Just Energy Transition Partnerships for Gas-Producing Countries

Working paper for consultation
November 2022

NRGI invites those with reactions to this paper or interest in engagement on JETPs to contact senior governance officer Aaron Sayne at asayne@resourcegovernance.org.

KEY MESSAGES

- Just Energy Transition Partnerships (JETPs) could help lower-income gas producing countries diversify their economies and energy systems away from fossil fuels, boost energy access, and compensate the people hit first and worst by climate change.
- Without shared principles for how to build a gas JETP, though, short-term political agendas and opaque negotiations could erode its value as a new transition finance tool.
- International partners should not condition JETP funding on the producer country promising to leave gas reserves unexploited, or to end domestic gas use. Instead, they should work with the producing country to design and fund a faster, more ambitious transition away from gas and other fossil fuels.
- Gas-producing countries should come to JETP negotiations having carefully weighed the risks and tradeoffs of continuing to rely on gas. They should also be transparent about the carbon costs of their country's gas plans since some may be misaligned with climate goals.
- All parties to a gas JETP should be open to a limited program of support for domestic gas if agreed principles are met. At the same time, funding for gas should not distract from a JETP's biggest promise: securing funding for the lower-income country's long-term switch to renewables.
- The centerpiece of any gas JETP should be a package of support that attracts more private investment in renewables. The international partners should also offer things that profit-driven investors will not, such as finance for transmission and distribution infrastructure and bigger, longer-lasting grants.

Just energy transition partnerships (JETPs) have generated significant interest since South Africa and an international partners group ("IPG", consisting of the U.S., France, Germany, U.K. and EU) announced the first such agreement at COP26. The five-year, USD 8.5 billion deal has been touted as a possible step-change for financing faster transitions to clean energy under "just transition" terms.

What is a JETP?

A JETP is a high-level political agreement between group of wealthy, high emitting international partner countries and a less-wealthy fossil fuel-producing country. The agreement is supposed to be a vehicle for helping the producer make a faster, fairer transition away from extracting and burning fossil fuels in line with "just transition principles." Through the partnership, the producer country gets a mix of funding (cheap loans, investment guarantees and grants) and technical support, mainly from public investors located in or controlled by the international partner countries, such as multi-lateral development banks, export credit agencies or state development agencies and investment corporations. The international partners, meanwhile, get to explore new destinations for investor capital while making progress on their climate finance commitments.

The producer country is supposed to set the goals for a JETP. In South Africa's case, government negotiators initially focused on phasing out coal plants, fast-tracking renewables and supporting the country's coal-producing regions, then added ambitions for electric vehicle and green hydrogen production. Other countries may have different needs, from power grid extension and environmental remediation to revenue replacement, debt relief and economic diversification.

Preparing for, negotiating, designing and implementing a JETP is long, complex process. South Africa went through several years of preparation before signing a political declaration with its international partners at COP 26. This was followed by the development and publication of a detailed investment plan, though many specifics of the financing and implementation remain to be seen.

Interest in JETPs is running high around COP27. International and national climate and development groups, climate negotiators, and a range of government and industry actors have expressed hopes that JETPs can expedite and expand climate and transition finance, both by avoiding the dysfunctions of current mechanisms and luring more private investors. If well-crafted and implemented, JETPs could also help lower-income countries to find realistic pathways to sustainable development, boost energy access and the competitiveness of renewables, and offer new ways to compensate some of the places hit first and worst by climate change.

Reports suggest that close to a dozen other JETPs are under discussion, though concrete details have been scarce. The most-discussed JETP candidates are significant polluters and coal consumers like South Africa, but at least one—Senegal—has a smaller carbon footprint and energy plans centered around gas. This has raised the question: should JETPs extend to lower-income, low-emission gas-producing countries that have traditionally contributed little to climate change?

