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Vietnam's Just Energy Transition Partnership: a background report

Minh Ha-Duong[1]

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Abstract

December 14th, 2022, Việt Nam with G7 countries plus Denmark and Norway issued a joint declaration to establish a Just Energy Transition Partnership. This nonbinding agreement aims to mobilize at least 15.5 billion USD over the next 3 to 5 years, half as private finance and half as public sector finance. To be prepared by November 2023, the Resource Mobilization Plan (RMP) should support Vietnam's green transition, including these quantified objectives: peaking electricity sector emissions at 170 MtCO2e in 2030; peaking the coal-fired power generation capacity at 30.2 GW; producing 47% of electricity from renewable sources in 2030. This report aims to establish a common understanding to give thorough considerations for effective negotiation.

The story is about a group of high-income countries seeking to help a middle-income country switch to renewable energy. It starts with a reminder of Vietnam's energy transition context, which has shown impressive gains in the last four years. It then describes the JETP mechanism as a country platform, reviewing the South Africa pathfinder to introduce the Vietnamese case, before examining how JETP fits in the international finance and climate diplomacy context. Next, it analyzes the two sides of the deal: the pledge to increase the public and private financial flows into Vietnam's energy sector and the promise to boost Vietnam's GHG emissions reductions. After discussing Justice, Technology Transfer, and Finance, the report concludes with a summary of the vision implicit in the JETP declaration.

A comprehensive bibliography on Vietnam's JETP, the verbatim JETP Declaration, excerpts from Vietnam's COP26 implementation plan, and our interview protocol including a detailed vision for the JETP implementation are annexed.

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Headline statements

- JETP's focal point is the Ministry of Natural Resources and Environment (MONRE), which is responsible for climate policy.
- There is already a Country Platform: the Vietnam Energy Partnership Group (VEPG).
- VEPG's focal point is the Ministry of Industry and Trade (MOIT). It could be the 'energy' component of the JETP.
- The IPG offered 7.75 billion USD as public loans in the next 3 to 5 years. The Government of Vietnam borrowed only 1.9 billion USD from foreign sources in 2021.
- As a State-Owned Enterprise, all EVN debt is public debt.
- The amount of foreign loans actually disbursed by the Vietnam's public sector is constrained by the national economic development strategy, balancing public debt limits, GDP growth and short term contingencies.
- JETP commitments for Vietnam align with the Net-Zero scenario published by MOIT/EREA in the Vietnam Energy Outlook 2021 (EOR21) report.
- The Power Development Plan 8, promulgated on May 15th 2023, recognizes the role of JETP and peaks coal power capacity at 30.2 GW in 2030.
- The PDP8 forecasts power sector 2030 emissions to 204-254 million tons.
- The PDP8 forecasts the power sector's capital needs at 12 billion USD/year for generation and 1.5 billion USD/year for the grid during 2021-2030.
- Vietnam's power sector attracts private investors from various origins aside from G7+ countries: domestic, South Korea, China, ASEAN countries, Middle East.
- There is a pipeline of sector reforms that could give a new dynamic to the renewable energy sector.
- The JETP declaration does not address much the energy efficiency and the power grid expansion finance problems.

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1. Introduction

On December 14th, 2022, at the Summit to celebrate the 45th anniversary of ASEAN - EU relations in Brussels, the leaders of Vietnam and the International Partnership Group (IPG) comprising the G7 countries, Norway, and Denmark signed a high-level declaration to curb Vietnam's greenhouse gas emissions: a Just Energy Transition Partnership (JETP) agreement (2022), see document S1 page 81.

IPG countries are committed to mobilizing $7.75 billion in public sector financing for Vietnam at more attractive terms than private capital markets. A consortium of private financial institutions, the Glasgow Financial Alliance for Net Zero (GFANZ), committed simultaneously to work closely with IPG and the Government of Vietnam to raise at least $7.75 billion in private financing. Vietnam committed to ambitious de-carbonization targets:

- Power sector CO_2 emissions to peak in 2030 instead of 2035 and at 170 Mt instead of 240 Mt.
- Limit coal power capacity to 30.2 GW by 2030 from a projected 37 GW.
- Renewable sources, including hydroelectricity, will account for at least 47% of electricity production in 2030.

Partners agreed to set up a Secretariat for April 2023 and to produce a Resource Mobilization Plan (RMP) by November 2023. Considering the tight timeline, the author took the initiative to prepare a rapid independent background report to set a common knowledge basis for the dialogue.

The report is organized as follows. Section 2 reminds Vietnam's energy transition context for a readership who might have yet to follow the country's rapid progress since 2018. Section 3 reviews the JETP mechanism. Vietnam is the third country to sign such a partnership (When this report mentions *JETP* without specifying a country it means the JETP for Vietnam, reproduced page 81). Section 4 positions JETPs in climate finance diplomacy: JETPs innovate because climate finance is a challenge for the international financial institutions. Section 5 discusses the IPG financial targets: what are the current status and trends of financial flows that the JETP aims to increase (public and private)? Section 6 reviews the trends of Vietnam's GHG emissions and reduction goals. Section 7 discusses implementation challenges, and section 8 concludes by summarizing the vision implicit in the JETP declaration, and proposing a few implications. A comprehensive bibliography on Vietnam's JETP starts page 68.

As this report's ambition is monographic –write everything there is to know– it used various methods. Most of it comes from desk work research with a legal orientation. We also analyzed energy and economic statistics and interviewed stakeholders from February 10th to March 20th, 2023.

The interview sample comprised twenty four informants from various horizons. Five interviews were with two informants together, the rest were individual. Overall, ten informants were Vietnamese, fourteen international. We met six from the banking sector (private and public), six from development partners (diplomatic and technical cooperation), eight individual experts/intellectuals and four Vietnamese officials.

The meetings were generally face-to-face in Hà Nội, except for five online interviews. We provided the interview protocol (annex S3 page 90) in advance. For seven interviews, the discussion was informal (we did not use the protocol), including all the conversations held with Vietnam government officials.

To discuss on concrete grounds, some of our interviews included details of a specific vision for the JETP. Annex S4 at the end of this report page 92 shares this vision. Meetings were under the Chatham House rule: the proposition has not been endorsed by anybody, our participants remain anonymous. This report engages only its author's responsibility.

2. Vietnam's energy transition context

2.1. General policy context

Vietnam policymaking architecture

The Party provides the leadership in Vietnam policymaking. Party Resolution 55 (Vietnam's Politburo 2020) currently orienting the energy sector strategy does not take into account the net-zero goal, which was adopted after its publication. Vietnam organizes policymaking using a comprehensive planning system (T. K. N. Nguyễn 2017; Nguyễn Xuân Phúc 2019). Planning and State ownership is particularly important for the energy sector, unlike others like retail or real estate which moved to a market economy with private ownership.

The planning period under the national planning system is ten years. The national planning orientations span a time span of 30 to 50 years. Regional and provincial planning orientations span a time span of 20 to 30 years. The current planning cycle is for 2020-2030, with a vision to 2050. Plans are reviewed every five years to allow for adjustments. The planning system has two dimensions: socioeconomic and geographic. The planning architecture is not a matrix, since the 2017 Planning Law removed sectoral-regional plans.

- Along the socioeconomic dimension, the top document is the national comprehensive planning: Resolution No. 81/2023/QH15 of the National Assembly, January 9, 2023 (Vương Đình Huệ 2023). Under it, the various sub-ministerial units prepare thirty-nine sectoral plans.
- Along the geographic dimension, the top documents are National land use planning: Resolution 39/2021/QH15 of the National Assembly, dated 13/11/2021 (Vương Đình Huệ 2021b) and the National marine spatial planning, scheduled for June 2023 (T. Nguyễn 2023). Those govern a hierarchy of regional, provincial, and finer administrative unit planning.

Official Dispatch 760/TTg-CN from August 31st, 2022 monitors the status of the ongoing planning effort. As of March 2023, six sectoral plans were published, encompassing:

i. Network of vocational education institutions (Decision No. 73/QD-TTg dated 10/02/2023),

ii. Water resources (Decision No. 1622/QD-TTg dated December 27, 2022),

iii. Inland waterway infrastructure (Decision No. 1829/QD-TTg dated October 31, 2021),

iv. Railway network (Decision No. 1769/QD-TTg dated October 19, 2021),

v. Seaport system (Decision No. 1579/QD-TTg dated September 22, 2021), and

vi. Road network (Decision No. 1454/QD-TTg dated September 1, 2021).

Thirty-three sectoral plans remain to be approved, including:

i. The Power Development Plan (PDP),

ii. The Comprehensive Energy Plan,

iii. The Oil and Gas Storage and Supply Infrastructure Plan, and

iv. The Exploration, Extraction, Processing, and Utilization of Minerals Plan.

The regional plan for the Mekong delta region is approved, as well as the provincial plans for Thanh Hoa, Ha Tinh, Bac Giang, and Quảng Ninh (Trần Hồng Hà 2023).

Green Development Plan for Vietnam's coal province(s)

The Quảng Ninh province was traditionaly the center of the coal industry in Vietnam, it clearly recognizes the need to transform the development mode from "brown" to "green" towards sustainability (Article 1.II.1 paragraph 3). It aims at:

> "Developing environmentally friendly energy industry; continues to maintain as an energy center of the country (one of the centers of wind power and LNG power in the North), gradually shifting to developing clean energy and renewable energy. No expansion of coal-fired power plants; invest in improving the efficiency of existing factories and protect the environment. To develop rationally and sustainably the mining industry, with a focus on the coal industry, contributing to ensuring national energy security as planned; in the period of 2021 - 2030, Quang Ninh's coal mining output is basically stable and grows at an average rate of about 1.2%/year; by 2030, the exploitation output will reach over 49 million tons." (Article 1.III.1.a)

> "Develop a roadmap for training, retraining and job change for coal industry workers to meet the requirements of economic restructuring associated with renewing the green growth model, improving productivity, quality and efficiency. in line with the development needs of Vietnam Coal and Mineral Group, Northeast Corporation and market demand." (Article 1.III.1.d paragraph 2)

The Quảng Ninh provincial development plan Appendix XV (summarized in Article 1.V.) provides a detailed power sources and grid development plan for the Province. It includes:

- Building two 1 500 MW LNG power plants in Cam Pha city

- Converting 1 640 MW of coal power approved in the revised Power Master Plan VII to gas power (Quang Ninh III and Cam Pha III)
- Developing 2 500 MW of wind power sources, including 500 MW offshore.
- Building 2 313 MW of solar power, including 1 830 MW floating and 431 MW rooftop.

Vietnam's anti-corruption drive

Vietnam leadership has been running an effective and tough anti-corruption campaign since the establishment of the Central Steering Committee for Corruption and Negative Phenomena Prevention and Control in 2012 (VTV News 2022).

Evidence that it is effective can be found in Transparency International CPI rankings. Vietnam was 123/176 in 2012, it ranked 77/180 in 2022 (Transparency International 2023). This is better than Thailand, the Philippines or India, but not as good as China or Malaysia – not to mention Singapore, ranked 5th cleanest country for public sector corruption.

The Steering Committee (VNA 2023a) reported that in 2022, 59 party members were disciplined for corruptive behaviors and intentional violations of laws. Five officials were removed from the 13th Party Central Committee, two Deputy Prime Ministers resigned and three deputy ministerial-level officials were removed from their positions. Also, 557 cases were transferred to the investigation authorities, and 493 corruption cases with 1 123 defendants were prosecuted. Legal agencies seized and froze assets worth over 364 trillion VND (15.5 billion USD) in corruption cases, and sentence enforcement agencies recovered 27.4 trillion VND in those cases.

Moving forward into 2023, the Steering Committee's focus is to ensure that investigations into major cases of public concern are completed in a timely manner. These cases include those involving Viet A Technologies JSC, the Foreign Ministry's Consular Department, FLC Group, Tan Hoang Minh Group, Van Thinh Phat Group, and Advanced International Joint Stock Company (AIC).

Like a strong medicine, the anti-corruption campaign has adverse side effects. Bloomberg (2023) quoted Albert Park, chief economist at the Asian Development Bank, who remarked that "*Nobody in Vietnam wants to be on the record of approving anything right because they don't know whether it will come back to them in the anti-corruption campaign.*" This chilling effect has had a detrimental impact on the development of the power sector, which requires significant infrastructure investment to meet the country's growing energy demands. It explains part of the problems that the JETP aims to solve:

- According to a recent study by Do and Burke (2023), incomplete regulations represent the most significant barrier to the coal phase-out in Vietnam. The study cites the following quote in support of this finding: "*Public servants are often risk-averse and reluctant to act in an incomplete regulatory environment.*"
- The solar PV sector is at a legal freeze, sorting out the after-effects of approving the connection of 6 GW in December 2020.
- The wind power sector is moving glacially slow to integrate the projects that missed the October 31st, 2021 FIT deadline into the system. The 62 wind projects at various stages of completion, with total capacity of 3 479 MW, were invited to discuss with EVN on March 3rd, 2023 (Bùi Công Luận 2023).
- The auction mechanism which could allow EVN to procure new renewable electricity production capacities is not going to be promulgated soon by a decree, but after much more higher level work potentially involving the Electricity Law, the Renewable Energy Law, the Public Investment Law and the Bidding Law.
- The permitting for offshore wind and seabed surveys is blocked, while MONRE clarifies with other ministries which criteria could be used to assess the qualification of survey service-provider companies. Until this process is completed, the issuance of permits for offshore wind and seabed surveys remains suspended.

In short, there is tension between the urgency of the energy transition and the carefulness required by good governance.

Development studies scientists have long recognized that international cooperation mechanisms interact with the corruption problem in receiving countries. It remains an open empirical question for economists: Krasniqi and Demukaj (2021) found no significant impact of foreign aid on corruption, while Dávid-Barrett et al. (2020) found that interventions which increases donor oversight and widens access to tenders was effective in reducing corruption risks.

It is imperative that the Joint Energy Transition Plan (JETP) makes a meaningful contribution to the ongoing campaign against corruption. Any attempt to circumvent established protocols and procedures in pursuit of JETP objectives would be counterproductive and could jeopardize the success of the initiative. Therefore, a commitment to upholding the highest standards of accountability and transparency is essential to the JETP's ultimate success.

2.2. Energy system conditions

Climate policy before COP26

Table 1 page 13 presents key statistics on Vietnam's sustainable development status and trends, according to official data by (General Statistics Office of Vietnam 2021). Vietnam is a 100 million persons middle-income country, those CO_2 emissions per capita increased from 1.5 t to 2.5 t in the five years between 2015 and 2020. Expected economic, electricity production and CO_2 emissions growth in the coming years are higher than the rates observed in 2020 and 2021 during the health crisis. GSO does not provides official statistics for JETP indicators such as the total installed capacity of coal power plants, CO_2 emissions from electricity production, or the share of renewable sources (including hydro) in Electricity production.

Vietnam has a legacy of green plans and strategies. In 2012 the National Green Growth Strategy (T. D. Nguyễn 2012 Decision 1393) decision established an Inter-ministerial Coordinating Board under the National Committee on Climate Change, with the Deputy Prime Minister as its Head and the Minister of Planning and Investment as the focal point to coordinate the strategy.

The Renewable Energy Development Strategy (REDS) (T. D. Nguyễn 2015 Decision 2068) adopted in November 2015 framed the increasing contribution of renewable energies in Vietnam's energy mix. It proposed a Renewable Portfolio Standard (RPS) mandating power generating and distributing units to use no less than 10% of renewable energy (excluding large hydro) by 2030 – with the 2020 intermediate goal of 3% to 5%. The RPS was not implemented by 2023. This illustrates the limits of MONRE in shaping energy policy.

In 2017, the adoption of the National Action Plan for the Implementation of the 2030 Sustainable Development Agenda (Nguyễn Xuân Phúc 2017 Decision 622) quantified goals for the 115 performance indicators of the 2030 Agenda. This National Action Plan was not energy policy-setting, it merely restated goals already set in the PDP7A and REDS.

In 2020, Vietnam updated its Nationally Determined Contributions (NDC) (The Socialist Republic of Vietnam 2020), revising the 2015 NDC. The NDC did not address how the goals were to be achieved. It did not mention the RPS or even the carbon market mechanism that was created, also in 2020, by the Law on Environmental Protection. The National Strategy on Climate Change (Lê Văn Thành 2022g) proposed that total greenhouse gas emissions in 2030 from the energy sector should be less than 457 MtCO2e, that renewable energy sources accounts for at least 33% of electricity produced by 2030, and to reduce coal-fired thermal electricity after 2035.

Table 1: Vietnam's key economy and energy statistics, 2015-2021.

Year	2015	2019	2020	2021
Population	92 229 thous. pers.	96 484 thous. pers.	97 583 thous. pers.	98 506 thous. pers.
Population growth rate	1.12%	1.15%	1.14%	0.95%
GDP per capita	2 596 USD/person	3 465 USD/person	3 552 USD/person	3 717 USD/person
GDP growth rate previous year = 100	6.99 %	7.36 %	2.87%	2,56%
Electricity production, annual	158 TWh	227 TWh	235 TWh	245 TWh
CO_2 emissions	179 $MtCO_2$	284.6 $MtCO_2$	289.9 $MtCO_2$	na
CO_2 emissions per GDP	1.4 $kgCO_2$/USD	1.8 $kgCO_2$/USD	1.7 $kgCO_2$/USD	na
CO_2 emissions per capita	1 960 kg CO_2/person	2 949 kg CO_2/person	2 971 kg CO_2/person	na
Total primary energy supply (TPES)	66 147 ktoe	96 228 ktoe	99 040 ktoe	na
Total final energy consumption (TFC)	52 962 ktoe	66 396 ktoe	67 297 ktoe	na
Energy intensity of the economy (TFC /GDP)	399.2 kgOE/kUSD	409.9 kgOE/kUSD	406.0 kgOE/kUSDb	na
Electricity consumption/TFC	22,9 %	26,8 %	27,6%	na
Electricity consumption per capita	1 535 kWh/person	2 145 kWh/person	2 211 kWh/person	na
Share of renewables (incl. hydro) in TPES	19,9 %	14,6 %	14,9 %	na

Source: GSO (2022) Statistical Yearbook of Vietnam 2021.

Under the Vietnamese Constitution, Party's Resolutions are the topmost documents, to orient subsequent executive and legislative work. In February 2020, Party's Resolution 55 (Vietnam's Politburo 2020) oriented the national energy development of Vietnam to 2030. This Resolution reiterates that ensuring national energy security is the overarching policy goal in the domain. It further prioritizes fast and sustainable energy development, while aiming to foster favorable conditions for all economic sectors, particularly the private sector, to participate in energy development. It also targets subsidies, monopolies, opaqueness and unfair competition in the industry.

In October 2020, Resolution 140/2020/NQ-CP programmed the Government's actions to implement Resolution 55 (Nguyễn Xuân Phúc 2020). The mission orders to MOIT include the revision of the Electricity Law (first issued in 2004, revised in 2012), the development of a Renewable Energy Law, and the preparation of an updated National Energy Development Strategy to 2030, with a vision to 2050 (updating the one adopted in 2007 with a time horizon of 2020), in parallel with finishing the PDP8.

Directives are broad, high-level and qualitative statements. Monitoring the execution of Resolution 140 work program could be an interesting instrument to follow-up on the progress of Vietnam's energy policymaking, but inspecting the implementation of the Party resolution may not be suitable for an international cooperation task.

The 2021 revision of the National Green Growth Strategy, Decision 1658/2021/QD-TTg (Lê Văn Thành 2021) stated that the 2030 greenhouse gas emission intensity per unit of GDP should be reduced by 15% compared to 2014. Since all previous targets were compared to "baseline", that statement was a significant milestone in Vietnam's climate policy. Due to its timing and being under Ministry of Planning and Investment – not MOIT – the strategy had little influence on the PDP8 debates, just reaffirming resolution 55's renewable energy targets: *to reduce the average primary energy consumption per unit of GDP by 1,0 – 1,5%/year for the 2021 - 2030 period. The contribution of renewable energy to total primary energy supply is expected to reach 15 – 20% in 2030.* All ministries and provinces now have to produce a green growth action plans. Decision 687 on the circular economy scheme (Lê Minh Khái 2022c) is mostly a framework text reminding the principles, objectives, and the role of various ministries. The National Action Plan on Green Growth decision No. 882/2022/QD-TTg (Lê Văn Thành 2022e) implements the strategy. Many of its tasks are related to the JETP. Monitoring their progress would also be interesting, to know what remains to be done and where international support could help.

All the above quantitative targets were made redundant when Vietnam adopted a net-zero target by 2050 in November 2021.

Energy balance and the recent renewable energy boom

Figure 1 presents Vietnam's 2020 energy balance (IEA 2023). Vietnam produced domestically about 10 Mtoe of crude oil. As it consumed 24 Mtoe of oil products, it relied on imports of crude oil and oil products for more than half its liquid fuel consumption. Vietnam used about 55 Mtoe of coal, with a little less than half mined in the country. Vietnam gas was all domestically produced and consumed. Regarding electricity, international trade was small compared to total production. Most electric energy came from coal, with hydroelectricity second, and gas third.

After 2020, the mix of Vietnam's power sources shifted in line with the global development trend toward developing clean and renewable energy sources. The total installed capacity of photovoltaic electricity increased from 84 MW at the end of 2018 to 4 439 MW at the end of

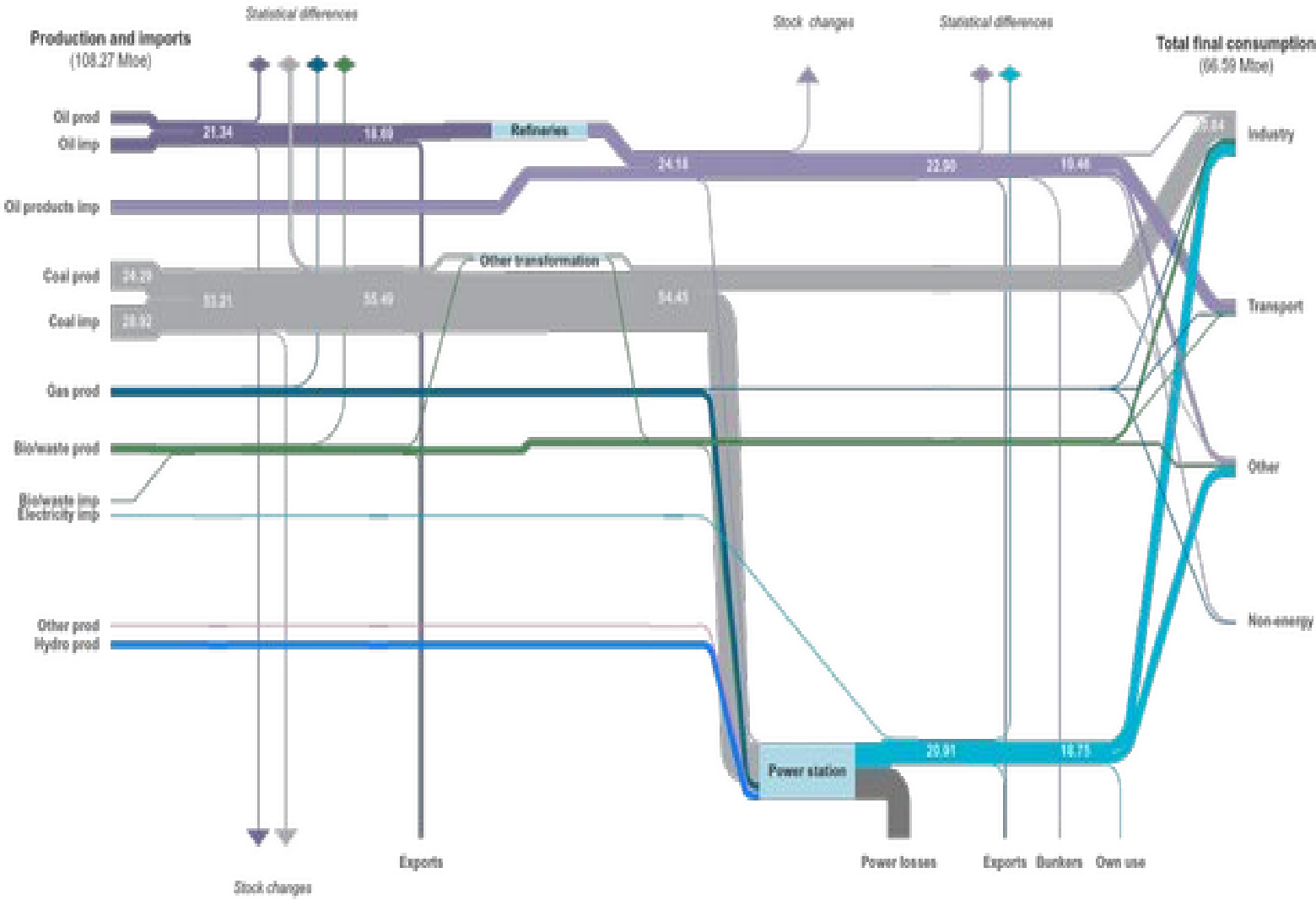

Figure 1: Vietnam energy balance 2020

Source: IEA.

