TRANSFORMA

JUST ENERGY TRANSITION IN COLOMBIA:

Analysis of the Partnership Model for financing and its applicability

About Transforma

Transforma is a Colombian think tank that promotes climate action and ecological transitions as fundamental elements in the search for sustainable and regenerative societies and economies at the national, regional and global levels.

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THIS POLICY BRIEF WAS PREPARED BY:

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Giovanni Pabón, Gian Fava, Alexa Guzmán y Álvaro Pinzón,
with Revisions and Editing by Karem Castro.

Aknowledgements to Shandelle Steadman
and Archie Gilmour from ODI.

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Introduction

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A Just Energy Transition (JET) is an essential process to address the challenges of climate change and move towards a sustainable future for the next generations. Within this framework, the energy sector contributes more than 70% of global greenhouse gas (GHG) emissions (WRI, 2020); thus, a transformation of how each country produces and consumes energy is required to contribute to reduce emissions and move towards a net zero scenario by 2050.

In Colombia, the *Just Energy Transition Roadmap* published by the Ministry of Mines and Energy in 2023 shows the political will to make progress in fulfilling the national commitments acquired after the Paris Agreement. As stated by the Government, the Just Energy Transition will enable progress in fulfilling international commitments to reduce GHG and ensure the country's energy sovereignty and economic stability in the face of uncertainty in international fossil fuel markets (Ministerio de Minas y Energía, 2023).

However, this challenge implies the need not only to decarbonize the energy mix, but to diversify the national economy considering the dependence on fossil fuel exports (CENSAT AGUA VIVA et al., 2022) and the local economic and social dynamics that require an analysis from the social and justice components.

Developing economies face technical and financial challenges despite the political commitment, the resources to implement the actions are not available or are offered as high-interest loans due to the risk assessments made by international credit institutions.

In an effort to address this problem, international experience has led to different ways of approaching this challenge. One of the most popular is the mechanism known as Just Energy Transition Partnerships or JET-P, based on the coordination of the activities among partners, investors, and donors for the development and execution of joint projects (Hadley et al., 2022).

Currently, there are international stakeholders interested in supporting the development of Country Platforms for climate action. For example, during COP 28, the Multilateral Development Banks Group have committed to support and boost joint climate action through country-led Platforms (European Investment Plan, 2023) in order to enhance in-country coordination and impact. Opportunities for agile and ambitious just transitions might seem achievable for countries like Colombia, only if reliable platform projects can be formulated to increase and accelerate financing.

This document proposes a first approach to the discussion on the relevance of Just Energy Transition Partnerships in Colombia by identifying the challenges the country faces from the point of view of mobilising investments and financing mechanisms for the transition. This is based on a review and analysis of the international experiences that have been implemented in South Africa, Indonesia, Vietnam, and Senegal (Simpson et al., 2023). In addition, it approaches the Colombian context by assessing the current economic needs and financing mechanisms designed for climate action and just transition, as first steps that have already been taken in the country.

Thus, this Policy Brief has been mediated and complemented with the points of view of different stakeholders (national institutions, private sector, civil society organisations, international cooperation and implementation agencies) invited to participate in dialogue and discussion spaces. It aims to provide the first steps to start the feasibility of applying these financing mechanisms and support informed political decision-making for the implementation of this type of mechanism in Colombia.

Research Methodology

Transforma, in collaboration with ODI, implemented a qualitative participatory research methodology that allowed us to collect inputs to develop and nurture this policy brief. The first step of the methodology was the search for secondary information, the conduction of surveys, and interviews with stakeholders within the JET agenda; subsequently, a workshop was held including institutional actors, civil society organisations, international cooperation and implementation agencies. These spaces allowed us to approach the stakeholders involved and to understand their positions around the financing of the JET, particularly with respect to the Financing Partnerships as a Country Platform. The collected information and the answers obtained in the proposed spaces are presented in this policy brief.

Financing for a Just Energy Transition

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2.1. What are Country Platforms?

A Country Platform can be defined as an ongoing mechanism to catalyse and channel collaboration for the systematic development of specific plans, programs, and projects (Hadley et al., 2022). These are government-led, multi-stakeholder voluntary partnerships used to attract and coordinate international public financing in support of common goals. The platforms carry out activities to convene and align different stakeholders such as national governments, financial institutions, the private sector, civil society organisations (CSOs), philanthropic organisations, and other development actors around a specific issue or geography (ODI, 2022).

Through its innovative collaborative approach, they help mobilise multiple stakeholders to unlock investments and maximise their contributions as a group, highlighting the importance of coordinated collaboration and coherent financing. Some perspectives focus primarily on obtaining and deploying public financing, and others focus on mobilising private funds by creating an enabling environment or reducing the risks associated with each project (World Vision International and The Partnering Initiative, 2016).

Multisectoral platforms (especially at the national level) have helped to address complex problems due to their ability to catalyse collaborative efforts (Plant, 2020). An example of this model is found in climate action; platforms led by national governments that have made it possible to link national mitigation and adaptation objectives according to the priorities and policies of each country, thus facilitating and directing international financing to support common objectives (Hadley et al., 2022).

Each country has a different situation and starting point that prevents homogenising the model for these platforms, so their needs and context must be understood and identified (Hadley et al., 2022). Therefore, the challenge to be addressed, the groups of target countries, the stakeholders involved, the particularities of governance, and the sources of financing will differ in each experience.

