

UNTAPPED POTENTIAL:

NATIONAL DEVELOPMENT BANKS CAN
ANCHOR JUST ENERGY TRANSITIONS



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Cover photo: Electric bus charging station in New York City
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Oil Change International is a research, communications, and advocacy organization focused on exposing the true costs of fossil fuels and facilitating the ongoing transition towards clean energy.

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EXECUTIVE SUMMARY

National development banks (NDBs) – publicly-owned domestic financial institutions with public policy mandates – have an underused potential for financing the energy transition. If equipped with the right mission and resources, NDBs can act as powerful tools to steer and finance just energy transition plans.¹ In this briefing, we present the first-ever dataset of NDB energy finance in G20 countries, covering transactions between the adoption of the Paris Agreement in 2016 and 2024. Our research confirms the growing recognition that NDBs can become a major player in fostering a just energy transition: They are already providing large amounts of clean energy finance

and could provide far more. Many are well-suited to deploy public-interest financing tools to uphold environmental, labour, and social safeguards, and ensure affordable, reliable energy services for all – with examples already in use that peer institutions could learn from.

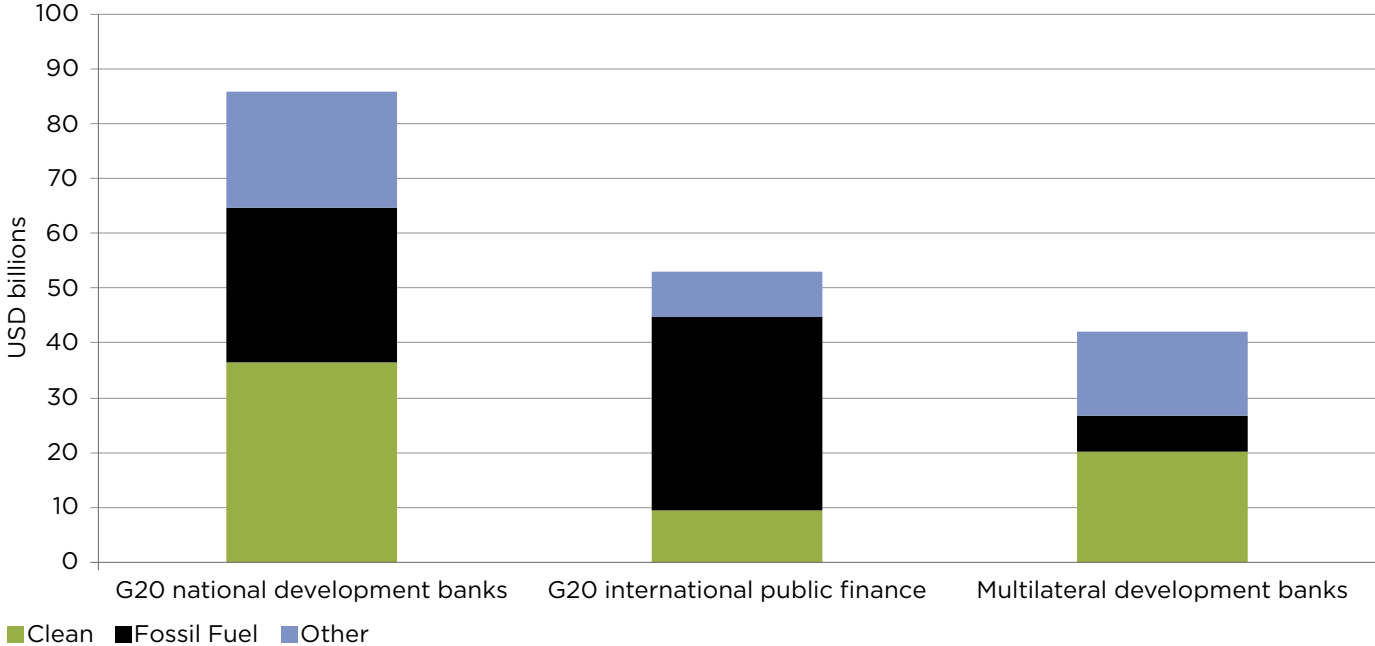
- NDBs already provide large amounts of clean energy finance and even more can be shifted to support just energy transitions.

Worldwide, there are over 300 NDBs with estimated total assets of USD 18 trillion that make up 9% of annual global investments, showing their great potential to shape an energy transition.²

Our analysis finds that G20 NDBs’ clean energy finance (\$36 billion annually on average from 2016 to 2024) is already larger than the international public finance from G20 countries and the multilateral development banks (MDBs) combined (\$29 billion annually over the same period).

If all NDB fossil fuel and other energy finance was shifted and used to support the build out of affordable renewable energy systems, NDBs could provide an additional \$28 billion for the just energy transition annually. This would be more than all MDBs and G20 international public finance for clean energy combined.