Individual gas-producing countries will have their own goals for a JETP, not least because of the unique role gas plays in their politics, economies and energy mixes. In Africa, for instance, the landscape is divided between

- **existing producers** like Nigeria and Algeria, who depend on gas for export earnings and domestic energy
- **emerging producers** like Senegal, with ambitious plans to start exporting and burning significant volumes of gas soon
- **prospective producers** like Tanzania, who could end up reliant on gas in the longer term if extraction takes off

Because JETPs are still new, future partners will have wide discretion to shape their terms. This flexibility is key for both the promise of JETPs and their possible pitfalls. Thus far, no agreed framework or guidance exists for negotiation, consultation or design, nor is there consensus around what types of support should be on or off the table. Without such common ground, the potential value of the JETP model could be lost or diluted by political horse trading between the partners.

In this discussion paper we offer ideas for how to craft gas JETPs that:

1. **Achieve a fair balance of climate and development goals around gas**
2. **Support faster, fairer expansions of renewables**

We include a mix of broad principles for designed funding packages and more technical recommendations. Because some issues around JETPs—especially those involving gas—are controversial, NRGI is circulating this discussion paper among stakeholders at the global level and in the countries where we work, to gauge reactions to its content and find points of agreement and difference. We plan to design programming around gas JETPs in the coming year and welcome all feedback to improve our work in this fast-evolving area.

1. Achieving a fair balance of climate and development goals around gas

The debate over whether developing countries should extract and burn gas is deeply politicized and divisive. Multiple high-profile studies have found that new gas extraction does not fit within a scenario for keeping Earth's temperature rise to 1.5-degrees, and that the world must halve its gas consumption by 2050 to avoid the worst climate outcomes. At NRGI, we believe that wealthier, higher-emitting countries should wind down their gas sectors first and fastest, both in terms of exports and domestic use. Yet, there is very little agreement about how to make that happen.

Political leaders from many lower-income producers—in Africa especially—are touting gas as critical for their development, calling it a "transition fuel" that can alleviate chronic domestic energy issues and kickstart wider economic growth. They want the freedom to burn more of their own gas reserves to:

- expand energy access
- meet fast-rising electricity demand
- boost energy security
- lower electricity costs
- displace other, dirtier fuels in the domestic energy mix
- balance the power grid as renewables grow
- give more households clean cooking fuels
- provide fuel for industrialization and economic diversification

More controversially, they also argue that higher-income, high-polluting countries should pay for the new infrastructure needed for all this as part of a just energy transition.

The high-polluting Global North countries, meanwhile, have been sending mixed messages. Days after the U.S. backed an end to international public finance for developing country gas projects it announced its largest-ever auction of oil and gas leases at home. The EU took a similarly hardline stance, only to backtrack when it grew desperate for fresh sources of gas after Russia invaded Ukraine. Member countries started courting African and Eastern Mediterranean gas producers; Brussels even labeled some overseas gas projects "green" for investment purposes—with an apparent preference for those that would send more liquified natural gas (LNG) to Europe's rescue.

In many lower-income gas producers, this opaque, unaccountable behavior is stoking anger. Voices in and outside of government have accused the wealthy countries of hypocrisy, "green colonialism" and "energy apartheid"—asking why, for example, northern governments would pressure energy-poor African producers to give up fossil fuels while their gas was going to keep Europe warm and powered. At the same time, lower-income country officials are dusting off tens of billion dollars in new gas projects—many of which were considered highly risky as recently as a year ago—in hopes that funding may now materialize. The apparent double standard from the Global North also comes at a time when lower-income countries have led in new gas discoveries, hundreds of millions of people in them still lack electricity or clean cooking fuel, and wealthy countries have failed to honor their pledge of USD 100 billion in annual climate finance for developing countries through 2025.