2.2. Just Energy Transition Partnerships (JET-P)

A Just Energy Transition Partnership is the leading example of a Country Platform for climate action (Simpson et al., 2023). In 2021, during COP26 a landmark agreement was reached to increase generation from renewable energy sources, coal phase-out, and to support a just transition in South Africa (Madereel et al., 2023). Later, during COP28 the commitments were reinforced, and their ambition increased, among which it is worth highlighting (UNFCCC, 2023):

- Tripling renewable energy capacity globally and doubling the global av-

erage annual rate of energy efficiency improvements by 2030;

- Accelerating efforts towards the phase-down of unabated coal power;
- Accelerating efforts globally towards net zero emission energy systems, utilising zero – and low-carbon fuels well before or by around mid-century;
- Transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner, accelerating action in this critical decade, so as to achieve net zero by 2050 in keeping with the science;
- Accelerating and substantially reducing non-carbon-dioxide emissions globally, including in particular methane emissions by 2030;
- Accelerating the reduction of emissions from road transport on a range of pathways, including through development of infrastructure and rapid deployment of zero and low-emission vehicles;
- Phasing out inefficient fossil fuel subsidies that do not address energy poverty or just transitions, as soon as possible;

Therefore, during the last years, there has been interest in supporting these types of Country Platforms because they can help to take a step forward in climate action, focusing on the energy transition in middle-income countries with a high dependence on fossil fuel extraction activities.

This model represents a method to enhance existing efforts to achieve a Net-zero mix, while addressing development priorities arising from structural transformation. This approach emphasises enduring and collaborative partnerships on a plurilateral scale (Seiler et al., 2023), as they can offer opportunities to support the energy transition of emerging economies by bringing together public, private, and philanthropic investors, directly linking concessional or grant funding to JET strategies (Madereel et al., 2023).

These partnerships are distinguished by their commitment to provide substantial financing for the energy transition from various approaches according to the national context. These include job creation, providing reliable energy, the electrification of transport, energy communities, transmission grids, distributed generation, and energy efficiency (Seiler et al., 2023), as opposed to projects that focus solely on coal phase-out or scaling up renewable energy generation projects to meet global emission reduction goals.

It has even been affirmed that Just Energy Transition Partnerships have contributed to integrate the idea of "justice" in energy transitions since they promote the definition and application of more equitable and sustainable energy transitions (Simpson et al., 2023). This is relevant to distinguish this model from other approaches to mobilise investment as it projects the idea that energy transition cannot be apart from justice, but must be integrated into all planning and implementation,

using a multilevel understanding of the equitable distribution of costs and benefits that just allow decision-making and implementation of investments.

2.3. Sources of financing for Just Energy Transition Partnerships (JET-P)

In general, countries rely mainly on their own financial resources; nevertheless, needs cannot be met in full with public resources, as presented in the first chapter.

Moreover, many of the required investments are financially viable and therefore attractive for external financing (whether international or private); therefore, Just Energy Transition Partnerships must leverage external financing mechanisms and attract private investors through loans, public-private partnerships, or by generating the enabling environment for direct private investment. However, this will not be possible until the national government enforces the regulatory mechanisms to make these investments financially viable.

This implies a series of challenges for countries to access loans, funds, and other types of external financing, such as limited technical knowledge, administrative difficulties (OECD, 2023) and governance arrangements to support the execution and maintenance of an agreement such as Just Energy Transition Partnerships (Institute of Developing Economies, 2021). There are multiple financing modalities that respond to the needs of each country, and each modality has its own financing instruments, whether incentives, loans or grants. Likewise, an enabling framework must be established for those investments that have to be provided through solidarity funds or international cooperation. Table 2 presents these modalities and their types of financing instruments:

TABLE 1. OVERVIEW OF REVENUE STREAMS THAT PLAY A ROLE IN SUPPORTING TRANSITION FINANCING.

FINANCING MODALITY	FINANCING TYPE/INSTRUMENT
PUBLIC	• Subsidies. • Technical assistance. • Equity investment. • Multilateral development banks. • Non-concessional Loan. • Concessional Loan.
PRIVATE	• Commercial Loans (Private Loans with Concessionaires). • Equity investment. • Capital markets.
MIXED FINANCING	• Non-tax incentives. • Guarantees. • Credit enhancement mechanisms.
PHILANTHROPY	• Subsidies. • Technical assistance. • Risk capital.
CARBON FINANCE	• Carbon markets. • Carbon Tax. • Results-based payment.

SOURCE: (IPG & GFANZ, 2023)

2.4. International experiences and opportunities for improvement of Just Energy Transition Partnerships (JET-P)

Just Energy Transition Partnerships formulated so far have been financed by a group of international countries called the International Partners Group (IPG) and by private financial institutions that are part of the Glasgow Financial Alliance for Net Zero (GFANZ) (formally involved in Indonesia and Vietnam). There are different IPGs for each JETP with different lead countries for each one of them, the common members across them all are the governments of Japan and the United States, Canada, Denmark, the European Union, Germany, France, Norway, Italy, Great Britain, and Northern Ireland (GFANZ, 2022)— have facilitated financing as long as the objectives

to be financed are aligned with those of the group.

Despite being a recent implementation mechanism, it already presents lessons learned from the four current JETPs South Africa, Indonesia, Vietnam, and Senegal.

SOUTH AFRICA'S JET-P (2021): It was the first JET-P to be announced, made during COP 26 in Glasgow. Key objectives include accelerating a just transition, decarbonizing the electricity system, and fostering new economic opportunities such as green hydrogen and electrification of transport, thus contributing to South Africa's shift towards a low-carbon future (*South Africa's JETP*, 2023).

The Political Declaration committed to the initial mobilisation of US $8.5 billion out of the total US $98 billion required by the country. One important aspect links financing directly to the closure of coal plants. Subsequently, a detailed plan was presented by the South African government to implement the JET by 2027; the document was presented during COP 27 (*South Africa's JETP*, 2023).

INDONESIA'S JET-P (2022): During the G20 Summit that took place in Bali, Indonesia and the IPG launched this JETP aiming to reach the energy sector peak emissions by 2030, a 44% share of renewable energy in the electricity mix and net zero generation by 2050 (JETP Indonesia, 2023). This agreement established a Comprehensive Investment and Policy Plan that will be updated periodically to reflect changes in the market and policy priorities. Key areas of investment include transmission lines, early phaseout of coal power plants, acceleration of renewable energy phase in deployment, and renewable energy supply chain improvements (JETP Indonesia, 2023) with an estimated cost of US $97.1 billion (2023-2030) and US $580.3 billion (2023-2050) (*JETP Indonesia*, 2023).