2019. By the end of 2020, Vietnam reached 8.6 GW of installed solar farm capacity and 7.9 GW of rooftop solar, after which investment in the sector paused. Wind power in Vietnam followed a comparable trajectory one year later, with nearly 4 GW of installed capacity put into commercial operation by October 31st, 2021.

In 2022, waste to Energy power capacity increased from 7.5 MW to 60 MW. The industry waited to know how the 62 wind and 6 solar projects which missed the FIT deadlines would be treated (MOIT 2022a). A price bracket has been issued, but it is unclear how EVN should negotiate the PPA with project owners. EVN proposed to start buying electricity at the middle of the price bracket, during the time it takes to close the negotiation. It is also unclear if projects have the option to sell to another buyer (the DPPA rules are not published) or use alternative mechanisms (Auctions are not launched).

The Electricity Regulation Authority of Vietnam (2023) shared that in 2022, the national peak demand (Pmax) reached 45 434 MW on June 21. Pmax grew 9.1% per year between 2012 and 2022. The System Average Interruption Duration Index was 283 minutes (down from 319 minutes in 2021) but the System Average Interruption Frequency Index increased to 2.95 times/end user (up from 2.64 in 2020).

By the end of 2022, the total installed capacity of power sources reached 80 597 MW excluding imports. The total number of power plants in operation was 360, excluding small hydropower plants. Coal-fired power capacity was 26 087 MW, hydroelectricity 22 942 MW, gas power 7 398 MW, solar PV (including rooftop) and wind power together 21 972 MW.

The electricity output in 2022 was 268 billion TWh, a 5.1% increase over 2021. Hydro produced 98 187 GWh, coal 104 718 GWh, gas turbines 29 218 GWh, and new renewable 37 835 GWh. In 2022, renewable energy accounted for 48% of power generation in Vietnam (130 TWh), of which 35% hydro and 13% from wind, solar and biomass. The share was only 27% in 2010 (see Figure 4).

Vietnam has made significant strides towards a more market-oriented energy sector by reducing the dominance of state-owned enterprises in the power sector. According to Ngo Thi To Nhien (2022, 6) state-owned enterprises controlled 48% of power generation capacity by the end of 2021, a substantial decrease from the 72% they held in 2019. Although state-owned enterprises still retain a comfortable majority of 58% in total electricity production, private enterprises now play a crucial role. In 2021, they were responsible for 100% of wind, 99% of solar, 39% of hydro, 30% of coal, and 29% of gas-based electricity production. This new power source ownership landscape, coupled with the formation of a competitive

electricity market, necessitates significant changes in the state's regulatory approach to the power sector.

The power sector stakeholders have laid out their priorities for 2023, which are crucial for the overall development of the sector (Dinh Tu 2023b) . These priorities include various initiatives concerning EVN construction investment, such as ensuring an uninterrupted gas supply for thermal power plant projects in O Mon and Dung Quat Power Centers. Technical design aspects related to the Quang Trach I Thermal Power Plant project and Bac Ai pumped-storage hydroelectric project also require immediate attention. Additionally, the stakeholders are focusing on ensuring sufficient power supply for the Con Dao island district (Ba Ria - Vung Tau) and securing an adequate coal supply for thermal power plants.

Moreover, attention is currently directed towards economic matters that are integral to the development of the power sector. This includes adjusting retail tariffs, developing the electricity market, and implementing the Direct Power Purchase Agreement (DPPA), which would significantly contribute to the growth of the sector. These measures reflect the stakeholders' strong commitment to promoting sustainable and efficient economic growth in the power sector.

1. Country platforms are a tool to support a country's sustainable development. They should be country owned and country led, and be designed and implemented in line with country's reform and development policies and priorities. Development partners should act consistently with the country's vision, or support the government to develop a shared vision and defined objectives on project and reform priorities, including through sharing views and analyses, as appropriate.

2. Country platforms should be customized and adapted to local context and country needs, specificity, priorities and legislation. Where applicable, platforms should build on existing activities, coordination mechanisms or networks that already exist to avoid risks of overlap and duplication.

3. Country platforms should aim at fostering a wide mobilization of development partners, on a voluntary basis, including the private sector where appropriate, while respecting each partner's own governance and decision-making process, and avoiding excessive bureaucracy.

4. Country platforms should foster the collaboration and synergies among development partners by helping the sharing of appropriate and necessary information, good practices and lessons learned among participants, on a voluntary basis, as well as by facilitating the implementation of key standards, as practiced in a diversified approach by MDBs with regards to environmental, social and governance standards, procurement, transparency and anti-corruption, pricing policies, local capacity building, and debt sustainability. In that regard, the ongoing work by MDBs to implement high standards, including when working with other partners, should serve as a basis for their further work to build over time a common understanding among them of how "core standards" should be defined and implemented.

5. Country platforms will follow up as appropriate on platforms' activities and results, so as to help draw lessons from experience, support a "learning by doing" progress curve, and improve over time the efficiency of individual platforms as well as of the collective platform process worldwide

Text 1: G20 reference framework for effective country platform (extract)

3. Just Energy Transition Partnerships

3.1. JETPs what, why, where and how

JETPs as Country Platforms

The G20 Reference Framework (G20 2020) defined Country Platforms as "*Voluntary country-level mechanisms, set by governments and designed to foster collaboration among Development Partners, based on a shared strategic vision and priorities*" to implement the 2030 Agenda for Sustainable Development. Text 1 characterizes the country platforms as country-owned and country-led, customized, wide, collaborative, and monitored.

JETPs are country platforms, adding an additional trait to that G20 definition: the multi-stakeholder dimension (Plant 2020). This trait is not new. The "Platform for Partnership" report (Redd, Hayes, and Stibbe 2014) traces the idea of platforms to the 2011 Busan High-Level Forum on Aid Effectiveness, which recognized the centrality of cross-sector partnerships to sustainable development (Papoulidis 2011).

Mark Carney, UN Special Envoy on Climate Action and Finance, was very explicit on the need to engage with Multilateral Development Banks and the private sector, particularly Glasgow Financial Alliance for Net Zero (GFANZ) members (Carney 2021). The day after the first JETP for South Africa was announced at COP26 in Glasgow, November 2021, he launched a Country Platforms Action Plan, stating that:

> Bridging the financing gap [...] requires building new country platforms which deploy blended finance at scale, leveraging private finance at significant multiples and connecting stand-alone private finance with NDCs. These 'Country Platforms' would provide a single focal point to channel technical assistance and public and private finance to support the delivery of Paris-aligned NDCs in emerging markets and developing countries. They would coordinate and scale all elements including, critically, standalone private finance to major emerging markets for all aspects of transition finance including the wind-down of stranded assets. Country platforms could help mobilize $1 trillion per annum of new private capital flows by mid-decade.

Analyzing the lessons of international development cooperation experience for climate action country platforms, (Hadley et al. 2022, 45) define them as *a government-led multi-stakeholder partnership that aligns international and national goals and unlocks financing (public and potentially private) to support a step change in climate action.* Hadley et al. (op. cit. pp 45-47) argue that JETPs share three features:

- *"They will be based on a political 'deal' that aligns international and national interests to achieve a shared goal. This high-level political commitment is critical to drive forward and institutionalize a partnership, as well as to make the case and overcome the internal obstacles on either side."* The major challenge with such deals is to maintain them over a decade or more over several governments in various countries. This require quality dialogue and consistent focus.
- *"They will embrace a programmatic approach to coordinate international and national financing to address a specific problem, such as a clean energy transition."* Coordinating donors under a programmatic approach is difficult. There is empirical evidence that it can raise the impact of development assistance compared to project-based interventions. This requires a credible reform plan, limiting the goals of the platform, building on existing initiatives, and strengthening the central government offices.
- *"Where appropriate, they will strategically engage the private sector to tackle barriers holding back private sector investments to support a green transition in a specific sector of the economy."* Building the capacity of domestic policy-makers to engage with the private sector while avoiding capture by vested interests is key.

The programmatic approach, nevertheless, must activate a pipeline of projects to finance. IPG stakeholders assert that their problem is not the lack of capital but the lack of investment opportunities in partner countries. JETPs can help national development banks reach their nationally-given objectives.

G7 diplomats aim to generalize South Africa, Indonesia and Vietnam's JETPs and apply them as a climate finance architecture to other key emerging market and developing countries, as early as possible considering urgency of the world's energy transition.

The JETP in the UNFCCC process and Paris Agreement Article 6

JETPs have a potential to be a turning point in the history of climate finance, if they deliver. In the Paris Agreement framework they are under Article 6.8 on Non Market Approaches (NMA). The loose coupling with the UNFCCC process allows JETPs to move forward with less delays for deliberation.

During the 2009 COP15 summit in Copenhagen, developed countries made a commitment to provide 100 billion USD annually by 2020 to support climate action in developing countries. Unfortunately, this pledge was not fulfilled. As of 2020, the OECD (2022) estimated that only 82.2 billion USD in climate finance had been mobilized, with loans comprising 71% of this amount. However, critics argued that the reported sum was

significantly inflated for several reasons (Oxfam 2020). Firstly, around 50% of the loans did not qualify as development assistance since they were non-concessional, that is, not offered at below-market rates. Consequently, such loans should not be included. Secondly, concessional loans should only be counted based on their grant-equivalent value as counting them at face value would misrepresent the actual net benefits to the recipient countries. Finally, multipurpose development projects tended to overestimate the climate finance component. This dispute over the accounting of "finance mobilization" could apply to JETPs.

The Paris Agreement (United Nations 2015, art. 6) defines three ways for Parties to pursue voluntary cooperation:

- Paragraph 6.2 would allow country-to-country trade of Internationally Transferred Mitigation Outcomes (ITMOs).
- Paragraph 6.4 creates a new international carbon market with public and private participation. Often called the Sustainable Development Mechanism, it replaces the ~~Clean Development Mechanism~~.
- Paragraph 6.8 establishes a framework for Non-Market Approaches: voluntary cooperative actions that are not reliant on market-based approaches and that do not include transactions or quid pro quo operations.

JETPs are non-market approaches, so they could participate in the 6.8 framework, as an eventual outlet to share experiences. Implementation of the two market mechanisms and the 6.8 framework is progressing slowly at each COP. The work program of the Glasgow Committee for the implementation of 6.8 aims to establish by 2026 a website to record and exchange information about non-market approaches (Carbon Market Institute 2022).

JETPs are not based on a carbon value

A JETP may help implement a national carbon market and discover carbon prices, but they are not based on an explicit or implicit value of avoided GHG emissions. JETPs are not designed as tradable carbon market instruments (Article 6.2). This is not G7+ countries spending money to reduce CO_2 emissions in a partner country, so that an implicit cost of carbon could be estimated by dividing a monetary value by a CO_2 quantity.

On the finance side, most of climate finance money comes as loans and investments. To be sustainable and scale up, loans can be designed to be profitable for both sides of the transactions. For example, looking at the yield of the 20-year government bonds as of 10/3/2023, Vietnam borrows at 4.9% while Japan borrows at 1.2%. Thus, Japan can profitably finance Vietnam's energy transition at better than market rates.

On the mitigation side, GHG emission reductions due to JETP are hard to measure scientifically. When it comes to not building a coal power plant, for example, there is no factual baseline to observe how much carbon it would have emitted during its lifetime – it depends on how much it would have been used. Investment to support the electricity transmission infrastructure is necessary to allow the penetration of carbon-free power sources, but does not in itself reduces emissions.

3.2. The pathfinder: South Africa's JETP

History of Just transition idea in South Africa

The idea of a "just transition" appeared in South Africa's national climate change response white paper as early as 2011 (DEA 2011, 5). According to Cassidy et al. (2022) it played a prominent role in its policy discussion since at least 2015, when the South African National Planning Commission developed the country's initial Nationally Determined Contribution (NDC).

A transition to renewable energy was an uphill fight at the time due to strong vested interests in South Africa's coal-dominated energy industry. Eskom, the country's state-owned energy utility, in particular, has been staunchly opposed to attempts to increase renewables. This stance has started to shift in recent years, as both government officials and utility representatives have recognized the need for more fundamental reform of the country's power industry.

South Africa's electricity system is plagued by frequent power outages as a result of long-running underinvestment in new generation infrastructure. In 2020 the median age of plant was 39 years, explaining an availability factor of 66.6% only (Eskom 2020). The company's average cost of debt was 9.6%, its cash from operation was barely sufficient to pay its debt interests. These mounting challenges prompted the government and Eskom to begin discussions on an electricity sector reform agenda in which the utility would relinquish some control and enable private investment to flow into new renewable electricity production. Simultaneously, the South African government revised its NDC in October 2021 to include more ambitious climate objectives.

Eskom established its Just Energy Transition office in 2020. It proposed a plan (Lungi 2021) including the development of 8 GW of renewable energy projects for a cost of 10 billion USD, the repurposing/repowering of the Komati power station, a Gas project and the first JET Climate Transaction (Rambharos 2021). The Komati power station was scheduled to close

down in 2022, it would serve as a pilot project since Eksom planned to decommission 5.4GW of electricity from coal generation by 2022, 10.5 GW by 2030.

The think tank Meridian Economics noted that Eskom's JET plan would not solve their debt problem and only modestly accelerated the coal phaseout, and proposed a more ambitious Just Transition Transaction (JTT) (Steyn et al. 2021). The JTT would be structured as a series of long-term (approximately 25 years) debt-financing tranches ultimately priced at a highly concessional interest rate. Loans would be taken at nominally market rates, but interests payment would be reduced in proportion to the avoided CO_2 emissions below baseline, for an agreed-upon carbon price. That would reduce the cost of the loan to South Africa. With fine-tuning, net interest would still cover the cost of money for the dedicated multi-lateral lending facility, which would be funded at developed-country conditions.

These propositions cleared the way for international donors to contribute external financial resources at the COP26 in Glasgow, resulting in the first JETP between a number of G7 donors and the South African government. Comparing the JETP with the JTT proposition, Tyler and Mdoduso (2022) note that while both leverage the private sector, there are deep differences. The JTT was a cohesive idea proposed by an small group of experts, while the JETP has the legitimacy but also the complexity of international diplomacy.

The South African JETP loan-based investment plan

The South Africa JETP was signed at COP26 in November 2021. The JETP Secretariat releases an update report every six months (PCFTT and IPG 2022b, 2022a) to the leaders, namely the Presidential Climate Finance Task Team (PCFTT) and the International Partners Group (IPG). The twelve months report presented the Just Energy Transition Investment Plan (JET IP) and the policy reforms engaged to support it.

The policy reforms include several measures such as eliminating the thresholds for behind-the-meter generation projects, increasing the next wind and solar bid window to 5.2 GW, reducing the local content requirements for photovoltaic (PV) from 100% to 35%, waiving environmental impact assessment (EIA) in selected areas, expediting the unbundling of Eskom (South Africa's national power company), developing a rooftop solar feed-in tariff (FIT), and establishing a National Energy Crisis Council to be chaired by the Director-General in the Presidency's Office.

In October 2022, the Government of South Africa and the IPG endorsed South Africa's JET IP for the period of 2023-2027. This plan requires a total financing of 98.7 billion USD, with 68.7 billion USD allocated to the electricity sector, 8.5 billion USD to the new energy vehicles sector, and 21.3 billion USD to the green hydrogen sector (JETP Secretariat 2022, tbl. 1). The

international partners have committed to providing 8.5 billion USD of the required financing, with 0.7 billion USD allocated to green hydrogen, 0.2 billion USD to new energy vehicles, and the remainder to the electricity sector.

Table 2 presents the offered South Africa JETP IP financing package by instrument and source. The Accelerating Coal Transition (ACT) program of the Climate Investment Fund (CIF) intends to lend 500 million USD through the World Bank Group and the African Development Bank (AfDB), subject to the presentation of an ACT Investment Plan. This is expected to leverage 2.6 billion USD in concessional loans. The United Kingdom has offered guarantees to AfDB. The Development Finance Corporation (DFC) had proposed to finance eligible private sector-led opportunities, providing up to 1 billion USD in debt, guarantees and/or political risk insurance (PRI) per project, as well as equity investments – up to 30% of direct equity or funds transaction – in companies and funds (JETP Secretariat 2022).

Table 2: Sources and financing instruments of the IPG offer to South Africa

US$ millions	Grants / Technical Assistance	Concessional loans	Commercial Loans	Guarantees	Total (source)
Climate Investment Fund	50	2 555	0	0	2 605
European Union – EIB	35	1 000	0	0	1 035
France – AFD	2.5	1 000	0	0	1 002.5
Germany – GfZ and KfW	198	770	0	0	968
United Kingdom – BII, PIDG, private sector	24	0	500	1 300	1 824
United States – USTDA, USAID, Power Africa, the State Department and DFC	20.15	0	1 000	0	1 020.17
Total (instrument)	329.7	5 325	1 500	1 300	**8 455.7**

Source: (JETP Secretariat 2022, tbl. 28)

South African 2023 electricity crisis "national disaster" declaration

Over 8 456 million USD in total, the amount of grants and technical assistance is 339 million USD. Around 97% of the offered financing package is loans. More than half is earmarked as concessional loans, that is to say at better rates than what the South African government could get on the open market. Farand (2022) quotes Jack Schmidt from the US-based Natural Resources Defense Council as saying:

"I hope they find a slightly better offer for other countries if they are going to move this forward. South Africa needs financing so desperately because Eskom is in so much debt. But others might not be so desperate."

In 2022, rolling blackouts worsened in South Africa, the energy cuts increased 400% from the already record-breaking previous year. The South African president declared the electricity crisis a "national state of disaster" on February 9th, 2023, recognizing they pose an existential threat to the economy and social fabric (Macaulay 2023). Quinten Bertenshaw, executive director of ETM Analytics, estimated that the economic costs associated with electricity outages—known as load-shedding—have reduced GDP by 1 to 1.3 percent annually since 2007. Economists have estimated losses of between 1.5 billion rand and 4 billion rand (about $87 million to $232 million) per day (Gbadamosi 2023). This context makes it difficult for the government to talk with IPG about closing any power plant.

The state of disaster in South Africa results from a lack of investment to maintain existing plants and develop new generation resources over many years. The effects of poor management – not to say corruption –, compounded by the electricity tariffs below average costs, could only be swept under the rug for a time. The progressive degradation of the power system led to an acute crisis. The case highlights the need for scientific foresight in policy making to address infrastructure challenges, that is to invest on time.

We defer the discussion of the lessons learned from the South Africa JETP on Justice and the process to section 7.1, so that the reader can better see the relevance for Vietnam.

3.3. Vietnam Just Energy Transition Partnership (JETP) particulars

The negotiation

Vietnam expressed interest in emulating South Africa at COP26, and included signing a JETP in its national COP26 implementation plan Decision 888 (item 19) published in June 2022, with a target date for September 2022. A first draft was available that month, but by COP27 in November 2022, the text was not 100% agreed to. That let Indonesia announce its JETP first at the G20 summit it hosted in Bali. The announcement was made on December 14th 2022, on the margin of the EU-ASEAN summit in Brussels. The talks were remarkably quick for international negotiation (Cabinet Office 2022; Lai 2022; Wignaraja 2022).

Minister of Environment and Natural Resources (MONRE) Trần Hồng Hà led the talks on Vietnam's side. On IPG's side they were led by a duo of EU and UK diplomats. The Brexit situation between EU and UK prevailing at the time did not impede the co-leadership. The UK ambassador in Vietnam was active and expert in climate diplomacy: UK still presided

COP after Glasgow until Sharm-el-Sheik. The EU brought efficiency in international negotiations. It was pushed by France, as Germany does not have a credible leadership on coal phaseout diplomacy.

JETP negotiations were high-level and complicated as international negotiations are. The Vietnamese negotiator also had to include input from all involved Ministries, not only MONRE. The IPG co-leads had to refer to all the capitals, since negotiations were not driven from the local embassies. There was discussions between the proponents of ambitious goals aligned with the 1.5 degree objective and the local teams pushing for more feasible goals.

The end result appears to be an ambitious but realistic compromise. The negotiation outcome is more in line with a 2 degree objective than 1.5. Talks started with a 5 billion USD offering package, and ended at 15 billion (McDonnell 2022). The loan basis of the support was a difficult point to accept and will likely remain a problem. Energy efficiency is at the periphery of the declaration. There were no talks about EVN restructuring, since there is no real unanimity within IPG countries on which degree of competition works best in the electricity sector, e.g. Vietnam's integrated national utility EVN is close to France's EDF.

Achieving the JETP goals, even a few years late, would be a very significant step for Vietnam and a success for the international community. This requires maintaining high-level momentum. The next steps are to install a Secretariat by April 2023, prepare the Resource Mobilization Plan (RMP) by November 2023, and publish a compatible PDP8.

The RMP can include a pipeline of projects and define performance indicators. The important word in RMP and PDP8 is *Plan*. Execution will be hard, and adaptation will be necessary, hence the need for continuous dialogue.

As a country-led process, Vietnam's decisions and regulations to reopen the renewable energy sector will determine if investments materialize in the next three to five years. That would pave the way for another, more ambitious successor JETP deal.

How does Vietnam's situation compare to other JETPs?

The three JETPs signed so far focus on weaning the power sector from coal, with a side tailored to build on the country's comparative advantages in the energy sector.

South Africa, Indonesia and Vietnam have national power utilities and low regulated electricity prices. In South Africa, Eskom is in a dire financial situation, requiring a bailout due to mounting debt. In September 2022, Fitch rated its standalone credit profile CCC- . In Vietnam, EVN reported losses exceeding 1 billion USD in 2022 (Vietnam News 2022) and has issued warnings of serious repercussions if retail prices fail to increase in line with

heightened generation costs. The electric power industry in Indonesia is managed solely by Perusahaan Listrik Negara (PLN), a state-owned monopoly. Fitch rates EVN and PLN standalone credit profile at BB+, based on the expected support from their government.

With JETPs, IPG countries aim to accelerate the phase down of coal production and consumption in partner countries. Their national situations differ. Indonesia is the first exporter of coal in the world, South Africa the fifth. Vietnam is the ninth coal importer. South Africa's coal power plants are old and being retired, while Vietnam's ones are young. Vietnam and South Africa need more electricity. The condition in Indonesia differs since it has overbuilt its coal power production capacity, particularly for the island of Java. Sulaeman (2022) quoted Darmawan Prasodjo, president director of the Indonesian national utility company, as saying "PLN is currently experiencing great oversupply," and "So there seems to be an extra 5 GW."

Furthermore, it is essential to consider the unique national context of each country. According to the World Bank's Government Effectiveness index, in 2021 South Africa was ranked 90th in the world, while Vietnam was 69th and Indonesia 62nd. Regarding the IMF economic growth forecasts, Vietnam was ranked 17th, Indonesia 44th, South Africa 149th.

Overall, when compared to the other two countries, Vietnam has a lower share of coal in its electricity mix, with a greater proportion of low-carbon sources. Although Vietnam's JETP was the third to be signed, the country's energy transition is the most advanced, making it the most promising of the three signed JETPs.

Main domestic stakeholders

In Vietnam, national decision-making is carried out through collective leadership from the Party's Politburo. Its four key members are: the General Secretary (head of the Party), the Prime Minister (head of the Government), the President (head of the State), and the Chair of National Assembly (head of the unicameral Parliament).

The Prime Minister chairs the National Steering Committee responsible for executing Vietnam's commitments in the COP26 Conference (Phạm Minh Chính 2021). The Ministry responsible to implement Vietnam's COP26 commitments (see Annex B page 88) is the Ministry of Natural Resources and the Environment (MONRE), and more specifically its Department of Climate Change (DCC). As such, MONRE is the focal ministry for the JETP.

The Ministry of Industry and Trade (MOIT) is responsible for the electricity sector in Vietnam. It is the focal point for the existing energy country platform, the Vietnam Energy Partnership Group (VEPG, see page 34). The responsibilities of MOIT are divided between

the Electricity and Renewable Energy Authority department (EREA), which oversees the sector's operational supervision and is the focal point for VEPG, the Department of Energy Efficiency and Sustainable Development (DEESD), which handles climate change matters, and the Gas, Oil and Coal department, which oversees fossil fuels, and the Electricity Regulatory Authority, which regulates the market. Furthermore, MOIT is in the process of launching a Vietnam Energy Information Center (VEIC).

