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Realizing the Potential of Just Energy Transition Partnerships in the Current Geopolitical Environment

By **Dr. Gautam Jain** and **Ganis Bustami**

The Just Energy Transition Partnership (JETP) framework[1] was designed to help accelerate the energy transition in emerging market and developing economies (EMDEs) while embedding socioeconomic[2] considerations into its planning and implementation. A JETP involves an EMDE receiving financial support for its energy transition from the International Partners Group (IPG) comprised of advanced economies, including the European Union, the UK, the US, and Japan, among others. The program has already mobilized over $50 billion in pledges to support energy transitions in South Africa, Indonesia, Vietnam, and Senegal before potentially extending to other EMDEs.

Although JETPs are an innovative way to facilitate a shift from fossil fuels to cleaner energy sources in EMDEs without socioeconomic disruptions, the path from pledges to tangible implementation has been fraught with challenges, raising questions about the utility of the framework. Among these challenges are structural barriers in the energy markets of JETP countries, such as heavy reliance on coal to meet economic development goals and significant gaps in investment readiness for new clean energy projects. The financiers also face hurdles in deploying funds, including the high risks associated with these markets and the diverse interests and priorities of the stakeholders involved.

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The election of Donald Trump as president of the United States has only complicated matters further. One of Trump's first executive orders upon taking office was to rescind the US International Climate Finance Plan,[3] putting at risk all of the US's climate finance commitments and initiatives, including JETPs. Since then, the US has given up its leadership role within the IPG group in Indonesia's JETP,[4] adding to concerns as thus far it has disbursed only a fraction of the roughly $4 billion pledged for all the JETPs (see Tables A1 and A2 in the appendix).

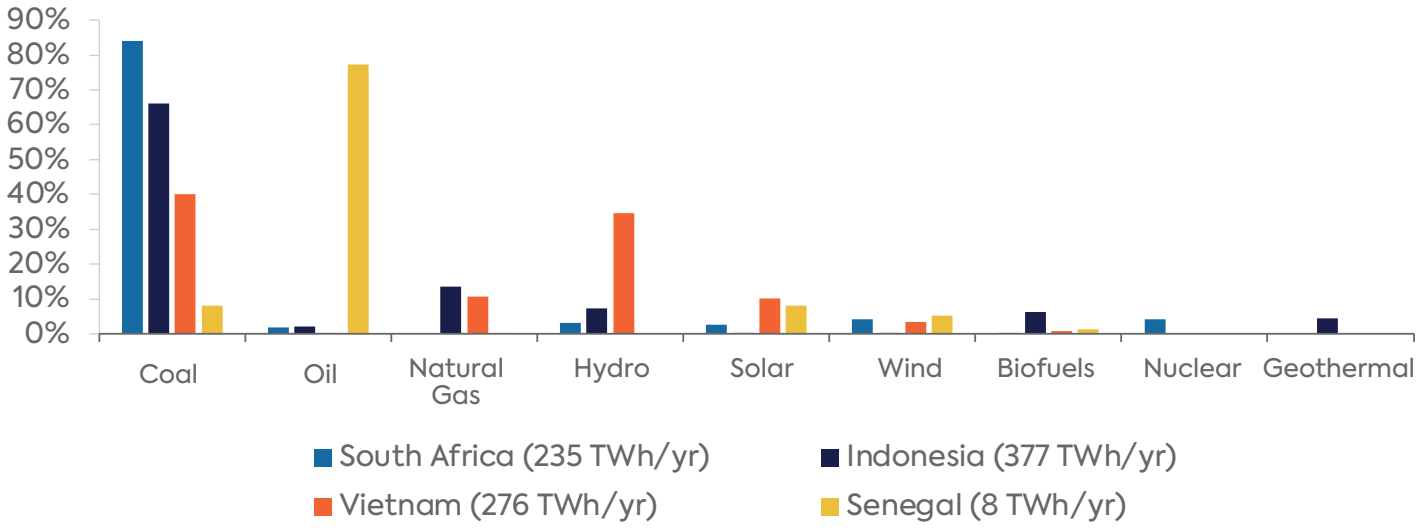
But these challenges, while serious, have not proven fatal. Germany has already agreed to co-lead Indonesia's JETP with Japan after the US withdrawal. Moreover, the IPG will meet in the coming weeks to ensure the remaining $45 billion in funding commitments are met. Considering this continued commitment to the framework, this commentary explores the factors that have hampered implementation and offers policy recommendations that could enable JETPs to fulfill their potential as transformative programs for a just and effective energy transition in EMDEs.

A Promising Initiative to Transition from Fossil Fuels

The JETP framework was designed to start with a handful of EMDEs and then expand to others if the program succeeds. The first JETP initiative, announced at COP26 in 2021, involved South Africa securing an $8.5 billion commitment[5]—expanded to $11.6 billion at COP28 in 2023[6]— to support its energy transition, after which the country unveiled a Just Energy Transition Investment Plan (JET-IP) that estimated a total need of $98.5 billion for clean electricity, electric vehicles, and green hydrogen.[7] JETPs were then launched for Indonesia, Vietnam, and Senegal, each tailored to these countries' unique energy transition challenges. A commitment of $20 billion for Indonesia, unveiled during its G20 Presidency in 2022,[8] represents the largest JETP package to date, and the country released a Comprehensive Investment and Policy Plan (CIPP) in 2023 to support its implementation.[9] During this latter year, a $15.5 billion JETP pledge was announced for Vietnam,[10] which then launched its Resource Mobilisation Plan (RMP)[11] at COP28. Senegal's €2.5 billion JETP,[12] also launched in 2023, aims to achieve 40 percent renewable energy in its electricity mix by 2030.