Financing for this project reaches up to US $10 billion from G7 donors, in addition to US $10 billion from Norway and Denmark. US $153.8 million was allocated for grant financing, and the rest of the resources will come from public financing including loans at preferential rates (Nangoy et al., 2023). The JETP has significantly reduced its allocation for early coal retirement from 5.5 GW to only 1.7 GW. To address this shortfall, further analysis and clear guidelines are needed to prioritise initiatives and foster collaboration (Larasati, 2023).

VIETNAM'S JET-P (2022): During the EU-ASEAN summit in Brussels, Vietnam made the political declaration of the agreement with the IPG to implement the JETP. This pact aims to help Vietnam reach its peak of GHG in the electricity sector by 2030 (5 years ahead of the initial plan) and reaching its maximum installed capacity of coal-fired power plants, JETP agreement will encourage the development of power generation projects from renewable sources, and the electrification of transport (Nangoy et al., 2023).

G7 members offered public financing of nearly US $8.1 billion as part of the total pledge of US $15.5 billion. Most of the resources are loans at market prices, which Vietnam has accepted. However, only 2% of the financing comes from grants mainly from the European Union, and another 18% approximately are low-interest concessional loans. The remaining resources are expected to come from private investors through loans (Nangoy et al., 2023).

SENEGAL'S JET-P (2022): This agreement was conceived during the COP27 in Egypt in November 2022. Senegal reached an agreement with developed countries to be provided with initial financing of US $2.74 billion. This capital will be used to achieve its target of 40% installed capacity from renewable energy sources by 2030 (Pineau & Irish, 2023).

A detailed investment plan will be finalised in the next 6 months. In addition, Senegal's new NDC, to be published at COP30, is expected to reflect increased climate ambition with its new energy strategy (European Commission, 2023).

Although each of these experiences have been, different depending on the context of each country, they have had common starting points: (i) their implementation has involved intensive collaboration and negotiation; and (ii) partner countries are interested in having more detailed understanding of the amount and nature of the financing provided by the IPG, which includes grants, loans, debt guarantees, among others. This information is essential to make informed decisions about the proposed projects to be included in the Partnership's investment plan.

However, although the promise of support for the transition to renewable energy projects is a positive development, there are significant challenges associated with them. They present improvement opportunities for those countries that intend to formulate a Country Platform to finance their JET. Some of them are:

1. The Investment needs must be formulated in advance of the request for mobilisation of financial resources

In the previously mentioned international experiences, resource mobilisation announcements were made, and subsequently the Investment Plans were outlined. This generated, for instance, that in South Africa the Presidential Climate Commission had estimated the total investment and financing needs of the Investment Plan at US $98 billion, a figure that far exceeds the initial promise to mobilise US $8,5 billion from investors and external donors (SIAL, 2024).

To make efficient use of the available financing flows, it is important to identify the priority projects that respond to the needs and context of each country before requesting resources, and in this way, align these projects with different financing modalities and corresponding

conditions, and not the other way around. To that extent, Investment Plans are the financing baseline because they express the resources required for the JET. However, this would be challenging taking into account that the investment plan preparation is time and resource intensive and would require technical support and coordination which is a big part of country platforms themselves.

2. These models must focus on addressing the real problems that act as barriers to a just energy transition:

The current definition of what constitutes a 'just' transition is not enough to build a political consensus, as there is no unified commitment (political or popular) to the implications of justice in the framework of an energy transition.

To that extent, project portfolios must prioritise the needs of the country from the inside out, based on the main barriers that prevent decisive progress towards the transition of the energy sector. In contexts such as Colombia, a Partnership on this level must incorporate not only the decarbonization of the energy mix, but also the economic diversification of the country considering the high dependence on fossil fuel exports and the complex local economic and social dependencies.

3. In Just Energy Transition Partnerships, the contribution to public debt and their limited inclination to grants are part of the design

Structuring these models comprises high percentages of debt for recipient countries, since most of the financing is mobilised through loans and guarantees on commercial loans. Blended finance as JETP modality must be introduced in the context of fluctuating economic situations. In the case of emerging economies, there is a high level of debt, especially in Latin America, where climate financing has been distributed mostly in the form of loans. These represent 88% of the finance acquired while only 12% has been allocated in the form of grants to the countries (Guzmán Luna et al., 2023). This may impose a higher tax burden on each country's accounts and will not be of great relief in promoting the JET.

Just financing principles are critical to ensure that resources are disbursed in the form of grants rather than loans. Even loans on favourable terms, with significant discounts with respect to market rates, increase the debt burden of countries. Therefore, for contexts such as Colombia, it is essential to obtain resources in the form of grants in the Just Energy Transition Partnerships and in other climate action funds that allow access to resources without implying an increase in public debt.

4. When coordinating the successful implementation of the Investment Plans, Multilateral Development Banks can contribute significantly

Although in this case the financing offer of the Partnerships proposed so far consists mainly of concessional financing and commercial loans, which raises doubts about whether this model would increase the already high percentage of debt on the GDP of the recipients, there are other approaches in which they could contribute such as playing the role of coordinator. Thanks to their convening power, these banks can bring together a wide range of public and private stakeholders through their national commitment model, they could also contribute to the development of reliable Investment Plans, and structure the most attractive strategic projects for financing. They can also help assess the risk of contributing to debt distress and propose mitigation measures.

5. Involving civil society is key to avoid problems associated with the lack of transparency in the management of resources:

A JET Financing Platform should include mechanisms that encourage meaningful civil society participation in the identification, design, and monitoring of projects, as well as in the structuring of JET financing programs for countries. For example, CSOs can gather channels to disseminate certain information and prepare citizens to act as overseers in the implementation of actions.