The Ministry of Planning and Investment (MPI) is responsible for making regulations regarding foreign loans and investments, while the Ministry of Finance (MOF) manages public debt, decides energy prices and implements the upcoming carbon market. The Commission for the Management of State-owned Enterprises (CMSC) oversees three public entities that own most of the energy sector: Vinacomin for coal, PVN for oil and gas, and EVN for electricity.

Over the past five years, private companies have made significant investments in power generation infrastructure (see page 16), space and time constraints prevents us to list many other players here. All the above have a say in the RMP. In the long run, maintaining leadership support and building MOIT adherence are essential conditions for JETP's success.

4. JETP, finance and diplomacy

4.1. JETP in the reform of multilateral finance

Countries in JETP talks

To sidestep the complexity and slowness of multilateralism, the country platform approach involving a relatively small number of countries has been called "minilateral". Five JETPs are going on in parallel as of early 2023: South Africa signed the first JETP in 2021, followed by Indonesia and Vietnam in 2022, and maybe India and Senegal in 2023 (Cassidy, Quitzow, and Sparkman 2022; Hadley 2022).

South Africa's JETP negotiation was co-led by UK and EU. The Declaration was signed on November 2nd, 2021 (Republic of South Africa et al. 2021). It resolves to mobilize 8.5 billion USD over the next three to five years. The World Bank, in November 2022, approved South Africa's request for a 497 million USD project to decommission and reuse the Komati Coal Power Plant with renewable energy and batteries (Engelbrecht 2022). See more details at 3.2 above.

In Indonesia, the JETP negotiations were co-led by US and Japan. The Declaration was signed on November 15th, 2022 (Government of the Republic of Indonesia and International Partners Group 2022). It amounts to mobilize 20 billion USD, half by IPG members and half private from the Glasgow Financial Alliance for Net Zero (GFANZ) members. It aims to peak power sector CO_2 emissions at 200 MtCO2 by 2030. The Indonesian deal also attracts financial support from Japan, Denmark, Norway, and New Zealand, who were not involved in the South African JETP (Hadley 2022). The JETP secretariat is established, the Comprehensive Investment and Policy Plan (CIPP) is due for September 2023. A consultation draft ought to be prepared three months before.

In Vietnam, UK and EU co-led the negotiation. The Declaration was signed on December 14th, 2022 (Government of SR of Vietnam and International Partners Group 2022). The deal is closer to the Indonesian than to the South African one, see (Dang, Truong, and Dang 2022) for a comparison . The amount is 15.5 billion USD, half coming from the public sector and half from the private sector (GFANZ). The Resources Mobilization Plan should be published by November 2023. Refer to section 3.3 for more discussion.

For Senegal, JETP negotiations co-led by France and Germany started in June 2022. The context is different from the first three partnerships: Senegal is an emerging LNG exporter (Lado and Diene 2022) without coal power plants.

The India JETP negotiation, co-led by USA and Germany, stalled on the coal phaseout question (Srivastava 2023). India's upcoming G20 presidency in July 2023 may offer opportunities to show climate policy leadership.

An academic case study on Nigeria was published (Nweke-Eze 2022). Team Europe announced it was engaged in inclusive dialogue with Egypt, Ivory Coast, Kenya and Morocco for JETPs in Africa at the EU-AU Summit in 2022 (Macron 2022).

Multilateral development finance

The French President also announced that France will hold a Summit on a New Financial Pact with the Global South in Paris on June 23rd, 2023 (Focus 2030 2023). This conference is part of the Bridgetown Initiative for financing climate action, led by the Prime Minister of Barbados, Mia Mottley, since COP26. The conference's main objectives are: To disarm debt traps; to foster private sector development in low-income countries, to finance countries vulnerable to climate change; and to encourage investment in green infrastructure for the energy transition in emerging and developing countries. The fourth objective of this broad agenda includes JETPs (Martens and Pompili 2023, 57).

The Paris conference takes place within a more general discussion about international finance institutions reform. The World Bank president (Josephs 2023) recently pointed out:

> *"If you think of the history of Western lending, sometimes it's not for the full benefit of the people in the countries [being lent to]. Even World Bank loans haven't always been for the best that could have been done in a country. So what we're trying to do, and I think everyone should be trying to do, is improve the quality of the lending.*
>
> *One of the techniques is to unbundle the loan, meaning if there's an investment project, let's say you're building a train, describe the project and what the cost will be. And then separately, arrange the financing. If you bundle them together, it makes it very hard to know, 'am I getting a good deal on the train or on the financing?'"*

Bundled loans, also known as tied aid, come with the condition that the receiving government must buy from the loaning country's firms instead of procuring goods and services competitively. This lead to an inefficient spending of public funds, which OECD estimated to 20-30% (Catrinus J. Jepma 1991). Worse, it can lead to going around the local laws on transparent and fair public procurement, particularly when the contracts represent large sums, as in the construction and infrastructure sectors. The Vietnamese government implementing the JETP is particularly sensitive to such risks of corruption (see 2.1 above).

That said, the auto-critique quote above was more directed to China than to self-reform.

4.2. China

China is a prominent investor in infrastructure for many emerging and developing countries, including South East Asia. For example, China financed the Thái Bình 2 and Vân Phong 1 coal power plants in Vietnam before it committed to stop funding coal abroad. China is absent from the JETPs. Two reasons explain why: Geostrategic competition and the climate negotiations posture.

PGII vs. BRI

The JETPs are energy transition-oriented country platforms implemented simultaneously as a broader strategy of the G7, the Partnership for Global Infrastructure and Investment (PGII). Launched in June 2022, the PGII aims to *"provide financing for quality, high-standard, sustainable infrastructure in developing and middle-income countries"* (Biden 2022). Climate and energy security are PGII's priorities (The White House 2022). The PGII follows the G7 Build Back Better World (B3W) initiative announced in 2021 (Savoy and McKeown 2022). The B3W follows the Blue Dot Network initiative launched in 2019 by Australia, Japan, and the United States, designed to certify infrastructure projects that meet robust international quality standards (United States Department of State 2019).

The Blue Dot Network, B3W, and PGII initiatives were all more or less explicitly a response of the G7 bloc to China's Belt and Road Initiative (BRI). Launched in 2013, the BRI aims to (i) promote the connectivity of countries; (ii) set up all-dimensional, multi-tiered, and composite connectivity networks; and (iii) realize diversified, independent, balanced, and sustainable development in countries along its pathway (UN, DESA 2022). The BRI and JETPs target the same market: infrastructure in emerging and developing countries.

China not in UNFCCC Annex I

Another reason why China would not participate in JETPs has to do with its global negotiating position. The United Nations Framework Convention on Climate Change (UNFCCC) was signed in 1992. China ratified it in 1993 as a Developing Country, also called a Non-Annex I Party. Developing countries may volunteer to follow the rules for Annex I countries when they are sufficiently developed (UNFCCC art. 4.2. g). But as of COP27 in 2022, China still negotiates as a developing country. Thus, it would be incoherent to be on the donor's side on JETP.

China also identifies as a developing country in World Trade Organization negotiations (Zhou 2019). Dropping the status at climate negotiations could have cascade effects on trade

negotiations with a more considerable economic impact. The World Bank recognizes China as an upper-middle-income country, according to income per capita.

As China uses more than half of the world's coal production, the resource-limited Western development assistance initiatives can only bear a marginal impact on its emission trajectories. For these reasons, China is not a priority partner country to be included on JETP receiving side either.

From Vietnam's point of view, the capital needs of the energy sector are large enough to maintain a balance of suppliers between G7+, China, Korea, and ASEAN countries.

4.3. International alliances interested in JETP

JETP is a declaration between States. Its implementation relies on public-private catalytic and blended finance, the private sector participation is critical.

GFANZ

The Glasgow Financial Alliance for Net Zero (GFANZ) is a federation of seven sector-specific alliances covering all branches of the Finance industry. It assembles 550+ firms from more than 50 countries. These firms have individually committed to meeting the Race to Zero's strict criteria, pledging to transition the emissions of their financed portfolios to net zero by 2050, develop net-zero transition strategies, set 2030 targets, report progress annually, and adhere to strict restrictions on the use of offsets.

GFANZ three work streams are to support member's efforts to translate pledges into actions, to drive ambitious and credible public policies, and to mobilize capital for emerging markets and developing economies. The alliance brings the weight of the private financial sector behind the G20 country platforms and G7 JETPs (GFANZ 2022). Not just interested but engaged, it actively participates in Vietnam JETP negotiations from the start.

GEAPP

The Global Energy Alliance for People and Planet (GEAPP 2023a) is an alliance of preeminent philanthropic, government, donor, multilateral development banks, development finance institutions and private sector partners working to improve people's lives through an inclusive and just transition to renewable energy for all. It is comprises anchor partners, investment partners, delivery partners, and country partners.

- Anchor Partners: The Rockefeller Foundation, IKEA Foundation, and the Bezos Earth Fund;

- Investment Partners: African Development Bank Group, Asian Development Bank, European Investment Bank, Inter-American Development Bank, International Finance Corporation, British International Investment, U.S. International Development Finance Corporation, and World Bank;
- Upstream Partners: The COP26 Energy Transition Council, Sustainable Energy for All, International Solar Alliance, USAID, Power Africa, RMI, and IRENA.
- GEAPP's first Call for Country Partnerships closed on 15 March 2022. National governments wishing to participate were asked to share an Expression of Vision for the proposed country programs; a description of the work already done, and major interventions for which it seeks support, and a commitment to support at the highest level.

At COP27 in November 2022, GEAPP announced its support for countries in the JETP process, including Vietnam. Its initial priority is to improve planning and implementation capacity within partner governments. Following that, on February 24th, 2023, GEAPP signed Memorandums of Understanding with MOIT, MPI and MONRE to collaborate towards Vietnam's net-zero goal (GEAPP 2023b).

PPCA

The Powering Past Coal Alliance (PPCA) is a coalition to advance the transition from unabated coal power generation to clean energy. It was established at COP23 in 2017 and is co-chaired by Canada and the UK. Current membership totals 168 – including 48 national governments, 49 sub-national governments (across 13 countries) and 71 other organizations. In addition, nineteen organizations partner the PPCA and contribute expertise from their network to help further the Alliance's mission and work. Vietnam is not a member.

5. Increasing international financial flows

5.1. Existing platforms and mechanisms

Development Partners bless Vietnam with many energy sector support initiatives and programs. A country platform like JETP aims not only to mobilize additional resources, but also to use the existing ones more efficiently. This section reviews the multilateral energy platforms and mechanisms existing in Vietnam.

We let aside bilateral cooperation programs, however important and effective they may be, see e.g. France (Vietnam Energy Online 2023), Germany (Dinh Tu 2023a), Denmark (EREA and DEA 2022), Japan (My Dung 2023). We also skip over initiatives including but not focused on Vietnam, such as the Japan-led Asia Zero Emissions Community (AZEC), the ASEAN Center for Energy (ACE), the Global Offshore Wind Alliance (GOWA).

VEPG

The Vietnam Energy Partnership Group (VEPG) is a country platform between the Government of Vietnam and its international Development Partners established in 2017 to strengthen cooperation, dialogue and exchange of experiences and knowledge in the country's Energy Sector. The local focal point is the Ministry of Industry and Trade (MOIT).

It is primarily supported by the European Union, linked with the budget support of Vietnam. Budget Support is an international cooperation mechanism that involves direct financial transfers to the national treasury of partner countries engaging in sustainable development reforms, conditional on policy dialogue, performance assessment, and capacity building. This mechanism does not place any debt burden on the receiving State. And compared to project-based assistance, it is less likely to suffer from inefficiencies of tied aid where the implementation contracts go back to the donor country companies.

Considering the administrative overheads to receiving official development assistance (ODA) in Vietnam, managing a 250 million EUR budget support program for the energy sector (European Union and Government of Vietnam 2014) in the form of two successive big programs is much more feasible than managing dozens of smaller grants to a multitude of public entities (only public entities can receive foreign grants in Vietnam). The name of these two programs is the Energy Sector Policy Support program (ESPSP) of 108 million EUR, 2017-2020 and the EU-Vietnam Sustainable Energy Transition program (SETP) of 142 million EUR following it.

Each of this program is build around a large budget support and complementary support measure(s). The SETP has a 121 million EUR budget support component, the remaining 21 million EUR budget is allocated to four smaller components. One of those is the EU-Vietnam Sustainable Energy Transition Facility, financed by the EU up to 8 million EUR and managed by the Belgian project management company Stantec.

In the same way that the SETP is the continuation of the ESPSP, that Facility is the follow-up of the ESPSP complementary measure named EU-Vietnam Energy Facility (EVEF), which was about 8.7 million EUR co-financed in part by Germany and managed by GIZ until 2022.

The facilities activities included: animating the VEPG, providing demand-driven technical assistance, supporting the Vietnam Energy Information System, monitoring and communication. VEPG is organized in five Working Groups, each organizing a few Task Forces to work on specific topics, for example the offshore wind task force led by GIZ.

VEPG and JETP are both country platforms on energy where Vietnam and development partner dialogue. Besides JETP being newer, how do they compare?

JETP is a high-level program. So its equivalent in EU cooperation terms is the Multi-annual Indicative Program (MIP) for Viet Nam (European Union and Government of Vietnam 2014). The MIP was more detailed than the JETP Declaration, less a communication object, and was a more than ten-year program. The EU implemented it in two phases: first, the ESPSP, and then the SETP. To summarize, JETP rhymes with SETP.

The VEPG is a dialogue component of the SETP. However, VEPG has autonomy. It has a separate steering committee. The coordination between the SETP and VEPG steering committees is ensured by having the same persons sit as chair and co-chair. Thus, the VEPG is as high-level as the SETP. As both JETP and VEPG are country platforms, JETP also rhymes with VEPG.

The JETP Secretariat would be at the level of the EVEF team, which acts as a SETP Secretariat and runs the VEPG Secretariat.

JETP and VEPG have two essential differences. One is that VEPG (and SETP) focuses on the energy sector, so its focal point is at the ministerial level within MOIT. The JETP focuses on the just transition. It has environmental and socioeconomic dimensions, and these are inter-ministerial. The JETP steering committee and secretariat remain to be defined, but the COP26 implementation committee chair is at the PM level.

The second difference pertains to finance. The SETP uses a budget support mechanism; the JETP is loan-based. To simplify, with budget support the donor gives funds first and trusts

Trust comes with verification. The budget support mechanism verifies results. It differs from loan-based approaches, where the donor pays close interest in what the receiver does with the funds. The EU seeks proof of the satisfactory execution of the receiver's energy, economic, social, and public finance policies. More specifically, the EU disburses budget support through annual tranches linked to the completion of performance-specific indicators and the results of a sectoral policy analysis. For SETP, it includes verification of the progress of the Vietnam Energy Efficiency Program (VNEEP3), Renewable Energy Development Strategy (REDS), and the current Power Development Plan. The annual disbursements are also linked to the results of implementing the Financial Development Strategy, the MoF's latest Public Debt Bulletin, and the latest Annual State Audit Report by the State Audit of Viet Nam.

Text 2: The Budget Support trust-and-verify mechanism

the receiver to use them effectively (see Text 2). In the second mechanism, the receiver makes policy reforms first to unlock the markets for projects, loans, and capital investments.

How to articulate VEPG and JETP?

One of Country platforms' operating principles (see Text 1 page 18) is building on the existing. Thus, JETP has to coordinate with VEPG. Coordination has to happen at all levels: Program, Working Groups, and Task Forces must articulate their activities to cover climate change and energy transition cooperation. Coordination minimizes dialogue fatigue from all partners by holding joint activities rather than duplicating efforts.

The energy transition policy could be coordinated at a high inter-ministerial level: under at least the supervision of a Deputy PM, if not the PM. JETP's focal point is MONRE, with MPI, MOF, and MOFA also involved. If that happens, as VEPG's focal point is MOIT, the VEPG could be positioned as the 'energy' component of the JETP.

Coordination must articulate the current arrangements with a long-term view: the JETP and VEPG country platforms will stay until 2027. Partners have yet to discuss their dialogue organization after that year.

SEA ETP

The Southeast Asia Energy Transition Partnership (SEA ETP) is not a country platform, but a region platform: *"a multi-donor partnership formed by governmental and philanthropic partners to accelerate the sustainable energy transition in Southeast Asia in line with the Paris Agreement and*

Sustainable Development Goals." The partner countries are Indonesia, Vietnam, and the Philippines. UNOPS hosts the SEA ETP Secretariat in Bangkok.

SEA ETP members are AFD, German's Federal Ministry for Economic Affairs and Climate Action, the UK Department for Business, Energy & Industrial Strategy, Environment and Climate Change Canada, the Children's Investment Fund Foundation, the Ikea Foundation, and the Windward Fund. ETP partners include DCC/MONRE, OGC/MOIT, and EREA/MOIT.

ETP operates three streams of funding channels: i) pooled funding from ETP donors dedicated to programs, ii) earmarked funding for specific programmatic purposes, and iii) aligned funding – resources of ETP donors allocated to projects that pursue the goals of ETP. Its activities in Vietnam include (Quagliata 2023):

- The "Roadmap for Net-Zero Emissions for energy enterprises of the Government" project supports the Commission for Management of State Capital at Enterprises (CMSC) to develop a roadmap for net-zero emissions of the energy SOEs with an in-depth analysis of financial and technical implications.
- The "Diagnostic Study on Net-Zero for The Energy Sector in Vietnam" project assesses the transition of Vietnam's energy sector to net-zero scenarios by 2050 and the JETP implications for the sector. The study is expected to support the Government of Vietnam in realizing the National Energy Master Plan for the 2021-2030 period, vision to 2050 and further international negotiations and national deliberations.
- The "Carbon Border Adjustment Mechanism (CBAM)" project quantifies the impacts of CBAM on the export products, de-carbonization strategy of Vietnam and analyses the implications of the design of carbon tax in Vietnam in order to provide recommendations to minimize the negative impacts and assess the suitabilities to apply carbon tax in Vietnam.
- The "Legal review and support to the development of power generation projects" reviews the current legal framework, international best practices, and assists the EREA in developing a new legal framework for approval of investment in new renewable energy projects and transmission grids in Vietnam according to the revised Electricity Law.
- The National Green Cooling Program project promotes conversion to high energy efficiency and low carbon technologies and increases energy savings in the cooling sector in line with sustainable development goals as well as national energy efficiency targets.

Planned projects pertain to:

- An Energy Transition TV series on National Assembly TV,
- Leadership Training on energy transition,
- Emission Trading System Simulation tool, and
- National standards for offshore wind energy and Battery energy storage.

ETP is also launching a Just Coal Transition Forum, to discuss the coal phase-down in the South-East Asia and global contexts.

ADB's ETM

At COP27, the ADB launched an Energy Transition Mechanism (ETM) to facilitate the earlier closure of coal power plants in selected countries. Public and private investments—from governments, multilateral banks, private sector investors, philanthropies, and long-term investors—will finance country-specific ETM funds to retire coal power assets on an earlier schedule than if they remained with their current owners.

In the pilot phase, ADB seeks to retire or re-purpose 5-7 coal-fired power plants in three pilot countries Indonesia, Philippines and Vietnam. Repurposed plants will be converted to renewable energy generation or alternative uses. Scaling up, ADB seeks to ultimately retire 50% of the coal fleet in the three pilot countries.

Launching the Mechanism in November 2022, ADB signed an MoU with the Cirebon-1 steam power plant in West Java, Indonesia. The mechanism will refinance the plant 250-300 million USD on the condition that it will stop operating 10-15 years earlier than originally planned (Lawder 2022). Opened in 2012, this 660 MW coal-fired power plant is privately owned by Japanese (32.5%), Korean (47.5%), and Indonesian (20%) corporations.

In Vietnam, State-Owned Enterprises own most older coal power plants, so that the RMP will need to be designed under different legal and economic constraints. The feasibility study and list of target power plants for Vietnam were not known as of March 2023.

This ETM is close to but distinct from the JETPs: it was designed before and is ADB-led. One way the Asian Development Bank (ADB) ensures coordination with JETP, for example, is by supporting the JETP Secretariat in Indonesia.

UK's COP26 ETC and the RRF

The COP26 Energy Transition Council (ETC) is an assembly of Ministers and senior officials from 20 countries together with leaders of the world's international organizations focused

on the global power sector. UK formed the group as part of its COP26 Presidency, to host high-level discussions on how to accelerate the global transition to clean power.

Its overall purpose is to enable an effective dialogue between countries that require support for their energy transition on the one hand and the major international actors offering support on the other, to find, coordinate and implement tailored solutions more rapidly. The ETC Secretariat connects ETC partner countries to this expertise through country dialogues at the working and senior levels. The ETC's Rapid Response Facility (ETC RRF, not to be confused with the RRF providing emergency support to UNESCO World Heritage sites in times of crisis) is a technical assistance fund to respond to requests for technical, commercial, regulatory, and policy assistance arising from the ETC dialogues that cannot be met directly by ETC partners in-country. From March 2021 to the COP26 in November 2021, the RRF has responded to 24 requests. ETC partners have committed almost £10 million of aligned funds for energy transition support through the RRF, including for energy efficiency, grid infrastructure and energy planning.

The ETC and its RRF was to created to support UK COP26 Presidency. The need for high-level dialogue groups is permanent, it is unclear if the UK will continue to support this one or let it progressively phase down at the 2025 horizon. The UK remains engaged in energy transition support, especially on the finance side.

There is a substantial overlap between the ETC member countries and the JETP countries. China is not a member. Vietnam participated in the COP26 ETC launch on December 4, 2020. The focal point was the Department of Energy Efficiency and Sustainable Development, Ministry for Industry and Trade.

VCCF

A consortium of the U.S. International Development Finance Corporation (DFC), the Japan Bank for International Cooperation (JBIC), the Department of Foreign Affairs and Trade (DFAT) of Australia, and Export Finance Australia (EFA) affirmed their cooperation on climate finance and created the Vietnam Climate Finance Framework (VCFF)(VIETSE 2023).

The VCFF is a strategic cooperative framework for promoting projects in multiple sectors to support Vietnam's energy transition. It complements other initiatives in support of Vietnam's net zero targets, including the Asian Zero Emissions Community, the Just Energy Transition Partnership in Vietnam (JETP), and the Indo-Pacific Economic Framework (IPEF).

The VCFF will support projects by making full use of financial tools (such as loans, guarantees, and equity investments, including through financial intermediaries such as

banks, non-bank financial institutions, or other platforms to support access to climate finance to those under-served) and/or non-financial tools (such as technical assistance, feasibility studies, etc.) available through the aforementioned institutions of Australia, Japan, and the United States.

5.2. The public and private financial goals

Public support to Vietnam energy sector

Figure 2 compares the JETP public finance goals to the past level of supports to Vietnam's energy sector, as collected in VEPG's database. The JETP pledge corresponds to a several-fold increase in the level of public finance support from development partners. To reach 7.75 billion USD in 36 - 60 months means bringing 130 – 215 million USD per month. As a reference point, the 2014-2020 EU's multi-annual indicative program allocated 346 million euros to support sustainable energy (European Union and Government of Vietnam 2014). This is one of the largest budget support program ever granted by the EU.