South Africa, Indonesia, and Vietnam were ideal candidates for the JETP program because of their heavy use of coal for electricity generation (Figure 1). Senegal has low power needs and emissions but suffers from high electricity costs due to the heavy use of imported diesel.[13]

Figure 1: Power demand (terawatt hours [TWh] per year [yr]) and share of supply sources in JETP countries



Source: International Energy Agency, "South Africa: Electricity," 2022, https://www.iea.org/countries/south-africa/electricity; "Indonesia: Electricity," 2022, https://www.iea.org/countries/indonesia/electricity; "Viet Nam: Electricity," 2022, https://www.iea.org/countries/viet-nam/electricity; "Senegal: Electricity," 2022, https://www.iea.org/countries/senegal/electricity.

The Headwinds Constraining Progress

While these partnerships highlight strong international collaboration, they also underscore persistent challenges in effectuating the energy transition in EMDEs.

Political backlash and economic interests hinder coal plant closures

The JETP negotiators likely underestimated the complexities of closing coal plants that provide the bulk of electricity and employ a large share of the population in recipient countries.

South Africa announced in 2021 that it would close all coal-fired power plants (CFPPs) by 2050, which seemed appropriate as the average CFPP in the country is 42 years old and operates at 58 percent capacity,[14] contributing to frequent blackouts amid an ongoing electricity crisis. However, after more than three years, only one coal plant has been decommissioned and the closure of other plants has been delayed (Table 1). These delays have been attributed to pushback from the nation's powerful coal lobby in partnership with politicians and labor unions,[15] which should have been anticipated given the historical importance of coal in the country[16] and the fact that coal decommissioning will impact 2.5 million residents in 69 mining host communities across 21 municipalities.[17]

Similar economic and socio-cultural barriers have been at play in Indonesia,[18] though with an additional complexity: since the country is an archipelago, it has a fleet of "captive" CFPPs dedicated to heavy industries and nickel production that are not connected to the grid.[19] The JETP negotiators sidestepped this issue by creating a loophole for these captive CFPPs in the deal. Moreover, the Indonesian government's policies continue to make coal more economically attractive than renewable sources with the view that this will ensure affordable energy supply and economic stability.[20] The country's identified coal capacity for closure and investment amount dedicated to this purpose are thus quite low (Table 1).

Table 1: South Africa and Indonesia coal decommissioning schedule and progress

Project Name	Early Retirement Date	Capacity (MW)	Estimated Project Cost (USD millions)	Progress Update
South Africa				
Komati	2022	1,000	500	Decommissioned
Hendrina	2025	2,000	↑	Delayed
Camden	2025	1,600	|	Delayed
Grootvlei	2027	1,200	|	Delayed
Arnot	2029	2,100	|	Delayed
Kriel	2030	2,850	3,800	Delayed
Tutuka	2030	3,650	|	Not in 2023-2027 Plan
Duvha	2034	3,600	|	Not in 2023-2027 Plan
Unspecified as yet	—	4,000	↓	—
Total	**—**	**22,000**	**4,300**	**—**
Indonesia				
PLTU Pelabuhan Ratu	2037	1,050	830	Under negotiation
PLTU Cirebon-1	2035	660	300	Framework signed
Unspecified as yet	—	—	1,270	—
Total	**—**	**1,710**	**2,400**	**—**

Source: Asian Development Bank, "New Agreement Aims to Retire Indonesia 660 MW Coal Plant Almost 7 Years Early," December 3, 2023, https://www.adb.org/news/new-agreement-aims-retire-indonesia-660-mw-coal-plant-almost-7-years-early; Presidential Climate Commission, "Komati Power Station Recommendations Report," November 16, 2023, https://pccommissionflo.imgix.net/uploads/documents/PCC-Komati-Power-Station-Recommendations-Report.pdf; OilPrice.com, "South Africa's State Utility Set to Keep Highly Polluting Coal Plants Open," June 20, 2024, https://oilprice.com/Latest-Energy-News/World-News/South-Africas-State-Utility-Set-to-Keep-Highly-Polluting-Coal-Plants-Open.html.

Lack of coordination between various stakeholders

The announcements of the JETPs were generally rushed for political purposes to coincide with high-profile events that could garner added attention to them, leaving negotiators insufficient time to devise effective implementation plans.[21] This has caused delays in the execution of the JETPs. The main factors hindering progress include:

- **Lack of coordination between IPG members:** Each IPG member has its own political and environmental agenda that informs the types of projects it prefers to support, which explains why 20 percent of funds for Vietnam and 55 percent for Indonesia were earmarked for specific projects.[22] Moreover, the role of multilateral development banks (MDBs)[23]— including how they plan to leverage the guarantees provided by IPG members (Table A1) or should work synergistically with the private sector instead of competing with it—has not been clearly specified. Finally, to raise the headline amount, some of the funding included was not new or additional and was allocated before the JETP announcements.[24]
- **Lack of coordination between IPG and JETP governments:** Although the lack of investment plans at the time of the JETP announcements was eventually rectified, detailed implementation strategies, including the specific responsibilities of each stakeholder and timelines, are still absent. Moreover, the announcements did not account for infrastructure constraints—such as limited grid capacity—on the rapid deployment of renewable energy.[25] Consequently, only a tiny fraction of the pledged amounts have been disbursed so far (see Table A2).
- **Lack of coordination within the hierarchy of JETP governments:** There are significant gaps in the investment readiness of recipient countries, with their institutional frameworks lacking the capacity, coordination, expertise, and resources needed to handle the complexities of a just energy transition.[26] For example, Indonesia's investment plan relies on large-scale hydro and geothermal projects, which are notoriously challenging to develop due to long construction periods. Moreover, government agencies are unprepared for and overwhelmed by the scale of the transition, leading to delays and inefficiencies.[27]

Gaps in the structure of the pledges

The structure of the financing committed by IPG members poses multiple obstacles:

- The pledges across the four JETP countries sum up to over $45 billion, excluding the US (Table A1), but that amount pales in comparison to the investment need, which totals $330 billion across only South Africa, Indonesia, and Vietnam (Table 2). While the pledges may be viewed as down

payments to catalyze further investment, there are no clear plans for raising the additional financing.