When it comes to projects that require significant infrastructure changes, transparency is important to ensure financing resources are allocated correctly. In the case of JET projects, it involves using the resources to develop projects in a way that benefits the entire community. This accountability and transparency can only be achieved when local CSOs and civil society experts have the freedom and capacity to (i) fully participate in public debates; (ii) independently monitor social and environmental impacts; and (iii) support the community with advocacy processes when needed.

Current overview of the Just Energy Transition financing in Colombia

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3.1. Financing needs for a Just Energy Transition for Colombia

The JET does not have a single definition, it varies according to the context of each country. In Colombia, it refers to the actions required to reach net zero by 2050. However, the energy transition is closely linked to the economic transition, given the country's economic dependence on fossil fuels.

According to the Colombian National Policy, CONPES 4075 on Energy Transition, public-private investment of COP $283 billion will be required by 2030 to advance in the JET consolidation process in Colombia. Of the total investment, only 0.01% is expected to come from public resources (DNP, 2022) through the development of policies and regulatory frameworks that will enable investments in the private sector. In the same way, other studies and references present different values related to the necessary financing for the JET in the country as shown in Table 1:

TABLE 2. NECESSARY INVESTMENT FOR JET IN COLOMBIA

DOCUMENT - SOURCE	GLOBAL ESTIMATE	ESTIMATED IN COLOMBIAN PESOS (COP)	ANNUAL NEEDS AS % OF GDP
ENERGY TRANSITION POLICY (NATIONAL GOVERNMENT OF COLOMBIA) CONPES 4075	N/A	$283 trillion (2022-2028)	3,0%
INTERNATIONAL MONETARY FUND	2% of GDP	$672 trillion (2022-2050)	2.0%
INTERNATIONAL ENERGY AGENCY	1.5% of GDP	$588 trillion (2022-2050)	1.5%
CAMPETROL	N/A	$2,394 trillion (2022-2050)	7.0%
MEAN OF THE ESTIMATE	1.5% of GDP	$1,197 trillion (2022-2050)	3.4%

OWN ELABORATION WITH DATA OBTAINED FROM (DNP, 2022), *FMI*, (IEA, 2023), (CAMPETROL, 2023).

In this sense and according to the magnitude of the investments required to execute the JET in the country, the flow of financing from the Global North to countries such as Colombia would allow them to bet on more ambitious goals. Hence the relevance of a financing platform.

Internationally, there is consensus that the quantity and quality of climate financing are currently insufficient for developing countries such as Colombia, which implies a challenge for the financing of a just transition, unless systemic changes are formulated within the financial ecosystem (Lowitt, 2021). This is because the mobilisation of investments is required, where traditional and even developed international financing mechanisms for climate financing are insufficient and ineffective.

It is necessary to develop specific instruments, mechanisms, and finance schemes to effectively plan and execute a JET that manages to prioritise two objectives equally: a climate-resilient low-carbon development economy, and socio-economic well-being that guarantees leaving no one behind. Therefore, financial innovations like the Country Platforms are required to mobilise resources towards the Global South. Their most recent development is Just Energy Transition Partnerships, which can play a key role.

With the 'JETP' branding currently not being used for new country platforms, and with alternative models gaining traction like Egypt's NFWE and Bangladesh's Climate and Development Platform, future Colombian country platforms might adopt a different approach.

3.2. Mechanisms that allow channelling resources for a Just Energy Transition in Colombia

One of the issues addressed during the development of this research was to explore the existing financial mechanisms in Colombia that facilitate capital flows to the JET. The implemented methodology allowed addressing this issue based on the consultation of primary sources such as surveys and bilateral interviews with stakeholders. The aim was to collect the diversity of perspectives and positions around financial mechanisms. Interviewees belong to one of these four categories: institutions, international cooperation, private sector, and civil society organisations. This approach made it possible to get a complete picture, thus laying the foundations for an analysis of the available financing mechanisms and their applicability in the national context.

Specifically, one of the questions asked was *"which of the mechanisms that you know in the country do you think could finance the JET in Colombia?"* The responses first underlined the importance of public financing through state resources as the main tool to support the JET. This allows us to affirm that, with respect to JET financing, the actors expect a major participation of national public resources.

The following financial mechanisms already exist in Colombia in the energy sector:

- **RENEWABLE ENERGY AND EFFICIENT ENERGY MANAGEMENT FUND (FENOGE BY ITS SPANISH ACRONYM):** it was created with the purpose of financing the implementation of projects of renewable energy sources and efficient energy management. Its resources are managed through a commercial trust. It is important to note that the resources that nourish FENOGE may come from various sources, ranging from law enforcement to multilateral and international organisations and donations.

- **ENERGY SOLUTIONS FUND (FONENERGÍA BY ITS SPANISH ACRONYM):** Aims to coordinate and focus various resources to finance: plans, projects and programs aimed at improving the quality of service, expanding energy coverage and standardising grids. It was created with the purpose of merging several financial instruments, such as the Electricity Grid Standardization Program, the Financial Support Fund for the Electrification of Interconnected Rural Areas, the Financial Support Fund for the electrification of non-interconnected areas, and the Special Fund for Natural Gas Development Quota (Transforma, 2022).

Although there are public funds, so far, they have not been fully used for productive development. The recent enforcement of the National Development Plan 2022-2026 (Law 2294 of 2023) has expanded the elements that can be financed through the National Development Fund (FONDES by its Spanish acronym). It enables using various resources and financial instruments to promote reindustrialization, the JET, and other strategic initiatives (DNP, 2023). The Government seeks to promote the growth of entrepreneurial capital, boost impact investment, and support ventures nationally.

- **IN PARALLEL, THE COLOMBIA: WORLD POWER OF LIFE FUND**, recently created with the enactment of Law 2294 of 2023, began its operation in November 2023. Its objective is to boost environmental and climate action, based on the implemented project type there will be some related to JET. This fund is presented as a strategic entity to articulate, focus, and finance the execution of plans, programs, and projects of a national or territorial nature (Función Publica, 2023).