Figure ES-1: Public Energy Finance by Category and Institution Type, Annual Average, 2016-2024, USD Billions



Source: Public Finance for Energy Database, energyfinance.org.

While the role of NDBs in the energy transition is often overlooked, this figure shows that there is a large potential to make more effective use of NDBs' finance, tools, and instruments for the energy transition in G20 economies. Moreover, previous research into NDB climate commitments finds that many do not yet adhere to specific climate criteria, and many others could be given a stronger mandate or the ability to raise more funds, meaning that there is room to further enhance their ability to fund the transition.³

- **Different G20 NDBs are playing dramatically different roles in the energy transition. Just a handful are responsible for almost all the fossil fuel finance we found.**

NDB finance for fossil fuels from G20 countries averaged at least \$28 billion a year from 2016 to 2024.

For NDBs in Russia, South Korea, Mexico, Canada, the United States, and Indonesia, fossil fuel finance made up three-quarters of their total energy finance between 2022 and 2024. Similar, yet less marked trends can be observed in Saudi Arabia, Japan, Argentina, and Italy, where roughly half of their finance went to fossil fuels.

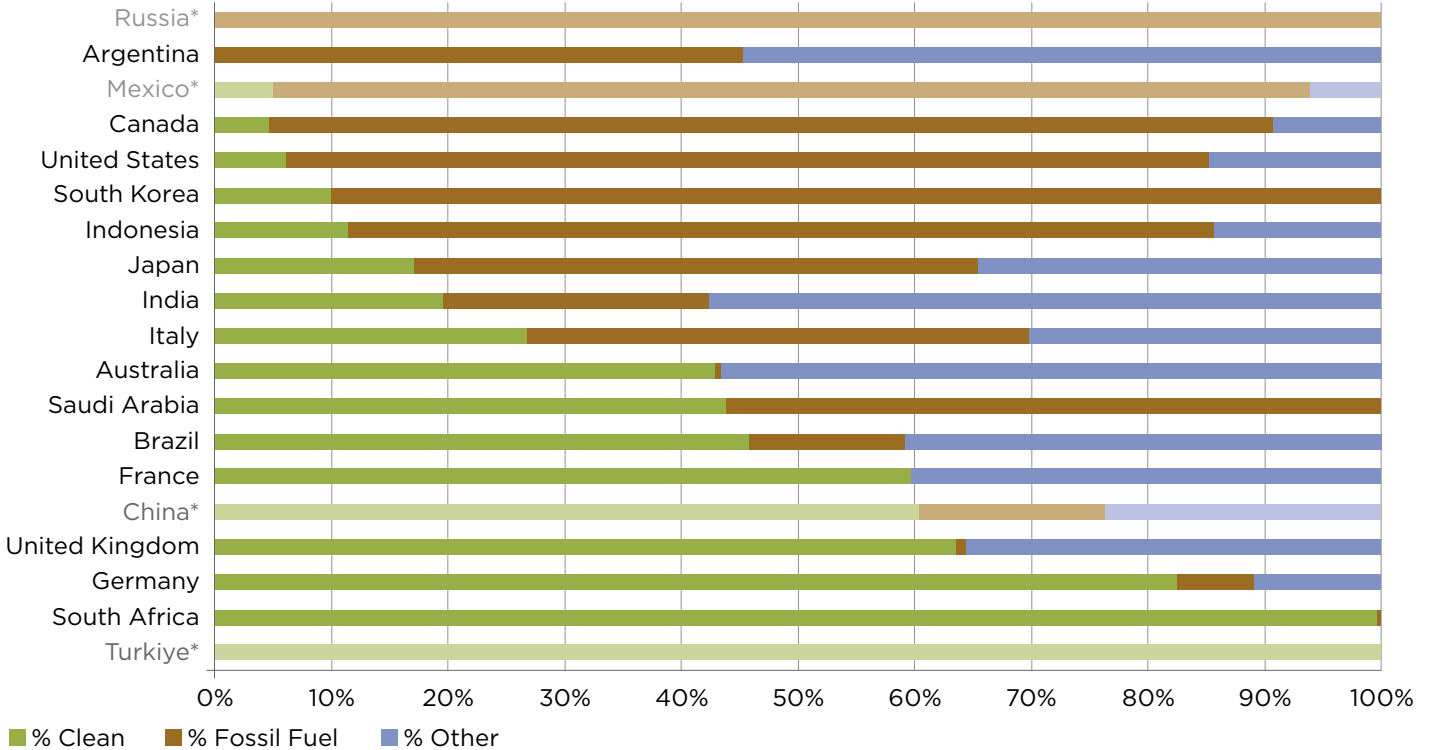
A handful of actors are disproportionately driving NDB fossil fuel finance. Canada (\$13.5 billion annually), China (\$9.6 billion annually), and South Korea (\$4 billion annually) were the top three fossil fuel financiers from 2022 to

2024, making up 78% of all NDB fossil fuel finance we found in 2022 to 2024.

