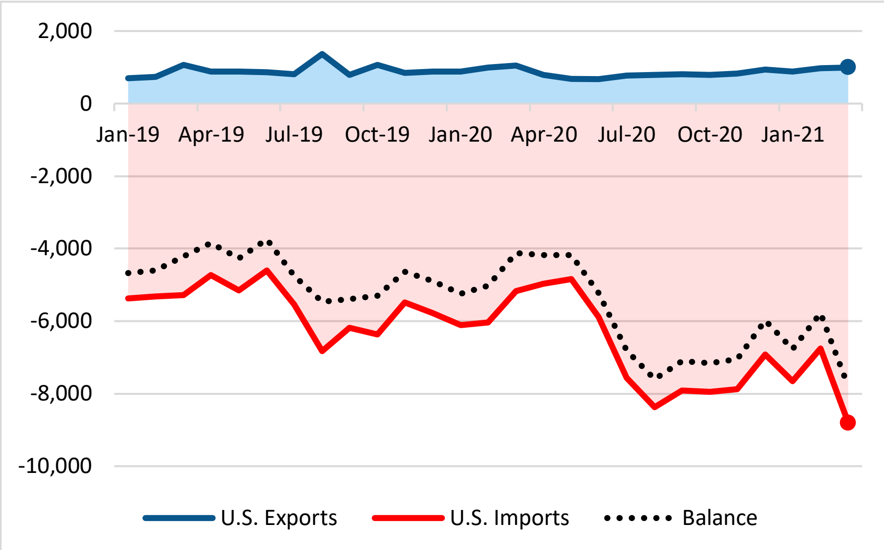
[37] On the sidelines of June 2019 G20 meeting, then-Prime Minister Nguyen Xuan Phuc assured the Trump administration that the two countries' energy ministries would soon sign an MOU for "long-term, large scale, strategic level" cooperation on energy and significant LNG imports from the U.S. Vietnam Government News Portal. Prime Minister holds bilateral talks on the sideline of G20 Summit. 28 June 2019.

[38] Vietnam Government Portal. Prime Minister carries bilateral talks on the sidelines of G20. June 28, 2019.

[39] Ministry of Industry and Trade. Vietnam, U.S. establish comprehensive energy cooperation partnership. October 6, 2019

[40] The widening of Vietnam's trade deficit during this period was due to supply chain relocations from China in the aftermath of the U.S.-China trade war, and the fact that Vietnam could not yet import U.S. LNG given its lack of import infrastructure.

Figure 5: The Ballooning U.S. Trade Deficit with Vietnam



Source: *U.S. Census Bureau.*

U.S. LNG Project Sponsors: Experienced Players and Aggressive Newcomers

The rapid deterioration of U.S.-Vietnam trade relations may have been viewed by some LNG project developers as a business opportunity from 2018 to 2020: LNG-to-power projects could be portrayed as a means for Vietnam to ease trade tensions by boosting U.S. LNG imports. At the same time, project developers could echo and reinforce the federal administration's trade rhetoric, fostering the impression that their projects enjoyed the diplomatic and financial support of the U.S. government.

The Vietnamese government had already been considering the development of an LNG-based power fleet to meet projected energy demand growth. After many years sitting largely on the sidelines of Vietnam's energy development, U.S. companies took a renewed interest in Vietnamese LNG.

Alongside established companies such as AES Corporation and ExxonMobil, several new players proposed high-profile, complex, and expedited projects with multi-billion-dollar price tags. These consortia have attracted significant media coverage in Vietnam. Yet a lack of experience in this sector compared to conventional players, and potential changes in market forces and U.S. federal policy, raise important questions about the ability of some of these newcomers to execute on their ambitions.

Below is a preliminary overview of the projects that have received public attention. IEEFA will continue to follow developments as they evolve and as new information becomes available.