The VEPG data table was designed before the JETP process started. Nevertheless, it appears fit for purpose as the best available tool to monitor the IPG's commitments. We expect an update in March 2023, which will provide a baseline needed to substantiate the discussion of

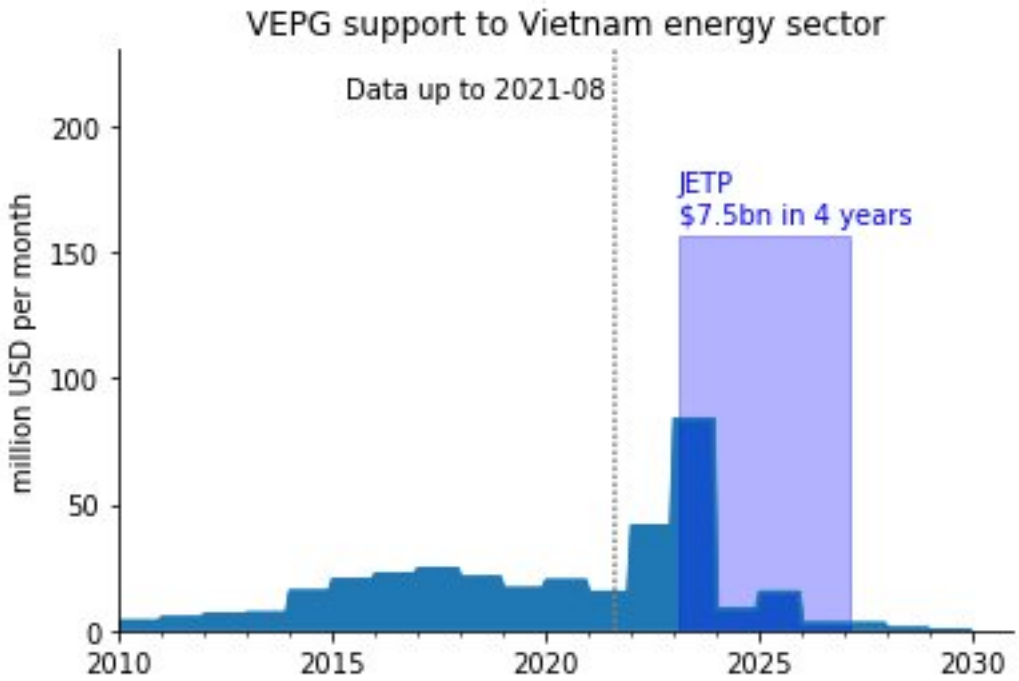

Figure 2: Support to Vietnam's energy sector and JETP goals.

Source: Author, using VEPG table of development partners projects, 2020-08 version. The 2022-2023 peak corresponds to a projected pipeline of three World Bank loans for VRE integration and expansion adding up to 1.1 billion USD in two years.

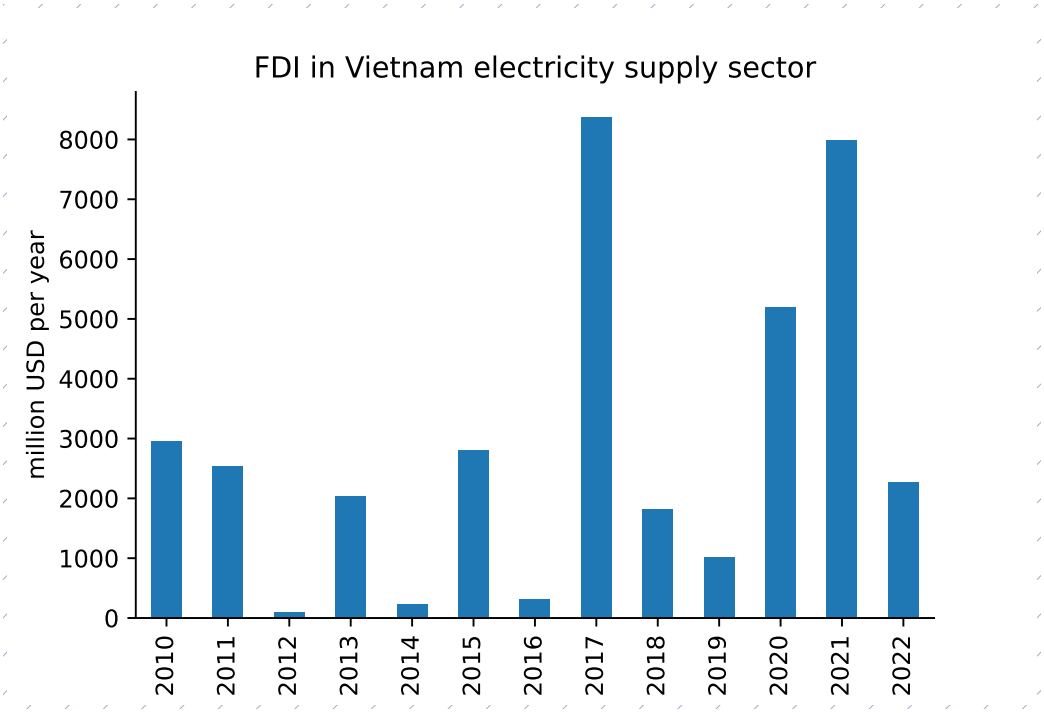

Figure 3: Foreign direct investment in Vietnam's energy sector.

Source: Author, using VN Statistical Yearbook and MPI data.

the JETP Resource Mobilization Plan. That baseline will have to be completed with pipelines of projects proposed from the Vietnam side.

To monitor progress toward the private financial pledge, the best tool will be a specific survey of GFANZ members. This is not available, and it is too early to monitor.

We can, however assess the significance of the 7.75 billion USD private finance by looking at Foreign Direct Investment (FDI) in Vietnam statistics. By January 20, 2023, the Foreign Investment Agency of Vietnam's Ministry of Planning and Investment[2] reported a total of 36 485 FDI projects in Vietnam, with a total registered capital of 441.3 billion USD. Of those, the "Production and distribution of electricity, gas, steam, and air conditioning supply" sector counted 185 projects representing a total registered capital of 38.3 billion USD.

Foreign direct investment in the electricity supply sector

Figure 3 shows the annual capital registered to FDI projects in that sector. The mean is 2 892 million USD per year, the median is 2 261 million USD. In terms of amount, the private finance JETP pledge corresponds to the rhythm of foreign direct investment in Vietnam's electricity sector. This does not means that it is business as usual for GFANZ members:

2 https://www.mpi.gov.vn/en/Pages/tinbai.aspx?idTin=56654&idcm=122

The data does not distinguish gray versus green investment. The 2017 record is due to three BOT coal power projects adding up to 7.4 billion USD (VNS 2017): Marubeni's (Japan) $2.8 billion Nghi Sơn 2, Sumitomo's (Japan) $2.58 billion Vân Phong 1 and the $2.07 billion Nam Định 1 thermal power plant. The first two of these are open now. The third investment certificate was originally awarded to a Saudi-Korean team, to be financed by Chinese banks, and will likely not be built. The 2021 surge is due to gas power plants. The largest FDI project that year, across all sectors, was GS Energy's (South Korea) Long An I & II LNG power plant, about 3 billion USD, followed in third position by the Marubeni's (Japan) O Mon II domestic natural gas thermal power plant project, about 1.3 billion USD. The Declaration paragraph 21 clarifies that gas power investment is not a priority in the JETP Resource Mobilization Plan. The GFANZ pledge is a significant reorientation.

The data does not shows how much FDI in Vietnam's electricity sector comes from GFANZ members. Among all sectors, the IPG countries (not including the EU) invested 8 255 projects, with a total capital of 97.4 billion USD, which is 22% of all registered FDI in Vietnam. RoK ranks first with 18.4% of the total, followed by Singapore representing 16.3%, Japan (in IPG), Taiwan (China, 8.33%) and Hong Kong (China, 6.70%), and China (5.35%). On these grounds, the GFANZ pledge does appear to be not only a reorientation but an increase compared to the current financing level.

More detailed FDI statistics are necessary to verify the commitment of JETP's private funds:

1. GFANZ contributions to FDI projects outside the "Power supply" category which contribute to a just energy transition, such as those involved in manufacturing components for renewable energy systems, should be accounted.
2. Projects can blend a combination of funding sources. Funding from national development agencies or multilateral development banks belong to the "public support" half of JETP's pledge. On the other side, only finance from GFANZ member private banks should be included. This can be difficult for capital contributions. Consider for example a developer which emits green bonds on international markets for corporate finance, and undertakes an offshore wind project in Vietnam.
3. Investment registration certificates are not a precise indicator of financial flows. By February 20th, 2023, the country had 36,611 *valid* FDI projects with a total registered capital of about 442.3 billion USD, but the sum of *realized* capital of FDI projects was only 276.5 billion USD, equivalent to 62.5% of the total registered investment capital (MPI 2023). This is because there is a time lag between project registration and capital

release, projects are revised at the implementation stage, and some become "zombie projects" such as the Nam Định 1 thermal power plant.

This section reviewed primary data sources in Vietnam. For international comparisons, OECD is tracking climate finance provided and mobilized by developed countries for climate action in developing countries. OECD publishes a grant-level detailed dataset gathered from donor countries, multilateral development banks and climate funds (OECD 2023). The AidData lab at William & Mary Data publishes a detailed dataset on Chinese development projects (Malik et al. 2021).

5.3. Discussion

The perils of foreign public debt

Excessive foreign public debt can prevent a government to invest in critical areas such as infrastructure, education, and health care. This thwarts long-term economic growth.

The European debt crisis from 2009 to 2012 was triggered by a sudden halt of foreign capital into countries with significant deficits and a reliance on foreign borrowing, starting with Greece and followed by Italy, Portugal, Ireland, and Spain. On the aftermath of the 2008 global financial crisis, the European crisis was spurred by the revelation of Greece's sovereign debt, which was 113% of GDP – the country has been disguising its national accounts. Its budget deficit was over 10% of its GDP in 2009. The country's credit rating plummeted, borrowing rates increased, markets crashed, and bailout measures followed, including austerity measures such as reducing public wages, pensions, healthcare, and other public spending while raising taxes. The outcome was an economic contraction, rising unemployment, and social unrest. In 2022, Greece's GDP per capita had plummeted to $20,658, down from $31,902 in 2008, with sovereign debt exceeding 194% of its GDP in 2021 and a government deficit of 7.5% of its GDP.

The Asian Financial Crisis was a cascade of currency devaluations started in July 1997 which hit Thailand, Malaysia, the Philippines and Indonesia and South Korea. These are model countries for Vietnam. The crisis exposed macroeconomic vulnerabilities such as overspending by governments and accumulating external public debt, banks providing credit for low quality loans that facilitated a real estate bubble, and corporations and banks borrowing short-term funds from abroad, exposing them to exchange rate risks.

In 2023, Vietnam faces significant macroeconomic threats, including the global economic crisis, a struggling domestic real estate sector, and a growth model that relies heavily on

foreign investment. Consequently, Vietnam's government policy to reduce external debt (VNS 2021) holds strategic importance greater than that of the JETP.

Vietnam's public debt limit

JETP's financial pledge – 15 billion USD over 3-5 years – will mostly come as loans at better than market rates. How does that amount compare to existing Vietnam's debt?

On 6/2022, Vietnam's outstanding national external debt was 142.0 billion USD, that is 43.1 billion USD for government debt plus 98.9 billion USD for enterprises' external debt. The top three creditors of Vietnam's government were the World Bank (15.3 billion USD), Japan (11.9 billion USD) and ADB (7.8 billion USD). External debt disbursements from the government decreased from 3.5 billion USD in 2017 to 2.29 billion USD in 2020 and 1,93 billion USD in 2021. The corresponding amount for enterprises increased from 92.6 billion USD in 2017 to 113.1 billion USD in 2020 and 138.9 billion USD in 2021 (MOF 2023, tbl. 4.06).

Regarding rates, in 2020 the government paid 722.15 million USD in interests and commission over an outstanding 47 774 million USD it owed in 2019, which is a rate of 1.6 %. This rate is low because the world's interest rates during the period immediately up to 2020 were historically low, and Vietnam's Government debt is mostly concessional loans. Considering the higher rates now, JETP loans will not be about refinancing existing debt.

Vietnam's Public Debt Strategy to 2030 (Decision 460/QD-TTg 2022) aims that by 2030, public debt will not exceed 60% of GDP, government debt will not exceed 50% of GDP; the Government's direct debt repayment obligation will not exceed 25% of the total state budget revenue; and the country's external debt will not exceed 45% of GDP (Lê Minh Khái 2022b; Vương Đình Huệ 2021a).

Table 3 shows that the limits were not very binding in 2021. There is a technical time series break between 2020 and 2021. The numbers before 2021 used another source for the GDP and are not comparable to the limit. In nominal terms, the central government debt increased from 135 billion USD in 2020 to 142 billion USD in 2021, while the government-guaranteed debt decreased from 15.9 billion USD in 2020 to 13.9 billion USD in 2021.

Most countries in the world reconsidered their government debt ceilings during the COVID-19 crisis (IMF 2023). But the crisis is over. Vietnam's GDP grew by 2.91% in 2020 (GSO 2020), by 2.58% in 2021 (GSO 2021), and recovered to 8.02% in 2022 (GSO 2022). Thus, the JETP loan negotiations take place in a post-crisis context, so the margins to increase debt in Table 3 should be looked at with caution. The only reliable degree of freedom for increase in public

debt is that the limits are set relative to GDP, so economic growth mechanically raise the nominal borrowing limit.

Table 3: Public Debt and national external debt indicators

Indicator	2017	2018	2019	2020	2021 (P)	2030 Limit
Public debt/GDP (%)	61,4	58,3	55,0	55,9	43,1	60
Government debt/GDP (%)	51,7	49,9	48,0	49,9	39,1	50
National external debt/GDP (%)	49,0	46,0	47,1	47,9	38,4	45
Gov. debt service / budget revenue (%)	19,7	17,1	17,4	21,2	21,8	25

Source: MoF (2022, 2023) Bulletin Public Debt 13 and 15, Table 4.01. Data for 2021 provisional. Public and national external debt indicators of 2021 were calculated based on the GDP of 2021 by the Ministry of Planning and Investment.

Public/private funding complementarity

The IPG pledged 7.75 billion USD of public finance over 3-5 years. This corresponds to the rhythm at which the Vietnam Government has been in-taking foreign debt in recent years, about 2 billion USD per year. The IPG pledge thus appears sized large, considering that Vietnam's foreign debt limit is not just for the energy sector, but for the whole economy. The health, education, real estate and other sectors also need financing, and there is no clear priority in the economic recovery resolution for 2022-2023 for energy (Lê Minh Khái 2022a; Vương Đình Huệ 2022). This highlights the necessity of ODA loans for development, making JETP a crucial driving force for progress. Nevertheless, an effective mechanism for managing loans is necessary.

Table 3 shows that the government debt is more constrained than the public debt. Public debt also includes loans to sub-national governments and government guaranteed debt. These amounts are smaller compared to the central government's debt. However, the JETP loans to the public sector may find less obstacles if they go towards State-owned enterprises than to the central Government.

Public finance support is only one part of the JETP. If that part falls short of its stated goal, the total 15.5 billion USD could still be reached by overachieving the private finance part. Indeed, Vietnam seeks a diversified funding strategy. During the JETP negotiation, Vietnam's Ministry of Finance declared (MOF 2022a):

> *"Currently, Vietnam is strongly converting fossil energy to green energy, developing solar power, wind power, etc. At the same time, diversify capital sources to implement this policy such as state budget capital, commercial banks, foreign capital, private capital... and issue green bonds to mobilize resources to accelerate energy conversion."*

Table 4: Vietnam GHG emissions under the BAU scenario

Year	Energy	Agriculture	LULUCF	Waste	IP	Total
2014	171.6	89.8	-37.5	21.5	38.6	**284.0**
2020	347.5	104.5	-35.4	31.3	80.5	**528.4**
2025	500.7	109.2	-37.9	38.1	116.1	**726.2**
2030	678.4	112.1	-49.2	46.3	140.3	**927.9**

Source: Vietnam second updated NDC, table 1 page 6.

Table 5: National contribution to GHG emission reduction by sectors by 2030

Sector	GHG emission reduction % below BAU			GHG emission reduction M tCO2e			Financial need M USD		
	Uncondi-tional	With int. support	Condi-tional	Uncondi-tional	With int. support	Condi-tional	Uncondi-tional	With int. support	Condi-tional
Energy	7.0	17.5	24.4	64.8	162.2	227.0	14 464	46 097	60 561
Agriculture	1.3	4.1	5.5	12.4	38.5	50.9	2 123	13 979	16 102
LULUCF	3.5	1.5	5.0	32.5	14.1	46.6	3 927	1 567	5 495
Waste	1.0	2.2	3.2	8.7	20.7	29.4	917	1 809	2 726
IP	3.0	2.4	5.4	29.7	21.9	49.8	310	1 640	1 950
Total	**15.8**	**27.7**	**43.5**	**146.3**	**257.4**	**403.7**	**21 741**	**65 093**	**86 835**

Source: Vietnam second updated NDC, table 3 page 10.

Table 6: GHG emissions targets in 2030 by sector

		GHG Emission Target MtCO2e	
Sector	**BAU**	**Unconditional**	**Conditional**
Energy	678,4	613,6	451.4
Agriculture	112,1	99,7	61.2
LULUCF	-49,2	-81,7	-95.8
Waste	46,3	37,6	16,9
IP	140,3	110,6	90.5
Total	**927,9**	**781,6**	**524.2**

Source: Author, Table 4 minus Table 5.

At an earlier round-table, the Deputy Minister remarked (MOF 2022b):

> *"During the working sessions, the Ministries made preliminary proposals for major projects and programs to mobilize capital sources from foreign governments, international organizations, banks, the private sector, etc. The mobilization of capital is essential in the context of Việt Nam's limited budget. For programs and projects that must be assigned to the private sector for implementation, it is necessary to ensure a safe financial system, guarantee sustainable public debt management, and contribute to sustainable growth, macroeconomic stability and economic restructuring in a positive way."*

In the end, a declaration like the JETP is a tool to set societies in motion, but the 50/50 ratio has not economic optimality or special meaning beyond symbolic convenience.

6. Increasing Vietnam's energy/climate policy ambitions

6.1. Current commitments

Nationally Determined Commitment

Vietnam submitted its second updated NDC to the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat at COP27, on November 8, 2022, to commit to a higher reduction level than the first updated NDC in 2021.

According to the second updated NDC (The Socialist Republic of Vietnam 2022) Vietnam's GHG emissions, which were 284 MtCO2e in 2014, would reach 927.9 MtCO2e in 2030 in the baseline scenario, see Table 4. Vietnam's GHG emissions reductions compared to the business-as-usual baseline are split in two parts: one part it will do on its own, and the other it can do with international support. The GHG emissions reductions in the first part are unconditional targets. The conditional contribution adds up the two parts. Table 5 displays the national GHG emission reduction contributions. Vietnam's GHG emissions targets are 781.6 MtCO2e in 2030 unconditionally, and 524.2 MtCO2e in 2030 with support from developed countries.

The initial NDC technical report (Nguyen Khac Hieu et al. 2015, tbl. 3.26) did not explicit a baseline, but from the statement that a 9.8% reduction amounted to 65.93 MtCO2e reduction, we can infer that the energy sector baseline was 672 MtCO2e in 2030. In the first and second NDC updates, the energy sector baseline was 678.4 MTCO2e in 2030 (The Socialist Republic of Vietnam 2020, 2022). The conditional emission target for the energy sector in 2030 is 451.4 MtCO2e. This includes emissions from methane leaks, fossil fuels production and use, and electricity production.

The Financial estimates needs in Table 5 are scientifically problematic. They depend on a hypothetical baseline and on technico-economic assumptions that are impossible to know in advance. The macroeconomic situation and global energy markets have changed a lot since these numbers were computed.

COP26 pledges and implementation plan

At COP26 in Glasgow: (i) Prime Minister Pham Minh Chinh committed Vietnam to achieve net-zero emissions by 2050. (ii) Vietnam signed the Global coal to clean power transition statement: to achieve a transition away from unabated coal power generation in the 2040s (or as soon as possible after that), and to cease issuance of new permits for unabated coal-fired power generation projects that have not yet reached financial close. (iii) Vietnam signed

the US and EU-led Global Methane Pledge: to cut global Methane emissions by 30 % in 2030 (Ha-Duong 2021).

After COP26, the Vietnam government has issued of a web of strategies, roadmaps, action plans and work programs, at the national and ministerial level, for green growth, circular economy and climate change.

- Decision No. 888/2022/QD-TTg approving the Scheme on tasks and solutions to implement the results of the COP26 Conference on climate change (Lê Văn Thành 2022f).
- Decision 942/QD-TTg dated August 5, 2022, to approve the Action Plan on Methane Emissions Reduction by 2030 (Lê Văn Thành 2022a).
- Decision 896/QD-TTg dated July 26, 2022, to approve the National Strategy on Climate Change by 2050 (Lê Văn Thành 2022g).

National strategies and national action plans are taken at the Deputy Prime Minister level. Strategies define the vocabulary, set overall targets and outline ministerial responsibilities. Action plans go further in detail in the objectives. Even finer line ministries action programs details tasks to implement the promise, see for example Directive 876/2022/QD-TTg for the transportation sector (Lê Văn Thành 2022d) or the Directive 2756/QD-BCT Action Plan to Respond to Climate Change and Green Growth (Đặng Hoàng An 2022).

These Decisions are only programmatic. They are just marching orders for the executive branch. To become effective, they must translate into Masterplans, Laws, Decrees and other regulations.

The Party has yet to issue guidelines supporting the COP26 commitments. The existing Resolution 55 predates the net-zero commitment and its climate and energy targets do not appear ambitious compared to the goals discussed today.

Plans for a carbon market

Vietnam's carbon market is still in its infancy: establishing a trusted reporting, monitoring and verification (MRV) system. The goal is to open the market in 2030, after a two-year pilot phase starting in 2028. MOF is in charge, with the cooperation of MONRE and other authorities like MPI and MOIT (see Annex B task I.2).

The carbon market has many facets.

In theory, tradable permits help to achieve national greenhouse gas emissions targets at a minimal cost. In practice, this is very complicated by the questions of compliance and control. It is difficult to determine how many permits to allocate, to whom and at what price.

A cadre of active financial consultants are interested in selling Voluntary emission reduction certificates from land use and forestry conservation and from renewable energy projects.

Sectors exposed to international trade measures, such as Steel production, need to justify they operate in a carbon-constrained fashion to be able to expert through Carbon Border Adjustment Mechanisms.

Existing regulations, such as the decree 06/2022/ND-CP on "Regulations on mitigating greenhouse gas emissions and protecting the ozone layer" (Lê Văn Thành 2022b) and Decision 01/2022/QD-TTg Promulgating the list of fields and facilities emitting greenhouse gases that must carry out a greenhouse gas inventory (Lê Văn Thành 2022c), are still far from implementing a workable market.

6.2. JETP goals related to current trends

To limit coal power generation capacity in Vietnam to 30.2 GW in 2030

According to the Vietnam Investment Review (Huong Thuy 2022) the coal power pipeline in Vietnam at the end of 2022 counted twelve coal-fired projects/13,792 MW assigned to investors. Seven were under construction and five preparing for investment:

Of the seven projects/6,992 MW under construction:

- Four (Thai Binh II, Quang Trach 1, Van Phong 1, Vung Ang II) have already arranged capital, are under construction and will definitely be put into operation
- One (Long Phu I – 1200 MW) is stalled mid-construction.
- Two (An Khanh Bac Giang - 650 MW and Na Duong II - 110 MW) have plans to borrow money in the country.

Of the five projects/6,800 MW preparing for investment, there are difficulties in deploying and arranging capital:

- One project (Công Thanh) switched to gas and asked permission to increase from 600 MW to 1 500 MW.
- Four (Quang Tri - 1,200 MW, Song Hau II - 2,000 MW, Nam Dinh I - 1,200 MW, Vinh Tan III - 1,800 MW) were at risk due to difficulties in arranging capital and changing shareholders.

By the end of September 2022, Vietnam had 39 operating coal-fired power plants with a total capacity of 24,674 MW. This includes three recently opened plants: Nghi Son II – 1330 MW in 2022-7, Duyen Hai II – 1320 MW in 2021-6 and 2021-12, Song Hau I – 1200 MW in 2022-4.

Adding up the capacities of 39 plants in operations with the seven projects under construction exceeds the 30.2 MW target of the JETP (24 674 MW + 6 992 MW = 31 666 MW). Options to reduce 1.5 GW of coal power include:

- Abandoning the construction of Long Phu I – 1200 MW would go a long way to meet the JETP goal. Project owner PetroVietnam is looking for a new EPC contractor after Power Machines, the former EPC from Russia, ended the contract in 2019. Its profitability depends on the differential between the cost of coal input and the price of electricity sold to EVN. It was not favorable in 2022. If the project owner expected coal costs to remain high during the plant's lifetime, it would be economically rational to cut their losses and abandon the project.
- The status of the two domestically financed projects An Khanh Bac Giang - 650 MW and Na Duong II - 110 MW could be interrogated.
- Retiring old coal power plants improves average system efficiency. The Ninh Binh – 100 MW and Uong Bi 1 – 105 MW are already retired and probably were not counted in the 39 operating plants. The list of power plants using pulverized coal, the relatively inefficient subcritical steam cycle, and which will be more than 20 years old in 2030 include: Pha Lai 1 – 440 MW opened in 1986 and Pha Lai 2 – 600 MW opened in 2001. Dong Nai Formosa units 1 and 2 – 300 MW total opened in 2004, and Uong Bi extension – 300 MW opened in 2007. Quang Ninh 1 units 1 and 2 – 600 MW total opened in 2009 and 2010.