We offer the following suggestions for breaking the impasse:

Suggestions for international partners

> *Do not condition JETP funding on the producer country promising to leave gas reserves in the ground, or to end domestic gas use. Instead, work together with the producer to design and fund a faster, more ambitious domestic energy transition away from gas and other fossil fuels.*

Two factors inform this recommendation. First, in contrast to wealthy countries, where energy use is relatively stable and existing energy systems can meet needs, many lower-income gas producers cannot meet domestic demand energy, particularly as they expand energy access to their young, fast-growing populations, build new industries and diversify their economies; some scenarios forecast that electricity demand in Africa will more than triple by 2040. The challenge in such cases, then, is less about "transitioning" from dirty to cleaner fuels than building new systems that can expand energy supply quickly in less carbon-intensive ways. And if serving unserved consumers and industrialization generally imply some amount of "carbonization," all partners in a JETP should ask: how can the producing country achieve such developmentally important goals in less carbon-intensive ways?

Second, countries such as the U.S., U.K., Germany and others—whose own gas consumption and responsibility for the climate crisis are disproportionately large—lack the moral authority to demand in a JETP that lower-income countries forego gas. Rich-world production is the main gas-related climate threat, even if some lower-income country were to proceed with new gas projects. Current and planned gas consumption in the US, EU, UK and other wealthy countries dwarfs use by lower-income producers. The gap between these and lower-income producer emissions from burning fossil fuels is even wider—

Africa accounts for just 3 percent of all CO2 emissions, as much as a quarter of which come from combustion by consumers overseas. Compounding the inequity, most lower-income gas producers are much more vulnerable to the impacts of climate change than the US, EU or UK African countries especially experience some of the worst impacts; they are also less ready to adapt.

Given these disparities, and the importance of the gas-producing country setting goals in a JETP, the high-income parties to a gas JETP should:

- Recognize that conditioning JETP support on a pledge to leave gas unexploited will likely be a political non-starter, and actors in the producer country and elsewhere will judge such a demand as hypocritical and unjust.
- Tailor any conditions on gas JETP financing to the country context—and use conditions sparingly as long as the international partners' own gas production and/or use are not Paris-aligned.
- Acknowledge the lower-income country's limited contribution to climate change in communications around the partnership.
- Be open to including finance for climate adaptation and climate-related loss and damage in a gas JETP.

Be upfront about how much demand and funding for lower-income country gas are actually on the table.

Wealthy polluters must be more transparent about how much gas they intend to buy from producers. Europe's dash for non-Russian gas imports has created unrealistic expectations in many countries. While a few short-term supply deals have resulted, EU countries are also hastening their own transitions to renewables and trying to avoid signing long-term gas purchase agreements. Furthermore, this year's record LNG prices and cancelled shipments have led some wealthy importers to rethink plans for further expansion of LNG import infrastructure, limiting demand growth elsewhere. To separate reality from hype and keep lower-income producers from wasting capital or time chasing unviable upstream or LNG projects, any international partner involved in a gas JETP should:

- Clearly set out its own fossil fuel production exit plans in parallel with any gas JETP negotiations, with the wealthier, higher-emitting nations winding down first and fastest.
- Clarify its plans for phasing out domestic gas consumption.

International partner countries would not have to include such details in the terms of an individual JETP deal—e.g., as a covenant or other legally enforceable commitment. But greater transparency in this area is needed to boost international partner credibility and ensure producers aren't negotiating with bad or partial information.

The group of international partners should also state clearly which if any gas projects it intends to help fund: those focused on extraction and exports, or domestic use. The EU's courting of Africa and the Eastern Mediterranean has also raised hopes of new investment in projects, yet concrete promises of capital have been scarce so far. A small group of international private banks, most headquartered in North America or the EU, have provided around two-fifths of recent non-public gas project finance for Africa, with similar amounts coming from China. Most funds went to a few export-focused projects, and the number of projects reaching financial close has been dropping for some time. Meanwhile, international public financial support for gas projects, from state-owned or controlled development

banks, export credit agencies and finance corporations, has also fallen, in line with total multilateral development bank (MDB) financing for fossil fuels. At this point, only a handful of smaller, mostly Asian and African MDBs seem open to or at least unconflicted about backing new gas projects. The World Bank still directly supports a few downstream gas projects, but mainly in middle-income countries. And overall, even before the U.S. and EU called for an end to public funding for gas at COP26, low-income countries were receiving very little of it—less than $4 billion a year on average, one recent study found, nearly all of which went to a single export-focused project in Mozambique.