Large fossil fuel financiers could become major players in the transition if their finance was shifted. For example, Korea Development Bank (KDB) is a large financier with a long history, high involvement in the Korean economy, and many tools at its disposal - however, its energy financing is almost entirely flowing to fossil fuels.⁴ If the bank was reoriented towards clean energy, it could become a significant force for good in the energy transition.

Clean energy finance also remains highly concentrated in just a few economies: China has been the largest provider of NDB clean

Figure ES-2: G20 NDB Finance by Category as a Percentage of Overall Finance, 2022-2024



Countries with * have particular data gaps for the 2022-2024 time period. More details on these gaps can be found in Table 1 in Methodology. Source: Public Finance for Energy Database, energyfinance.org.

energy finance by far at \$33 billion annually. This is followed by Brazil (\$3.5 billion annually), and India (\$1.6 billion). Together these top three account for almost 88% of the clean energy finance in the 2022 to 2024 time period. Between 2022 and 2024, eight G20 countries' NDBs (Australia, Brazil, China, France, Germany, South Africa, Türkiye, United Kingdom) provided more clean energy finance than fossil fuel finance.



European trade union demonstration. Joost (formerly habeebee) CC BY-NC-ND 2.0.

There are also important differences in context that shape what role each NDB can play in the energy transition. Notably, G20 countries in the Global North generally have more fiscal and financial tools at their disposal that mean fewer constraints for their NDBs. They also have legal and moral responsibilities that mean they must transition first and fastest, and pay their fair share to ensure all countries can act.

- **NDBs have the potential and precedent to play a much larger role steering and financing countries' just energy transitions.**

No NDB is perfect, but as financial institutions with mandates that allow them to seek goals other than short-term profits, many are well-positioned to support a fair transition away from fossil fuels with financial expertise, democratic governance, and public-interest tools to steer the quality and quantity of finance needed. While most banks have room to improve, we found examples

of best practices that others could learn from. Brazil's BNDES, Germany's KfW, and Costa Rica's Banco Popular use financial tools and instruments such as long term low-interest finance, cross-subsidization, and public green bonds to channel growing sums towards supporting national and local players in decarbonizing.⁵ KfW and Banco Popular also stand out for their democratic governance models, involving the public and national stakeholders such as unions.⁶ There are also promising signs in the UK and Mexico, where the mandates of new and old NDBs are being shaped to prioritize the transition.⁷

- **To fulfill the full potential of NDBs to unlock a just energy transition:**

- **All governments** should equip NDBs with the mandate, democratic governance, strong safeguards, and funding needed to support national and local transition plans.

- **NDBs** should move away from a narrow reliance on “de-risking” private investment,⁸ and instead scale the use of public interest financing mechanisms to direct fair finance to just energy transition priorities – including cross-subsidization, public green bonds, cross-government coordination, and the use of progressive conditionalities to steer private investments.

- **Global North governments** should provide debt-sustainable finance to Global South NDBs to drive just and locally-led energy transitions as one part of their wider responsibility to pay their fair share of climate finance and cancel debt in Global South countries. This includes issuing country-driven grants, technical assistance facilities, and local currency instruments to help address the unfair cost of capital and debt crises constraining Global South economic sovereignty and energy transition funding.

1. INTRODUCTION

A just energy transition to a renewable economy is much more affordable than continued fossil fuel dependence.⁹ Globally, Oil Change International estimates that the investments needed by 2030 to be on track for a just energy transition are less than two-thirds of direct costs of continued fossil fuel dependence in the same time period (Figure 1).¹⁰ Ending fossil fuel dependency is also a critical strategy to strengthen security and sovereignty, building a national guarantee against geopolitical shocks.