- EMDEs strongly prefer to receive "high quality" finance —i.e., grants and deeply concessional loans—because it enables them to avoid adding to their already elevated debt levels. They also see provisioning high quality finance as a way for developed countries to account for their historical greenhouse gas emissions, which is a point of contention. (Advanced economies want the initiative to be seen as an effort to substantiate the energy transition in EMDEs rather than as a form of reparation). But in the three countries for which the breakdown is available, on average, less than 3 percent of the pledges are in the form of grants and only about a third are concessional loans (Table A1).[28] Following its JETP announcement, South Africa was expecting a greater portion of its funding to be in the form of grants, the lack of which initially led to distrust with its IPG partners.[29] Similarly, India's concern about increasing its debt burden was one reason why its JETP negotiations with IPG countries at COP29 failed.[30]
- Since roughly half of the financing for Vietnam and Indonesia is from private sources at market rates, it is not particularly attractive to these countries beyond its potential to catalyze further investments.[31] At the very least, it is important to identify and account for other barriers that could cause the financing to be even less appealing to the recipient country,[32] such as loans denominated in a foreign currency rather than the local currency.[33]
- Although the recipient countries prefer concessional loans, these can lead to other problems. Since the loans provided by commercial financiers carry market rates, these institutions could have a hard time competing for the best projects with MDBs and development finance institutions, which can lend at concessional rates for a longer duration and provide technical assistance.

Table 2: Amounts needed by JETP countries with sector-level breakdowns

	South Africa		Indonesia		Vietnam
South Africa	USD millions	% of Total	USD millions	% of Total	
Coal Demmissioning	4,300	4.4%	2,400	2.5%	No Breakdown Yet
Variable Renewable Energy (Solar and Wind)	31,660	32.1%	49,200	50.6%	
Dispatchable Renewable Energy	—	—	25,700	26.4%	
Storage (Battery and Hydro)	1,540	1.6%	—	—	
Green Hydrogen	21,300	21.6%	—	—	
Electrical Vehicle Manufacturing Facility	8,500	8.6%	—	—	
Transmission and Distribution	9,710	9.9%	19,700	20.3%	
Municipal Development	21,300	21.6%	—	—	
Just Transition	1,800	0.2%	200	0.2%	
Total	**98,490**	100.0%	**97,200**	100.0%	**134,700**

Source: Presidential Climate Commission, "South Africa's Just Energy Transition Investment Plan (JET-IP) 2023-2027," November 3, 2022, https://pccommissionflo.imgix.net/uploads/images/South-Africas-Just-Energy-Transition-Investment-Plan-JET-IP-2023-2027-FINAL.pdf; Just Energy Transition Partnership Indonesia, "Official JET-P CIPP 2023," November 21, 2023, https://JET-P-id.org/storage/official-JET-P-cipp-2023-vshare_f_en-1700532655.pdf; European Commission, "Resource Mobilisation Plan Implementing Viet Nam's Just Energy Transition Partnership (JETP)," December 1, 2023, https://climate.ec.europa.eu/system/files/2023-12/RMP_Viet%20Nam_Eng_%28Final%20to%20publication%29.pdf.

Addressing the Challenges

For the JETP initiative to succeed in the four recipient countries and possibly elsewhere down the road, some or all of these issues will need to be addressed. Three measures, if adopted, would go a long way toward achieving that goal.

Increase investment planning for the "just" aspect of the transition

Given the limited progress on the social dimension of the transition,[34] a concerted effort to generate greater buy-in from the local community is needed. This could include the following measures:

- Ensure there are sufficient funds not only to retrain workers and provide pensions or other compensation for retiring workers but also to potentially transfer ownership of the production of renewable technologies to coal communities.[35] The closure of the Komati Power Station in South Africa materialized through the support of a $497 million World Bank loan, of which $47.5 million was estimated to be needed to create new opportunities for affected workers and communities.[36] However, the official policy plans allocate a much smaller fraction of the projected investments toward a just transition (Table 2).
- Include civil society members and NGOs in the planning and implementation discussions, not only for transparency and accountability reasons but also to ensure that the affected community has a say and is part of the energy transition. Vietnam's JETP, for example, was criticized precisely for lacking such involvement.[37] Simply put, a transition strategy cannot be devised or executed successfully without workers and local communities on board.[38] Indeed, in South Africa, the poor reception by the local community to the closure of the Komati coal plant[39] indicates that the country did not amply follow through on the stakeholder engagements' main takeaway: affected communities will support a transition but only if they are part of the decision-making process and see meaningful economic benefits from its implementation.[40]

Improve coordination between stakeholders

Several steps can be taken by both the IPG and recipient countries to improve coordination between both sides and internally.