Delta Offshore Energy

Delta Offshore Energy is aiming to construct a $4 billion, 3.2 GW LNG-to-power project in Bac Lieu province, expected to enter service by 2024. The project plans to run on U.S. LNG. It would be the largest Foreign Direct Investment project for the Mekong Delta region, but Delta Offshore as an entity appears to lack a performance history of projects at this scale, having only been incorporated in 2018 in Singapore. The company established a U.S. presence with an office in Houston, Texas in August 2020.[41]

LNG Bac Lieu is the first privately held and foreign-owned integrated LNG-to-power project that has received official licensing in Vietnam.[42] Along with its early-mover advantage, the project is well-known for Delta Offshore's ambitious implementation timeline and competitive power offtake price, initially proposed at $0.07/kWh applicable for the entire project life cycle.[43]

Political support from the U.S. government has been frequently cited and may have helped to boost the profile of the project. Former Secretary of Commerce Wilbur Ross referred to Delta Offshore and the Bac Lieu project as an example of "new commercial opportunities for U.S. businesses."[44] The U.S. Consul General in Ho Chi Minh Marie Damour also stated in October 2020, "This project will utilize the best-in-class technology and engineering that the U.S. has to offer." She added, "It's an example of the commitment by the U.S. Public and Private Sector to invest in, and be a strong partner for Vietnam's growing energy infrastructure needs."[45] According to a company press release, former Energy Secretary Dan Brouillette "expressed U.S. Government support for the Project, to Deputy Prime Minister H.E. Pham Binh Minh, in a letter dated 13 July 2020."[46] [47]

A review of the project's progress to date reveals several questions concerning the project's financing, status, and the nature of the support that can be expected from the U.S. government.

Power purchase agreement (PPA) negotiations are still underway, despite media reports that they had been finalized. In January 2020, Delta Offshore set an ambitious timeline to finalize PPA negotiations with state-run utility EVN and achieve financial close by end-2020. For context, negotiations for the most recent

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[41] Houston Chronicle. Singapore company sets up shop in Houston with eye on U.S. LNG market. August 18, 2020.
[42] LNG Limited. Delta Offshore Receives Investment Registration Certificate. January 23, 2020.
[43] Vietnam Express. Bac Lieu Power and Gas proposes electricity selling price of 7 cents per kWh. December 4, 2019.
[44] Youtube. U.S. Secretary of Commerce Wilbur Ross. February 22, 2021
[45] PR.com. Delta Offshore Energy Press Release: DeltaOE Presented Its Consortium Partners at the Memorandum of Understanding (MOU) Signing Ceremony for the 3200 MW LNG-to-Power Plant Project in Bac Lieu. October 13, 2020.
[46] Delta Offshore Energy. Press Release: DOE Receives PM Support on PPA Completion in 2020 at National Meeting. August 5, 2020.
[47] LNG Industry. Delta Offshore Energy gains support for Bac Lieu LNG project PPA completion. August 6, 2020.

coal-power projects in Vietnam took 10-12 years,[48] and the multiple regulatory gaps that are preventing authorities from finalizing PPAs of LNG-based power projects are still under discussion. In August 2020, EVN said it was unable to sign a framework PPA with Delta Offshore due to the terms requested by the sponsor which are deemed "unprecedented for independent power projects in Vietnam."[49] In January 2021 Delta Offshore issued a press release stating that "the signing of the PPA *began in earnest* on 29 December" (emphasis added),[50] prompting numerous Vietnamese and foreign media outlets to report, apparently in error, that the company had signed an agreement with EVN.[51] [52] [53] In April 2021, the provincial government of Bac Lieu reportedly stated that the negotiation process was still ongoing due to issues related to offtake obligations and foreign exchange convertibility.[54] [55] Media outlet Dau Tu Online reported in early June 2021 that PPA negotiations were still underway and that Delta Offshore had requested the Vietnamese government's help in speeding up the negotiation process with EVN.[56] As of this report's publication, IEEFA is unaware that a PPA between Delta Offshore and EVN has been finalized. Until a PPA is signed, IEEFA believes it is unlikely the project can achieve financial close and begin construction.