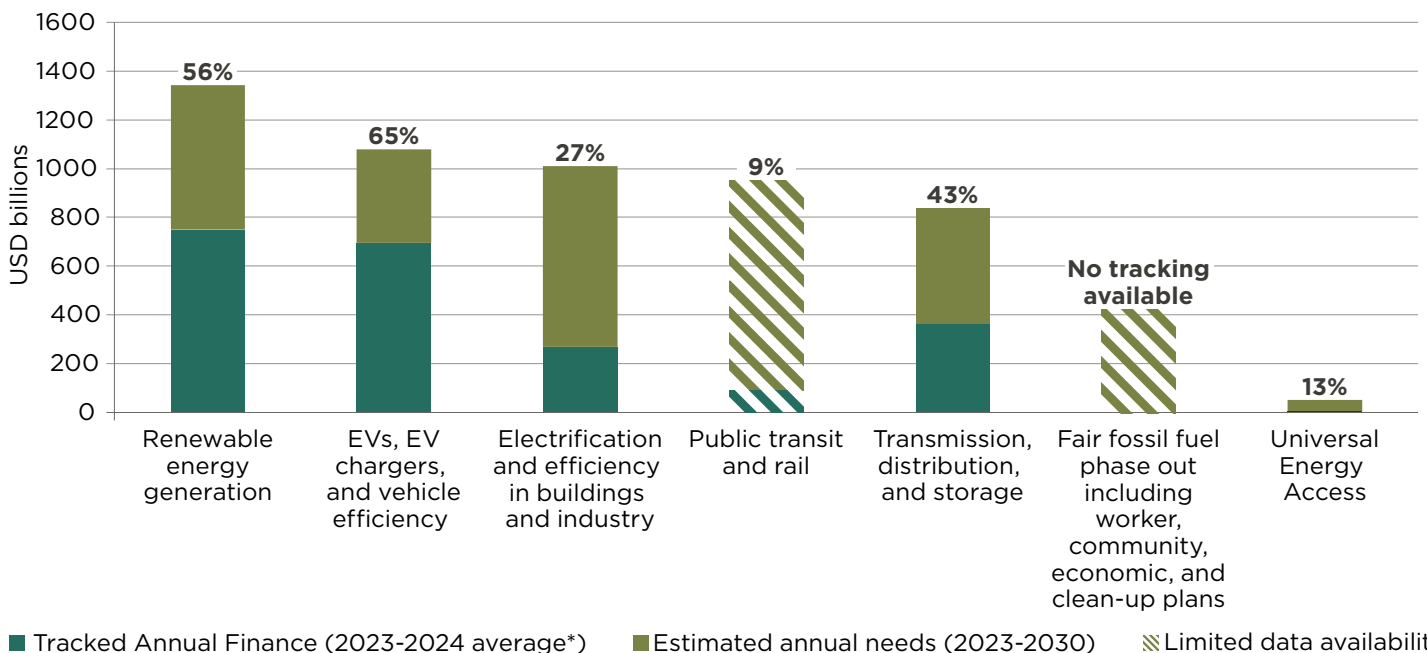
A just transition means phasing out extractive economic sectors in a way that upholds rights, is led by impacted communities and workers, and that works to undo systemic injustices.¹¹ In the energy sector, this includes

phasing out fossil fuels in a fair and orderly way; building renewable energy systems that stay within planetary limits; ensuring affordable and universal energy access; planning democratic economic diversification and green industrialization for secure, well-paid jobs; repairing the fossil fuel industry’s harm to people and ecosystems; and pursuing common solutions across other needed transitions like strong public services and fair global economic rules.¹² Figure 1 shows the estimated investments this will entail across different sectors globally.

To ensure an energy transition with the scale, speed, and equity required, governments need to take a leading role in coordinating investment

through public funding, financial regulation, public ownership, and community-led planning. Their over-reliance on “private-sector first” approaches to financing the energy transition has not delivered the scale, quality, or distribution of investment needed.¹⁴ In the last decade, policy debates on financing the energy transition have focused most heavily on attracting private finance, especially through voluntary private sector commitments like the Glasgow Financial Alliance for Net Zero (GFANZ).¹⁵ As former U.S. Treasury Secretary Janet Yellen put it in 2021, to transition to net-zero emissions: “massive investments are needed and the bulk has to be private.”¹⁶ The role of governments and public finance institutions has in turn been narrowly

Figure 1: Estimate of Annual Global Finance Needs for Just Energy Transition by Sector Compared to Annual Tracked Finance, USD Billions



Source: Oil Change International analysis of data from Climate Policy Initiative, Civil Society Equity Review, Bloomberg NEG, and International Energy Agency.¹³

cast as ‘derisking’: using public finance to make investments less risky and more profitable for private investors. In many countries in the Global South, this is a function of limited economic sovereignty imposed by an outdated international financial architecture. Meanwhile, in practice many Global North governments have used a greater variety of public finance and policy tools to build up their renewable energy economies.¹⁷

The dominance of the “private-sector first” approach has meant that only 38% of the estimated global annual investment needed for a just energy transition is flowing, and key sectors like impacted worker supports, fossil fuel site clean-up, universal energy access, energy efficiency, and public transit are each receiving less than a quarter of the investment needed (Figure 1). Worse, just 15% of the finance for energy transition went to the global majority living outside of the Global North and China. Efforts to fix this gap have focused on using international public finance from multilateral development banks (MDBs), export credit agencies (ECAs), and bilateral development finance institutions (DFIs) to attract private investment, but in practice this not delivered the anticipated finance and has often come with concerns that the investments made do not support local and national priorities.¹⁸ Over the last decade, this approach has raised only 40 cents of private investment for the energy transition per public dollar invested, compared to the 4-7 dollars promised in major policy plans and models.¹⁹