The IPG can:

- Align funding priorities and specific targets across members.
- For each JETP, assign a single member to represent the group as coordinator,[41] facilitating cooperation with the recipient by communicating policy goals and ensuring reciprocity.[42]
- Combine the contributions of members and distribute them from a single facility rather than bilaterally.[43]
- Provide a clearer role for MDBs, including using guarantees more effectively to mobilize private capital, possibly by coordinating with the private financiers that are already part of the program.
- Extend the timeline of the programs beyond 3 to 5 years,[44] which was unrealistic from the start and is even more improbable in the current US political landscape.

For their part, the beneficiary governments can:

- Devise investment strategies detailing the involvement of different agencies, ministries, and local governments, as well as timelines at the project level for each category within the investment plan.[45]
- Develop a credible policy and institutional framework to ensure proper public sector action, including necessary market reforms, timely permitting, and efficient grid management in support of utilities and other entities responsible for the projects[46] and strengthening governance to ensure transparency in the use of international funds.[47]
- Identify infrastructure bottlenecks for every project and make addressing them part of the project milestones.
- Prepare a detailed financing plan and highlight the funding gaps after incorporating IPG pledges and domestic private and public sources.
- Foster inclusive dialogue with civil society organizations and NGOs as they play a key role in raising awareness of the benefits and costs of the energy transition among communities.[48]

Stretch the limited available funding to narrow the investment gap

Innovative financial mechanisms and instruments are needed to narrow the wide gap between the IPG pledges and the energy transition investment needs of JETP countries. Given the large investment gap, the JETP countries will need to use their federal budgets to supplement the pledged amounts. Instead of issuing a conventional bond to finance some of the projects, these countries could consider green bonds, a type of thematic bond whose proceeds are ring-fenced for environmental projects.[49] Assuming a conventional bond would be used to raise funds in any case, issuing a green bond in its stead would not add to indebtedness.

Green bonds can even result in cost savings via the issue premium —referred to as "greenium" —but this tends to be insignificant.[50] A better approach would be to coordinate with IPG members so that some of their pledges help lower the cost of issuance further—e.g., by either guaranteeing interest payments, which has been shown to carry a low cost for the guarantor,[51] or explicitly paying part of the interest payments. Saving 1 or 2 percentage points via this mechanism would be significant for the JETP country and would incentivize it to achieve the program's objectives. From the perspective of the IPG member, this approach would allow for leveraging its limited funding and assuring the proceeds are used for the designated purposes since the projects are externally verified as part of the green bond requirements.

The Path Forward for Other EMDEs

As emerging economies strive to fulfill their updated Nationally Determined Contributions through their energy transition efforts, the need for innovative mechanisms that ensure funding translates into measurable actions while providing socio-economic benefits has never been more urgent. The JETP is one such approach. While it may not work for every country—in some cases, a variant could be devised and applied, as exemplified by Egypt's country platform launched in 2022[52]— the successful implementation of prototype JETPs for South Africa, Indonesia, Vietnam, and Senegal could compel other EMDEs to adopt it as a viable financing strategy to achieve their energy transition in a just manner.[53]

Appendix

Table A1: Pledged amounts by source and type (USD millions)

	South Africa					Indonesia					Vietnam				Senagal
	Grants	Concessional Loans	Guarantees	Commercial Loans	Total	Grants	Concessional Loans	Guarantees	Commercial Loans	Total	Grants	Concessional Loans	Commercial Equity/ Loan/ Guarantees	Total	Total
US	63	0	0	1,000	**1,063**	67	0	1,000	1,000	**2,067**	50	0	1,000	**1,050**	No Breakdown Yet
UK	34	0	1,300	500	**1,834**	0	0	1,075	75	**1,150**	4	0	300	**304**	
EU	125	1,080	0	216	**1,421**	30	1,091	0	0	**1,121**	185	735	0	**920**	
Germany	241	1,048	0	0	**1,289**	167	1,475	0	10	**1,651**	63	399	210	**672**	
France	4	1,080	0	0	**1,084**	0	541	0	0	**541**	1	523	0	**524**	
Spain	16	2,160	0	108	**2,284**	0	0	0	0	**0**	0	0	0	**0**	
Italy	0	0	0	0	**0**	0	270	0	0	**270**	0	0	528	**528**	
Denmark	20	58	58	65	**143**	2	60	0	100	**162**	10	0	0	**10**	
Switzerland	35	0	0	0	**35**	0	0	0	0	**0**	0	0	0	**0**	
Netherlands	167	0	0	0	**167**	0	0	0	0	**0**	0	0	0	**0**	
Norway	0	0	0	0	**0**	0	0	0	250	**250**	1	0	250	**251**	
Canada	1	0	0	0	**1**	10	81	0	0	**91**	4	0	4	**59**	

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	South Africa					Indonesia					Vietnam				Senagal
	Grants	Concessional Loans	Guarantees	Commercial Loans	Total	Grants	Concessional Loans	Guarantees	Commercial Loans	Total	Grants	Concessional Loans	Commercial Equity/ Loan/ Guarantees	Total	Total
Japan	0	0	0	0	**0**	0	1,700	0	0	**1,700**	2	0	340	**342**	No Breakdown Yet
CIF/ACT	50	1,350	0	875	**2,275**	20	1,999	0	540	**2,559**	0	0	0	**0**	
ADB	0	0	0	0	**0**	0	0	0	0	**0**	0	1,000	1,100	**2,100**	
FMO	0	0	0	0	**0**	0	0	0	0	**0**	0	0	315	**315**	
GFANZ	0	0	0	0	**0**	0	0	0	10,000	**10,000**	0	0	7,750	**7,750**	
Other	0	0	0	0	**0**	0	0	0	0	**0**	0	0	1,000	**1,000**	
Total	**756**	**6,776**	**1,330**	**2,764**	**11,596**	**295**	**7,217**	**2,075**	**11,975**	**21,562**	**322**	**2,708**	**12,797**	**15,826**	**2,700**

Note: CIF/ACT stands for Climate Investment Fund's Accelerating Coal Transition Investment Program, which partners with key multilateral organizations, including the World Bank and the International Finance Corporation; ADB stands for Asian Development Bank; FMO is the Dutch development bank; GFANZ or the Glasgow Financial Alliance for Net Zero is a coalition of global financial institutions.