Financing source does not appear to be confirmed. A company executive stated in August 2020 that "the project has funding fully secured already."[57] However, developments since last August raise questions, since, according to recent press reports, PPA negotiations with EVN are still ongoing. Without a PPA, IEEFA believes it is unlikely that funding can be finalized. Since the Vietnamese government has reportedly been unwilling to provide the type of financial guarantees often sought for large infrastructure projects, the project's bankability remains largely in question.[58] Although the project's financing structure is not certain, an August 2020 article in the Vietnam Investment Review indicated that 80-85% of the project would be financed by loans, mainly from overseas.[59] However, a Vietnamese official stated in April 2021 that parties involved in the project were having "unprecedented problems in attracting foreign investment" due to unclear regulations.[60] A Delta Offshore press release in March 2021 stated that financing

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[48] See, for example, the Song Hau 2 Coal-fired Power Plant and the Vung Ang 2 Coal-fired Power Plant.
[49] Dau Tu Online. EVN yet to sign PPA framework with LNG Bac Lieu. August 31, 2020.
[50] Delta Offshore Energy. Bac Lieu power project opens 2021 celebrating major milestones. January 21, 2021.
[51] Offshore Energy. Delta Offshore inks PPA for Bac Lieu LNG-to-power project. January 26, 2021.
[52] The Asset. Delta Offshore Energy signs PPA for Bac Lieu LNG project. January 27, 2021.
[53] IJGlobal.com. DeltaOE to sign PPA for Bac Lieu LNG-to-power. January 22, 2021.
[54] Vietnam Investment Review. LNG Bac Lieu project expected to start in late 2021. April 28, 2021.
[55] Dau Tu Online. LNG Bac Lieu hopes to break ground in late 2021. April 24, 2021.
[56] Dau Tu Online. Bac Lieu LNG electrification waiting to remove the bottleneck. June 4, 2021.
[57] S&P Global. Vietnam's Delta Offshore Energy backs away from renewing MOU with Magnolia LNG. August 11, 2020.
[58] Vietnam Finance. USD4 billion LNG Bac Lieu project: Do not bring the government into international guarantees. March 13, 2020.
[59] Vietnam Investment Review. Bac Lieu LNG power plant to sign PPA this month. August 28, 2020.
[60] Vietnam Investment Review. LNG Bac Lieu project expected to start in late 2021. April 28, 2021.

"can be supported by the U.S. Export-Import Bank, the U.S. Development Finance Corporation and the U.S. International Trade Development Agency."[61]

Federal government support may not continue under the new administration. With the change in administration in Washington D.C., market analysts are more focused on the question of how the new administration's climate policies may affect support for LNG exports. A March 2021 Delta Offshore Energy press release stated, "the U.S. Department of Commerce will continue to provide official commercial advocacy for their Vietnam Bac Lieu project,"[62] referring to the federal Advocacy Center.[63] The release continued, "approval of [Delta Offshore Energy]'s LNG2P [LNG-to-power] project underscores the Biden Administration's support of U.S. energy-related exports and the domestic jobs those exports represent." IEEFA notes that the Advocacy Center makes decisions on a case-by-case basis,[64] that its guidelines cite international environmental goals as a criterion for determining whether advocacy is in the U.S. national interest,[65] and that a decision can be re-evaluated at any time.[66]

Given policy risks associated with potential shifts in the U.S. government's energy policy orientation, along with the fact that—based on recent press reports and to the best of IEEFA's knowledge—PPA negotiations are still ongoing, the U.S. government's support for the Bac Lieu project may be subject to change in the future.

Chan May LNG

A Vietnam-incorporated joint venture composed of 60% U.S. stakeholders and 40% Vietnamese investors is developing the 4GW, $6.2 billion Chan May LNG-to-power project in Thua Thien Hue province. The company has proposed a project timeline that would bring the initial 2.4GW online as soon as 2024, with the remaining capacity in-service by 2027.[67] Unlike the LNG Bac Lieu project, LNG Chan May is still in the proposal phase and has yet to receive official approval and licensing from the Vietnamese government, making its ambition to break ground in 2021 a highly unlikely development.[68]

