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Challenges and Opportunities in U.S.-Japan Energy Cooperation

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U.S.-Japan energy cooperation faces significant challenges in 2023 while also offering important opportunities. Managing the challenges and exploiting the opportunities will be a complex task for government and business leaders in both countries.

Challenges

The intersection between geopolitics and global markets—for energy as well as energy-related commodities—is perhaps the most obvious challenge. After decades of stability, Japan's liquified natural gas (LNG) imports from the United States have become increasingly volatile during the last ten years. [https://www.eia.gov/dnav/ng/hist/ngm_epg0_eve_nus-nja_mmcfm.htm] While some of the volatility reflects the emergence of a meaningful global spot market for LNG, the year following Russia's invasion of Ukraine has been especially difficult, with a marked shift in U.S. exports toward Europe to compensate for its loss of Russian pipeline gas imports. Japan's LNG import price today is roughly double the average figure across 2019, 2020, and the first three quarters of 2021 [https://ycharts.com/indicators/japan_liquefied_natural_gas_import_price], with few reasons to expect growth in U.S. or other supplies sufficient to drive down prices in the near future. As a result, the growing mutual benefit in the U.S.-Japan gas relationship has suffered significant collateral damage from Russia's assault on Ukraine and U.S. and Western policy responses.

The collision between geopolitics, the energy transition, and domestic politics poses another challenge. This is primarily a consequence of escalating competition between the United States and China, on one hand, and growing efforts in the U.S. and allied countries to reduce dependence on China by increasing domestic manufacturing of electric vehicles (EVs), batteries, solar panels, and other systems or key components, on the other. The problem has been most visible in public complaints by many U.S. allies about the Inflation Reduction Act's EV tax credit, which requires an escalating share of battery materials from the United States or countries with which Washington has free trade agreements (a restriction that of course excludes Japan) and requires a rising share battery components from North America. Final EV assembly must also be in North America to qualify. [https://www.piie.com/blogs/realtime-economics/why-us-allies-are-upset-over-electric-vehicle-subsidies-inflation]

Setting aside whether any firms will be able to meet the battery material requirements—retired U.S. admiral Dennis Blair, the chairman of an advocacy organization supporting

electric vehicles, expressed doubt as the Congress debated the IRA [https://www.realclearenergy.org/articles/2022/08/05/a_ramp_not_a_cliff_needed_to_build_ev_battery_supply_chains_846531.html] —the dispute reflects broader tension between America's goal to unite its allies to compete with China militarily and in other ways while seeking to promote domestic manufacturing, something that inevitably intensifies commercial competition with the same allies. Of course, most U.S. allies are simultaneously introducing similar policies to support domestic manufacturing; in fact, some did so well before Washington's. Relatively low U.S. domestic energy and electricity prices add to this by creating further incentives to locate energy-intensive manufacturing in the United States rather than elsewhere. Even as the United States, Japan, and others work to establish more secure critical mineral supply chains through the new Minerals Security Partnership [https://www.state.gov/minerals-security-partnership/], many if not most are involved in parallel disputes surrounding manufacturing-promotion policies in clean energy and other areas.

A third challenge in the United States is in the interaction between domestic politics and the energy transition. Clean energy is highly contested in the United States, with many Republican elected officials and voters skeptical toward subsidy-oriented policies such as the IRA's expansive tax credits and toward broad interpretation and application of federal regulatory powers. This has led to acrimonious policy debates over energy and climate policy and to zig-zagging federal policy on some issues.

It would not be easy for Republicans to repeal or revise the IRA, as this would require either control of both the Congress and the White House or, alternatively, two-thirds majorities in both the House of Representatives and the Senate, to override a presidential veto. However, it is conceivable that in 2024, Republicans could retain their House majority (possibly with a wider margin) and win the Senate (where Democrats hold a slim 51-49 majority) and the presidency. Until 2024, or in a second administration that lacks control of Congress, the Biden administration may confront growing pressure from some Democrats to develop new regulatory policies, especially clean air rules or related efforts to shape the power sector. These efforts have historically produced long court battles and/or later reversals by a Republican administration; they make America's domestic investment environment less predictable than it could otherwise be.