For the first time in 2024 and 2025, major international climate and energy finance reports recognized the shortfalls of this “private sector first”

approach,²⁰ while the Financial Times stated that the “magic pony of private finance fails to fund the global green transition.”²¹

Alongside this, there is growing expert, media and policymaker recognition of the need for governments to reclaim their ability to steer domestic public investment, for example with renewed interest in industrial policy and commitments to make nationally-led country platforms and roadmaps for just energy transition.²²

Despite increased recognition of the need for publicly-led transitions, global trade, climate, finance, and debt rules make it more difficult for governments to take a more active role in coordinating and investing in the just energy transition, especially in the most climate-vulnerable countries in the Global South. This unfair and outdated international financial architecture has fuelled a historic debt crisis that is leaving many economies highly vulnerable to geopolitical instability, climate-event-related shocks, and commodity price swings.²³ All of these factors raise the cost of capital, and limit the public budget space and economic sovereignty needed to undergo structural economic transformation.²⁴

HOW NATIONAL DEVELOPMENT BANKS CAN STEER GREEN AND JUST ENERGY TRANSITIONS

As public financial institutions with mandates that allow them to seek goals other than short-term profits, many NDBs are well-positioned to support a fair transition away from fossil fuels. They also hold a large amount of financial firepower. Worldwide, there are over 300 NDBs

with total assets of USD 18 trillion that make up an estimated 9% of annual global investments – roughly \$2 trillion per year (Figure 2).²⁵

If equipped with democratic governance and a public interest mandate, these banks can anchor just energy transitions by funding sustainable, climate-resilient projects that are tailored to local priorities; uphold environmental, labour, and social safeguards; and ensure affordable, reliable energy services for all.²⁶ They can also be a key tool to work around the limited public budgets and economic sovereignty posed by the international financial architecture that are constraining transitions, especially in many Global South countries.²⁷

There is new, widespread, and growing recognition of this potentially transformative role. In 2024 and 2025 there was a drumbeat of multilateral commitments across UN climate negotiations, G20 summits, and finance ministers’ meetings where governments agreed to enable NDBs as anchors and coordinators of country-led transition plans.²⁸

Most notably, in the Seville Commitment adopted at the once-a-decade UN Financing for Development Conference in 2025, governments agreed to “fully exploit the potential of national public development banks” to support sustainable development by updating their mandates, resourcing them, upholding social and environmental safeguards, and changing national regulations to empower them to act.²⁹ Global North governments and their development finance institutions also agreed to provide financial and technical support to NDBs and collaborate more deeply

with them as a way to ensure that international finance for climate and development better support local plans and priorities.

Not all NDBs are equally suited to play a public interest role in energy transitions, as they have a wide range of mandates, structures, and practices, and in many contexts other kinds of domestic public finance institutions and government agencies can play a similar role. We unpack the definition of NDBs and put them in context compared to other public finance institutions in Box 1.

The renewed academic attention on NDBs in recent years emphasizes that given their government steering and mandates to support public policy goals, the public banks have the **potential, flexibility, and precedent** to anchor and resource just energy transitions in the following key ways:³⁰

- **Working with other public entities to support national transition plans:** Many NDBs are deeply incorporated into countries' industrial strategy planning, for example, often acting as the lead banker for state-owned enterprises like public utilities.³¹ With growing recognition of the need for whole-of-government roadmaps and "country platforms" to coordinate a fast, orderly, and fair energy transition, NDBs are well suited for the public-public collaboration this requires. They can build and share expertise on how to structure energy transition financing. And they often already have experience pursuing joint financing and coordination with other government-led entities for cost savings. These partnerships are key to creating more publicly-

owned and community-owned infrastructure and services, to maintaining economic stability during both transition and unplanned shocks, to incubating new green sectors, and to partnering with local entities more closely in touch with community needs.

- **Harnessing democratic governance for accountability:** There are a variety of effective models for democratically accountable governance in use at many NDBs.³² These make it more likely for strong, rights-based safeguards to be adopted and upheld and for the needs of most-impacted communities to be respected. Ensuring a range of representatives on decision-making bodies can also help support sustained green investments, even in periods where some levels of governments oppose it.³³
- **Using financing tools to increase public finance for just energy transition priorities:** NDBs can provide long-term loans and require lower returns, tools that are needed for much of the key infrastructure in just energy transitions. They can also grow the public funding available for just energy transitions by using tools like risk sharing and cross-subsidization that allow cost savings and profits from higher-return activities to fund programs not suited to profit generation. For example, NABARD in India has used profits from other operations to finance widespread rural solar energy access.³⁴ At least 13% of public development banks (PDBs) are already doing this in some form,³⁵ but there is considerable potential to scale this.