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[61] Delta Offshore Energy. Continuing to support energy innovation, the U.S. Department of Commerce provides advocacy for Delta Offshore Energy Project. March 3, 2021.
[62] *Ibid.*
[63] The U.S. Government Advocacy Center was established pursuant to two presidential executive orders related to boosting U.S. exports, Executive Order 13534 (National Export Initiative), and Executive Order 13630 (Establishment of an Interagency Task Force on Commercial Advocacy).[63] The Advocacy Center helps U.S. companies to win foreign government contracts. Advocacy assistance may involve meetings between key foreign decision-makers and high-ranking U.S. Government (USG) officials, direct support from USG officials stationed abroad, letters to foreign decision-makers or coordinated action by USG agencies. International Trade Administration. Advocacy Center Services. Accessed June 22, 2021.
[64] International Trade Administration. U.S. Government Advocacy Policy. Accessed June 22, 2021.
[65] *Ibid.*
[66] *Ibid.*
[67] Power Technology. Chan May LNG to build power project in Vietnam with $6bn investment. July 23, 2020.
[68] Hanoi Times. Status of LNG projects in Vietnam. December 31, 2020.

The project claims to be in partnership with the U.S. Asia EDGE initiative, General Electric, Black & Veatch, Baker McKenzie, and McKinsey, among others.[69] In July 2020, under the previous administration, CEO John Rockhold was quoted as saying "We have big support from the U.S. government for the project, as they have LNG to sell. We have a number of U.S. LNG suppliers and we are doing the shopping right now."[70] Rockhold added that the Chan May project would specifically import $1.2 billion of U.S. LNG per year, helping to narrow Vietnam's trade deficit.[71] Chan May LNG claims that the U.S. Export-Import Bank, the DFC, and the International Finance Corporation (IFC) have all expressed interest in financing the project.[72] A press report in Vietnam suggests that the company has indicated that it has raised all the capital necessary to build the project—something that would be challenging in the absence of the required approvals or a PPA.[73]

Despite the project's anticipated 2024 in-service date, it is unclear whether Chan May LNG has made progress on feasibility or other technical studies. The company signed a research cooperation Memorandum of Understanding (MOU) with Thua Thien Hue province officials at the Vietnam Energy Summit in July 2020.[74] However, in the absence of any company announcements since July 2020 about progression beyond pre-development stages, questions must be raised about whether progress has stalled.

Participants in the Chan May LNG project appear to lack a demonstrated track record of successfully developing LNG-to-power projects of the scale or cost proposed, and momentum for the project appears to rest on assumptions about U.S. diplomatic and financial support, as well as commitments to purchase U.S. LNG.

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[69] Vietnam Investment Review. Chan May initiative brings the power. July 20, 2020.
[70] Reuters. U.S.-Vietnam JV plans to invest up to $6 billion in LNG power project: CEO. July 22, 2020.
[71] *Ibid.*
[72] Power Technology. Chan May LNG to build power project in Vietnam with $6bn investment. July 23, 2020.
[73] Vietnam Express International. $6 bln LNG-fired power plant planned in central Vietnam. November 9, 2020.
[74] Vietnam Energy Summit 2020. Dissemination of the Politburo's Resolution No. 55-NQ/TW on the Orientation of Vietnam's National Energy Development Strategy to 2030, with a vision to 2045. July 22, 2020.

Energy Capital Vietnam

Energy Capital Vietnam (ECV) is a US-based entity targeting the development of a multiphase, integrated 3.6GW LNG-to-power project in the southeast province of Binh Thuan. Total investment for LNG Mui Ke Ga is said to be $4.2 billion, with the first phase expected to be completed by 2024. ECV formed a joint venture with Gunvor Group, a global commodity trading house, with a commitment to supply the project mostly with LNG from the U.S.[75] This project is also at the proposal stage and is still pending official approval and licensing from the Vietnamese government.

The project has also been reported to have won support from the U.S. government in seeking approvals. In 2020, the U.S. Department of Commerce and the U.S. Embassy in Hanoi reportedly asked Vietnam's MOIT and Deputy Prime Minister Pham Binh Minh to approve the LNG Mui Ke Ga project for the country's current power development plan.[76] While this effort was unsuccessful, the project has been tentatively included in the 2021-2030 power development plan (PDP8), expected for release later this year.

Millennium Energy

Houston-based Millennium Energy has proposed a portfolio of three mega-projects in three different provinces across Vietnam: LNG Van Phong, a 4.8GW power plant, LNG terminal, and storage facility with a combined investment of $27 billion;[77] LNG Nghi Son, a 4.8GW power plant and LNG terminal worth $7 billion;[78] and LNG Soc Trang, a 9.6GW, $15 billion integrated LNG-to-power project.[79] The projects are still in the proposal phase, but details about Millennium Energy's backing and track record are difficult to confirm.