- **IN THE NATIONAL REINDUSTRIALIZATION POLICY (CONPES 4129)**, reindustrialization is positioned as the productive expression of the JET. It supports the decarbonization of the economy and addresses the adaptation and mitigation of climate change in the productive apparatus. Interventions in strategic sectors such as minerals, renewable energy, energy efficiency, steel, and sustainable mobility stand out. The initiative also seeks financing through the Colombia World Power of Life Fund, with specific programs from

the Ministry of Finance, the National Guarantee Fund, and the Ministry of Commerce, Industry and Tourism (DNP, 2023).

- **FINALLY, THE MINISTRY OF COMMERCE,** Industry and Tourism plans to implement a program between 2025 and 2026 that promotes crowdfunding for companies linked to the strategic bets of the reindustrialization policy (DNP, 2023). This program seeks to diversify and facilitate access to financing in key sectors for the country's economic development.

However, it should be noted that despite the combined efforts of the State to finance the JET, as shown above calculations indicate that public investment only represents 0.01% of the required resources (DNP, 2023). In addition, beyond the calculation made by the DNP, it has been evidenced that it is important to have financing from public funds that stimulate innovation and close social gaps, especially for those projects that do not have a financial closure. This implies that the planning of the JET should aim to stimulate substantial private investments along with public investment.

Financing platform for a Just Energy Transition in Colombia

4

As has already been expressed in the document, the JET requires a change in the economic model and a Just Economic Transition with equitable financing mechanisms that consider the particularities of the country. This is a complex process that can take years to materialise, as it requires the articulation between various actors in society to reach agreements around some of the challenges that the JET must overcome (Transforma, 2023): (i) provide short-term assistance for the labour transition of workers affected/displaced by the energy transition; (ii) develop economic activities that replace external income from traditional mining-energy sector operations; (iii) create robust financing mechanisms to achieve the transition; and (iv) forging a path for renewable energy in Colombia overcoming regulatory obstacles, among others.

4.1. Country Platform for a Just Energy Transition in Colombia

A JET Partnership could serve as a more effective source to catalyse capital to help Colombia accomplish the commitments around the JET; it could unlock substantial international resources and international support (Willis Towers Watson & Center for Sustainable Finance, 2022).

In this sense, the platform would make it possible to identify the financial instruments available to meet the goal of tripling the installed capacity using renewable energies by 2030, established at COP28.

A transition towards the decarbonization of the energy mix is required, with a focus on economic and social justice. This means ensuring that transition-affected communities are an integral part of the process and benefit from new economic opportunities.

The implementation of a Country Platform model for Colombia would attract both public and private investments towards JET projects, thus generating a proper environment for development and innovation in this sector. In addition, it would strengthen international cooperation on climate change, which would result in exchanges of knowledge and technologies, as well as the establishment of strategic alliances to jointly address this global challenge.

The existing platforms in Colombia that allow resources to be channelled for the JET are presented below:

- **THE NATIONAL CLIMATE CHANGE INFORMATION SYSTEM (SNICC BY ITS SPANISH ACRONYM)** is in the process of being created by decree. It aims to become an umbrella platform that articulates all relevant information on climate change in Colombia. In addition, the incorporation of a financing platform within the National Climate Change System is being considered, which would not be independent but part of it. The latter focuses on providing data on available projects

and the need for financial instruments, instead of playing an intermediary role, with an approach oriented towards being a partnership between countries to coordinate resources.

- **THE CLIMATE FINANCE CORRIDOR:** This tool was conceived as a system to target finance flows towards specific needs in the fight against climate change. It connects stakeholders, initiatives, and existing financing mechanisms in the market to promote future business but does not commit to mobilise specific resources. It seeks to develop a market model to meet the commitments of the Paris Agreement; encourage the mobilisation of climate finance resources from the public, private and international sectors; and articulate sectoral and territorial needs with various sources of financing (DNP, 2024).

  This corridor collects information about the projects, including their degree of maturity, the sector they belong to, and the type of financing they seek. Projects are prioritised according to their relevance and mapped to identify connections between them and potential business opportunities. It seeks to understand the sectoral and strategic needs to adapt the platform to the different areas of interest.

  While this corridor connects projects with financing sources, there is room for other platforms to focus on specific transactions, or on other aspects to ease direct financial transactions or address aspects directly related to the JET that are not the main focus of the corridor.

4.2. Need for articulation with existing tools and platforms

To make the most of available resources and avoid duplication of efforts, there must be an articulation among the financing platform and the financial mechanisms, corridors and tools already existing, both at the national level and in the international financial system, especially those related to climate change. This includes the use of existing financial vehicles such as Climate Investment Funds. Within this framework, it is necessary to:

- Avoid reprocessing associated with misalignment and disarticulation with multiple platforms that are not integrated with each other.

- Centralise information on sectoral needs and strategic projects to make the most of resources and maximise the impact of investments.

- Define the structure for a Just Energy Transition Finance Partnership in Colombia and set a baseline on how to develop an efficient platform. The experience of the National Planning Department can play a crucial role in this regard. Hence, it is recommended that sectors recognize and use the Corridor platform to strengthen coordination

with government policies and specific sectoral needs, such as the JET.

To achieve an effective articulation that guarantees the adequate allocation of these resources to the JET, it is essential to strengthen the dialogue, management and allocation between the different levels of government (national, departmental, municipal). There are already several resources, platforms, and needs; we must look for a platform that seeks to align all actors with financing and needs.

4.3. Relationship between the Financing Platform and NDC mitigation actions.

To ensure coherence between the financing platform and the mitigation actions set out in the NDC, it is essential to adopt the following measures:

- Detail precisely and specifically the concrete actions that will be carried out to meet the climate goals established in the NDC. This involves following the Just *Energy Transition Roadmap* to clearly define the activities, timelines and resources required for its successful implementation in all sectors.