This overview of Vietnam's coal power sector suggests that JETP's 30.2 GW cap target can succeed. The latest drafts of the Power Development Plan 8 are close to this target.

To generate 47% of electricity from renewable sources in 2030

Achieving the goal requires a Power Development Plan 8 formulated towards it.

The PDP8 is the central document to quantify the investment needed in power transmission infrastructure and in new power generation and regulation sources. The December 16th PDP8 draft (MOIT 2022b) plans that in 2030, the production and import of electricity could reach 551.2–595.5 TWh. The electricity mix could be 30.6–42.5% coal, 25–28.3% gas, 17.5–17.6%

hydro, 11.6–20.2% other renewable sources, and 2.9–3.2% imports. At best, the domestic carbon-free sources could represent 37.8% of the mix.

Figure 4 illustrates the discrepancy between that draft and the JETP goal. In 2022, more than 47.5% of Vietnam's electricity generation came from renewable sources, including solar, wind and hydroelectricity. To progress towards the net-zero in 2050 goal, it is necessary to increase this ratio, not decrease it to 37.8%.

In addition, a JETP-compatible PDP8 has to be accompanied by finalized legal frameworks organizing how the route to market for renewable energy projects. The JETP-compatible PDP8 would rely on rooftop solar, floating PV, onshore and offshore wind. Since early 2022 investments in these sectors are frozen in Vietnam. Thawing the sector requires the government to make a route to market for these projects. This includes the finalization of regulatory projects already in the works: the Direct Power Purchasing Agreement and technical dispositions for behind-the-meter energy projects, a competitive system like auction to procure renewable energy, a suite of legal and regulatory dispositions to allow offshore wind.

To attract investments in grid infrastructure, such as transmission lines and electricity storage, a legal framework is also necessary. However, this may take a few more years than the previous items, which are further along in the policymaking pipeline.

Energy efficiency is another essential area that requires investment. Unfortunately, Vietnam faces an economic paradox in this area. If energy efficiency is profitable for companies, government intervention may not be necessary. Conversely, if it is not profitable, government intervention may be challenging to justify and ineffective. Attracting investment in energy efficiency has been difficult in Vietnam so far.

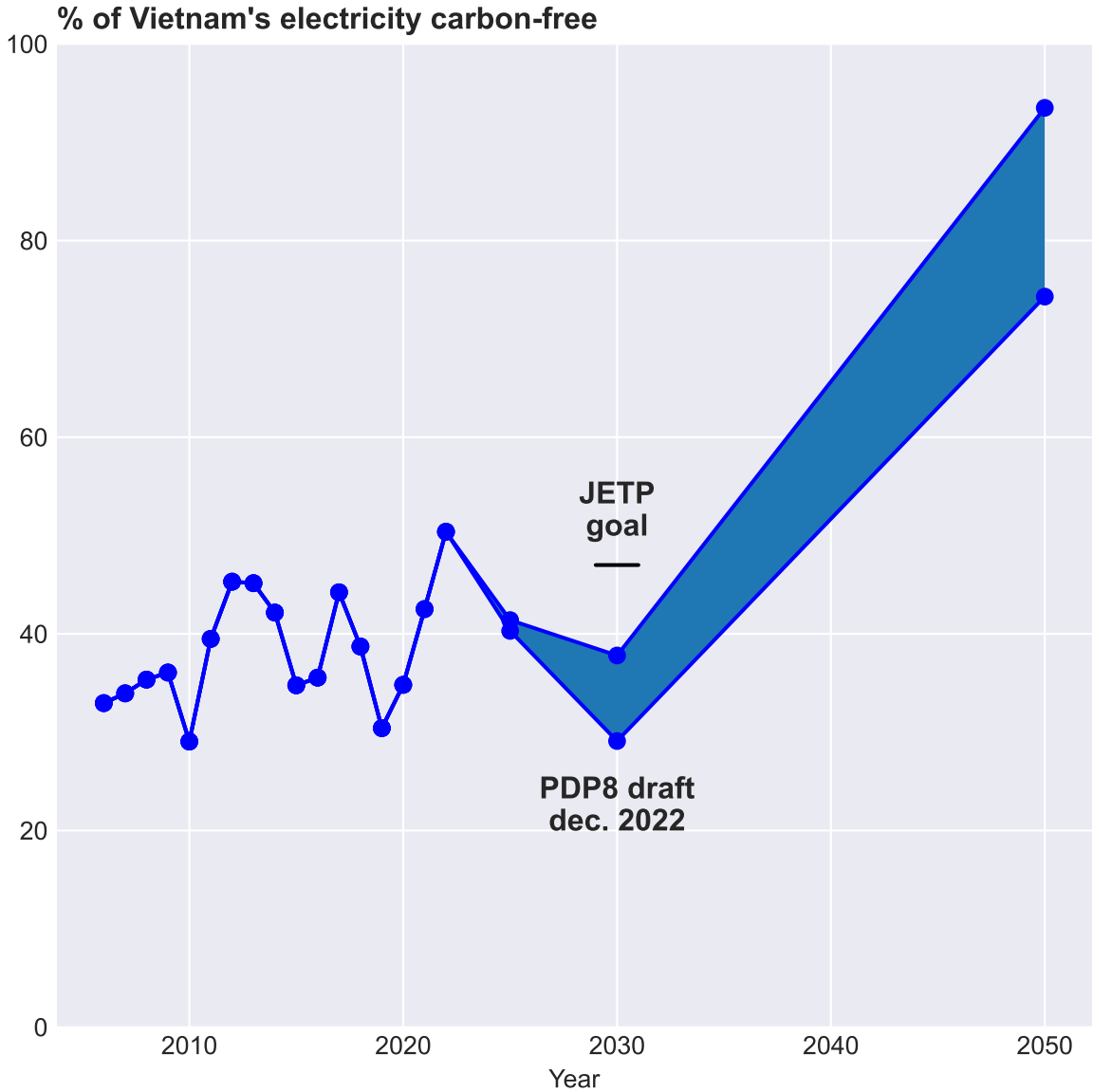

Figure 4: Green electricity share in Vietnam 2030: JETP versus PDP8 draft.

Carbon-free obtained by adding up the shares of hydro, solar and wind electricity production, plus biomass and hydrogen for 2050. Source: Author.

Peaking Vietnam's electricity sector emissions at 170 MtCO2e by 2030

In the Net-Zero scenario of Vietnam's Energy Outlook 2021 (EOR21) report, power sector CO_2 emissions peak at around 170 MtCO2e by 2030, and drop below 50 MtCO2 around 2043. This is a publication prepared by the Electricity and Renewable Energy Authority in Vietnam (EREA) under the Ministry of Industry and Trade (MOIT) together with the Danish Energy Agency (DEA) and supported by the Danish Embassy in Hà Nội (Ea, EML, and IE 2022, fig. 45; EREA and DEA 2022).

The EOR21 states that this scenario "includes a total capacity of 38 GW solar power and 21 GW wind power already in 2030", "Storage is not needed until after 2030 to ensure cost efficiency", "the energy system costs are very similar in all scenarios until 2040", "the already planned imported coal power plants operate at 50% less full load hours already in 2030, indicating that more coal capacity is planned than what is needed in the short term to reach the net zero target." and ". An additional inter-regional transmission capacity of 12 GW already in 2030 is needed in all scenarios corresponding to around 40% of the transmission capacity in 2020."

This EOR21 Net-Zero scenario is the most detailed and legitimate scenario available, it comes from MOIT/EREA. The Energy Masterplan scenarios from MOIT are also detailed and legitimate, and in the draft presented before the JETP declaration, power production emits 215 MtCO2e in 2030 in the base scenario (Dang Hai Anh 2022, 19). The NDC greenhouse gas scenarios from MONRE are legitimate but is less detailed since MOIT is responsible for energy plans.

Other organizations, such as SEA-ETP, may be currently preparing or revising power sector scenarios aligned with the JETP objectives and Vietnam's net-zero commitment. The ASEAN Center of Energy is an official and well-informed source, but its Net-Zero scenarios (Handayani et al. 2022, app. F) peak Vietnam's power sector CO_2 emissions above 200 MtCO2e in 2035-2040.

The Environment law says that in 2030 there will be a carbon market in Vietnam. In that framework, the JETP goal translates as "MONRE will allocate 170 MtCO2e to the power sector in 2030, and not increase it subsequently". No stakeholder we interviewed even mentioned the idea. A carbon market needs to be firmly established before it can be used as a driver of change for the power sector.

6.3. Discussion

The JETP goals raise the bar

The JETP goals are more ambitious than the range of options explored by the Institute of Energy to prepare the PDP8, in 2020 (Institute of Energy 2021).

Although Vietnam's Power Development Plans are ultimately specified in terms of investments in capacity, the underlying technical report (Institute of Energy - MOIT 2020) did define its various exploratory scenarios in terms of renewable energy, CO_2 emissions and coal phaseout. This report represents "best conventional thinking" at the time of its preparation, 2019 – before the radical context changes (Ha-Duong 2023). Scenarios KB1, KB2

and KB3 respectively aimed at 32%, 39% and 42% of the share of renewable energy in electricity production. Scenario KB4 cut GHG emissions by 25% in 2030. Scenario KB5 had no new coal after 2030.

The selected scenario KB1 has 37.2 GW of coal installed and emits 246 MtCO2 in 2030. That is a 15% emission reduction below the 290 MtCO2e scenario KB0 corresponding to the PDP7A baseline (Institute of Energy 2021, chap. 16). The KB4 scenario corresponds to 217 MtCO2 in 2030. All these numbers are less ambitious than the JETP targets of 30.2 GW coal / 47% renewable / 170 MtCO2 in 2030.

Further steps will be needed

Vietnam's JETP means changing from gas to offshore wind as the backbone of the power system. This is a necessary first step. But the JETP cannot guarantee net-zero emissions in 2050, its goals are for the next three to five years. More should be done later:

To decarbonize electricity generation in 2050, the share of carbon-free electricity has to increase towards 100%. This requires more than JETP's 47% goal (see Figure 4). This requires an accelerated phaseout of all fossil fuel power generation capacity. The scientific consensus (IPCC 2023) states its urgency as such:

> *"Limiting human-caused global warming requires net zero CO_2 emissions. Cumulative carbon emissions until the time of reaching net-zero CO_2 emissions and the level of greenhouse gas emission reductions this decade largely determine whether warming can be limited to 1.5°C or 2°C. Projected CO_2 emissions from existing fossil fuel infrastructure without additional abatement would exceed the remaining carbon budget for 1.5°C (50%)"*

In other words, to give the world a fair chance of avoiding 1.5 degree of global warming, humanity should be already phasing out coal power plants. Any new coal power production capacity contributes to climatic chaos and increases the risk of abrupt, irreversible changes with very large adverse impacts.

Yet the urgency for developing countries to phase out coal depends on how much of the humanity's carbon budget the developed countries use. This is the problem of burden sharing under the principle of common but differentiated responsibility. It is unsolvable. This is why the Paris Agreement architecture leaves it to each country to determine nationally the ambition level of their commitments. The JETP is an answer to Vietnam's NDC clear call for support from developing countries. As a country-led platform, it is one first step that will hopefully be followed by others when Vietnam asks so.

The conditions of success

To examine the JETP through the lens of the conditions of success according to (Gunfaus et al. 2022), we answer three questions:

- Does the JETP make a difference in the amount of mobilized money? Yes. The IPG proposes to surge the level of international support to Vietnam's energy sector, compared to the existing level (see section 5.2 starting page 40).
- Does the JETP ensure that the developing country leads and owns the investment plan and policies? Very likely. The JETP will be Vietnam-owned, or will not be at all. The administration has strong safeguards to preserve internal policymaking from external interference. Historical experience with international cooperation shows that Vietnam sets the pace when it comes to disbursing loan money from foreign agencies. Finding energy transition governance arrangements that are efficient in front of the problem's urgency is an open challenge (UNDP Vietnam 2023). One problem is that JETP is signed with MONRE, while the ministry responsible for making it happen is MOIT, which already has signed another country platform. Another problem is that the Resource Mobilization Plan is due for the end of 2023, but the secretariat is not even in place.
- Does the JETP move from low carbon project-level to macro socioeconomic development level? Uncertain. In principle, yes, the declaration is about setting an enabling environment for change, not about sponsoring IPG's pet projects. In reality, establishing a pipeline of bankable projects is the critical path for JETP's success. And it is faster to rely on existing project-based IPG and MDB support actions, rather than seeking innovative financial support schemes such as the EU Budget Support model giving direct contribution to the national treasury.

Some interviewees pointed out that the declaration understated the critical problem of investment in grid infrastructure. Otherwise, the JETP appears to meet the preconditions of success.

The JETP is not specific about the coal province transition

The declaration remains strictly at the national level. It mentions affected communities, sectors, and regions but no specific provinces:

> *15. Emphasizing that for this transition to be just, equitable and inclusive for consumers, workers and affected communities efforts will be needed to ensure that all are adequately protected from the direct risks and can benefit from opportunities brought by this transition, so that no one is left behind: noting*

that the transition should be accompanied by programs of training and retraining, up-skilling, job creation and other forms of support for workers in the affected sectors and areas, so that they can benefit from the industrial innovation and the creation of quality green jobs; and that access to electricity must remain affordable and reliable for all, in particular for affected, vulnerable and low-income groups;

f) develop and implement educational, vocational training and re-skilling programs to develop necessary skills and competencies and support job creation for labor in sectors and regions affected by the transition, as well as other forms of support to ensure better living conditions for workers after the transition;

According to the Quang Ninh Provincial Plan for the period of 2021 - 2030, with a vision to 2050 approved by the Prime Minister in February 2023, Quang Ninh will develop an environmentally friendly energy industry; continues to maintain as an energy center of the country (one of the centers of wind power and LNG power in the North), gradually shifting to developing clean energy and renewable energy. (An Vinh 2023)

The geographical distribution of support within Vietnam is not written in the JETP Declaration. It makes sense for the IPG to leave it to the Government of Vietnam.

JETP does not mention carbon capture and storage (CCUS)

Vietnam plans to research carbon capture and storage (CCUS). Vietnam's COP26 implementation action plan Decision 888 (Lê Văn Thành 2022f) specific objectives include:

By 2030, [...] decrease greenhouse gas emissions by 32,6% in energy, 43% in agriculture, 70% in forestry and land use sector in which the carbon sequestration capacity is expected to increase by 20%, [...] (compared to the emission reduction stated in the Business-as-Usual (BAU) scenario). Do research on and widely implement solutions for the capture and storage of carbon from large point sources.

Even more specifically, it assigns the tasks to *"research on technologies and implements solutions for carbon capture and storage in certain fields"* over the 2022-2027 period to the Ministry of Construction, Ministry of Industry and Trade, Ministry of Natural Resources and Environment, Vietnam Academy of Science and Technology. The Ministry of Natural Resources and Environment is further tasked to *"Execute projects on the trial application of coal gasification, carbon capture and burial at underground coal seams outside the dyke of the Yinggehai-Song Hong Basin."*

Vietnam JETP Declaration articles 20 and 21 do not mention these technologies, of little relevance for the next 3-5 years in the economic conditions in JETP countries:

20. To mobilize support for Việt Nam under the JETP, through which Việt Nam will continue its work to improve regulatory frameworks to expand both public and private investment into Việt Nam. This work should focus on renewable energy and the just energy transition, including measures to improve energy efficiency and strengthen the electricity grid in Việt Nam, contributing to the achievement of the targets stated in the National Strategy on Climate Change to 2050 and Việt Nam's NDC.

21. To develop and publish as soon as possible a JETP-RMP by November 2023 to identify the new investment requirements and opportunities – for the development and implementation of wind, solar, transmission, energy efficiency, storage, electric vehicles, training, retraining and vocational support for employment among others - and measures to facilitate the deployment of support and overcome barriers to investment, to deliver Việt Nam's just energy transition.

Indonesia JETP Joint Statement targets on and off-grid coal phase down at the 2030 time horizon. It does not mention CCS. South Africa's JETP Implementation Plan (JETP-IP) does not feature investment in CCS among the electricity sector investment scenarios to 2035, as it is the most expensive technology (JETP Secretariat 2022, tbl. 37).

7. Implementation

7.1. Justice

Five perspectives on Justice

Wang and Lo (2021) identify five views on the just transition idea:

1) Labor-oriented concept. This historical perspective traced the just transition concept to the 70s when particularly polluting industries experienced phase-down in the US. Rather than fighting the environmental regulations to avoid mass layoff, the Oil, Chemical, and Atomic Workers Union (OCAW) advocated for workers retraining and community support. The just transition can open discussions on mitigating the social consequences of environmentally necessary changes and creating decent green jobs.

2) Integrated Framework for Justice. This distributional perspective sees the just energy transition as integrating environmental, climate, and energy justice. The first recognizes that the most disadvantaged communities are often disproportionally impacted by environmental degradations – e.g. the landfills are in the poorest neighborhoods. The second, climate justice, discusses the distribution of future and present responsibilities (GHG emission mitigation burden sharing), compensation for past harm (loss and damages), and fairness in collective decision-making procedures. For example, at COP27, Pakistan illustrated that reconstruction loans sold to debt-distressed countries hit by more frequent climate disasters could lead them deeper into a climate debt trap. Finally, energy justice discusses energy poverty within nations and the trade-offs between energy, CO_2 emissions, and development between countries.

3) Theory of socio-technical transitions. This dynamic systems perspective looks at the energy transition as a socio-technical change. History shows that technological shifts can radically change society's structure and values. It looks at how niche innovations grow, destabilize the socio-technical landscape, and may ultimately change the prevailing socio-technical regime.

4) Governance strategy. This socio-economic perspective studies the institutional structures, governance, and social relations around the energy transition. It examines coalition-making and effort-sharing between and within nations, differences in efficiency and equity between government styles, or the tension between the urgency to act and the desire for inclusive and deliberative decision-making.

5) Public perception. This managerial perspective examines the public perception, acceptance, and support of low-carbon energy projects and policies. Studies try to uncover the factors that determine stakeholders' attitudes – the position of impacted individuals and communities – such as the neighbors of a power generation project.

The historical perspective shows that the JETP name is not just an accident. It has a history in South Africa (Nel 2015) and the US (Newell and Mulvaney 2013). South Africa had a saying in naming the country platform it signed on with the G7. This name choice remains for all subsequent platforms.

Vietnam's JETP article 24 paragraph e explicitly refers to the labor-oriented view of a Just Transition. Vietnam policymakers care for the distributional perspective nationally – leaving no one behind, keeping electricity affordable – and internationally – as a non-annex 1 country impacted by climate change.

The multiplicity of angles demonstrates the high level of ambiguity of the word *just* in JETP. Ambiguity allows us to unite and assemble. Like a banner, Justice represents different things to different people. It matters more to look at who is marching under it and where to go than to try and divide stakeholders on which perspective on Justice matters most.

Justice in South Africa's JETP process

Connolly (2022) draws five concrete implications from South Africa's experience:

- The high-level, centralized body managing the just transition process has a broad representation. The Presidential Climate Commission (PCC), chaired by the President, with the Minister of Environmental Affairs and Tourism as deputy chair, counts ten ministers and 21 members from all sectors of the society.
- Engaging stakeholders early and often in any policy decision or process is essential to ensure equity and garner implementation support. The National Planning Commission engaged in stakeholder dialogue on the "Pathways for a Just Transition" as early as 2018 (Merrill 2018). The PCC later continued and expanded the conversation.
- Transparency and accessibility are required to ensure that people know and understand what is happening throughout the policy process. The PCC has live-streamed and recorded all its meetings and stakeholder engagement events. The Presidential Climate Finance Task Team (PCFTT), which prepared the national JET IP, did not follow this practice. The lack of transparency and engagement disappointed stakeholders.

- Not aligning key policies — particularly in the energy sector — with the NDC threaten the country's ability to reach its climate commitments. For example, the Just Energy Transition plan of the Department of mineral resources and Energy (DMRE 2021) follows the objectives of the 2019 integrated resource plan, not the 2021 JETP. Consequently, it does not phase down new coal power plants as needed.
- The just transition can form the basis for a social compact around which to build a broad governance coalition. It brings together organizations that might not agree on much else, yet all of which have an essential role in advancing the movement — including workers' unions and other mass organizations, private corporations, and intellectuals.

A JETP is country-led and country-specific. Localization is particularly critical for a notion like Justice which pertains to the domain of social sciences as opposed to engineering, physics, or climatology. *Justice* implies, for example, that the energy transition is a social as much as a technical change. It belongs to the Prime Minister, not to a line Ministry.

Governance differences between South Africa and Vietnam imply that the lessons from international experience have to be adapted locally. The Vietnam JETP declaration (art. 16) takes a consultative approach toward the media and other stakeholders:

> 16. Noting further that for the transition to be just and equitable, regular consultation is required, including with media and other stakeholders, to ensure a broad social consensus;

The complicated internal situation, the platform's novelty, and the electricity problem's urgency contribute to explaining South Africa's JETP growing pains. The situation in Vietnam is different. The situation is also dynamic, and the low retail electricity tariff is also a concern for the national utility. But the renewable electricity production was started in time to alleviate the shortcoming of the coal power sector development. And an energy country platform already exists in Vietnam. Building upon the existing institutions –the COP26 implementation commission, the VEPG country platform, and the national planning system– could facilitate the urgent management of the just transition.

7.2. Climate Change Center for Technology Transfer

The idea of a Climate Change Center appeared in Vietnam's climate strategy well before the JETP Declaration. The latter states that partners will:

> *l) work towards the establishment of a center of excellence for renewable energy in Việt Nam to share expertise, support the development of skills, technological and regulatory understanding, and facilitate*

voluntary cooperation between Việt Nam and the private sector on technology transfer to accelerate and scale up the deployment of renewable energy and management of clean power systems in Việt Nam and the region;

Subsequently, Deputy Prime Minister Tran Hong Ha (VNA 2023b) proposed that the Asia Zero Emission Community countries establish a research and technology transfer center "because technology is key to reducing emissions while ensuring energy security and ensuring the state, people, and businesses have access to clean energy at affordable prices." and setting up a scientific research support fund and a high-quality human resource training center.

Certain stakeholders view a Climate Change Center of Excellence as a means to accelerate technology transfer and facilitate the growth of a domestic supply chain in the renewable energy sector. However, technology transfer is a multifaceted process that cannot simply be commanded and controlled. One respondent noted that it is instead accomplished by forming local joint ventures with foreign companies to construct domestic factories utilizing cutting-edge technologies. This approach can only be feasible in the renewable energy industry if the investment environment is unfettered.

The UK sponsors a scoping exercise for a Vietnam Center of Excellence for Offshore Wind. Early lessons from that study include: A Center of Excellence does not have to be named that way. It is a concept – the "High Technology Center" is equivalent in Vietnamese. Typically, the mission statement of such a Center is "To lower the levelized cost of electricity from offshore wind in Vietnam. "

A Center of Excellence can fulfill a variety of roles: Skills and training center, Capacity building platform, Standards and Accreditation Hub, Research and Development Center, and Demonstrator project accelerator. At this stage, the UK-sponsored proposition needs precisions regarding how to prioritize these roles, where to build the Center, and under which Ministry. The epicenter of Vietnam's renewable energy industry is in Binh Thuan and Ninh Thuan provinces.

The JETP Declaration calling for a center of excellence for renewable energy may justify to look beyond the offshore wind sector. For example, Vietnam also requires excellence in electricity storage, floating solar, agrivoltaics, or data science for the smart grid. In addition, the Center can also pilot new mechanisms such as auction, DPPA, etc. In addition, the Center can also pilot new mechanisms such as auction, DPPA, etc.

7.3. Innovative Finance

Capital needed for Vietnam's power sector

The 2023 May 10th, draft of PDP8 estimates that the total investment capital needed to implement the plan during the 2021 – 2030 period is 134.7 billion USD, of which 119.8 billion USD for power sources development (12 billion USD per year) and 15.0 billion USD for the transmission grid (1.5 billion USD per year).

After 2031, the investment needs will climb to 18.2-24.2 billion USD per year for generation sources, and 1.7-1.9 billion USD per year for the transmission grid.

The relative importance of JETP finance

The numbers from the PDP8 drafts show that the power sector expansion needs 10 to 15 billion USD per year. The JETP pledges to bring in 15.5 billion USD for the next 3-5 years, which is 3.1 to 5.2 billion USD annually. Thus the JETP proposes to finance more than 20%, up to 50% of the sector's capital needs in the 2022 PDP8 draft – a coherent order of magnitude considering the extra investment needed in a PDP8 oriented towards renewable energy. Assuming, for example, an average CAPEX of 1500 USD/kW, the sector would need 15 billion USD to invest 10 GW of installed capacity. That much money can not be called marginal but additional.