On Millennium Energy Corporation's website, which was set up in 2020, the company states it is involved in various stages of natural gas and LNG value chains, including upstream, midstream, and downstream segments.[80] The company also presents itself as having more than 35 years of experience in developing energy projects from various asset classes, with total investments in the U.S. and abroad amounting to over $36 billion.[81] Its website lists 31 projects "where Millennium's team members had leading roles," though the specific nature of staff members' involvement is unclear.[82] Although the website does have a Vietnamese translation, it does not mention any proposed projects in Vietnam.

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[75] Gunvor Group. Energy Capital Vietnam and Gunvor form joint venture to trade and ship LNG to Vietnam. December 8, 2020.
[76] Cong Thuong Newspaper. Binh Thuan aims to become a national energy center. July 31, 2020.
[77] VietnamPlus. U.S. company wants to invest in two LNG projects in Van Phong Economic Zone. May 13, 2021.
[78] Thanh Hoa Newspaper. Thanh Hoa Party Secretary meets with U.S. investor. June 1, 2020.
[79] Vietnam Investment Review. Millennium Energy Vietnam proposes to develop USD15 billion LNG project in Soc Trang. April 26, 2020.
[80] Millennium Energy. Home.
[81] Millennium Energy. Projects.
[82] *Ibid.*

Similar to its competitors, the company's executives have assured Vietnamese provincial authorities that the U.S. government will provide guarantees for the projects and work with the Vietnamese government at the provincial level to implement proposals.[83]

The U.S. Government's Continued Support for Specific Fossil Fuel-Related Projects Abroad is Uncertain, As Projects Are Likely to Face Increased Scrutiny

In the six months since the election of U.S. President Joseph R. Biden Jr., new LNG players in Vietnam have continued to tout their projects' geopolitical benefits. In IEEFA's view, however, U.S. government support for new international fossil fuel projects in ASEAN countries may be subject to reconsideration in line with a new stance on climate policies. While some projects may still proceed with U.S. federal support, agencies under the Biden administration are likely to scrutinize projects and their sponsors more closely, possibly delaying or limiting federal approvals. A more restrained federal approach to fossil fuel exposure raises questions about whether statements concerning U.S. government backing for LNG ventures will translate into the tangible U.S. government financial support that these capital-hungry projects will require.

While the previous administration officials provided outspoken support for fossil fuel developments abroad and eased regulations on U.S. LNG exports, the new administration has not yet confirmed whether it will continue to back new international fossil fuel-related projects and has left the door open to rejecting at least some projects that have not yet received approval for federal financing.

A January Executive Order entitled "Tackling the Climate Crisis at Home and Abroad" directs relevant departments and U.S. development agencies to work toward "ending international financing of carbon-intensive fossil fuel-based energy,"[84] and statements from high-level officials have suggested an end to all federal support for fossil fuel projects except in cases with demonstrable climate or national security benefits. However, specific policies have left the door slightly open for continued federal support for international natural gas and LNG-related projects.

At the World Economic Forum in January, U.S. Special Presidential Envoy for Climate John Kerry referred to the January Executive Order as "a plan for ending international financing of fossil fuel projects with public money."[85] Kerry also noted, "If we build out a huge infrastructure for gas now and continue to use it as the

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[83] Vietnam Finance. U.S. oil and gas "giant" proposes mega LNG-to-power project worth USD15 billion in South Van Phong. August 1, 2020.
[84] White House. Executive Order on Tackling the Climate Crisis at Home and Abroad. January 27, 2021.
[85] Inside Climate News. Wealthy Nations Continue to Finance Natural Gas for Developing Countries, Putting Climate Goals at Risk. June 7, 2021.

bridge fuel, we haven't really exhausted the other possibilities, we're gonna be stuck with stranded assets in 10 or 20 or 30 years."[86] [87]

In April, however, Kerry told the International Monetary Fund, "We have to move away from coal faster. Gas, to some degree, will be a bridge fuel."[88] [89]