Source: Presidential Climate Commission, "South Africa's Just Energy Transition Investment Plan (JET-IP) 2023-2027," November 3, 2022, https://pccommissionflo.imgix.net/uploads/images/South-Africas-Just-Energy-Transition-Investment-Plan-JET-IP-2023-2027-FINAL.pdf; Just Energy Transition Partnership Indonesia, "Official JET-P CIPP 2023," November 21, 2023, https://JET-P-id.org/storage/official-JET-P-cipp-2023-vshare_f_en-1700532655.pdf; European Commission, "Resource Mobilisation Plan Implementing Viet Nam's Just Energy Transition Partnership (JETP)," December 1, 2023, https://climate.ec.europa.eu/system/files/2023-12/RMP_Viet%20Nam_Eng_%28Final%20to%20publication%29.pdf; Government of South Africa, "JET Grants Register Q1 - Q2 2024," July 31, 2024, https://www.stateofthenation.gov.za/assets/downloads/JET%20Grants%20Register%202024Q1%20-%202024Q2.pdf; Just Energy Transition Partnership Indonesia, "JET-P Grant Mapping," August 7, 2024, https://JET-P-id.org/news/JET-P-grant-mapping.

Table A2: Distributed amounts by source and type (USD millions)

	South Africa				Indonesia			
	Grants	Concessional Loans	Commercial Loans	Total	Grants	Concessional Loans	Commercial Loans	Total
US	32	0	0	**32**	67	0	1,000	**2,067**
UK	42	0	0	**42**	0	0	75	**1,150**
EU	57	200	0	**257**	30	1,091	0	**1,121**
Germany	171	326	0	**497**	167	1,475	10	**1,651**
France	2	326	0	**327**	0	541	0	**541**
Spain	0	0	0	**0**	0	0	0	**0**
Italy	0	0	0	**0**	0	270	0	**270**
Denmark	21	0	0	**21**	2	60	100	**162**
Switzerland	39	0	0	**39**	0	0	0	**0**
Netherlands	7	0	0	**7**	0	0	0	**0**
Norway	0	0	0	**0**	0	0	250	**250**
Canada	1	0	0	**1**	10	81	0	**91**

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	South Africa				Indonesia			
	Grants	Concessional Loans	Commercial Loans	Total	Grants	Concessional Loans	Commercial Loans	Total
Japan	0	0	0	**0**	0	0	0	**0**
CIF/ACT	2	0	0	**2**	11	0	0	**11**
ADB	0	0	0	**0**	0	0	0	**0**
FMO	0	0	0	**0**	0	0	0	**0**
Total	373	851	0	**1,225**	206	1,008	0	**1,214**

Note: Breakdowns are not yet available for Senegal and Vietnam; while $497 million has been allocated by the World Bank for the decommissioning of the Komati coal plant in South Africa through CIF/ACT, only $1 million has been disbursed so far.

Source: World Bank, "Eskom Just Energy Transition Project: Project Information Document/Integrated Safeguards Data Sheet," accessed February 6, 2025, https://projects.worldbank.org/en/projects-operations/project-detail/P177398. Climate Investment Funds, "South Africa: ACT Investment Plan," October 25, 2023, https://d2qx68gt0006nn.cloudfront.net/sites/cif_enc/files/meeting-documents/CTF_TFC_IS_3_03_South%20Africa_ACT_IP_0.pdf; UK Government, "Advancing the South Africa Just Energy Transition Partnership," December 12, 2023, https://www.gov.uk/government/news/advancing-the-south-africa-just-energy-transition-partnership; SA News, "South Africa Signs Loan Agreements to Support Just Energy Transition," November 22, 2023, https://www.sanews.gov.za/south-africa/south-africa-signs-loan-agreements-support-just-energy-transition; World Bank, "Project Information Document - Integrated Safeguards Data Sheet," November 15, 2023, https://documents1.worldbank.org/curated/en/099111623113536803/pdf/P17907704c4b1409709e6a049fa3b50e229.pdf; World Bank, "Project Information Document - Integrated Safeguards Data Sheet," December 18, 2023, https://documents1.worldbank.org/curated/en/099121823110513734/pdf/P12232905cc0a201a092ec0acc2df92e3e0.pdf; Government of South Africa, "JET Grants Register Q1 - Q2 2024," July 31, 2024, https://www.stateofthenation.gov.za/assets/downloads/JET%20Grants%20Register%202024Q1%20-%202024Q2.pdf; Just Energy Transition Partnership Indonesia, "JET-P Grant Mapping," August 7, 2024, https://JET-P-id.org/news/JET-P-grant-mapping; The Diplomat, "Breaking Down the $20 Billion in Indonesia's Just Energy Transition Partnership," December 12, 2023, https://thediplomat.com/2023/12/breaking-down-the-20-billion-in-indonesias-just-energy-transition-partnership/; The Jakarta Post, "JET-P Funds are Moving: How Do We Increase the Flow?," July 10, 2024, https://www.thejakartapost.com/opinion/2024/07/10/JET-P-funds-are-moving-how-do-we-increase-the-flow.html.