It is also the case in South Africa and Indonesia partnerships that JETP finance only a part of the capital needs. There are many good reasons why JETP money should be an additional, but not an overwhelming part of the sector's finance:

- The purpose of JETPs is not to finance the whole power sector development, only to accelerate its reorientation.
- It is a national security risk for a receiving country to allow a single source of foreign capital to finance, therefore own, a significant share of its energy system.
- The G7+ is only a part of the international community. There are many other capital sources: Japan, Korea, China, middle-east countries, and richer ASEAN countries.
- There would not be enough public budget in G7 countries to scale up the JETP model to many more countries if it pledged to finance a higher share of South Africa, Indonesia, and Vietnam's power sector needs. Moreover, international cooperation supports many other sectors beyond energy.

The 7.75 billion USD from the private sector is just a placeholder number based on matching the public sector pledge. However, a higher leverage ratio than 1:1 is in everybody's interest.

Innovative climate finance

The JETP timeline is very tight. The urgency imposes to go through the existing toolbox of financial instruments and match projects with public agencies and private companies to assemble a 15-20 billion USD investment plan, in six months. While there is no time to deploy classes of financial instruments that are not ready to be used in Vietnam, the action plan may develop the legal framework for financing the energy transition in the future.

Regarding climate diplomacy and Paris Agreement article 6, JETPs are non-market-based actions. That said, the JETP will support Vietnam to *"develop [...] long-term legal framework for the green transition of its economy, including through the use of pricing and regulatory instruments, which will include but is not limited to making improvements to the regulatory framework to facilitate investment into renewable energy and energy efficiency and to strengthen the electricity grid in Việt Nam..."*

A long-term legal framework for the green economy includes carbon markets and emission reduction certificates trading nationally and internationally. Carbon markets are under MOF and MONRE's responsibility. The Declaration does not mention carbon markets or forestry. It prioritizes increasing renewable energy production.

Innovative climate finance is not synonymous with carbon trading. Innovation can pertain to risk sharing between the public and private actors and between the national and multinational actors. JETPs allow development banks to articulate their new role in response to climate change -- see the agenda of Paris's June 2023 Climate Summit.

8. Concluding remarks

JETP vision summary

The JETP is not a pot of money, it is an international declaration. It only says that G7+ countries and Vietnam want to go somewhere together. The high-level agreement sets an objective and leaves it up to the executive levels of the administrations to implement it. There is no new financial mechanism and no legal commitment. Nobody accepts anything in advance.

The 15.5 billion USD financial pledge seems feasible. Over the next 3 to 5 years, 20 to 50% of Vietnam's energy sector investment can come from G7+ countries. Most investment need is in new renewable energy production sources. The Government of Vietnam's willingness to take on external public debt is limited. How can Vietnam take 7.75 billion USD in concessional energy sector loans from foreign lenders like Japan, World Bank, ADB, AFD, or others in the next 3 to 5 years?

The JETP size and time horizon allow EVN to negotiate green bond emissions to finance the power grid development. The principle of borrowing from the World Bank and ADB to build critical infrastructure is well established. It fits conceptually with the JETP architecture: the public sector constructs the transmission lines, and the private sector invests in the power generation capacities.

The Greece debt crisis illustrates the dangers of innovative finance and creative accounting. The South African electricity disaster highlights the importance of sound management and financing the too big to fail, State-owned utilities. EVN bonds, even if not formally State guaranteed, increase the national debt and should be used only in moderation.

It is easier to think that most JETP funding will be private. Suppose total investment from G7+ countries in Vietnam's energy sector exceeds 15.5 billion USD by 2028. In that case, the JETP can be regarded as a success, regardless of the public/private ratio. A leverage ratio of public funds greater than 1:1 would be better from everybody's point of view.

The way forward

To achieve success, it is essential to establish an enabling legal framework that allows for direct sales of renewable energy to companies with a demand for green electricity (through the proposed DPPA mechanism), launch a public procurement mechanism for electricity production capacity (through the proposed auction scheme), and raise electricity prices to ensure EVN's solvency.

To unlock private investment in renewable power projects, the Vietnam government must invest in the expansion of power grid infrastructure and the enhancement of the power system's flexibility as a long-term strategy to propel the country's development forward. EVN should develop a strategy and means to build a power grid capable of integrating upcoming renewable energy sources (through the ongoing PDP8), with the implementation plan including technology transfer projects that accelerate the offshore wind and smart grid industries.

The sharing of benefits with individuals during the process of transitioning to new forms of energy is a critical issue that requires careful attention from policymakers. To achieve an equitable outcome, it is necessary to consider various mechanisms, including job creation, vocational training, social insurance, and unemployment. These factors must be carefully balanced to ensure that all individuals and communities benefit from the energy transition. To achieve this goal, policymakers must develop comprehensive plans that take into account the specific needs of different regions and populations. It is only through careful consideration and thoughtful planning that we can hope to create a sustainable energy system that benefits everyone.

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References

An Vinh. 2023. "Quảng Ninh phát triển công nghiệp năng lượng thân thiện với môi trường." *Nang Luong Sach Vietnam*. https://nangluongsachvietnam.vn/d6/vi-VN/news/Quang-Ninh-phat-trien-cong-nghiep-nang-luong-than-thien-voi-moi-truong-6-185-19648 (February 27, 2023).

Biden, Joe. 2022. "Remarks by President Biden at Launch of the Partnership for Global Infrastructure and Investment." Presented at the Launch of the PGII meeting, Schloss Elmau, Krün, Germany. https://www.whitehouse.gov/briefing-room/speeches-remarks/2022/06/26/remarks-by-president-biden-at-launch-of-the-partnership-for-global-infrastructure-and-investment/ (March 22, 2023).

Bloomberg. 2023. "Vietnam Officials 'Do Nothing' for Fear of Massive Anti-Corruption Purge." *South China Morning Post*. https://www.scmp.com/news/asia/southeast-asia/article/3211045/vietnam-officials-do-nothing-fear-massive-anti-corruption-purge (March 10, 2023).

Bùi Công Luận. 2023. "EVN Invitation to Companies to Discussion about Circular 15/2022/TT-BCT and Decision 21/QD-BCT."

Cabinet Office. 2022. "COP26 President Meeting with Vietnamese Minister Ha: 8 November 2022." *GOV.UK*. https://www.gov.uk/government/news/cop26-president-meeting-with-vietnamese-minister-ha-8-november-2022 (March 26, 2023).

Carbon Market Institute. 2022. *COP27 Article 6.8 Breakdown*. https://carbonmarketinstitute.org/app/uploads/2022/12/Article-6.8-breakdown.pdf (March 21, 2023).

Carney, Mark. 2021. *Country Platforms Action Plan, from Mark Carney, UN Special Envoy on Climate Action and Finance and the Prime Minister's Finance Adviser for COP26*. https://ukcop26.org/country-platforms-action-plan-from-mark-carney-un-special-envoy-on-climate-action-and-finance-and-the-prime-ministers-finance-adviser-for-cop26/ (March 21, 2023).

Cassidy, Christopher, Rainer Quitzow, and Maia Sparkman. 2022. "Just Energy Transition Partnerships: Will COP27 Deliver for Emerging Economies?" *Atlantic Council*. https://www.atlanticcouncil.org/blogs/energysource/just-energy-transition-partnerships-will-cop27-deliver-for-emerging-economies/ (February 20, 2023).

Catrinus J. Jepma. 1991. *The Tying of Aid*. OECD. https://www.oecd.org/development/pgd/29412505.pdf (March 21, 2023).

Connolly, Katie. 2022. *5 Lessons from South Africa's Just Transition Journey*. WRI. https://www.wri.org/insights/5-lessons-south-africas-just-transition-journey.

Dang Hai Anh. 2022. "Draft Strategy and Master Plan on National Energy for the Period 2021-2030 Vision to 2050." Presented at the VEPG TWG5 meeting, Hà Nội, Viet Nam. https://vepg.vn/documents-of-the-2nd-meeting-of-the-twg5-on-em_30-nov-2022/.

Đặng Hoàng An. 2022. *Quyết Định 2756/QĐ-BCT 2022 Ứng Phó Với Biến Đổi Khí Hậu và Tăng Trưởng Xanh Ngành Công Thương*. Bộ Công thương. Quyết định. https://thuvienphapluat.vn/van-ban/Thuong-mai/Quyet-dinh-2756-QD-BCT-2022-ung-pho-voi-bien-doi-khi-hau-va-tang-truong-xanh-nganh-Cong-Thuong-548565.aspx (March 23, 2023).

Dang Thi Thuy Hanh, Truong Nhu Tung, and Dang Thanh Tung. 2022. "Quan hệ đối tác chuyển dịch năng lượng công bằng và những thách thức đặt ra cho ngành năng lượng Việt Nam." *Petrovietnam Journal* 12: 38–44. http://www.pvj.vn/index.php/TCDK/article/view/915 (January 18, 2023).

Dávid-Barrett, Elizabeth et al. 2020. "Controlling Corruption in Development Aid: New Evidence from Contract-Level Data." *Studies in Comparative International Development* 55(4): 481–515. https://doi.org/10.1007/s12116-020-09315-4 (March 21, 2023).

DEA. 2011. *National Climate Change Response White Paper*. Department of Economic Affairs, Government of South Africa. https://www.gov.za/documents/national-climate-change-response-white-paper.

Dinh Tu. 2023a. "Thảo Luận về Các Nội Dung Hợp Tác Trong Lĩnh Vực Năng Lượng Giữa Việt Nam và Đức." https://nangluongsachvietnam.vn/d6/vi-VN/news/Thao-luan-ve-cac-noi-dung-hop-tac-trong-linh-vuc-nang-luong-giua-Viet-Nam-va-Duc-6-166-19805 (February 27, 2023).

———. 2023b. "Triển Khai Giải Pháp Tháo Gỡ Những Khó Khăn, Vướng Mắc Cho EVN." *Nang Luong Sach Vietnam*. https://nangluongsachvietnam.vn/d6/vi-VN/news/Trien-khai-giai-phap-thao-go-nhung-kho-khan-vuong-mac-cho-EVN-6-166-19686 (February 27, 2023).

DMRE. 2021. *Towards a Just Energy Transition Framework in the Minerals and Energy Sectors. Discussion Document.* Department of mineral resources & energy, Republic of South Africa. https://cdn.ymaws.com/southafricanenergyassociation.site-ym.com/resource/collection/604B4B63-5AC4-42BC-9C4E-E7599014C1A5/DMRE_Towards_a_JET__Framework_Discussion_Document_Nov_2021.pdf (March 25, 2023).

Do, Thang Nam, and Paul J. Burke. 2023. "Phasing out Coal Power in a Developing Country Context: Insights from Vietnam." *Energy Policy* 176: 113512. https://www.sciencedirect.com/science/article/pii/S0301421523000976 (March 22, 2023).

Ea, EML, and IE. 2022. *Technical Report for the Vietnam Energy Outlook 2021*. Hà Nội, Viet Nam: Energy Analyses (EA), Energy modelling lab (EML), Institute of Energy (IE). http://vepg.vn/wp-content/uploads/2022/06/Technical-Report.pdf.

Engelbrecht, Lavinia. 2022. *World Bank Approves $497 Million in Financing to Lower South Africa's Greenhouse Gas Emissions and Support a Just Transition*. The World Bank. Press release. https://www.worldbank.org/en/news/press-release/2022/11/04/world-bank-approves-497-million-in-financing-to-lower-south-africa-s-greenhouse-gas-emissions-and-support-a-just-transit (March 21, 2023).

ERAV. 2023. "Smart Grid Development in Vietnam." Presented at the VEPG TWG3 meeting, Hanoi.

EREA and DEA. 2022. *Vietnam Energy Outlook Report 2021*. Hanoi. https://ens.dk/en/our-responsibilities/global-cooperation/country-cooperation/vietnam.

Eskom. 2020. "Eskom Group Annual Results for the Year Ended 31 March 2020." https://www.eskom.co.za/wp-content/uploads/2021/07/2020ResultsPresentation.pdf (March 23, 2023).

European Union and Government of Vietnam. 2014. "EU Cooperation in Viet Nam: An Enhanced Response to the Development Challenges. The Multiannual Indicative Programme for Viet Nam, 2014-2020." https://eeas.europa.eu/sites/default/files/20141113_mip_en.pdf.

Farand, Chloé. 2022. "Who Is Contributing What to South Africa's Clean Energy Shift?" *Climate Home News*. https://www.climatechangenews.com/2022/10/22/breakdown-who-is-contributing-what-to-south-africas-clean-energy-shift/ (February 20, 2023).

Focus 2030. 2023. "Summit for a New Global Financial Pact: towards more commitments to meet the 2030 Agenda?" *Focus 2030*. https://focus2030.org/Summit-for-a-New-Global-Financial-Pact-towards-more-commitments-to-meet-the-1030 (April 7, 2023).

G20. 2020. *G20 Reference Framework for Effective Country Platforms*. G20 Saudi Arabia 2020, Finance Track. http://www.mof.gov.cn/en/Cooperation/mulid/202011/P020201104581749367491.pdf (March 21, 2023).

Gbadamosi, Nosmot. 2023. "How South Africa's Energy Crisis Became an Economic Crisis." *Foreign Policy*. https://foreignpolicy.com/2023/01/25/south-africa-energy-crisis-corruption-anc/ (March 23, 2023).

GEAPP. 2023a. "About Us > FAQ." *Global Energy Alliance for People and Planet (GEAPP)*. https://www.energyalliance.org/about-us/faq/ (February 27, 2023).

———. 2023b. "Vietnam and Global Energy Alliance for People and Planet (GEAPP) Build on Commitments Made at COP27 to Accelerate Just Energy Transition." *Global Energy Alliance for People and Planet (GEAPP)*. https://www.energyalliance.org/news-insights/vietnam-geapp-energy-transition/ (February 27, 2023).

General Statistics Office of Vietnam. 2021. *Statistical Yearbook of Vietnam 2020*. Vietnam: Statistical Publishing House. https://www.gso.gov.vn/en/data-and-statistics/2021/07/statistical-yearbook-of-2020/ (July 16, 2021).

GFANZ. 2022. *The Potential for Country Platforms to Mobilize Capital for Net-Zero Transition in Emerging Markets and Developing Economies. Private Sector Statement.* Glasgow Financial Alliance for Net Zero. https://www.gfanzero.com/our-work/mobilizing-capital-for-emerging-markets-and-developing-economies/ (March 21, 2023).

Government of SR of Vietnam, and International Partners Group. 2022. *Political Declaration on Establishing the Just Energy Transition Partnership with Viet Nam*. Brussels, Belgium: European

Commission. https://ec.europa.eu/commission/presscorner/detail/en/statement_22_7724 (March 3, 2023).

Government of the Republic of Indonesia, and International Partners Group. 2022. *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).* . Joint Statement. https://www.whitehouse.gov/wp-content/uploads/2022/11/Joint-Statement-1.pdf.

GSO. 2020. "Socio-Economic Situation in the Fourth Quarter and 2020." *General Statistics Office of Vietnam*. https://www.gso.gov.vn/en/data-and-statistics/2021/01/socio-economic-situation-in-the-fourth-quarter-and-the-whole-year-2020/ (April 6, 2023).

———. 2021. "Socio-Economic Situation in the Fourth Quarter and 2021." *General Statistics Office of Vietnam*. https://www.gso.gov.vn/en/data-and-statistics/2022/01/socio-economic-situation-in-the-fourth-quarter-and-2021/ (April 6, 2023).

———. 2022. "Infographic Social-Economic Situation 4th Quarter and 2022." *General Statistics Office of Vietnam*. https://www.gso.gov.vn/en/data-and-statistics/2022/12/infographic-social-economic-situation-4th-quarter-and-2022/ (April 6, 2023).

Gunfaus, Marta Torres et al. 2022. "Just Energy Transition Partnerships: Can They Really Make a Difference, and How?" *IDDRI*. https://www.iddri.org/en/publications-and-events/blog-post/just-energy-transition-partnerships-can-they-really-make.

Hadley, Sierd et al. 2022. "Country Platforms for Climate Action: Something Borrowed, Something New?" *ODI: Think change*. https://odi.org/en/publications/country-platforms-for-climate-action-something-borrowed-something-new/ (March 21, 2023).

———. 2022. "What's the State of Play on Just Energy Transition Partnerships?" *ODI: Think change*. https://odi.org/en/insights/whats-the-state-of-play-on-just-energy-transition-partnerships/ (March 22, 2023).

Ha-Duong, Minh. 2021. "COP26: Việt Nam hướng tới mục tiêu trung hòa carbon vào năm 2050." *Tia Sáng* 23: 10–12.

———. 2023. *Vietnam's Energy Security in 2023: Global Coal and LNG Markets*. Hà Nội: VIETSE. https://vietse.vn/en/publication/vietnams-energy-security-in-2023-global-coal-and-lng-markets/ (April 12, 2023).

Handayani, Kamia et al. 2022. "Moving beyond the NDCs: ASEAN Pathways to a Net-Zero Emissions Power Sector in 2050." *Applied Energy* 311: 118580. https://www.sciencedirect.com/science/article/pii/S0306261922000617 (July 11, 2022).

Huong Thuy. 2022. "Newest Draft of Power Development Plan VIII Comes with Several Highlights." *Vietnam Investment Review - VIR*. https://vir.com.vn/newest-draft-of-power-development-plan-viii-comes-with-several-highlights-97898.html (February 19, 2023).

IEA. 2023. "Viet Nam Energy Balance 2020 Sankey Chart." https://www.iea.org/sankey/#?c=Viet%20Nam&s=Balance (March 8, 2023).

IMF. 2023. *Crisis upon Crisis. The IMF Annual Report 2022.* International Monetary Fund. www.imf.org/AR2022 (April 6, 2023).

Institute of Energy. 2021. *Quy hoạch phát triển điện lực quốc gia thời kỳ 2021-2030 tầm nhìn đến năm 2045 - Báo cáo dự thảo Lần 3 - TẬP 1: THUYẾT MINH CHUNG*. Ha Noi, Viet Nam: Ministry of Industry and Trade.

Institute of Energy - MOIT. 2020. "Primary Energy, Input Parameters and Results, Power Source Development Program." Presented at the Report in PDP8 workshop, Hanoi.

IPCC. 2023. "AR6 Synthesis Report: Climate Change 2023." https://www.ipcc.ch/report/ar6/syr/ (March 24, 2023).

JETP Secretariat. 2022. *South Africa's Just Energy Transition Investment Plan (JET IP) for the Initial Period 2023-2027*. The Presidency, Republic of South Africa. https://www.thepresidency.gov.za/content/south-africa%27s-just-energy-transition-investment-plan-jet-ip-2023-2027.

Josephs, Jonathan. 2023. "China's Loans to Africa Worry World Bank President David Malpass." *BBC News*. https://www.bbc.com/news/business-65140363 (April 3, 2023).

Krasniqi, Albian, and Venera Demukaj. 2021. "Does Aid Fuel Corruption? New Evidence from a Cross-Country Analysis." *Development Studies Research* 8(1): 122–34. https://doi.org/10.1080/21665095.2021.1919538 (March 21, 2023).

Lado, Hervé, and Papa Douada A. Diene. 2022. "Senegal and the G7: Five Questions about the Just Energy Transition Partnership." *Natural Resource Governance Institute*. https://resourcegovernance.org/blog/senegal-and-g7-five-questions-about-just-energy-transition-partnership (March 2, 2023).

Lai, Dao Xuan. 2022. "Gearing up towards a Just Energy Transition in Vietnam." *Vietnam Investment Review - VIR*. https://vir.com.vn/gearing-up-towards-a-just-energy-transition-in-vietnam-92038.html (March 26, 2023).

Lawder, David. 2022. "Indonesia, ADB Launch First Coal Power Plant Retirement Deal." *Reuters*. https://money.usnews.com/investing/news/articles/2022-11-13/exclusive-indonesia-adb-launch-first-coal-power-plant-retirement-deal (March 21, 2023).

Lê Minh Khái. 2022a. *Quyết Định 448/QĐ-TTg 2022 Phê Duyệt Chương Trình Quản Lý Nợ Công 03 Năm 2022 2024*. Thủ tướng Chính phủ. Quyết định. https://english.luatvietnam.vn/decision-no-

448-qd-ttg-approving-the-2022-2024-three-year-public-debt-management-program-and-the-2022-publ-219555-doc1.html (March 6, 2023).

———. 2022b. *Quyết Định 460/QĐ-TTg 2022 Phê Duyệt Chiến Lược Nợ Công Đến Năm 2030*. Thủ tướng Chính phủ. Quyết định. https://english.luatvietnam.vn/decision-no-460-qd-ttg-dated-april-14-2022-of-the-prime-minister-219636-doc1.html (March 6, 2023).

———. 2022c. *Quyết Định 687/QĐ-TTg Phê Duyệt Đề Án Phát Triển Kinh Tế Tuần Hoàn ở Việt Nam*. Thủ tướng Chính phủ. Quyết định. https://thuvienphapluat.vn/van-ban/EN/Thuong-mai/Decision-687-QD-TTg-2022-the-scheme-for-circular-economy-development-in-Vietnam/516871/tieng-anh.aspx (March 6, 2023).

Lê Văn Thành. 2021. *Quyết định 1658/QĐ-TTg 2021 phê duyệt Chiến lược quốc gia về tăng trưởng xanh*. Thủ tướng Chính phủ. Quyết định. http://www.news.chinhphu.vn/Home/National-Green-Growth-Strategy-for-20212030-vision-towards-2050/202110/45859.vgp (December 31, 2021).

———. 2022a. *Decision 942/QD-TTg Vietnam Methane Action Plan*. https://www.ccacoalition.org/sites/default/files/resources/Vietnam%20Methane%20Action%20Plan.pdf (March 16, 2023).

———. 2022b. *Nghị Định 06/2022/NĐ-CP Quy Định Giảm Nhẹ Phát Thải Khí Nhà Kính và Bảo vệ Tầng ô-Dôn*. Ha Noi, Viet Nam: Chính Phủ. Decree. https://english.luatvietnam.vn/ecree-no-06-2022-nd-cp-dated-january-07-2022-of-the-government-providing-regulations-on-reduction-of-greenhouse-gas-emissions-and-protection-of-the-215516-Doc1.html (June 9, 2022).

———. 2022c. *Quyết Định 01/2022/QĐ-TTg Cơ Sở Phát Thải Khí Nhà Kính Phải Thực Hiện Kiểm Kê Khí Nhà Kính*. Ha Noi, Viet Nam: Thủ tướng Chính phủ. Quyết định. https://thuvienphapluat.vn/van-ban/Tai-nguyen-Moi-truong/Quyet-dinh-01-2022-QD-TTg-co-so-phat-thai-khi-nha-kinh-phai-thuc-hien-kiem-ke-khi-nha-kinh-501161.aspx (February 17, 2023).

———. 2022d. *Quyết Định 876/QĐ-TTg 2022 Chuyển Đổi Năng Lượng Xanh Giảm Khí Các Bon Ngành Giao Thông*. Thủ tướng Chính phủ. Quyết định. https://thuvienphapluat.vn/van-ban/EN/Giao-thong-Van-tai/Decision-876-QD-TTg-2022-program-for-mitigation-of-carbon-dioxide-from-transportation/523955/tieng-anh.aspx (March 6, 2023).

———. 2022e. *Quyết Định 882/QĐ-TTg 2022 Phê Duyệt Kế Hoạch Tăng Trưởng Xanh 2021 2030*. Thủ tướng Chính phủ. Quyết định. https://thuvienphapluat.vn/van-ban/Thuong-mai/Quyet-dinh-882-QD-TTg-2022-phe-duyet-ke-hoach-tang-truong-xanh-2021-2030-523274.aspx (March 9, 2023).

———. 2022f. *Quyết Định 888/QĐ-TTg Phê Duyệt Đề Án về Những Nhiệm vụ, Giải Pháp Triển Khai Kết Quả Hội Nghị Lần Thứ 26 Các Bên Tham Gia Công Ước Khung Của Liên Hợp Quốc về Biến Đổi Khí Hậu*. Thủ tướng Chính phủ. Quyết định. https://thuvienphapluat.vn/van-ban/EN/Tai-nguyen-Moi-truong/Decision-888-QD-TTg-2022-scheme-setting-out-tasks-of-Conference-on-Climate-Change/524316/tieng-anh.aspx (February 17, 2023).