- Actively seek international support, involving counterparts to obtain technical assistance and financial resources.

- Establish more effective interactions between the government and the private sector to ensure the implementation of mitigation actions.

- Finally, the Financing Platform should support prioritised mitigation actions through:

1. The strategic lines defined in the Plan for Integrated Management of Climate Change in the Mining-Energy Sector (PIGCCME, by its acronym in Spanish) mitigation plan including: Strengthen the Rational and Efficient Energy Use Program (PROURE, by its acronym in Spanish), manage the offer to promote the dispatch of electrical energy, diversify the energy mx, transition to renewable energies in Non-Interconnected Areas, efficient demand management, demand aggregator, generate information and regulation of fugitive emissions, electrification and substitution to less carbon intensive energy in companies in the energy mining sector and promote new technologies.

2. Compliance with the recommendations and implementation of the JET Roadmap.

3. Support for the needs of communities and citizens, highlighting the role of CSOs as overseers of the JET in the country.

4. Technical support for the formulation of new sectoral regulation that enables new investments (e.g., renewable energy auctions).

However, lessons learned from the development of climate finance tools and mechanisms cannot be overlooked. The main challenge for JET financing lies in learning from climate finance experiences to achieve microeconomic outcomes that have a positive impact on vulnerable communities. Some of the most crucial challenges are:

- The need to define indicators that enable measuring the impacts of strategic projects on vulnerable communities by establishing universal metrics that can adequately capture the results of investments in the developments of financing for a just transition, which allow maximising the potential of these investments.

- Review the enabling frameworks for investment inflows at the national level, as bureaucracy and slow resource disbursement processes which delay the implementation of projects and limit their scope.

- Prioritise transparency, accountability, and efficiency in the management of resources to avoid errors and delays.

4.4. Challenges in the implementation of a Financing Platform for the Just Energy Transition in Colombia

The implementation of a Financing Platform for JET in Colombia faces a number of challenges that must be addressed to ensure its success.

One of the main challenges lies in the **lack of capacity to structure and manage JET projects** at national and subnational levels. The lack of experience and technical knowledge in the development of viable and bankable projects can make it difficult to effectively channel financial resources. To overcome this obstacle, it is necessary to implement mechanisms to increase the capacity at national and territorial level on this aspect.

The **long-term sustainability of JET projects** also needs to be considered. The active participation and ownership of local communities in the planning,

implementation and maintenance of projects are essential elements to ensure their success. Likewise, creating a robust financial monitoring and reporting system that goes beyond the technical monitoring of projects will enable a better traceability of resources over time. The implementation of mechanisms for measuring, reporting, and verifying financing, similar to those used for emission reduction commitments, will also strengthen the transparency and traceability of the use of resources allocated to climate projects.

Support from international partner groups. In this scenario, multilateral development banks emerge as important stakeholders, able to mobilise stakeholders and facilitate the financing of JETPs. However, support from international partners must transcend monetary aid and encompass technology transfer and concerted efforts to cultivate local value chains for a strengthened JET.

Another challenge lies in the **democratisation of access to resources** should be sought by ensuring that they effectively reach communities with mechanisms such as energy communities, public-private, and public-popular alliances, and encourage private investment through financial mechanisms that reduce investment risks. Therefore, public resources must be reviewed and managed to gradually channel resources toward investments that reduce fiscal costs and promote JET, for instance:

- **RESOURCES OF THE GENERAL SYSTEM OF PARTICIPATIONS**: transfers from the national government to territorial entities to finance public investment Ministerio de Hacienda y Crédito Público, 2008).

- **RESOURCES OF THE GENERAL ROYALTY SYSTEM**: They come from the exploitation of non-renewable natural resources intended to finance investment in the producing regions (Ministerio de Hacienda y Crédito Público, 2019).

- **FINANCIAL SURPLUSES OF ENTITIES ASSOCIATED WITH EXTRACTIVE ACTIVITIES**: These entities could contribute additional resources to the JET as part of their social and environmental responsibility (Ministerio de Hacienda y Crédito Público, 2022).

Strategic programs prioritised for investment in the Just Energy Transition in Colombia

5

At COP28, the Colombian Government presented the **Leadership Portfolio for Climate Action and Socio-ecological Transition**, with a projected investment of more than US $32 billion, equivalent to 2.5% of the national GDP. It is noteworthy that the JET Portfolio will require an investment of US $14.5 billion out of the US $32 billion contemplated in the set of measures for climate action and the socio-ecological transition to decarbonize the energy mix. This portfolio aims to mitigate more than 15 MtCO2e per year of greenhouse gas emissions or 16.14% of the GHG of the energy sector , thus meeting the objectives set in the NDC, while expected to generate economic alternatives by reducing Colombia's dependence on the current extractivism (MME, 2023),

The Ministry of Mines and Energy has identified six strategic programs that act as accelerators for the JET, for instance: (i) Estallido Solar Caribe [*Caribbean Solar Burst*]; (ii) Energy Communities; (iii) the progressive phase out of public coal power plants; (iv) Green Hydrogen+ Power-to-X (P2X); (v) Electric mobility; and (vi) JET "Life Corridors" in coal regions (MME, 2023).

Out of the 6 strategic programs, the 2 on which the government has made the most regulatory progress to date are presented.

- **ENERGY COMMUNITIES, A BET ON THE DIVERSIFICATION OF ENERGY DEMAND:** On November 15, 2023, the Ministry of Mines and Energy announced the launching of "Energy Communities", an initiative that aims to democratise energy. This initiative seeks that communities bet on self-generation to meet their consumption needs, and if their generation exceeds their demand, they can commercialise the surpluses to another community or to the National Interconnected System (MME, 2023).