About the Authors

Dr. Gautam Jain is a Senior Research Scholar at the Center on Global Energy Policy (CGEP) of Columbia University's School of International and Public Affairs (SIPA). He focuses on the role of financial markets and instruments—including thematic bonds, blended finance structures, and carbon markets—in the energy transition, with an emphasis on emerging economies.

Dr. Jain has an extensive background in the financial industry where he covered emerging markets as a portfolio manager and strategist. He has worked at asset management firms and an investment bank, including The Rohatyn Group, Barclays Capital, and Millennium Partners. He has helped manage emerging market local debt and hard-currency bond portfolios, encompassing currencies, interest rate instruments, and sovereign credits. He specialized in portfolio construction and asset allocation incorporating macroeconomic, policy, and political developments in emerging markets.

He holds a Ph.D. in Operations Research from Columbia University. He also has an M.S. in Industrial Engineering from Iowa State University and a B.Tech. in Mechanical Engineering from the Indian Institute of Technology, Bombay. He is a CFA charter holder, a Cornell EMI Fellow, an Adjunct Professor at Columbia University's School of International and Public Affairs, and a consultant for the United Nations to support the workstream of the Global Investors for Sustainable Development (GISD) Alliance on "Tackling Local Currency Risk".

He has co-authored publications in the Journal of Derivatives, the Journal of Banking and Finance, the Journal of Applied Probability, Probability in Engineering and Informational Science, and the International Journal of Production Economics. He has also contributed chapters for the 2020 and 2021 Cornell EMI Annual Reports.

Ganis Bustami researches energy transition finance in emerging markets at the Center on Global Energy Policy at Columbia University SIPA. His work focuses on mapping energy transition projects and financial commitments in South Africa, Indonesia, Vietnam, and Senegal into a structured database.

Prior starting at Columbia University, Ganis worked at Indonesia's development finance institution, where he helped shape municipal financing policies, early-stage geothermal project's incentive policy, and the country's broader energy transition strategy. As a graduate student, he has deepened his expertise through hands-on experience in the clean energy sector. His first internship was with ChileGlobal Ventures, where he contributed to the investment team in planning Latin America's first-of-its-kind green hydrogen blended finance scheme. He is currently completing his second internship at Cordelio Power, a renewable energy producer, where he supports the Origination team with market research and company positioning.

With a law degree from the University of Indonesia, Ganis brings a policy-driven approach to clean energy finance. Now a Master's candidate in Sustainability Management at Columbia University, he integrates financial, legal, and strategic insights to drive investment in clean energy and climate solutions.

Notes

1. The framework is referred to as a Political Declaration in South Africa (US Embassy in South Africa, "Joint Statement: International Just Energy Transition Partnership," November 3, 2021, https://za.usembassy.gov/joint-statement-international-just-energy-transition-partnership/), Vietnam (UK Government, "Political Declaration on Establishing the Just Energy Transition Partnership with Viet Nam," December 14, 2022, https://www.gov.uk/government/publications/vietnams-just-energy-transition-partnership-political-declaration/political-declaration-on-establishing-the-just-energy-transition-partnership-with-viet-nam), and Senegal (UK Government, "Senegal and the International Partners Group Announce Just Energy Transition Partnership," June 23, 2023, https://www.gov.uk/government/news/senegal-and-the-international-partners-group-announce-just-energy-transition-partnership), and in a Joint Statement for Indonesia, which recognized goals and objectives of the United Nations Framework Convention on Climate Change and the Paris Agreement (Ministry of Foreign Affairs of Japan, "Joint Statement by the Government of the Republic of Indonesia [GOI] and the Governments of Japan, the United States of America, Canada, Denmark, the European Union, the Federal Republic of Germany, the French Republic, Norway, the Republic of Italy, and the United Kingdom of Great Britain and Northern Ireland [together the 'International Partners Group' or IPG])," November 15, 2022, https://www.mofa.go.jp/files/100421665.pdf).

2. Saliem Fakir, "South Africa's Just Energy Transition Partnership: A Novel Approach Transforming the International Landscape on Delivering NDC Financial Goals at Scale," *South African Journal of International Affairs* 30, no 2. (2023): 297–312, https://www-tandfonline-com.ezproxy.cul.columbia.edu/doi/full/10.1080/10220461.2023.2233006.

3. The White House, "Putting America First in International Environmental Agreements," Executive Order, January 20, 2025, https://www.whitehouse.gov/presidential-actions/2025/01/putting-america-first-in-international-environmental-agreements/.

4. Reccessary, "Germany Takes Over US Lead in JETP to Ensure Indonesia's $20bn Fund," February 6, 2025, https://www.reccessary.com/en/news/id-finance/germany-takes-over-us-lead-jetp.

5. US Embassy in South Africa, "Joint Statement: International Just Energy Transition Partnership," November 3, 2021, https://za.usembassy.gov/joint-statement-international-just-energy-

transition-partnership/.

6. UK Government, "Advancing the South Africa Just Energy Transition Partnership," December 12, 2023, https://www.gov.uk/government/news/advancing-the-south-africa-just-energy-transition-partnership.

7. Presidential Climate Commission, "South Africa's Just Energy Transition Investment Plan (JET-IP) 2023–2027," July 7, 2023, https://pccommissionflo.imgix.net/uploads/images/South-Africas-Just-Energy-Transition-Investment-Plan-JET-IP-2023-2027-FINAL.pdf.