Other officials in the Biden administration have hinted at an end to U.S. financial support for fossil fuel infrastructure. Secretary of State Anthony Blinken said in January that development finance "is a powerful tool for addressing the climate crisis."[90] As such, the U.S. will use it to "help drive investment toward climate solutions."[91] Treasury Secretary Janet Yellen also committed to using the U.S. Treasury's international finance tools to address climate change.[92] [93]

Beyond public statements, policy actions suggest that the Biden administration's energy policy orientation is not aligned with advocating strongly for U.S. LNG exporters in emerging markets. On April 16, the Department of Treasury removed Vietnam's currency manipulator designation and stated in a report to Congress it will develop a plan with Vietnamese authorities to address the undervaluation of the Vietnamese dong.[94] The move signals a more light-handed approach to the bilateral relationship and a broader engagement with Vietnam as a trading partner. It also foreshadows Biden's approach to ASEAN more broadly. In IEEFA's view, the current administration seems poised to more carefully evaluate options for diplomatic engagement and energy cooperation rather than pressuring ASEAN officials to guarantee U.S. LNG purchases and secure markets for U.S. exports.

On the domestic front, Biden administration officials have been less outspoken than previous administrations on federal support for LNG export facilities. The administration's recently announced $2 trillion infrastructure proposal includes a clean energy standard mandating a total phase-out of fossil fuels in the electricity

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[86] Bloomberg Law. Kerry Warns of Stranded Asset Risk From Natural Gas Buildout. January 27, 2021.
[87] At the CERA Week Energy Conference in March, Kerry again warned the fossil fuel industry that companies "don't want to be sitting there with stranded assets. That fight is useless. You're going to end up on the wrong side of this battle." Common Dreams. John Kerry Tells Big Oil to Stop Resisting Energy Transition or "You're Going to End up on the Wrong Side of This Battle." March 3, 2021.
[88] S&P Global. Biden plan leaves an opening for financing of global gas projects. April 27, 2021.
[89] As Secretary of State in the Obama administration, Kerry notably pledged U.S. support for the coal-fired *New Kosovo Power Plant*, despite analysis showing the plant would be both costlier and more environmentally harmful than other alternative energy sources. Foreign Policy. Tiny Kosovo Faces a Big Energy Dilemma. April 5, 2016.
[90] Quartz. Biden's crusade against fossil fuels won't work in Africa. March 12, 2021.
[91] *Ibid.*
[92] Reuters. Yellen vows to use 'full power' of U.S. government to tackle climate change. March 16, 2021.
[93] In a recent speech, Secretary Yellen recognized the important role of the U.S. in multilateral development bank (MDB) climate financing policies: "Efforts to increase MDB climate finance targets, align their lending with the Paris Agreement, and discourage new investments in fossil fuel-based power generation are important steps." U.S. Department of the Treasury. Secretary of the Treasury Janet L. Yellen's Remarks to the Institute of International Finance. April 21, 2021.
[94] U.S. Department of the Treasury Office of International Affairs. Macroeconomic and Foreign Exchange Policies of Major Trading Partners of the United States, p. 50. April 2021.

generation sector by 2035. The plan does not mention any support for natural gas infrastructure or export facilities. Despite lobbying from developers of the Alaska LNG project, for example, the project received no funding from the proposed infrastructure bill due partly to the Biden administration's opposition to more fossil fuel development.[95]

In IEEFA's view, the U.S. Federal Energy Regulatory Commission (FERC), which approves LNG export terminals (not including deepwater terminals), is also likely to look more closely at the greenhouse gas impacts of new terminals, possibly affecting the decision-making process for the six proposed facilities still awaiting FERC review.[96] Richard Glick, the new commission chairman, has dissented from FERC approvals of LNG export facilities in the past based on inadequate environmental review, and FERC recently assessed the climate change impacts of a proposed natural gas pipeline for the first time ever.[97] [98] New Biden appointees to the commission following the end of former FERC Chairman Neil Chatterjee's term in June could increase the stringency of climate reviews and affect the balancing of benefits versus adverse impacts that FERC must make in determining whether a proposed LNG export facility is "not in the public interest."[99] Biden has not yet nominated Chatterjee's successor and Republicans still have a 3-2 majority in the agency.[100]