- **Steering private investment towards just energy transition goals:** NDBs can set progressive conditionalities for private companies and banks receiving finance to help speed private sector alignment with the transition. In some contexts, they can also establish public green bonds as a means to raise private investment on open markets and direct it towards just energy transition needs, at a lower cost and with more control than alternatives like blended finance.³⁶
- **Working for national and local benefit:** NDBs function nationally and locally rather than internationally, allowing them to be in closer dialogue with communities where projects will be. Compared to international peers, NDBs are more likely to keep returns on investments in the country and region where investments are made, create domestic jobs instead of contracting international consultants, and tailor projects to local conditions.³⁷

There is considerable work ahead to get most NDBs to fully live up to this role. Previous research into NDB climate commitments has found that, of those surveyed, most did not yet adhere to specific, binding climate criteria.³⁸ A review of the mandates of 59 PDBs by the Transnational Institute and the Public Banking Project found that many are still narrowly focused on promoting market-oriented economic growth and private-first approaches that have failed to deliver a just energy transition.³⁹

We include examples of NDBs using some of these capabilities effectively in our case studies section below,

alongside cases where NDBs are instead hampering transitions.

The measures needed to support NDBs to effectively support a just energy transition differ widely by country. Among only the G20 countries this briefing focuses on, there is a wide variety of political contexts surrounding both energy transition and each country's NDBs.

G20 countries in the Global North have more fiscal and financial tools at their disposal to use their NDBs to shift their domestic energy systems and economies than their peers. For example, they can issue public green bonds without major debt sustainability challenges.⁴⁰ However, because of their outsized historic and current role in driving the climate crisis, they also have a responsibility to phase out fossil fuels and transition first and fastest.⁴¹ They also have moral and legal obligations to provide international public climate finance and technology transfer at a level that allows for climate-resilient development and meeting the 1.5°C global temperature goal.⁴² Fulfilling their 2025 Seville Commitment to support Global South NDBs to pursue sovereign and equitable energy transitions is one key component of this, and there is no shortage of public funding available to do so.⁴³

International NDB partnerships show great promise and can provide significant advantages and innovations for financing a just energy transition.

For example, for the kinds of energy transition investments that are strong candidates to be financed through debt, Global North countries' climate finance could flow directly as grants to NDBs to back country-controlled loan and guarantee facilities rather than as debt owed to donor-dominated institutions. This would allow countries to reinvest returns rather than owing debt to international public finance institutions, help avoid investments that serve donor country priorities rather than their own, and ensure more predictable finance flows.

Meanwhile, in Global South G20 countries, the impacts of unfair global trade, climate, finance, and debt rules pose relatively larger barriers to wielding NDBs for climate goals, though this is notably more extreme for smaller and lower income Global South countries outside of the G20. China, Brazil, Mexico, and India among others also have larger NDBs and a more active history of using them for public policy goals, precisely because they have been a key tool to counteract these barriers to development posed by the international financial architecture.⁴⁴ In light of Global North countries' intransigence on their climate and development responsibilities, NDBs are one of the strongest tools available for many Global South countries to advance the energy transition and ensure energy sovereignty, stability, and access.⁴⁵ Building stronger NDBs in the Global South can also play a role in building the economic and political

power to get Global North countries to come to the table on international cooperation, alongside other Global South-led efforts like the UN Tax Convention negotiations underway to write more democratic rules that will make it easier to tax rich polluters and prevent tax evasion.⁴⁶

For NDBs to play the potentially transformative role we set out here, they will need to be given the right mandates from governments and held accountable by the public. However, there is a significant shortfall of the data and awareness needed for this to happen. In this briefing, we start to fill this critical gap with a new dataset of G20 NDBs' investments and analysis of the extent to which these flows are supporting, or undermining, a fair and fast transition to a renewable economy. This dataset, available in full for download on OCI's Public Finance For Energy Database (energyfinance.org), covers almost 7,800 transactions between 2016 and 2024 provided by 54 institutions in the G20.⁴⁷ For details on how we set the scope of this dataset, see Box 1.

In the following sections, we first explore the key trends in NDB finance flows in the G20 (Section 2). We then showcase various examples of NDB practices that highlight their uniqueness in shaping domestic energy landscapes (Section 3) and we finally make recommendations on how NDBs can become powerful vehicles to drive a fair and fast energy transition (Section 4).

BOX 1: DEFINING AND TRACKING THE ENERGY FINANCE OF G20 NATIONAL DEVELOPMENT BANKS

NDBs (also sometimes called “national public development banks”) have a wide variety of mandates, structures, and functions that make them difficult to define and can overlap with the roles of other public financial institutions (Figure 2).