  - The commitment is aimed at expanding the universalization of energy to territories that have not had access to electricity to date, which can access quality energy that allows them to improve energy efficiency, decentralised electricity generation, electrify activities, increase their economic income, and improve their quality of life. Unlike the electrification programs of the Institute for the Planning and Promotion of Energy Solutions for Non-Interconnected Areas (IPSE by its Spanish acronym), it is sought that energy communities generate economic income through the use of electricity in territories that require it. This way, they can develop their local and territorial economy and also assume the costs of operation and maintenance of the energy solution of which they have been beneficiaries.

- **PHASE-OUT STATE COAL-FIRED THERMOELECTRIC PLANTS:** Colombia has demonstrated a firm commitment to the decarbonization of its energy mix by joining the Powering Past Coal Alliance (PPCA) in 2023, showing the country's willingness to phase out coal-fired power

plants. According to the "Just Energy Transition" scenario of the Ministry of Mines and Energy's JET Roadmap, coal is expected to be eliminated from the electricity generation mix by 2035 (Ministerio de Minas y Energía, 2023), driven by increases in operating costs related to the carbon tax, the completion of firm energy obligation contracts, and compliance with energy obligations.

A prominent example of this transition is the conversion of the TermoGuajira thermoelectric power plant, announced by the Ministry of Mines and Energy. This coal plant, located in the municipality of Dibulla, will be the first to be transformed into decarbonized electricity generation (Ministerio de Minas y Energía, 2023). With an installed capacity of 290 MW, TermoGuajira plans to generate power from solar panels and store it in battery energy storage systems (BESS). The operating company, Gecelca, has announced its foray into the development of photovoltaic solar panels, which boosts the development of renewable energies in the region (MME, 2023).

This project is considered a benchmark for the transition of coal-fired thermoelectric plants in Colombia towards Renewable Energy Sources. The "From Coal to the Future" plan of the Ministry of Mines and Energy includes aspects such as job conversion, socio-territorial relationship models, and financing strategies to facilitate this transition.

5.1. Additional elements to the project portfolio prioritised by the Ministry of Mines and Energy

Following discussions with the stakeholders, valuable contributions were obtained that complement the portfolio of projects presented by the Ministry of Mines and Energy for the implementation of JET. Among the suggestions made, the following stand out:

1. Smart Grids and Distributed Generation

The modernization of electricity transmission and distribution grids, accompanied by the implementation of smart technologies —such as smart grids and smart metres, as well as the promotion of distributed generation— are pillars to move towards a more efficient and resilient electricity system. These measures enable more effective management of the power grid and facilitate real-time monitoring and early failure detection, which in turn reduces emergency response times and optimises the use of resources. In addition, it supports the promotion of distributed generation that contributes to diversifying the electricity mix, reduces transmission losses, and strengthens the resilience of the system in the face of extreme weather events or interruptions (UPME, 2020).

2. Establish production chains

The economic reconversion and the phase-in of Renewable generation projects must be prioritised since it is necessary to move away from extractivism to a productive economy. At the same time, it is a sustainable activity in time, which supports or replaces the economic role played today by the mining-energy sector (Transforma, 2023),

In Colombia the promotion of wind projects is considered strategic to guarantee sustainable electricity supply. Investment in national industrial infrastructure to support this emerging sector is essential, as evidenced by the project to establish a concrete tower factory in La Guajira. This would not only strengthen the local economy, but also ensure a competitive offer in the market (Transforma, 2023).

The transition to renewable energy sources presents a unique opportunity to drive the manufacturing of related components and devices. Therefore, it is important that the Ministry of Mines and Energy include specific measures in its roadmap to promote the national industry associated with renewable energy technologies. This can be achieved through the implementation of incentive policies, support for research and development, and the creation of training and education programs for the specialised workforce in this field.

3. Sectors that are difficult to take down

Thermal plants are not the only ones in the industry that use coal; steel plants also use steelmaking coal. In addition, this industry demands large amounts of heat, which translates into a considerable need for energy to power its furnaces, as is the case with cement factories. Therefore, it is necessary to include these industries in the project portfolio, given their dependence on fossil fuels for their operation and their relevance in the national economy.

In addition, freight transport stands out for its high consumption of Diesel; however, current technologies do not offer viable alternatives to replace fossil fuels in this sector, so it is important to focus on research, development, and innovation strategies to explore alternatives. Hydrogen is considered a promising option to replace Diesel in freight transport (MME et al., 2021). However, domestic demand for hydrogen must be encouraged to stimulate its production and use at the national level, thus preventing the production of this energy resource from being directed solely to the international market.

4. Energy efficiency from the demand side

Encouraging a change in behaviour from the demand side also contributes significantly to the efficient use of energy. Various initiatives have been implemented to improve it in different

sectors such as industry, transport, and buildings, with the aim of reducing energy consumption and greenhouse gas emissions.

Initiatives such as the FENOGE-supported program, which consisted of replacing inefficient refrigerators and applying the Technical Labelling Regulation (RETIQ by its Spanish acronym) aim to establish measures to promote the rational and efficient use of energy in products that use electrical energy and fuel gas and offer key tools to reduce emissions and promote positive changes in energy management and consumption in the country (Ministerio de Minas y Energía, 2019).

5. Education to create a culture around the Just Energy Transition

Education and awareness play a crucial role in this process, as they can help overcome resistance and foster a culture of sustainability. Educational campaigns should highlight the benefits of the energy transition, as well as the importance of citizen participation in the process.

Groundwork needs to be done prior to project implementation, focusing on ethics and transparent resource management. This implies involving the beneficiary communities in the discussion on the appropriate use of resources, thus avoiding their politicisation.

5.2. Prioritisation in the allocation of resources for the Just Energy Transition

Three key factors were identified to be considered when allocating resources channelled through the Just Energy Transition Partnerships model for the implementation of projects in Colombia:

1. Energy poverty

Addressing energy poverty is key to achieving a just and equitable energy transition. Ensuring that all individuals have access to affordable and sustainable energy services that promote equal opportunities and reduces the social inequality gap. It also contributes to building a more inclusive and resilient society and to ensure a just, inclusive, and sustainable energy transition.