It remains difficult to predict the Biden administration's policy stance on LNG exports, but it is possible that a more nuanced policy leaving the door open for specific projects could result. Some administration officials have offered support for LNG abroad as a transition fuel for countries looking for alternatives to dirty coal-fired power. Energy Secretary Jennifer Granholm, for example, said LNG is often exported to "countries that would otherwise be using very carbon-intensive fuels," and noted that LNG "does have the impact of reducing internationally carbon emissions."[101] [102]
Other personnel working directly with Asia have also supported LNG exports to the region. President Biden's nominee for Assistant Secretary of Defense for Indo-Pacific Security Affairs Ely Ratner co-authored a report in January 2020 that argued, "The United States should continue U.S. exports of crude oil and liquefied natural gas (LNG) to the Indo-Pacific, as well as promote free trade in these key commodities, avoiding calls for limiting U.S. energy exports… The Overseas Private Investment

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[95] Anchorage Daily News. Alaska gas line project left out of Biden administration's massive infrastructure proposal. April 22, 2021.
[96] Federal Energy Regulatory Commission (FERC). LNG Maps Exports. November 2, 2020.
[97] S&P Global. After FERC policy shift, Northern Natural adds GHG data on project, seeks action. April 29, 2021.
[98] E&E News. Biden faces climate clash over LNG. March 8, 2021.
[99] FERC must grant approval for an LNG terminal "unless" it finds the proposed exporting or importing of LNG "will not be consistent with the public interest." Natural Gas Act, 15 USC § 717b(a)
[100] Bloomberg Law. Key Republican Energy Regulator Looks to Stay Past End of Term. April 26, 2021.
[101] E&E News. Biden faces climate clash over LNG. March 8, 2021.
[102] Deputy Energy Secretary nominee David Turk also noted the geopolitical benefits of LNG in a Senate confirmation hearing: "We're a democracy; we're the leader of the free world. I think it's a much better outcome for Japan or others to get their energy supplies from the U.S. than to get it from Russia or other countries." *Ibid*.

Corporation (OPIC) [now DFC] should prioritize support for LNG import terminals in key importing markets throughout the region. Congress should allow the Department of Energy to continue to streamline the approval process for LNG export licenses… This open approach to crude oil and LNG exports will provide considerable security and economic benefits for the United States and U.S. partners in Asia."[103]

Recent DFC announcements at the Climate Summit indicate that the U.S. may be leaving the door open for continued financing of LNG projects abroad. According to the plan, continued support for fossil fuel-related projects may be justified in "limited circumstances" by "a compelling development or national security reason."[104]

As White House senior climate advisor Jonathan Pershing put it, "low carbon doesn't necessarily mean no fossil fuel."[105]

While it is possible that some LNG import projects in the region may proceed with U.S. government support, agencies under the new administration are, in IEEFA's view, likely to scrutinize projects' financial viability, climate benefits, and national security implications more closely. This could ultimately limit the number of approvals from U.S. financing agencies, with particular impacts on the viability of projects proposed by new LNG industry players banking on U.S. support.

Changing Federal Policy Can Affect the Competitiveness of U.S. LNG Abroad

The Biden administration's policies on international climate finance and ASEAN relations are likely to have major implications for both U.S. exporters and LNG import project sponsors in Southeast Asia. Some climate moves from the Biden administration—including the reimposition of methane standards and efforts to impose climate-related disclosure requirements on publicly listed companies—could improve the competitiveness of U.S. LNG in less price-sensitive, more climate-focused markets like Europe.

In more price-sensitive Southeast Asian markets, however, IEEFA believes that electric utilities and other fuel buyers are likely to be more hesitant in committing to long-term purchases of a premium priced fuel. Because the Biden administration is less likely to wield foreign policy tools—including tariffs, trade negotiations, development finance, and currency manipulator labels—to pressure Southeast Asian governments into purchasing greater U.S. LNG volumes, U.S. exporters might have to compete more directly on price with potentially cheaper, geographically closer producers in Qatar, Australia, and Russia.[106]

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[103] Center for New American Security. Rising to the China Challenge: Renewing American Competitiveness in the Indo-Pacific. January 28, 2020.
[104] The White House. U.S. International Climate Finance Plan, p. 10. April 22, 2021.
[105] Farming Independent. U.S. climate plans won't halt LNG exports to Ireland. May 12, 2021.
[106] Nikkei Asia. Exclusive: Russia to boost LNG output fivefold to supply Asia. June 13, 2019.