8. Ministry of Foreign Affairs of Japan, "Joint Statement."

9. Just Energy Transition Partnership Indonesia, "Comprehensive Investment and Policy Plan (CIPP)," November 21, 2023, https://jetp-id.org/cipp.

10. UK Government, "Political Declaration on Establishing the Just Energy Transition Partnership with Viet Nam," December 14, 2022, https://www.gov.uk/government/publications/vietnams-just-energy-transition-partnership-political-declaration/political-declaration-on-establishing-the-just-energy-transition-partnership-with-viet-nam.

11. Socialist Republic of Viet Nam, "Resource Mobisation Plan: Implement Viet Nam's Just Energy Transition Partnership (JETP)," November 30, 2023, https://climate.ec.europa.eu/system/files/2023-12/RMP_Viet%20Nam_Eng_%28Final%20to%20publication%29.pdf.

12. UK Government, "Senegal and the International Partners Group Announce Just Energy Transition Partnership," June 23, 2023, https://www.gov.uk/government/news/senegal-and-the-international-partners-group-announce-just-energy-transition-partnership.

13. Nicholas P. Simpson, Michael Jacobs, and Archie Gilmour, "Taking Stock of Just Energy Transition Partnerships," ODI policy brief, November 2023, https://odi.org/en/publications/taking-stock-of-just-energy-transition-partnerships/; Mara van den Bold, "In Pursuit of Diverse Energy Futures: The Political Economy of Electricity in Senegal," *Environment and Planning E: Nature and Space* 5, no. 4 (2021): 1807–30, https://journals.sagepub.com/doi/abs/10.1177/25148486211034808?journalCode=enea.

14. David Pilling, "The Cost of Getting South Africa to Stop Using Coal," *Financial Times*, November 2, 2022, https://www.ft.com/content/3c64950c-2154-4757-bf25-d93c7850be8f.

15. Thabo Molekwa, "South Africa's Coal Lobby Is Resisting a Green Transition," *Climate Home News*, June 19, 2023, https://www.climatechangenews.com/2023/06/19/south-africa-coal-energy-fossil-fuels-climate-lobby/.

16. Strambo, Patel, and Maimele, "Taking Stock of the Just Transition from Coal in South Africa."

17. M.J. Cole, M. Mthenjane, and A.T. van Zyl, "Assessing Coal Mine Closures and Mining Community Profiles for the 'Just Transition' in South Africa," *Journal of the Southern African Institute of Mining and Metallurgy* 123, no. 6 (2023), https://www.scielo.org.za/scielo.php?script=sci_arttext&pid=S2225-62532023000600007&nrm=iso.

18. Stefan Böβner, Dimas Fauzi, and Pranita Rimal, "A Just Coal Transition in Indonesia: Actors, Framings and Future Directions," Stockholm Environment Institute, October 2023, https://www.sei.org/wp-content/uploads/2023/10/sei2023-051-coal-indonesia.pdf.

19. Harry Suhartono, Faris Mokhtar, and Jennifer A Dlouhy, "Money and Politics Put World's Biggest Climate Deal at Risk," *Bloomberg*, September 3, 2023, https://www.bloomberg.com/news/articles/2023-09-03/money-and-politics-put-world-s-biggest-climate-deal-worth-21-5-billion-at-risk.

20. Henriette Imelda, Ajeng Rachmatika Dewi Andayani, Hardhana Dinaring Danastri, Mukhammad Faisol Amir, and Puti Ayla Zafira, "The Role of the Just Energy Transition Partnership (JETP) in Indonesia in Making Finance Flows Consistent with Low Greenhouse Gas Emissions and Climate-Resilient Development," Germanwatch and Indonesia Research Institute for Decarbonization, November 21, 2023, https://www.germanwatch.org/sites/default/files/germanwatch_the_role_of_the_just_energy_transition_partnerships_in_indonesia_2024.pdf.

21. Simpson, Jacobs, and Gilmour, "Taking Stock of Just Energy Transition Partnerships."

22. Grant Hauber, "Financing the JETP: Making Sense of the Packages," Institute for Energy Economics and Financial Analysis, December 22, 2023, https://ieefa.org/resources/financing-jetp-making-sense-packages.

23. The Rockefeller Foundation and Environmental Defense Fund, "Scaling the JETP Model: Prospects and Pathways for Action," February 15, 2024, https://www.rockefellerfoundation.org/report/scaling-the-jetp-model-prospects-and-pathways-for-action/.

24. Hauber, "Financing the JETP."

25. The Presidential Climate Commission, "A Critical Appraisal of South Africa's Just Energy Transition Investment Plan," May 14, 2023, https://pccommissionflo.imgix.net/uploads/images/PCC-analysis-and-recommenations-on-the-JET-IP-May-2023.pdf.

26. Ibid.

27. Grant Hauber, "Implementing Indonesia's JETP Plan Requires Prioritization, Processes, and

Transparency," Institute for Energy Economics and Financial Analysis, November 30, 2023, https://ieefa.org/resources/implementing-indonesias-jetp-plan-requires-prioritization-processes-and-transparency.

28. Irdina Batrisyia and Indira Pradnyaswari, "Is JETP Making Progress in ASEAN Energy Transition?," ASEAN Center for Energy, July 5, 2024, https://aseanenergy.org/post/is-jetp-making-progress-in-asean-energy-transition/.

29. Pilling, "The Cost of Getting South Africa to Stop Using Coal."

30. Clean Energy Wire, "India, Donor Countries Give Just Energy Transition Partnership: German Official," November 20, 2025, https://www.cleanenergywire.org/news/india-donor-countries-give-just-energy-transition-partnership-german-official.