———. 2022g. *Quyết Định 896/QĐ-TTg 2022 Phê Duyệt Chiến Lược Quốc Gia Biến Đổi Khí Hậu Đến 2050*. Ha Noi, Viet Nam: Government Office. Decision. https://thuvienphapluat.vn/van-ban/Tai-nguyen-Moi-truong/Quyet-dinh-896-QD-TTg-2022-phe-duyet-Chien-luoc-quoc-gia-bien-doi-khi-hau-den-2050-523527.aspx (October 6, 2022).

Lungi, Nigel. 2021. "Eskom Lays out US$10 Billion Green Energy Transition Plan." *Renew Africa*. https://renewafrica.biz/news/south-africa-news/eskom-lays-out-us10-billion-green-energy-transition-plan/ (March 23, 2023).

Macaulay, Cecilia. 2023. "Eskom Crisis: What Does South Africa's State of Disaster Mean?" *BBC News*. https://www.bbc.com/news/world-africa-64594499 (March 23, 2023).

Macron, Emmanuel. 2022. "Just Energy Transition Partnerships in Africa." *Élysée*. https://www.elysee.fr/en/emmanuel-macron/2022/02/18/just-energy-transition-partnerships-in-africa.

Malik, Ammar A et al. 2021. *Banking on the Belt and Road: Insights from a New Global Dataset of 13,427 Chinese Development Projects*. Williamsburg, VA: AIDDATA, William & Mary. https://www.aiddata.org/publications/banking-on-the-belt-and-road.

Martens, Carlos Bilongo, and Barbara Pompili. 2023. *Rapport d'information Sur Le Bilan de La COP27 et Les Défis de La Future COP28*. Paris, France: Commission des Affaires Étrangères, Assemblée Nationale. https://www.assemblee-nationale.fr/dyn/16/rapports/cion_afetr/l16b0913_rapport-information.pdf (April 7, 2023).

McDonnell, Tim. 2022. "The Most Promising Source of Climate Cash at COP27 Is Not Part of COP." *Quartz*. https://qz.com/the-most-promising-source-of-climate-cash-at-cop27-is-n-1849778938 (February 20, 2023).

Merrill, Tamara. 2018. *National Development Plan: Pathways for a Just Transition, Western Cape Stakeholder Dialogue Meeting*. Community House, Salt River, Cape Town: National Planning Commission. https://pccommissionflow.imgix.net/uploads/images/1eb85a_67be11d9d0f6499e941f0d98ffa56100.pdf.

MOF. 2022a. "Mobilizing Financial Resources for the Green Energy Transition." *Ministry of Finance*. https://mof.gov.vn/webcenter/portal/btcen/pages_r/l/newsdetails?dDocName=MOFUCM244133 (March 2, 2023).

———. 2022b. "Roundtable on Financing Climate Change." *Ministry of Finance*. https://mof.gov.vn/webcenter/portal/btcen/pages_r/l/newsdetails?dDocName=MOFUCM224503 (March 2, 2023).

———. 2023. *Bulletin Public Debt. Statistic Tables 2018-6/2022*. Hanoi, Vietnam: Ministry of Finance. https://mof.gov.vn/webcenter/portal/btcen/pages_r/l/newsdetails?dDocName=MOFUCM270036 (April 6, 2023).

MOIT. 2022a. *Thông Tư Số 15/2022/TT-BCT "Quy Định Phương Pháp Xác Định Khung Giá Phát Điện Nhà Máy Điện Mặt Trời, Điện Gió Chuyển Tiếp."* MOIT.

———. 2022b. *Tờ trình số 8129/TTr-BCT ngày 16/12/2022 liên quan đến Dự thảo Quy hoạch điện VIII*.

MPI. 2023. "Report on Foreign Direct Investment in the First Two Months of 2023." https://www.mpi.gov.vn/en/Pages/tinbai.aspx?idTin=56922&idcm=122 (March 2, 2023).

My Dung. 2023. "Nhật Bản Hỗ Trợ Triển Khai Các Giải Pháp Giảm Nhẹ Phát Thải Khí Nhà Kính." *Nang Luong Sach Vietnam*. https://nangluongsachvietnam.vn/d6/vi-VN/news/Nhat-Ban-ho-tro-trien-khai-cac-giai-phap-giam-nhe-phat-thai-khi-nha-kinh--6-179-19800 (February 27, 2023).

Nel, Michelle. 2015. "Cosatu Breaks Stereotypes about Climate Justice." *Mail & Guardian*. https://mg.co.za/article/2015-03-20-00-cosatu-breaks-stereotypes-about-climate-justice/ (March 25, 2023).

Newell, Peter, and Dustin Mulvaney. 2013. "The Political Economy of the 'Just Transition.'" *The Geographical Journal* 179(2): 132–40. https://onlinelibrary.wiley.com/doi/10.1111/geoj.12008 (January 27, 2023).

Ngo Thi To Nhien. 2022. "Options for the Net-Zero Carbon Emission Roadmap of SOEs." Presented at the VEPG Technical Working Group 1 Meeting, Ha Long, Vietnam.

Nguyen Khac Hieu et al. 2015. *Vietnam's INDC Technical Report*. Ministry of Natural Resources and Environment.

Nguyễn, Tấn Dũng. 2012. *Decision 1393/QD-TTg approving the National Strategy on Green Growth*. Hanoi, Vietnam: The Government of Vietnam. Decision. http://www.moit.gov.vn/Images/FileVanBan/_1393_QD-TTg_12218078.pdf.

———. 2015. *Decision 2068/QD-TTg - Approving the Development Strategy of Renewable Energy of Vietnam by 2030 with a Vision to 2050*. Hanoi, Vietnam: The Government of Vietnam. Decision. http://congbao.chinhphu.vn/thuoc-tinh-van-ban-so-2068-qd-ttg-25342.

Nguyễn, Thị Kim Ngân. 2017. *Luật Quy hoạch 2017, Luật số 21/2017/QH14 mới nhất 2021 (Law on Planning)*. https://luatvietnam.vn/xay-dung/luat-quy-hoach-2017-118858-d1.html (November 30, 2021).

Nguyễn, Thu. 2023. "MONRE Finalises Regulations for Offshore Surveys." *Vietnam Investment Review - VIR*. https://vir.com.vn/monre-finalises-regulations-for-offshore-surveys-100565.html (March 22, 2023).

Nguyễn Xuân Phúc. 2017. *Quyết Định 622/QĐ-TTg Về Việc Ban Hành Kế Hoạch Hành Động Quốc Gia Thực Hiện Chương Trình Nghị Sự 2030 vì Sự Phát Triển Bền Vững*. Hà Nội: Government Office. Decision. https://vietnam.un.org/index.php/en/4123-national-action-plan-implementation-2030-sustainable-development-agenda, https://vietnam.un.org/index.php/en/4123-national-action-plan-implementation-2030-sustainable-development-agenda (December 28, 2021).

———. 2019. *Decree 37/2019/ND-CP on Elaboration of the Law Planning*. Hà Nội: The Government of Vietnam. Decree. http://vbpl.vn/tw/Pages/vbpq-van-ban-goc.aspx?dvid=13&ItemID=135361.

———. 2020. *Resolution 140/2020/NQ-CP Promulgating the Government's Action Programme for implementing Resolution no. 55-NQ/TW dated 11/02/2020 of Politburo regarding orientations of the Vietnamese National Energy Development Strategy until 2030, with a vision till 2045*. Hà Nội: The Government of Vietnam. Resolution of the Government. https://vepg.vn/.

Nweke-Eze, C. 2022. *Just Energy Transitions and Partnerships in Africa: A Nigeria Case Study*. Integrated Africa Power. https://www.iddri.org/fr/publications-et-evenements/rapport/partenariats-et-transitions-energetiques-justes-et-en-afrique-0.

OECD. 2022. *Climate Finance Provided and Mobilised by Developed Countries in 2016-2020*. Organisation for Economic Cooperation and Development. https://www.oecd.org/climate-change/finance-usd-100-billion-goal/ (March 21, 2023).

———. 2023. "Climate-Related Official Development Assistance in 2021: A Snapshot." https://www.oecd.org/dac/financing-sustainable-development/development-finance-topics/climate-change.htm (April 6, 2023).

Oxfam. 2020. *Shadow Climate Finance Report*. https://oxfam.app.box.com/s/djxmq18v80tkuec8xjwrpoch7bf7prjs (March 21, 2023).

Papoulidis, Jonathan. 2011. "Toward a New Paradigm of International Engagement in Fragile States." *Harvard International Review*. https://hir.harvard.edu/towards-a-new-paradigm-of-international-engagement-in-fragile-states/ (March 21, 2023).

PCFTT, and IPG. 2022a. *12-Month Update on Progress in Advancing the Just Energy Transition Partnership (JETP)*. Presidential Climate Finance Task Team and the International Partners Group. https://ukcop26.org/12-month-update-on-progress-in-advancing-the-just-energy-transition-partnership-jetp/.

———. 2022b. *Six-Month Update on Progress in Advancing the Just Energy Transition Partnership (JETP)*. Presidential Climate Finance Task Team and the International Partners Group. https://ukcop26.org/12-month-update-on-progress-in-advancing-the-just-energy-transition-partnership-jetp/.

Phạm Minh Chính. 2021. *Quyết định 2157/QĐ-TTg 2021 thành lập BCĐ quốc gia triển khai thực hiện cam kết về biến đổi khí hậu*. Thủ tướng Chính phủ. Quyết định. https://luatvietnam.vn/co-cau-to-chuc/quyet-dinh-2157-qd-ttg-214472-d1.html (March 28, 2023).

Plant, Mark. 2020. "Some Thoughts on Country Platforms." *Center For Global Development | Ideas to Action*. https://www.cgdev.org/publication/some-thoughts-country-platforms (March 21, 2023).

Quagliata, Lavinia. 2023. "ETP Newsletter: January-February 2023." https://mailchi.mp/3dd277514f53/etp-newsletter-april-may-17003756?e=5ec89068a4 (February 27, 2023).

Rambharos, Mandy. 2021. *Just Energy Transition (JET) Fact Sheet #001*. https://www.eskom.co.za/wp-content/uploads/2021/10/JET_Factsheet13Oct2021.pdf (March 23, 2023).

Redd, Stuart, John Paul Hayes, and Darian Stibbe. 2014. *Platforms for Partnership: Emerging Good Practice to Systematically Engage Business as a Partner in Development*. UK: The Partnering Initiative. https://thepartneringinitiative.org/research-and-learning-2/platforms-for-partnership/ (March 21, 2023).

Republic of South Africa et al. 2021. *Political Declaration on the Just Energy Transition in South Africa*. Glasgow, UK: COP26. Declaration from the Governments of the Republic of South Africa, the United Kingdom of Great Britain and Northern Ireland, the United States of America, the Republic of France and the Federal Republic of Germany, and the European Union. https://ukcop26.org/political-declaration-on-the-just-energy-transition-in-south-africa/.

Savoy, Conor M., and Shannon McKeown. 2022. "Future Considerations for the Partnership on Global Infrastructure and Investment." https://www.csis.org/analysis/future-considerations-partnership-global-infrastructure-and-investment (March 22, 2023).

Srivastava, Roli. 2023. "India Wants a Clean Energy Transition Deal - and Its Coal Too." *Context*. https://www.context.news/just-transition/india-wants-a-clean-energy-transition-deal-and-its-coal-too (March 2, 2023).

Steyn, Grové et al. 2021. *The Just Transition Transaction: A Developing Country Coal Retirement Mechanism*. Cape Town: South Africa: Meridian Economics. https://meridianeconomics.co.za/our-publications/the-just-transition-transaction-a-developing-country-coal-power-retirement-mechanism/ (February 1, 2023).

Sulaeman, Fadhil Haidar. 2022. "Indonesia Looks to Asean Community to Offload Excess Electricity." *The Jakarta Post*. https://www.thestar.com.my/aseanplus/aseanplus-news/2022/06/01/indonesia-looks-to-asean-community-to-offload-excess-electricity (April 12, 2023).

The Socialist Republic of Vietnam. 2020. *Updated Nationally Determined Contribution (NDC)*. Hà Nội: MONRE.

———. 2022. *Vietnam NDC 2022*. Hà Nội: MONRE. https://unfccc.int/documents/622541 (February 15, 2023).

The White House. 2022. *Indonesia and International Partners Secure Groundbreaking Climate Targets and Associated Financing*. https://www.whitehouse.gov/briefing-room/statements-releases/2022/11/15/indonesia-and-international-partners-secure-groundbreaking-climate-targets-and-associated-financing/.

Trần Hồng Hà. 2023. *Quyết Định 80/QĐ-TTg 2023 Phê Duyệt Quy Hoạch Tỉnh Quảng Ninh Thời Kỳ 2021 2030*. Thủ tướng Chính phủ. Quyết định. https://thuvienphapluat.vn/van-ban/Xay-dung-Do-thi/Quyet-dinh-80-QD-TTg-2023-phe-duyet-Quy-hoach-tinh-Quang-Ninh-thoi-ky-2021-2030-554203.aspx (March 21, 2023).

Transparency International. 2023. "2022 Corruption Perceptions Index: Explore the Results." *Transparency.org*. https://www.transparency.org/en/cpi/2022 (March 21, 2023).

Tyler, Emily, and Lonwabo Mgoduso. 2022. *Just Energy Transitions and Partnerships in Africa: A South African Case Study*. Meridian Economics. https://www.iddri.org/sites/default/files/PDF/Publications/Catalogue%20Iddri/Rapport/Ukama_ZAF_v05.pdf.

UN, DESA. 2022. *Partnering for a Brighter Shared Future. Progress Report on the Belt and Road Initiative in Support of the United Nations 2030 Agenda for Sustainable Development*. United Nations, Department of Economic and Social Affairs. https://eng.yidaiyilu.gov.cn/wcm.files/upload/CMSydylyw/202209/202209190500015.pdf (March 22, 2023).

UNDP Vietnam. 2023. *Terms of Reference of the Call for National Consultant to Map Existing Governance Frameworks and Mechanisms Related to the JETP in Vietnam*. Ha Noi: United Nations Development Programme, Procurement Office.

United Nations. 2015. *The Paris Agreement*. http://unfccc.int/paris_agreement/items/9485.php (May 22, 2017).

United States Department of State. 2019. "Vision Statement." *United States Department of State*. https://www.state.gov/blue-dot-network-vision-statement/ (March 22, 2023).

Vietnam Energy Online. 2023. "The working meeting between the French Development Agency and Electricity of Vietnam." *Vietnam Energy Online*. https://vietnamenergy.vn/the-working-meeting-between-the-french-development-agency-and-electricity-of-vietnam-30275.html (February 27, 2023).

Vietnam News. 2022. "Losses of More than VNĐ31 Trillion Mean EVN May Increase Electricity Prices." *vietnamnews.vn*. https://vietnamnews.vn/economy/1439668/losses-of-more-than-vnd31-trillion-mean-evn-may-increase-electricity-prices.html (January 13, 2023).

Vietnam's Politburo. 2020. *Resolution 55-NQ/TW on the orientation of the National Energy Development Strategy of Vietnam to 2030, vision to 2045*. Central Executive Committee, Communist Party of Vietnam. Resolution of the political bureau.

VIETSE. 2023. "International Partners Mobilise Climate Finance to Support Vietnam." *LinkedIn*. https://www.linkedin.com/posts/vietse_climatefinance-climatechange-energytransition-activity-7028200793006624768-gkUX (April 12, 2023).

VNA. 2023a. "Party Chief Chairs Anti-Corruption Central Steering Committee's Session." *https://en.dangcongsan.vn*. https://en.dangcongsan.vn/vietnam-today/party-chief-chairs-anti-corruption-central-steering-committee-s-session-602534.html (March 21, 2023).

———. 2023b. "Vietnam Offers Initiatives to Promote Cooperation to Reduce Emissions in Asia." *Vietnam+ (VietnamPlus)*. https://en.vietnamplus.vn/vietnam-offers-initiatives-to-promote-cooperation-to-reduce-emissions-in-asia/249326.vnp (March 6, 2023).

VNS. 2017. "FDI in VN Rose 44% to Hit New Record in 2017." *vietnamnews.vn*. https://vietnamnews.vn/economy/420011/fdi-in-vn-rose-44-to-hit-new-record-in-2017.html (March 2, 2023).

———. 2021. "Việt Nam's Foreign Debts under Control." *vietnamnews.vn*. https://vietnamnews.vn/economy/863021/viet-nam-s-foreign-debts-under-control.html (March 2, 2023).

VTV News. 2022. "National conference reviews 10-year corruption fight." *english.vtv.vn*. https://english.vtv.vn/news/national-conference-reviews-10-year-corruption-fight-20220702133050718.htm (March 21, 2023).

Vương Đình Huệ. 2021a. *Nghị Quyết 23/2021/QH15 Kế Hoạch Tài Chính Quốc Gia Vay Trả Nợ Công 5 Năm*. Quốc hội. Nghị quyết. https://thuvienphapluat.vn/van-ban/Tai-chinh-nha-nuoc/Nghi-quyet-23-2021-QH15-Ke-hoach-tai-chinh-quoc-gia-vay-tra-no-cong-5-nam-483941.aspx (April 12, 2023).

———. 2021b. *Nghị Quyết 39/2021/QH15 Quy Hoạch Sử Dụng Đất Quốc Gia Thời Kỳ 2021 2030*. Quốc hội. Nghị quyết. https://thuvienphapluat.vn/van-ban/Bat-dong-san/Nghi-quyet-39-2021-QH15-Quy-hoach-su-dung-dat-quoc-gia-thoi-ky-2021-2030-495757.aspx (March 21, 2023).

———. 2022. *Nghị Quyết 43/2022/QH15 Chính Sách Tài Khóa Tiền Tệ Phục Hồi Phát Triển Kinh Tế Xã Hội*. Quốc hội. Nghị quyết. https://thuvienphapluat.vn/van-ban/Thuong-mai/Resolution-43-2022-QH15-2022-fiscal-policies-for-supporting-Socio-economic-development-program-501349.aspx (March 6, 2023).

———. 2023. *Nghị Quyết 81/2023/QH15 Ngày 09/01/2023 về Quy Hoạch Tổng Thể Quốc Gia Thời Kỳ 2021-2030, Tầm Nhìn Đến Năm 2050*. Quốc hội. Nghị quyết. https://chinhphu.vn/?pageid=27160&docid=207352&classid=1.

Wang, Xinxin, and Kevin Lo. 2021. "Just Transition: A Conceptual Review." *Energy Research & Social Science* 82: 102291. https://www.sciencedirect.com/science/article/pii/S2214629621003832 (January 27, 2023).

Wignaraja, Kanni. 2022. "Realising Vietnam's Just Energy Transition." *Vietnam Investment Review - VIR*. https://www.undp.org/vietnam/news/realising-vietnams-just-energy-transition (March 26, 2023).

Zhou, Christina. 2019. "Why Is Emerging Superpower China Still Categorised as a 'developing' Country?" *ABC News*. https://www.abc.net.au/news/2019-04-11/why-china-is-still-categorised-as-a-developing-country/10980480 (March 22, 2023).

S1: Declaration on establishing the Just Energy Transition Partnership with Viet Nam

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1. The Governments of the Socialist Republic of Việt Nam, together with the International Partners Group, consisting of the European Union, the United Kingdom of Great Britain and Northern Ireland, the United States of America, Japan, the Federal Republic of Germany, the Republic of France, the Italian Republic, Canada, the Kingdom of Denmark and the Kingdom of Norway;
2. Recognising the need to accelerate action towards the objectives and long-term goals of the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, including through the implementation of the Glasgow Climate Pact, to minimise the worst adverse impacts of climate change for countries, people and the environment;
3. Noting that limiting global warming to 1.5°C to mitigate the worst adverse impacts of climate change requires rapid, deep and sustained reductions in global greenhouse gas emissions, including reducing global carbon dioxide emissions by 45% by 2030 relative to the 2010 level and to net zero around mid-century as well as deep reductions in other greenhouse gas emissions, emphasising climate change adaptation and achieving net zero emissions as an opportunity for sustainable development;
4. Recognising that for Việt Nam, as an independent, sovereign and fast developing lower middle income country heavily affected by the impacts of climate change, it will be key to embrace the opportunities brought about by the fast decreasing cost of renewable energies as an opportunity for sustainable development and to tackle related challenges such as poverty, inequality and unemployment, which are exacerbated by the impact of the COVID-19 pandemic and climate change, and that vulnerable groups and some important economic sectors may be impacted by the energy transition, including thermal electricity generation, coal mining, heavy industry and transport;
5. Recognising the need for new, predictable, long-term and sustainable support from partner countries, multilateral organisations and investors in finance, technology and capacity building for Việt Nam to exploit fully the opportunities of the transition in accordance with the national framework of public debt and

external debt management to contribute significantly to the implementation of the of Việt Nam, its commitment to reach to net zero greenhouse gas emissions by 2050 and its development orientation to become a high-income developed country by 2045;

6. Noting that at COP26, Việt Nam committed to achieve net zero emissions by 2050 with its own domestic resources, along with the cooperation and support of the international community, including developed countries, both in terms of finance and technology transfer, including implementation of mechanisms under the Paris Agreement; Việt Nam also joined the Global Methane Pledge supporting a goal of reducing methane emissions by 30% in 2030 compared to 2020 levels; Việt Nam also supported the Global Coal to Clean Power Transition Statement, and committed to ceasing issuance of new permits and construction of new unabated coal-fired power generation projects;

7. Welcoming Việt Nam's swift and significant actions to implement its commitments made at COP26, including its legislation to reduce greenhouse gas emission and adapt to climate change, promulgation ahead of COP27 of the National Climate Change Strategy to 2050, the Methane Reduction Plan, and its second updated Nationally Determined Contribution – and expecting further updates in line with the Glasgow Climate Pact;

8. Welcoming Việt Nam's strong, quantifiable targets to peak emissions by 2035 and its intention to bring that date forward to 2030, enabled by meaningful and strong international support in terms of technology and finance and then rapidly reduce emissions to meet Việt Nam's net zero emissions target by 2050; emphasising the need of adopting low-carbon energy systems to reach this goal through promoting renewable energy development, improving energy efficiency and the importance of the transition away from unabated coal fired power, while ensuring national energy sovereignty, security and affordability;

9. Recognising the significant growth in energy demand in Việt Nam in the coming years to facilitate long-term economic development, acknowledging that the green transition will require significant investments for electricity generation and expansion and modernisation of transmission and distribution grids as well as improved energy storage solutions;

10. Acknowledging that Việt Nam may seek to make use of in hard to abate sectors to achieve these targets;

11. Recognising the opportunities presented by an ambitious energy transition to attract significant new foreign direct investment in support of Việt Nam's vision to become a major low carbon manufacturing hub;

12. Emphasising the economic and social opportunities of Việt Nam's low carbon transition, including the creation of quality jobs, local value chains, and attracting large-scale domestic and international private investments; acknowledging the importance to guide investors to adapt early, redirecting finance and avoiding stranded assets;

13. Noting Việt Nam's intent to negotiate the decommissioning of coal-fired power stations; increase investment in renewable energy and storage; and improve the power generation technology and expansion and modernisation of the transmission and distribution grids, while ensuring a level playing field between market participants, using latest technology to increase energy efficiency;

14. Emphasising that for this transition to be just, equitable and inclusive for consumers, workers and affected communities efforts will be needed to ensure that all are adequately protected from the direct risks and can benefit from opportunities brought by this transition, so that no one is left behind: noting that the transition should be accompanied by programmes of training and retraining, upskilling, job creation and other forms of support for workers in the affected sectors and areas, so that they can benefit from the industrial innovation and the creation of quality green jobs; and that access to electricity must remain affordable and reliable for all, in particular for affected, vulnerable and low income groups;

15. Noting further that for the transition to be just and equitable, regular consultation is required, including with media, and other stakeholders so as to ensure a broad social consensus; and

16. Underlining that this partnership will support Việt Nam in terms of finance, technology, capacity building, including inter alia the improvement of its policy and regulations in line with its net zero and just energy transition road map to significantly scale up private investment into renewable energy.

Resolve:

17. To establish the Just Energy Transition Partnership as a long-term, ambitious partnership to support Việt Nam's low-emission and climate resilient development, as well as to support Việt Nam to accelerate the just transition and

decarbonisation of the electricity system, and develop new economic opportunities to support Việt Nam's transition towards net zero future.