The lack of public sector investment is especially troubling for domestic gas projects. The large foreign energy firms that build gas-fired power plants in developing countries often look to export credit agencies or other public financiers for loans and guarantees. Likewise, private lenders often shy away from developing country gas projects unless public lenders commit first and assume the biggest risks, whether through equity stakes, debt subordination or provision of guarantees and insurance. Competition for funds meantime is fierce: governments and firms in Africa alone have plans to build 35 gigawatts of new gas-fired power at a cost of tens of billions of dollars, but they can't find funding for most of it. In recent years, the vast majority of planned or developing projects, and foreign financial contributions, are for extraction and exports.

Realistically, investors shy away from lower-income country gas projects not just because they could be bad for the climate, but because they are risky, unattractive deals. Risks vary with project type, but financing most of them requires that buyers of the gas or other output like electricity commit for the long term; such commitments are rare, especially as the future of gas as a fuel grows more uncertain. A government seeking to build a new LNG plant, for instance, would struggle to secure financing without several offtake agreements in place that lock buyers in for 10 to 20 years. Some domestic projects cannot offer decent returns on investment—or turn a profit at all—because of dysfunction and financial problems elsewhere in the supply chain or local economy. A range of problems can erode cash flows from many lower-income country gas power plants, ranging from high grid losses and customer inability to pay to governments' failure to set cost-reflective tariffs or protect the value of the local currency.

In this tough investment climate, lower-income gas-producing countries will have to fund future gas projects mainly through private equity or their own already-stretched public budgets. To avoid creating false expectations around funding, a gas JETP's political declaration and investment plan should:

- State explicitly whether the partnership will include any funding for gas, including for any state-owned enterprises or projects that use gas in their operations.
- Describe the roles donor country and other multilateral institutions would take in funding gas projects—e.g., whether they will act as direct or indirect lenders, guarantors or insurers, and how their participation will help address investment risks and "crowd in" other investors.
- Provide specific amounts—or at least good faith estimates—of the funding for gas on the table.
- List detailed due diligence steps, conditions, criteria and targets that each gas project must meet to attract finance.

Suggestions for the gas-producing country

Come to negotiations having weighed the risks and tradeoffs of betting on gas.

Gas may become a significant part of some lower-income countries' energy futures, whether as exports or fuel for domestic energy. However, officials in too many gas-rich countries now start with the premise that if a country has gas reserves, it should extract and use as much as possible now, without questioning whether that is the best path.

The global energy transition has precipitated huge uncertainties around demand and pricing in the export LNG market. Producers must weigh the risks of stranded assets carefully, and avoid basing other public finance decisions on unreasonable expectations of export revenues. Time is not on the side of countries seeking to build gas export infrastructure. Modeling finds that if the world meets Paris climate targets, most new LNG projects will not be economically viable—and even existing export terminals could become stranded by the mid-2030s.

Part of the problem lies in the complexities of building LNG plants: large projects take can take a decade to complete, regularly suffer multi-year delays, and have long payback periods, often of 15 years or more. For these reasons, companies have already cancelled some planned projects, and new project approvals could soon peak. To avoid managing public resources in ways that might not serve their best interests, countries should:

- Avoid a "race to the bottom," in which officials' efforts to attract increasingly scarce investment lead them to offer concessions to investors that result in a project generating benefits insufficient to compensate for the environmental and social harms that it causes.
- Make decisions about investing scarce resources—including by state-owned companies—in new gas export projects based on an in-depth analysis of the economic viability of the project and return on investment under a variety of energy transition scenarios.
- Make wider budgetary decisions—including on borrowing and spending—based on a range of government revenue scenarios that account for the energy transition as well as other common causes of lower-than-expected revenues.