At the state and local level, the bitter politics of energy and climate is often expressed in permitting battles. Journalist Robert Bryce has built a database to track local rejections of solar and wind projects, which appear to be growing, although the database tracks the number of rejections rather than the rejection rate. [https://robertbryce.com/renewable-rejection-database/] One would expect the number of rejections to grow as the number of proposed projects grows—more important is whether a larger or smaller share of projects face successful local opposition. Radically increasing the share of solar and wind power in electricity generation would require boosting the number and scale of these projects rapidly each year.

Energy Innovation Reform Project's work has described the considerable land use requirements of solar and wind facilities and assessed some of the sources of local opposition, which has both local and national components. [https://www.innovationreform.org/wp-content/uploads/2020/10/1909-Energy-Reform-Land-Use-Requirements_digital.pdf] Some states, such as New York, have sought greater power to override local governments, though it remains to be seen how state officials will use this authority and with what consequences. [https://www.innovationreform.org/wp-

content/uploads/2021/09/Ambitious-Mandates.pdf] Proposed federal permitting legislation could ease permitting only on federal lands; Americans will thus decide much of the country's clean energy policy in state and local permitting proceedings and ultimately in elections. Like national-level uncertainties, this will complicate companies' investment decisions, despite the IRA's substantial financial incentives.

Opportunities

Notwithstanding America's evolving domestic policy, the most immediate commercial opportunities in U.S.-Japan energy relations derive from the massive Inflation Reduction Act tax credits for various forms of clean energy projects in the United States. The IRA includes substantial production tax credits for clean hydrogen, nuclear energy, and renewable power, as well as a clean electricity production tax credit that includes carbon capture, storage, and utilization (CCUS) projects. [https://www.energy.gov/sites/default/files/2022-10/IRA-Energy-Summary_web.pdf] Notably, these credits include a so-called "direct pay" provision that allows project developers to collect the full value of the credit even if it exceeds their tax liability; the credit becomes a tax refund. This significantly increases their attractiveness to developers, who in the past sold their excess tax credits at a discount in tax equity markets. [https://bipartisanpolicy.org/download/?file=/wp-content/uploads/2022/06/Energy-Direct-Pay-Infographic.pdf]

At the government-to-government level, and among universities, there are considerable opportunities to expand joint energy technology research and development (R & D), especially in clean energy. The United States and Japan have deep and lasting cooperation in energy technology; Japan has been the leading international partner of the U.S. Department of Energy. The two countries are also among the world's top spenders on energy R & D. [https://www.innovationreform.org/wp-content/uploads/2021/04/Energy-Technology-in-an-Era-of-Great-Power-Competition.pdf] As officials in Washington and Tokyo work to secure critical mineral supply chains, technologies to locate, characterize, and sustainably extract these minerals will only grow in importance, as will processing technologies that reduce energy and water consumption and limit environmental impacts. Advanced manufacturing and recycling technologies could similarly ease these efforts by reducing or shifting resource requirements and by improving sustainability.

Internationally, the United States and Japan could secure both economic and strategic gains by exploring a possible clean energy or green technology trade agreement, ideally within the Indo-Pacific Economic Framework or a similar multilateral format. Such an agreement could further reduce barriers to trade in these key technologies and help to accelerate their deployment. While negotiations would likely be quite difficult—particularly if they incorporate electric vehicles—a successful deal would be highly consequential. Washington and Tokyo could also improve coordination between their development assistance efforts with a view to facilitating joint clean energy project in select ASEAN member countries, such as Indonesia, the Philippines, Thailand, and Vietnam. Joint projects in India could be similarly advantageous, both commercially and geopolitically.

Conclusion

In pursuing the opportunities for closer U.S.-Japan energy cooperation, the most difficult challenges for both governments and firms are likely to come from their economic competition and domestic pressure for policies that promote manufacturing and sales of "made-at-home" products. This will not be easy to manage when publics want governments

to deliver jobs and growth. That said, there are some approaches that can help to align the interests of companies and, to a lesser extent, of governments.

One of the most straightforward, and most obvious, options for businesses in the two countries is to develop strategic partnerships in various forms—from simple partnership agreements to multinational consortia or mergers/acquisitions. This approach also has the advantage of building the scale necessary to compete effectively with some of China's huge state-owned enterprises, though it may not be equally available in all industries.

A key task for governments is to ensure that competition among U.S., Japanese, and other allied-nation firms remains within agreed and predictable systems. Firms are more likely to swallow their inevitable losses to others when they accept that the competition was fair. This is not easy either—but it is a strength of political and economic systems based on the rule of law.

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