31. Luthfyana Kartika Larasati and Sandy Fajrian, "JETP Resource Mobilization Plan: How Viet Nam Can Turn Ambition Into Action," Climate Policy Initiative, April 4, 2024, https://www.climatepolicyinitiative.org/jetp-resource-mobilization-plan-how-viet-nam-can-turn-ambition-into-action/.

32. GFANZ, "Actions to Mobilize Capital to Emerging Markets and Developing Economies," November 2022, https://assets.bbhub.io/company/sites/63/2022/10/GFANZ-Actions-to-Mobilize-Capital-to-Emerging-Markets-Developing-Economies.pdf.

33. Gautam Jain, "A Potential Path for Alleviating Currency Risk in Emerging Market Green Bonds," Center on Global Energy Policy, Columbia University, September 7, 2023, https://www.energypolicy.columbia.edu/publications/a-potential-path-for-alleviating-currency-risk-in-emerging-market-green-bonds/.

34. Jan Vanheukelom, "Two Years into South Africa's Just Energy Transition Partnership: How Real Is the Deal?," ECDPM, briefing note no. 174, November 27, 2023, https://ecdpm.org/work/two-years-south-africas-just-energy-transition-partnership-how-real-deal.

35. Alex Lenferna, "South Africa's Unjust Climate Reparations: A Critique of the Just Energy Transition Partnership," Review of African Political Economy 50, no. 177–78 (2023): 491–501, https://www.tandfonline.com/doi/pdf/10.1080/03056244.2023.2278953.

36. The Presidential Climate Commission, "Early Lessons and Recommendations from Komati's Decommissioning and Repurposing Project," November 16, 2023, https://pccommissionflo.imgix.net/uploads/documents/PCC-Komati-Power-Station-Recommendations-Report.pdf; The World Bank, "Eskom Just Energy Transition Project (P177398)," June 24, 2024, https://documents1.worldbank.org/curated/en/099062424081014756/pdf/

P17739812072ce04318df915e03ff2545bd.pdf.

37. Jörg Wischermann, "JETP Vietnam Energy Transition with Political Costs," Heinrich Böll Stiftung, April 20, 2024, https://th.boell.org/sites/default/files/2024-04/jetp-vietnam_final.pdf.

38. Pilling, "The Cost of Getting South Africa to Stop Using Coal."

39. Malcolm Moore and Rob Rose, "A Cautionary Tale from South Africa's 'Just Energy Transition,'" *Financial Times*, July 23, 2024, https://www.ft.com/content/c0e68f17-7b4d-41dc-85c9-cc40f0eda5f1.

40. The Presidential Climate Commission, "Community and Stakeholder Engagement on a Just Transition in South Africa," May 2022, https://pccommissionflo.imgix.net/uploads/images/Community-Consultations-on-a-Just-Transition-May-2022.pdf.

41. Hauber, "Financing the JETP."

42. Heiner von Lüpke, Charlotte Aebischer, and Martha Bolaños, "International Partnerships for a Just Energy Transition: Findings from South Africa," DIW Weekly Report 5, 2023, https://www.diw.de/documents/publikationen/73/diw_01.c.864697.de/dwr-23-5-1.pdf.

43. Hauber, "Financing the JETP."

44. Batrisyia and Pradnyaswari, "Is JETP Making Progress in ASEAN Energy Transition?"

45. Mutya Yustika and Grant Hauber, "Prabowo's Ambitious Decarbonization Goal Requires Visionary Project Implementation," December 16, 2025, https://ieefa.org/resources/prabowos-ambitious-decarbonization-goal-requires-visionary-project-implementation.

46. Philippe Benoit and Andri Prasetiyo, "Indonesia's Just Energy Transition Partnerships: A Way to Mobilize Capital for Climate and Development," Zero Carbon Analytics, September 2023, https://zerocarbon-analytics.org/wp-content/uploads/2023/09/Indonesia-JETPFinal-version-ZCA.pdf.

47. Phemelo Tamasiga, "Challenges and Opportunities for Just Energy Transition Partnerships in Africa," Megatrends Afrika, policy brief, November 30, 2024, https://www.swp-berlin.org/assets/afrika/publications/policybrief/MTA-PB30_JETPs_Tamasiga_vea.pdf.

48. Aida Diop, Nafi Chinery, and Fatima Diallo, "Senegal's JETP: Lessons, Challenges, Opportunities and the Role of Civil Society," National Resource Governance Institute, December 11, 2024, https://resourcegovernance.org/articles/senegals-jetp-lessons-challenges-opportunities-and-role-civil-society.

49. Gautam Jain, "Thematic Bonds: Financing Net-Zero Transition in Emerging Market and Developing Economies," Center on Global Energy Policy, Columbia University, December 12, 2022, https://www.energypolicy.columbia.edu/publications/thematic-bonds-financing-net-zero-transition-emerging-market-and-developing-economies/.

50. Ibid.

51. Jain, "A Potential Path."

52. Ministry of International Cooperation of the Government of Egypt, "Egypt's Country Platform for NWFE Program," September 7, 2022, https://moic.gov.eg/page/nwfe.

53. Melinda Martinus, "Just Energy Transition Partnerships (JETPs) in Indonesia and Vietnam: Implications for Southeast Asia," ISEAS Yusof Ishak Institute, issue 2024, no. 40, June 4, 2024, https://www.iseas.edu.sg/articles-commentaries/iseas-perspective/2024-40-just-energy-transition-partnerships-jetps-in-indonesia-and-vietnam-implications-for-southeast-asia-by-melinda-martinus/.

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