Fast-tracking domestic gas use also comes with serious risks and tradeoffs, especially as the world moves away from fossil fuels. New gas-fired power plants could strain public budgets and local currency values, especially if governments fund them with debt or need gas imports and subsidies to avoid the plants becoming stranded. Much of these costs would ultimately be passed on to consumers, in the form of higher electricity prices. Governments, project developers, private researchers and civil society should likewise study gas' negative local environmental and social impacts. Dependence on gas imports can threaten a country's energy security, and gas proponents must ask whether switching from coal or oil-based power to gas now will force them to pay unnecessarily for two energy transitions at the point when they shelve their gas plants and switch to renewables.

At the planning stage, authorities in gas-exporting countries must be realistic about how much of the gas they extract will actually be burned by domestic consumers. Governments in many developing countries have used domestic energy needs to justify gas investment but then actually channeled most production into exports, both because investment capital and returns are higher and because the domestic market has been unable to absorb the gas produced.

For all of these reasons, producers should carefully interrogate claims that gas will be a necessary "transition fuel" or "bridge" to cleaner domestic energy. While many developing countries will take decades to switch to all-renewable electricity, too much investment in gas now risks "crowding out" renewables and leaving a country "locked in" to gas. South African officials undertook several years of intensive analysis, planning, policy reform and stakeholder engagement in the lead-up to the announcement of the country's JETP, on which work continues. The preparatory work that gas-producing countries need varies, but some basic good practices include:

- Determine, through detailed scenario-based modeling, whether the country has sufficient exploitable reserves to fuel its domestic gas plans—and if not, determine the cost and other implications of any imports needed.

- Adopt energy plans that describe the changing role of gas over time, and how gas and renewables would work together. These plans will be informed by a range of official documents: grid expansion or integration studies, least-cost generation plans, sector master plans, development plans, energy market assessments, or the NDCs and long-term strategies required under the Paris Agreement.

Features of good domestic energy sector planning involving gas
▪ Detailed, evidence-based rationale for using gas as a fuel
▪ Credible projections of gas supply and demand
▪ Comprehensive list of commissioned and planned gas projects
▪ Scenario-based modeling for how use of gas will change
▪ Credible narrative for phasing out fossil fuel use in different sectors, markets and areas
▪ Dates for infrastructure decommissioning and retirement
▪ Harmonization with other relevant economic or development plans

Source: NRGI Gas-to-Power Framework, Module 1

- Sign contracts that give gas power plants the flexibility to run at lower capacity as renewables grow. Foreign investors from wealthier countries, ironically, often demand terms that carry the biggest lock-in risks. Governments in producing countries should conduct their own analyses of investors' actual needs for achieving acceptable rates of return.

Good contracting practices for avoiding gas lock-in
▪ Flexible operating regime allowing plants to operate at lower capacity over time
▪ Affordable, dynamic capacity payments
▪ Less risky alternatives to take-or-pay penalties
▪ Workable, enforceable provisions for renegotiation, refinancing, decommissioning and early retirement
▪ Published model and final contracts

Source: NRGI Gas-to-Power Framework, Module 1

A producing country should take steps like these first and foremost for itself, not merely to satisfy the wealthier parties to its JETP. The risks of investing in gas are too high not to ask hard questions.

Be transparent about the carbon costs of gas plans since some may be misaligned with climate goals.