To build our dataset, we employed the Finance in Common’s Public Development Banks database which defines NDBs as stand-alone financial institutions “initiated and steered by governments with an official mission to proactively orient their operations to public policy objectives.”⁴⁸ This aims to exclude other kinds of domestic public finance institutions like public retail banks and aid agencies with mandates that emphasize profit maximization, act as regular banks to households, or use grants as their primary financing tool.

In order to narrow the list to *national* development banks, we omitted PDBs that provide only subnational and international finance or are governed at these levels. However, many PDBs are hybrid and provide both international and domestic finance. To account for this, we included domestic energy finance from hybrid institutions in our dataset where there was a repeated and substantial record of domestic energy finance (see **Methodology**).

This definition allows our analysis to reflect many but not all of the wide variety of structures, mandates, and

institutional labels used by various countries to fulfill a similar set of domestic policy focused goals. For example, Export Development Canada’s large domestic operations and mandate mean that it is used as an NDB alongside its international export credit agency functions. Another example is the UK National Wealth Fund, which sounds like a sovereign wealth fund by name but operates like a NDB.

It is also worth noting that other domestic public finance institutions like public retail banks, sovereign wealth funds, and pension funds can and should be used to pursue policy goals like a publicly-led just energy transition, and in many cases already are. Conversely, in practice, many NDBs do prioritize profit maximization rather than policy goals despite their mandates.⁴⁹ However, as a first step to fill data gaps on domestic public finance for energy, we focus on NDBs as a key set of institutions readily suited to play the role described above.

We encountered several important limitations due to a lack of transparency, and figures presented in this briefing are still likely an underestimate of G20 NDBs’ public finance for energy. These are discussed in full in the **Methodology**. Understanding domestic finance flows and the diversity of NDBs is a long journey: We hope future research projects will complement our work, and help address some of the limitations we identified.

Figure 2: Combined Global Assets of National Development Banks in Comparison to Other Public Finance Institutions, USD Trillions



Source: Oil Change International analysis based on the Finance in Common Public Development Bank Database, Official Monetary and Financial Institutions Forum, Güngen and Marois (2025), and Marois (2021).⁵⁰

2. NATIONAL DEVELOPMENT BANKS' ENERGY FINANCE

In this section, we analyse the new NDB dataset Oil Change International has built using our Public Finance for Energy Database (energyfinance.org) methodology, a long-standing open-access database that has tracked international public finance for energy from G20 countries and MDBs since 2012. We classify energy investments in three categories (defined in more detail in the annex below) as follows: clean energy, fossil fuels, and other. "Other" is primarily made up of transmission and distribution projects, large hydro projects and nuclear power. The full methodology, a list of all institutions covered, and data gaps are provided at the end of this briefing.

While we aim to provide a first cross-country snapshot of the scale of NDB finance, we encountered several important limitations due to a lack of transparency. As a result, figures presented in this briefing are likely an underestimate of the total public finance for energy. Many institutions do limited or no reporting on the projects they finance, meaning media reporting or paid databases such as IJGlobal are the main sources available.

The most notable data gaps are from Chinese, Mexican, Russian, and Turkish institutions, meaning that data shown in this briefing may not be fully representative of their actual NDB finance. For China, we have included aggregate clean energy finance from NDBs for 2017 to 2023 from the Climate Policy Institute's Global Landscape of Climate Finance

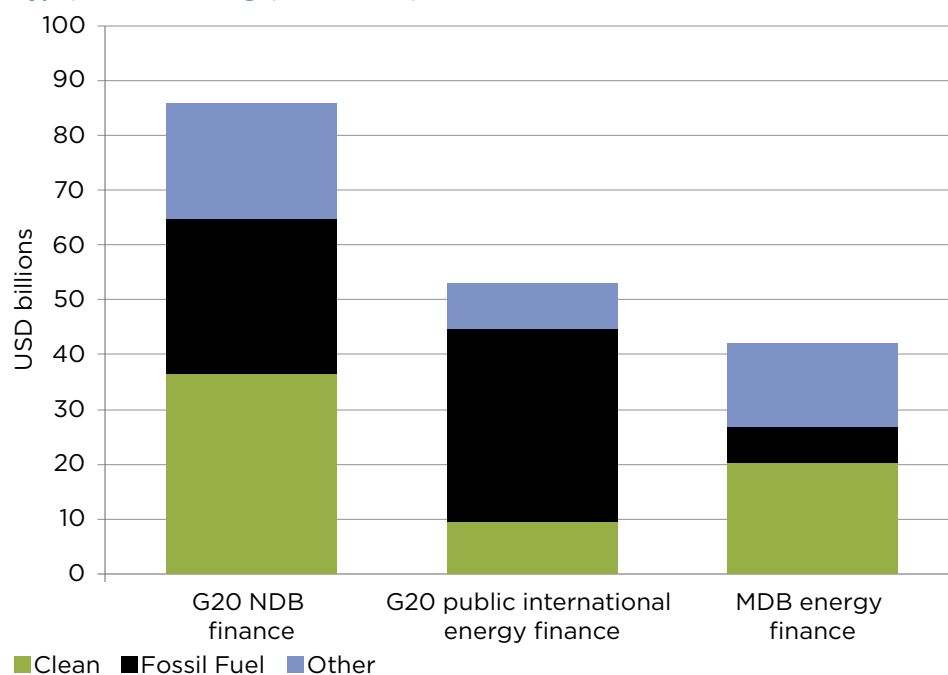
Dashboard.⁵¹ Our dataset also only covers energy finance, and not the other energy system investments that are critical to enabling a just energy transition, including public transit, worker and community support, green economic diversification, and efficiency (Figure 1). However, given a lack of transparency on most grid projects and the possibility for these investments to reinforce fossil fuel dependence, we also categorize these as "other" energy out of caution. Still, it is important to note that 100% renewable ready grids are an enabling sector that is key to a just energy transition.