18. To mobilize an initial amount of at least $15.5 billion over the next 3 to 5 years through a combination of appropriate financial instruments, which should not divert critical development assistance away from existing development funding to support the needs of Việt Nam's just energy transition in accordance with the national framework of public debt and external debt management. Working closely with the Việt Nam Government, IPG members will mobilize $7.75 billion of public sector finance which should be on more attractive terms than Việt Nam could secure in the capital markets. Working closely with the Vietnamese Government and the IPG, the GFANZ Working Group members[3] will work to mobilize and facilitate at least $7.75 billion in private finance, subject to Mobilization of the catalytic public sector finance by the IPG members.

19. That the Mobilization of this finance will be enabled by the adoption of the Việt Nam JETP Resource Mobilization Plan (JETP-RMP) and subject to and in line with all relevant budgetary procedures and consensus on the use of funds and terms on which finance may be provided and a pipeline of opportunities consistent with the Government of Việt Nam's ambition. This mobilized finance will represent a part of the much larger investment needs for Việt Nam as will be outlined in the Việt Nam JETP Resource Mobilization Plan.

20. To mobilize support for Việt Nam under the JETP through which Việt Nam will continue its work to improve regulatory frameworks to expand both public and private investment into Việt Nam. This work should focus on renewable energy and the just energy transition, including measures to improve energy efficiency and strengthen the electricity grid in Việt Nam, contributing to the achievement of the targets stated in the National Strategy on Climate Change to 2050 and Việt Nam's NDC.

21. To develop and publish as soon as possible a JETP-RMP by November 2023 to identify the new investment requirements and opportunities – for the development and implementation of wind, solar, transmission, energy efficiency, storage, electric vehicles, training, retraining and vocational support for

3 Glasgow Financial Alliance for Net Zero. The Working Group includes an initial set of financial institutions including Bank of America, Citi, Deutsche Bank, HSBC, Macquarie Group, Mizuho Financial Group, MUFG, Prudential PLC, Shinhan Financial Group, SMBC Group, Standard Chartered.

employment among others - and measures to facilitate the deployment of support and overcome barriers to investment, to deliver Việt Nam's just energy transition.

22. That this plan will be fully led by the Government of Việt Nam and presented for endorsement by the International Partner Group, with administrative and technical support provided by the Secretariat as defined in paragraph 23 below, with additional assistance from the IPG where necessary and if required.

23. To establish by April 2023 a secretariat with external financial and administrative support under the direction of both Việt Nam and the IPG to provide support for the management of the long-term partnership to support Việt Nam's just energy transition and to facilitate and coordinate technical work according to the instructions of Việt Nam and the IPG; in addition to the support provided in the drafting of the JETP-RMP outlined above, the Secretariat will help facilitate support for Việt Nam's just energy transition efforts from the IPG and key stakeholders, including multilateral and bilateral development financial institutions, private sector and others;

24. That the JETP-RMP will support Việt Nam to:

    a) develop an ambitious and reliable long-term legal framework for the green transition of its economy, including through the use of pricing and regulatory instruments; which will include but is not limited to: making improvements to the regulatory framework to facilitate investment into renewable energy and energy efficiency and to strengthen the electricity grid in Việt Nam;

    b) accelerate the decarbonisation of its electricity system from the current net-zero planning peak of 240 MtCO2e by 2035 with international support (down from 280 MtCO2e before COP26) towards reaching a peak of no more than 170 MtCO2e emissions from electricity generation by 2030 enabled by meaningful and strong support from IPG partners in terms of finance as outlined under paragraph 18 and all technologies to scale up the deployment of renewable energy and the management of clean power systems.

    c) Work with Việt Nam and investors to reduce Việt Nam's project pipeline for coal-fired generation, currently standing at a planned capacity peak of 37 GW, towards a peak of 30.2 GW, as well as providing a credible and

ambitious emission reduction pathway to phasing out unabated coal-fired power generation after those dates.

d) accelerate the deployment of renewable energy and to develop the technical expertise to support and manage a grid increasingly powered by variable renewable energy, with the aim of enabling Việt Nam to sustain a reliable grid and move beyond the current planned figure of 36% towards at least 47% of electricity generation coming from renewables including wind, solar and hydroelectricity power by 2030, enabled by international support.

e) lead a just transition, in line with, inter alia, the ILO Declaration on Fundamental Principles and Rights at Work, to ensure all of society can benefit from a green transition to increase access to affordable energy and engage with relevant organisations and stakeholders to help meet the needs of those most affected by the green transition, such as workers and communities in sectors and areas affected by the transition;

f) develop and implement educational, vocational training and re-skilling programmes to develop necessary skills and competencies and support job creation for labour in sectors and regions affected by the transition, as well as other forms of support to ensure better living conditions for workers after the transition;

g) define the role of the private sector and create an enabling environment for businesses to proactively participate in the transformation process, such as de-risking credit, facilitating equity and bank finance, auctioning of permits, speeding up licensing, enhancing competition;

h) create opportunities for technological innovation and private investment to drive the creation of green and decent jobs as part of a prosperous low emission economy; and to design mechanisms to assist ensuring affordable electricity for affected, vulnerable and low-income groups;

i) negotiate – with the support of partners – the halting of investment in coal-fired power plants to deliver these goals, where appropriate;

j) negotiate the closure of old, inefficient unabated coal-fired power plants to facilitate access to clean energy;

k) develop the renewable energy industry including but not limited to developing renewable energy hubs, storage battery and renewable energy

equipment manufacturing, and green hydrogen production, developing planning of offshore wind platforms combining with marine aquaculture and fishing logistics;

l) work towards the establishment of a center of excellence for renewable energy in Việt Nam to share expertise, support the development of skills, technological and regulatory understanding and facilitate voluntary cooperation between Việt Nam and the private sector on technology transfer in order to accelerate and scale up the deployment of renewable energy and management of clean power systems in Việt Nam and the region;

m) realise multi-purpose land use for renewable energy production, agriculture, aquaculture to improve production and processing of agricultural products through improved accessibility to energy and create jobs for rural workers.

25. That a biennial review process will be developed to assess adherence to the top-line targets and the IPG support included in the Political Declaration, including to adjust those targets when necessary, and to the respective policy reforms aimed at facilitating greater levels of investment; they will ensure that the RMP under development supports the delivery of the highest levels of ambition and consider whether, with more finance from international partners, additional to that described in paragraph 18, Việt Nam could go further to align with a 1.5°C compatible trajectory.

26. This Political Declaration constitutes political commitments of the Government of Việt Nam and the members of the International Partners Group to be implemented in conformity with applicable regulations and laws. It is not a binding international agreement and does not give rise to rights and obligations under international law.

S2: Key tasks from the GoV COP26 outcome implementation plan

No.	Tasks	**Lead** +cooperating authorities	**Target**
1.	Amend the Decree No. 114/2021/ND-CP on management and use of official development assistance (ODA) and concessional loans provided by foreign donors	**MPI** + Relevant ministries, regulatory authorities and local governments	2022-8
2.	Decree providing amendments to the Decree No. 40/2016/ND-CP elaborating the Law on natural resources and sea and island environment; Decree No. 11/2021/ND-CP prescribing assignment of certain sea areas to organizations and individuals for exploitation and use of marine resources	**MONRE** + Relevant ministries and local governments	2022-9
5.	Review and propose amendments to mechanisms and policies for receiving loan capital; encourage investments in climate change response and energy transition in conformity with Vietnam's commitments	**MPI** + MOF, SBV, and CMSC	2022-9
6.	Do research on development model of green banks; encourage credit institutions and foreign bank branches to give aids and concessional loans to projects classified as green projects; give assistance for achieving the net-zero emissions by 2050	**SBV** + Relevant ministries and regulatory authorities	2022 - 2025
7.	Integrate and reduce the time for completing relevant procedures in the fields of investment, land, environment and allocation of sea areas; make connection, transmission and trading of electricity in respect of renewable energy projects	**MPI, MONRE, MOIT**+ Relevant ministries, regulatory authorities and local governments	2022-12
10.	Give approval for the National Power Development Planning for the 2021-2030 period with a vision by 2045; the National Energy Master Planning for the 2021-2030 period with a vision by 2050	**MOIT** + Relevant ministries, regulatory authorities and local governments	By 2022
11.	Give approval for the National Marine Spatial Planning for the 2021-2030 period with a vision by 2045	**MONRE** + Relevant ministries, regulatory authorities and local governments	2022-11
13.	Promulgate the National Action Plan for Implementation of Global Coal to Clean Power Transition Statement	**MOIT** + Relevant ministries, regulatory authorities and local governments	2022-8
19.	Formulate the political declaration on the just energy transition partnership between Vietnam and G7 member and non-member partners	**MONRE** + MOFA, MOIT, MOT	2022-9
22.	Establish the National Renewable Energy Center	**MOIT** + Relevant ministries, regulatory authorities and local governments	2022-9

No.	Tasks	**Lead** +cooperating authorities	**Target**
31.	Formulate the plan for communications on climate change response for achieving the net-zero emissions by 2050.	**MOIC** + Relevant ministries, regulatory authorities and local governments	2022-8
I.2.	Pilot and establish domestic carbon market	**MOF** + MONRE, relevant ministries and regulatory authorities	2022 - 2030
II.6.	Adopt the model of the just energy transition partnership between Vietnam and G7 member and non-member partners	**MOIT** + MOT, MONRE, MOLISA, MOFA	2023 - 2030
VII.4.	Establish and perform tasks to increase awareness of climate change response for central authorities, local governments, enterprises and individuals	**MONRE** + Ministries, regulatory authorities, local governments, socio-political organizations	2022 - 2030
VIII.1.	Mobilize and attract international resources (public and private sources of finance, technologies, knowledge, experience, etc.) by means of exchange, high-level diplomatic visits and working programs of Ministries, regulatory authorities and local governments with foreign partners, and Vietnam's diplomatic missions in foreign countries, and promote establishment of bilateral and multilateral relationship with international partners	**MOFA** + MPI, MONRE, relevant ministries and regulatory authorities	2022 - 2030

MOF: Ministry of Finance, MOFA: Ministry of Foreign Affairs. MOIC: Ministry of Information and Communications , MOIT: Ministry of Industry and Trade. MOLISA: Ministry of Labour, War Invalids and Social Affairs, MONRE: Ministry of Natural Resources and the Environment. MPI: Ministry of Planning and Investment, MOST: Ministry of Science and Technology, MOT: Ministry of Transport, CMSC: Commission for the Management of State Capital at Enterprises. SBV: State Bank of Vietnam.

Source: *Decision No. 888/2022/QD-TTg*

S3: Interview protocol

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2022-02-17

The **purpose** of this research study is to publish a timely technical report on Vietnam's JETP, and afterwards publish a peer-reviewed scientific article, in order to facilitate the rapid transition of Vietnam towards a net-zero society.

Our funding is from:

- CNRS, the French national public research organization. Dr. Minh lab is CIRED, its homepage is at https://www.centre-cired.fr/, its director is Dr. Franck Lecocq.
- The local think tank Vietnam Initiative for Energy Transition Social Entreprise VIETSE. Its homepage is https://vietse.vn/ , its director is Ms. Ngo Thi To Nhien.

Our method mixes quantitative and qualitative: to analyze energy and economic statistics, and to conduct a face to face interview survey of about fifteen stakeholders in Vietnam. The interview aims to hear lessons from the international experience, to discover the unwritten history of VJETP, the stakeholders perceptions and their expectations for a successful partnership.

Your participation is **voluntary**, you are free to opt in or out of the study at any point. We plan to limit the discussion to one hour of your time.

To preserve **confidentiality**, we will take handwritten notes only, anonymize interviewees in our notebooks and not attribute any quotes that we may use. We will not circulate meeting minutes.

We collect **personal information** to organize this survey: we maintain a table with recording your name, email, organization, consent and interview date. To protect your data, we will not share this spreadsheet with anybody else and destroy it when the article is accepted for publication.

Results communication: we will send you the draft technical report after its confidential review by two colleagues, and take into account your feedback before sending it out for external peer-review and further diffusion.

Request for informed consent

If you consent to participate in our study, please let us know your agreement by electronic communication. We will go over this sheet again when we meet.

Interview themes to be explored

In a semi-structured interview, the conversation flow is not pre-defined or pre-phrased. Here is the open, unordered list of general and specific themes we would like to hear about.

- JETP history, how it fits with existing international cooperation on energy.
- Lessons from other countries' JETPs.
- Opinion on JETP goals and performance indicators, both sides of the deal.
- Perception of other influential stakeholders.
- Implementation expectations for the JETP and its Resource Mobilization Plan.

- Justice.
- Enabling environment for businesses.
- Coal-fired power plants in Vietnam.
- Technology transfer and a center of excellence for renewable energy in Vietnam.
- Multi-purpose land use for RE production, agriculture, aquaculture.

- What is not in the declaration, anything else important for you.

Prompted discussion

We introduce a vision for the JETP with a few slides, then have a two-way discussion about it. This vision is reproduced in the following pages.

S4: A vision for JETP

2022-02-17

S4.1 Introduction

In order to carry out the JETP commitment, it is necessary to have an elite group of experts as the core, along with appropriate decision-making and content from the Steering Committee. Adequate financial resources are essential to implement the JETP commitment effectively, covering management, logistic support services, and scientific research evidence to support decision-making. Here is a proposed structure organization for the implementation of the JETP commitment:

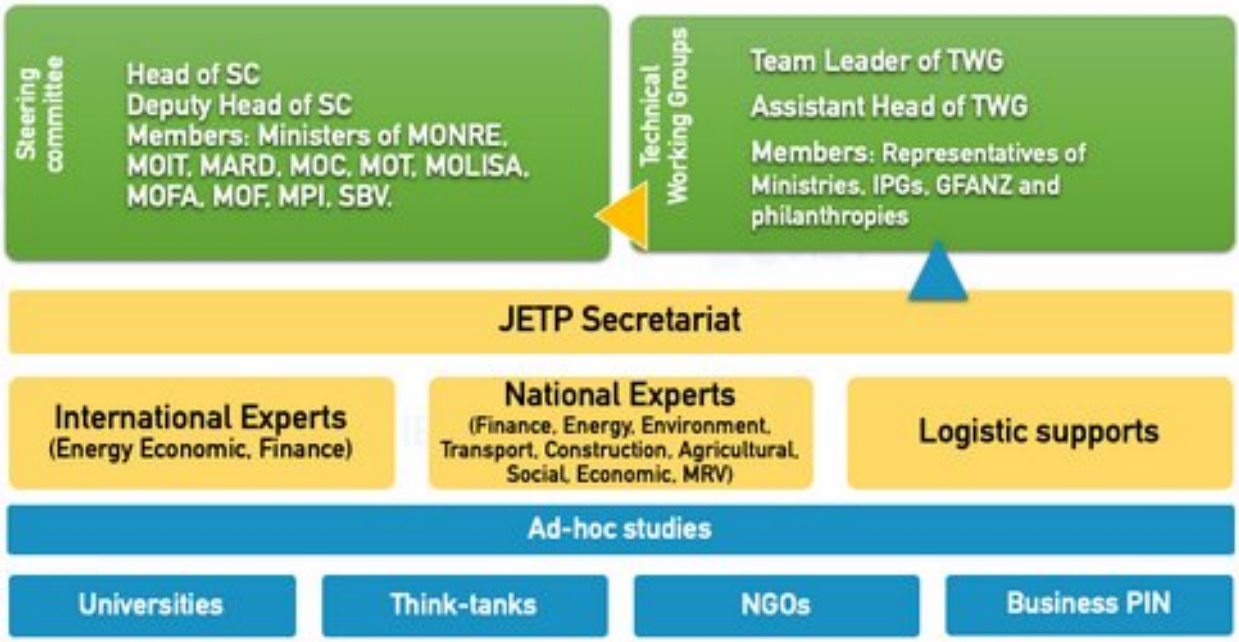

Figure 5: Proposed organisation of JETP secretariat

S4.2 Steering Committee

JETP National Steering Committee is responsible for managing resources and plays a crucial role in the implementation of JETP. The JETP-NSC's mission involves approving the action plan for JETP implementation, the list of investment projects within the JETP framework, financial policies and mechanisms to implement JETP commitments, and pilot implementation of specific mechanisms for technical assistance projects, investment projects, and budget-financed projects to fulfill JETP commitments. Additionally, the committee is responsible for monitoring, evaluating, and approving the annual report on implementing JETP commitments.

The duties and powers of the Head of JETP's National Steering Committee (JETP-NSC) include but are not limited to:

- Directing and approving all decisions regarding the mobilization of resources to implement the JETP commitments;
- Approving programs and master plans for the preparation and organization of activities of the Technical Working Groups and the Secretariat related to the implementation of JETP commitments;
- Adjusting and supplementing the members of the Steering Committee to ensure their effectiveness as leaders of relevant agencies and localities based on actual requirements and the nature of work;
- Approving ODA projects under the JETP commitment, including grants for operating the Secretariat and the Center of Excellence to carry out the implementation of JETP commitments.
- Convening and presiding over meetings of the Steering Committee for implementing JETP commitments.

The Deputy Head of the JETP-NSC is responsible for assisting the Head of the National Steering Committee in fulfilling their assigned responsibilities, which include, but are not limited to:

- Coordinating the preparation and organization of activities related to the implementation of the JETP commitment within the framework of assisting the Head of the National Steering Committee.
- Administering and handling the regular affairs of the National Steering Committee and producing periodic reports to be submitted to the Prime Minister.
- Communicating the direction of the Head of the National Steering Committee to relevant agencies and focal points during meetings.
- Directing the activities of the JETP Secretariat, encouraging Technical Groups to fully execute plans according to the roadmap, and coordinating activities between the Technical Working Groups and the JETP Secretariat.

The responsibilities of the Commissioner JETP-NSC include, but are not limited to:

- Representing their Ministry in JETP-NSC activities

- Executing tasks related to their Ministry management field and tasks assigned by the Head of JETP-NSC in JETP-NSC
- Being accountable to both the Head of JETP-NSC and their Ministry for the satisfactory completion of assigned duties.

S4.3 Technical Groups

The implementation of the JETP commitment requires thorough analysis of key factors by the Technical Working Group (TWG). We propose the creation of four technical subgroups to ensure comprehensive coverage of infrastructure, power development, energy efficiency, and transportation. The TWG will engage in discussions encompassing the Just Transition (Social impacts, reskilling, green jobs), Climate Protection (Clean air, water resource management, green agriculture, etc.), Carbon Initiatives, and Financial Initiatives.

The TWG will be headed by a Leader and a permanent staff who will assist the Team Leader in coordinating, making decisions, and documenting the contents discussed in the group. The TWG leader and permanent staff will be appointed by the Government from the management agency and receive their salary from the JETP implementation budget.

To ensure a diverse range of perspectives, team members will be nominated from various parties including government officials, IPGs representatives, and GFANZ representatives. Members must possess extensive professional knowledge in the fields of energy, environment, transportation, investment, finance, labor and employment, education and training, and climate protection. Team members will be responsible for quickly processing investment project requests or proposing new mechanisms and ideas to implement JETP commitments. Members of the TWG are expected to devote at least 70% of their working time and receive their salary from the JETP implementation budget.

The TWG involves overseeing the planning, directing, and organizing of technical activities related to fulfilling JETP commitments as assigned. The role also entails reviewing the regular tasks carried out by relevant ministries and agencies in the process of developing content, agendas, reports, documents, diplomatic letters, and other materials related to JETP commitment implementation. Specific responsibilities of TWG include:

- Leading the TAs research, proposing topics and initiatives, and coordinating with relevant parties to develop action plans, agendas, working programs, documents, invitations, and other materials related to JETP commitment implementation.
- Coordinating the provision of content related to investment activities, training, and other areas in relation to fulfilling JETP commitments.

- Summarizing and reporting the results of task performance and arising issues to the President of the National Committee.
- Carrying out other tasks as directed by the Head of the Technical Working Group.

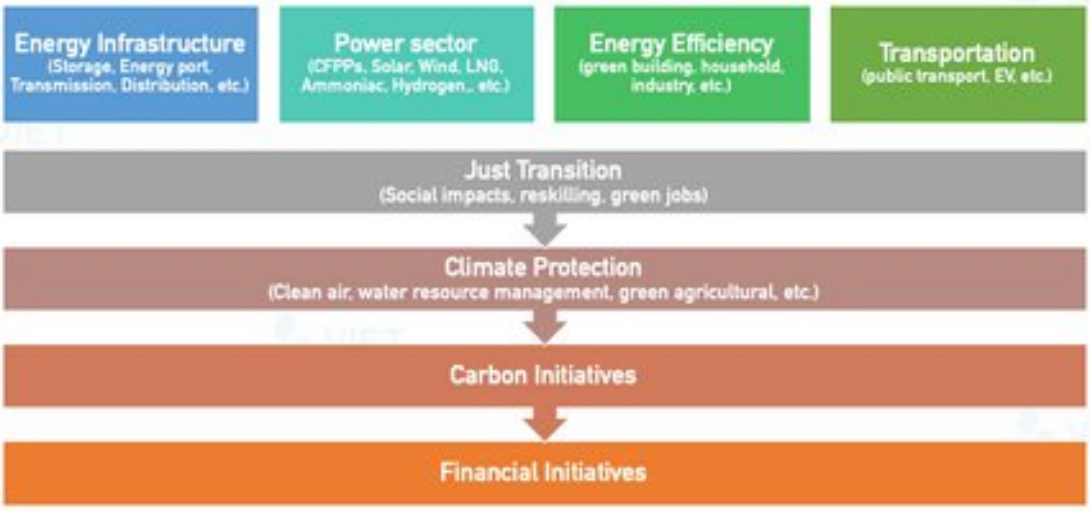

Figure 6: Structure of JETP Technical Working Groups

The duties of the Team Leaders of TWG encompass various responsibilities, such as:

- Being answerable to the JETP-NSC Head for their designated assignments.
- Planning, supervising, and regulating the activities of the assigned TWG
- Coordinating/contact point with the JETP Secretariat and other TWGs, as well as relevant agencies and regions.
- Making decisions about matters and duties related to the designated TWG's responsibility, following legal requirements.
- Preside over and be responsible for convening meetings of technical team members when necessary;

The responsibilities of the members of TWG include, but are not limited to:

- Representing their agency in JETP-NSC activities
- Executing tasks related to their agency's field and tasks assigned by the Team leader of TWG
- Being accountable to both the Team leader of TWG and their agency for the satisfactory completion of assigned duties.

S4.4 JETP Secretariat

The JETP Secretariat is comprised of two entities: the Permanent Secretariat and a team of experts. As a standing agency that supports the JETP-NSC, the Secretariat is responsible for overseeing and coordinating all activities related to the implementation of JETP commitments. This involves monitoring and coordinating the efforts of the Technical Working Groups, as well as facilitating communication between these groups and relevant ministries, agencies, and localities in Vietnam.

The Secretariat is specifically tasked with the following responsibilities:

1. Contributing to the development of work plans and programs, and ensuring that tasks related to JETP commitments are carried out in a timely and effective manner.
2. Collecting analysis reports from universities, think-tanks, and NGOs in order to develop integrated analytical reports as required by the Technical Working Groups.
3. Coordinating with the Technical Working Groups and relevant ministries and agencies in preparation for the Annual High-Level Meetings of the Steering Committee, as well as regular or extraordinary meetings of the TWG.
4. Collaborating with ministries and focal agencies to organize specialized conferences and related activities.

The members of the JETP Secretariat may include a range of experts, such as International Experts in Energy Economics and Finance, as well as National Experts in Finance, Energy, Environment, Transport, Construction, Agriculture, Social issues, Economic matters, and MRV. Additionally, logistical support is provided as needed.

The JETP Secretariat is responsible for hiring and mobilizing international/national experts and resource support for designing and carrying on ad-hoc studies and research paperwork based on the requirements of TWGs. In addition, JETP Secretariat also provides logistical support, coordinating with stakeholders, selecting venues, mobilizing financial resources, and performing other duties as directed. Through the effective execution of these responsibilities, the JETP Secretariat plays a crucial role in upholding the organization's commitments and ensuring the success of the implementation of JETP commitment.

S4.5 JETP Center of Excellence for renewable energy

The Center of Excellence will be established as a 5-years official JETP project funded by IPG partners and philanthropies. Its implementation consortium will comprise a local university, the research institute of the Ministry implementing the Secretariat, and a national energy transition expert organization. Its activities will be:

- Research and studies to accelerate the just energy transition in Vietnam and the region, including legal, environmental, technical, financial and socio-economic expertise.
- Continuous education training on renewable energy, focused on: public and private decision-makers JETP awareness; energy sectors workers re-skilling; gender and disadvantaged minorities just participation in the renewable energy sector
- Manage a network of national and international excellent researchers and teams on Data, Sustainability and Economic Sciences, with the aim to expand the Center into a regional scale Institute.