How far more gas extraction and use in lower-income countries would stretch the global climate budget is a complex question. Factors suggesting the impacts could be significant include the countries' fast-growing populations and expanding domestic energy use, the need for additional gas extraction, the long lives of gas projects, and the potency and chronic undercounting of methane. At the same time, expanded gas use in low-income countries may not add much to world emissions. But whether a particular plan or piece of infrastructure is Paris-aligned is not easily determined. Pro-gas voices may argue that gas is "greener" than the coal, diesel or other dirty status quo fuels, but this is not necessarily true. To create a fuller, more reliable picture of impacts, the governments and companies involved in a gas JETP should:

- Model emissions across the proposed gas projects and supply chains, and disclose the results. For domestic gas, modeling should include different scenarios for future use; whether gas can be part of a 1.5-degree scenario depends partly on the broader energy sector and economy it helps to create. For projects with gas exports, analysis should include multiple demand scenarios and cover the full value chain up to offtake (Liquification and regasification of gas emit high amounts of methane and CO2, marine transport of LNG is also carbon intensive, and emissions from transnational shipping are often undercounted in country and global totals.)
- Disclose whether planned domestic use projects will require new gas production or imports, and if so, the expected volumes.
- Indicate, based on scenario planning and feedback from investors, how many years gas infrastructure will operate, and at what capacity levels. If a government or investor claims it will cut infrastructure emissions by installing costly carbon capture and storage technology or switching to burning cleaner fuels like biogas or hydrogen, it should publish analysis showing that such a move will be technologically or economically feasible, and when it will happen.

Suggestions for all parties

Approach gas JETP negotiations as an opportunity to find common ground and address divisions around the question of gas in lower-income producer countries.

Hardened positions and polarized debate around gas lead to poor decisions. They could also delay action on climate and country development goals. To resolve tension:

- All parties to a gas JETP should approach negotiations in an open, listening manner, emphasizing collaboration and mutual respect.
- The gas-producing country should lead in setting goals and priorities, rejecting outdated donor-recipient power dynamics.
- Parties to gas JETPs should not frame the purpose too narrowly. They should avoid terms used mainly by the climate community in developed countries—e.g., the language of "decarbonizing" existing energy systems. For many lower-income gas-producing countries, the challenge is not so much transitioning from dirtier to cleaner fuels, but scaling up domestic energy supply in less carbon-intensive ways.
- Parties should work toward a partnership that increases all sides' climate commitments while addressing the socioeconomic impacts of transition and climate change on the producing country.
- When divisions and differences of opinion arise, parties should seek shared understanding in credible analysis, data and climate science.

- Early in the partnership discussions, the gas-producing country should involve diverse in-country voices and perspectives—for instance, using public dialogues, expert consultation or rulemaking—to build national consensus and improve the chances that the final agreement will reflect citizens' needs.
- The parties should engage proactively with local and international civil society actors and climate activists.

Be open to a limited program of support for domestic gas if agreed principles are met.

Including limited support for gas in a JETP could sometimes be warranted, as long as the total funding package clearly opens up a lower-carbon pathway for the producer country. Following are four principles that JETP parties could use to decide whether a particular gas-related investment belongs in the agreement:

- *The proposed use of gas is necessary to advance an urgent development goal, such as improving energy access.*
- *The proposed use is the only option for furthering the goal because no viable non-gas alternative exists.*
- *The proposed use is a small part of energy sector plans and funding proposals that the producer puts forward.*
- *The proposed use is not obviously and grossly misaligned with Paris Agreement climate goals*.

Deciding whether a particular use of gas meets all four of these principles can be difficult. Other options, like lengthy due diligence checklists or manuals, are possible, but use of those could slow overall JETP implementation and may not lead to clearer answers. JETPs are negotiated political settlements. If negotiators don't have clear, memorable and agreed ground rules to follow (and be judged by), parties can easily ignore more complex rules and standards.

To be clear, JETPs need not include finance for gas by default. No particular type of infrastructure or project should automatically be on or off the table, though some may be tougher to justify than others. For example, producer country officials may find it difficult to make the case for finance for gas exports, both since gas exports have contributed less to producer country development than domestic gas consumption, and because more exports would prolong the burning of fossil fuels in higher-emitting countries.