According to data from the Ministry of Mines and Energy (MME, 2024), the electricity coverage rate in Colombia by 2024 is 96.55%, that means 3.45% of households do not have electricity yet. This highlights the urgency to guarantee justice and equity in the energy transition in these communities and territories. Furthermore, in the framework of the JET, a gap in service quality is identified, since only 38% of decentralised users have electricity twenty-four hours a day, while 57% of users service provision is up to 10 hours/day (IPSE, 2023).

2. Energy to promote productive development

A Financing Platform for the JET must also be structured around an Economic Transition on the same scale, with coordination among all sectors and effective planning of costs in the short and medium term. It would allow the national economy to modernise in terms of reindustrialization, services and training, and enable adopting a model of economic diversification to increase competitiveness in the global scenario in which resources are allocated for research and development, as well as policies to promote innovation and specialisation in higher value-added sectors.

3. Labour, environmental, and financial liabilities

The focus on mitigating these liabilities not only contributes to solve existing problems, but also prevents the accumulation of future problems that could have an even greater impact on the environment and affected communities. Allocating resources to the resolution of labour liabilities promotes social justice by ensuring just and safe working conditions for workers; in turn, these improve economic and social stability in the affected areas.

By investing in projects that reduce or eliminate these liabilities, long-term environmental sustainability is fostered, thus creating a healthier and more resilient environment for future generations. Resolving financial liabilities (debts or financial management problems) contributes to improving the economic stability and investment capacity of the country, which in turn facilitates the financing of projects within the framework of the JET.

5.3. What should not be financed within the framework of Just Energy Transition

According to the inputs obtained in the different discussion spaces reflecting on the importance of considering social, economic and environmental aspects in the implementation of the JET, as well as the need for careful and transparent planning of available financial resources, a clear financing portfolio is required for the resources of the Just Energy Transition Partnerships, which excludes:

1. Fossil Fuel Projects

Portfolio projects must be aligned with reality and climate goals and international commitments. Dependence on fossil fuels must not be allowed to tilt the negotiation towards measures that are not related to the JET, or that are formulated as false solutions to the climate crisis, such as the case of investing in new infrastructure for gas.

Within those projects, the Colombian government has already taken

concrete steps toward eliminating financing for programs or projects that do not align with international agreements, as evidenced by the suspension of hydrocarbon exploration contracts, and the participation in the Beyond Oil and Gas Alliance (BOGA) as "Friend." This is an international initiative committed to transitioning to cleaner energy and reducing dependence on fossil fuels.

2. Projects that do not provide real and measurable benefits in terms of climate impact

Given that public resources are limited and must be used efficiently to address the most pressing challenges, such as climate change, financing projects whose impact cannot be measured equals wasting public funds that could be used for initiatives with tangible and positive results for the environment and society.

It is important that public-financed projects are based on solid data and evidence to ensure that they actually contribute to sustainability and climate resilience goals, and that actions that do not generate real and measurable benefits and could undermine public confidence in government policies related to the environment and climate are not supported, as well as organisations that support financing initiatives.

3. Subsidies on energy consumption

FOR FOSSIL FUELS

Regarding subsidies, following COP26, Colombia has committed to suspend inefficient fossil fuel subsidies. In addition, it is planned to start dismantling diesel final consumption subsidies by 2024 which could have implications for national inflation. The speed of implementation of the JET can have economic repercussions on the inhabitants of the country, especially for those in vulnerable situations.

Neither networked natural gas nor in-cylinder LPG should be subsidised, as this practice represents a high tax burden for the government (Gestor Del Mercado Del Gas Natural in Colombia, 2023).

FOR ELECTRICITY

The Solidarity Fund for Subsidies and Income Redistribution (FSSRI by its Spanish acronym) was created with the intention that higher-income users will help subsidize energy services for lower-income users, primarily benefiting strata 1, 2, and 3 with subsidies financed by contributions from strata 5 and 6. However, there is a problem of targeting resources, since subsidies are reaching most households, even those that do not need them according to poverty estimates (Pabón Restrepo et al., 2022).

This imbalance has generated a deficit in the funds, which requires an additional allocation of resources by the Government. In addition, subsidies negatively affect energy efficiency by promoting excessive consumption in the beneficiary strata, which makes it necessary to reassess consumption thresholds to ensure a dignified and efficient quality of life. Therefore, the importance of redirecting subsidies to avoid the waste of resources and promote more efficient behaviours in energy consumption is raised (Pabón Restrepo et al., 2022).

6 Conclusions

- Structuring a Just Energy Transition Partnership model, while posing challenges, shows significant opportunities for Colombia, as it would unlock substantial resources and support the country's efforts towards a more sustainable, low-carbon economy, and would facilitate the identification and organisation of available financial instruments, as well as the efficient channelling of resources towards Just Energy Transition projects in Colombia.

- Both a partnership and a financing platform represent complementary approaches that could help Colombia address the financial challenges associated with the energy transition, while promoting economic and social justice. In addition, it could contribute to coordination between the different levels of government and the public and private sectors, thus strengthening cooperation and collaboration in the implementation of climate actions.

- The need to diversify financing sources from the combination of national and international resources to finance the JET is highlighted, with an emphasis on the participation of the private sector. It seeks to democratise access to resources and encourage private investment through financial mechanisms that reduce investment risks for the private sector. Therefore, it is important that the government actively works to ensure an enabling framework for this type of investment and explores options, such as guarantees or other institutional measures that facilitate the participation of the private sector in projects related to the JET.

- Financing the Just Energy Transition depends also on an adequate articulation among the available funds. This coordination is critical to avoid duplication of effort and ensure efficient allocation of resources, thus enabling effective "housekeeping".

- Financing the Just Energy Transition is a process that demands careful and transparent management of resources. This involves carrying out a thorough assessment of the country's needs and priorities, ensuring that each investment has a significant and positive impact.

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