The often-cited breakeven price for Qatari LNG is roughly $4/MMBtu, compared with $7-7.80/MMBtu for new U.S. projects.[107] [108] Moreover, LNG shipping to Asia from the U.S. can cost approximately twice as much as from Qatar and almost three times as much from Australia, due to longer tanker travel times and added costs of transiting through major shipping routes.[109]

The competitiveness of U.S. LNG in Asia, however, depends on myriad factors, such as Henry Hub prices, vessel charter rates, shipping fuel costs, transit fees, and overseas spot market prices, among many other determinants. The wide range of factors affecting competitiveness makes it difficult to determine how much U.S. LNG Asian markets will absorb, especially given recent extreme volatility in both shipping rates and prices in the Japan-Korea Marker, the most widely used benchmark spot price in Asia. Without pressure from the administration on emerging markets to guarantee purchases of U.S. gas, exporters might have to navigate the competitive market environment at their own risk.

The recent low-price LNG environment and announcements that competitors plan to drastically increase LNG export capacity, as well as legal and regulatory delays domestically, have significantly hindered final investment decisions (FIDs) for new North American projects. In March 2021, Annova LNG cancelled its planned 6.5-million tons per annum project in Brownsville, Texas due to "changes in the global LNG market."[110] NextDecade cancelled its Galveston Bay LNG project for similar reasons a month earlier.[111] In April, Pembina Corporation paused development of its Jordan Cove LNG project on the coast of Oregon due partly to a lack of long-term offtakers, as well as permitting and legal challenges at the federal, state, and local levels.[112] Alaska LNG is struggling with high capital costs, which are nearly twice those of Qatari and Russian export projects.[113] Numerous other projects are also facing FID delays, and any continuation in the current market glut and inability to secure long-term offtakers for U.S. gas could further hinder the sector.

Conclusion

Given the high level of LNG market volatility, LNG import project developers in ASEAN are likely to be watching the Biden administration carefully to assess whether project financials, climate impacts, and project risks will be scrutinized more carefully. Risks to LNG projects in the region are well-known and include political and macroeconomic risks, corruption, construction delays, and problematic legal and regulatory frameworks. Moreover, the current unwillingness of potential buyers in the Philippines and Vietnam to grant long-term take-or-pay offtake

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107 IEEFA. IEEFA report press release: China unlikely to come to rescue of overbuilt U.S. LNG industry. July 29, 2020.
108 Bloomberg. King of LNG Undercuts Rivals to Keep Dominating World Market. May 19, 2021.
109 Center for American Progress. Do Not Fall for the Hype on U.S.-China Natural Gas Trade, p. 11. April 2018.
110 Oil & Gas Journal. Annova LNG cancels Brownsville, Tex., liquefaction project. March 23, 2021.
111 Oil & Gas Journal. NextDecade cancels proposed Galveston Bay LNG plant. February 1, 2021.
112 S&P Global. Pembina decides to 'pause' development of Jordan Cove LNG terminal in Oregon. April 23, 2021.
113 Alaska Journal of Commerce. AK LNG economics still challenged at lower cost. July 1, 2020.

contracts to independent power producers (IPPs) is likely to make bankability a difficult task.

Greater scrutiny of fossil fuel-related projects by U.S. development finance agencies means that the less experienced LNG developers in Southeast Asia with limited track records may be unable to meet the high expectations that some have used to fuel their ambitions. It could also mean longer timelines before Southeast Asian LNG demand grows rapidly enough to justify new U.S. LNG export capacity. Going forward, U.S. government agencies, LNG exporters, and other industry stakeholders can be expected to ask more questions about how price-sensitive developing markets will absorb new volumes of U.S. gas. If they don't, unrealistically bullish demand projections for LNG could leave U.S. companies, and their investors, to pick up the check for underutilized natural gas assets.

About IEEFA

The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

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