Officials and other stakeholders in lower-income gas-producing countries will understandably dislike justifying their gas plans to representatives of wealthier, bigger polluters. But hopefully they can understand that Global North politicians have made commitments back at home, just like they have, and those might include a promise to stop public funding for gas. Therefore, if producer country negotiators request gas-related support in a JETP, they might help the international partners to develop a justification.

The approach elaborated here is similar to guidance published by a number of think tanks, the U.S. Treasury and the World Bank, as well as NRGI's *Framework for Countries Evaluating Gas-to-Power Pathways*. We understand that some will find the proposal unacceptable on climate grounds, and we

respect that. The intention is to find a small compromise on the issue of gas that allows the partners to move on to more promising discussions.

2. Supporting faster, fairer expansions of renewables

Given gas' high risks and limited prospects, disputes over funding for it should not distract from a JETP's biggest promise: securing funding for the lower-income country's long term switch to renewables. Developing countries as a group will need at least $1 trillion a year this decade to reach net zero by 2050—ten times what rich countries have pledged (but failed to deliver). This certainly isn't a fair reflection of their resource endowment: Africa has at least 40 percent of world solar potential but has only one percent of all solar panels. Thus far, though, African countries have received just two percent of all renewables investment and three percent of climate finance flows. To be successful a JETP must address these imbalances.

Suggestions for international partners

Be willing to invest where profit-driven investors will not.

Private investors prefer to invest in renewable power generation capacity, where the returns are clearer, and shy away from other, less profitable infrastructure and projects that make it possible for those new wind turbines to actually produce power. This is another major barrier to the growth of renewables in lower-income countries.

In Africa, for instance, only 10 percent of investment in energy since 2015 has gone to transmission and distribution infrastructure; for even existing electricity demand to be met, that figure should be closer to 50 percent. JETP funders should be open to investing in such assets even with the expected returns aren't promising. They should also expand their offerings beyond loans, including in local electricity markets who economic fundamentals are still shaky. In rural electrification, for instance, some mini-grid developers depend on grants for up to half of their capital expenditures, partly because they cannot simply pass on the costs to the low-earning customers they serve.

Just as importantly, those who design JETPs should ensure that the private sector doesn't profit handsomely from its investments while leaving the producer country with unsustainable debt. Around half of African countries are already experiencing some level of debt distress, and the decline of fossil fuel exports could push some to borrow more. Officials in international partner countries should push their public lenders to dig deeper—and, in some cases, to revisit questionable past lending. At a minimum, this could include:

- Funding for critical but unprofitable infrastructure like grid extensions or household meters and connections. Where needed, the funds should help countries both to build new infrastructure and maintain and upgrade existing infrastructure.
- Debt relief for entities that cause dysfunction in local energy supply chains—e.g., financially distressed state-owned utilities or bulk electricity trading companies.

- Free or low-cost battery banks for solar and wind projects, especially where the producer country sees gas as a bridge to electricity storage.
- Much larger grants that cover a wider range of expenses, not just early-stage project costs such as studies or design work.

Suggestions for the producer country

Prioritize domestic reforms that facilitate faster growth of renewables.

Because solar and wind are newer technologies in most lower-income gas-producing countries, governments face challenges as they create an enabling environment for investment. South Africa spent several years reforming its domestic energy sector before seeking a JETP, and many of its efforts are ongoing. The most important steps, and modes of stakeholder engagement, will vary by country. Officials and accountability actors should ensure that elites or vested interests in the fossil fuel sector cannot politicize reforms in ways that allow for state capture and corruption. Here governments can:

- Signal the government's commitment to renewables by adopting an energy transition plan or framework, a renewable energy master plan, a climate change act or a local green finance taxonomy.
- Clarify and streamline governance of the electricity sector, possibly by creating an independent regulator and filling gaps in the regulatory framework.
- Liberalize and restructure markets, for instance by passing new rules for infrastructure access, grid connection, thresholds for private generation or state-owned enterprise participation.
- Roll out incentives that encourage more renewable power generation. Common options include net metering rules and subsidies, feed-in tariffs, cost-reflective tariff reviews, lower import duties and carbon taxes.
- Take concrete steps to wind down fossil fuel extraction and use, from phasing out fossil fuel subsidies to releasing new strategies, rules, targets and timelines for infrastructure retirement and decommissioning.
- Increase access to local bank debt and lower finance costs—e.g., through higher sector-specific lending caps for banks, preferential interest rates for renewables loans, or new rules governing exchange rates and foreign currency access.
- Hold or announce more auctions and licensing for renewable power.
- Educate stakeholders on the benefits of renewables and related topics.
- Collect and publish data that investors can use of due diligence on companies, customers and projects. Examples include household-level income and energy use, local bank lending and loan performance histories, databanks for existing and planned renewables projects, and a range of climate risk disclosures.
- Fast-track other reforms that improve the business environment, such as anticorruption programming, improvement to the rule of law, tax collection and port efficiency measures.

Suggestions for all parties

Work together to design a package of support that lowers real and perceived investment risks.

Lower-income countries won't make successful, fair transitions to clean energy unless the private sector backs them in a much bigger way. Presently most private capital for renewables flows to wealthier nations. Public investments by donors through a gas JETP should focus on "crowding in" more private capital. Direct loans and guarantees from development finance institutions (DFIs) like multilateral and regional development banks, export credit agencies and others are significant, but are only a fraction of needed funding.

Perceptions of risk among private investors keep them from providing funds. Many lower-income gas-producing countries are new to solar and wind technologies in; business models and markets are still being tested. So, despite strong promise and upsides—like high unmet demand, falling technology costs, and potentially generous returns—many investors are still holding back.

The global transition away from fossil fuels could raise risks for those investing in gas-producing countries. The energy transition will be a period of profound change and uncertainty, yet decades of evidence has shown that fossil fuel dependence leaves countries less able to adapt to economic change, attract and maintain investment in other sectors, and build accountable public institutions. These factors could make it harder for companies and projects to attract finance renewables. Gas JETPs could offer relief and facilitate new ways forward.

As one example, a gas JETP could offer investors protection against currency risk for renewables projects. Renewables investors in developing markets regularly list local currency value loss as one of their biggest concerns. And in some gas-producing countries, declining export earnings from fossil fuels could worsen the threat of currency risk. While optimal responses to currency risk will depend on the industry and country context, parties to a gas JETP could weigh four options:

- Develop more effective guarantees and other products for mitigating currency risk.

Some options
• Partial risk/credit or liquidity guarantees that cover currency risk • New political risk insurance policies that include long-term currency risk coverage • Concessionary credit lines companies can tap when struggling to secure foreign currency • More affordable currency hedging products

- Help local banks become more willing and able to lend in the local currency.

Some options
• Loan syndication, where the DFI assumes more risk and shares know-how with local bank • On-lending, in which a DFI borrows money and provides it to a local bank as a credit line to invest in renewables projects • B-loans or other lending structures that allow borrowers to sell parts of a loan to a local lender and refinance the loan into the local currency once a company or project meets certain targets • Debt subordination, whether through mezzanine finance or other hybrid instruments, where the local bank's part of the debt is "senior" and therefore paid first if there is a default

• Portfolio guarantees or capital injections for banks lending to renewables companies or projects

- Support public grantmaking, lending and investment bodies in the producer country.

Some options
• Capital for government bodies (national development banks, banks of industry, rural electrification agencies) that finance renewables or related infrastructure • Support to sovereign wealth funds that invest in renewables • Backing for a government-run currency risk guarantee fund

- Help attract funding from local institutional investors such as pension funds, insurance companies and endowments.

Some options
• Financial and technical support to a new yieldco • Purchasing and advising on local currency green bonds • Support for entities that guarantee local corporate bonds