Overall, our findings support the growing recognition that NDBs are already playing a significant role in

financing the just energy transition but have the scope to do much more.⁵² We find that G20 NDBs are already a significant source of public clean energy finance, but that some continue to dedicate significant resources to fossil fuel projects, exposing countries to external market shocks and locking in energy insecurity.

Figure 3 provides a breakdown of the G20's public domestic energy finance from NDBs, the G20's public international energy finance, and MDBs' energy finance between 2016 and 2024. As the figure illustrates, the G20's NDB finance is larger than both the G20's international public energy finance flows and the MDBs' energy finance flows. Beyond providing more energy finance, **the**

Figure 3: Public Energy Finance by Category and Institution Type, Annual Average, 2016-2024, USD Billions



Source: Public Finance for Energy Database, energyfinance.org

G20's NDB clean energy finance is greater than their public international clean energy finance and MDBs' clean energy finance combined. Of this, China's domestic finance accounts for approximately 39% of all domestic energy finance and, importantly, 72% of all domestic clean energy finance.

- **G20 NDBs' finance delivered 55%** (on average \$36 billion annually) **of the total clean energy finance from all the public finance institutions tracked in our wider Public Finance for Energy Database between 2016 and 2024**, though the vast majority of this finance is from China. Without China, NDBs are delivering 26% of all clean energy finance.

- **Between 2016 and 2024, G20 NDBs also provided on average \$28.1 billion annually in support for fossil fuels and \$21.2 billion annually in support for other energy.**
- If all NDB fossil fuel and other energy finance was shifted and used to support the build out of affordable renewable energy systems, NDBs could channel, at least an additional \$28 billion for the just energy transition annually. This would be more than all international public finance from MDBs and G20 countries for clean energy combined.

- **75% of all NDB finance for energy has been provided as loans**, followed by 10% provided through guarantees, 10% mixed or other, and 3% through equity finance. Just 2% has been provided as grants. This roughly mirrors international public energy finance, where 77% has been provided through loans, 16% through guarantees, 2% through equities, 3% mixed or other, and 1% through grants. Increased reporting on financing terms, especially the concessionality of loans, is needed.

Rwanda Solar Project, Power Africa (CC BY-NC 2.0)



LARGE VARIATIONS ACROSS COUNTRIES IN THE CURRENT ROLE OF DOMESTIC PUBLIC FINANCE IN THE ENERGY TRANSITION

When comparing the energy finance flows from NDBs across G20 countries, it is also important to note that the following analysis includes only one source of domestic public investment in energy, and not the entirety of domestic public support. Governments use other tools and institutions such as direct spending, tax breaks, and state owned enterprises to support both clean and fossil fuel energy development. Some countries also have regional or sub-national public banks that provide energy finance, which are not included in these numbers.

Overall, we find:

- **Some NDBs are already financing domestic clean energy:** Eight G20

countries (Australia, Brazil, China, France, Germany, South Africa, Turkiye, United Kingdom) provided more clean energy finance than fossil fuel finance between 2022 and 2024.

- On the flipside, **in other G20 countries, NDBs continue to be vehicles for fossil fuel expansion.** This is clear, especially in the producer countries among the G20. In Indonesia, Mexico, Canada, the United States, South Korea, and Russia, fossil fuel finance made up at least 74% of their total energy finance between 2022 and 2024. Similar, yet less marked trends can be observed in Japan, Argentina, Saudi Arabia and Italy, where between 45% and 56% of their finance went to fossil fuels.
- Within the “Other” finance category, between 2022 and 2024, 47% went to nuclear, followed

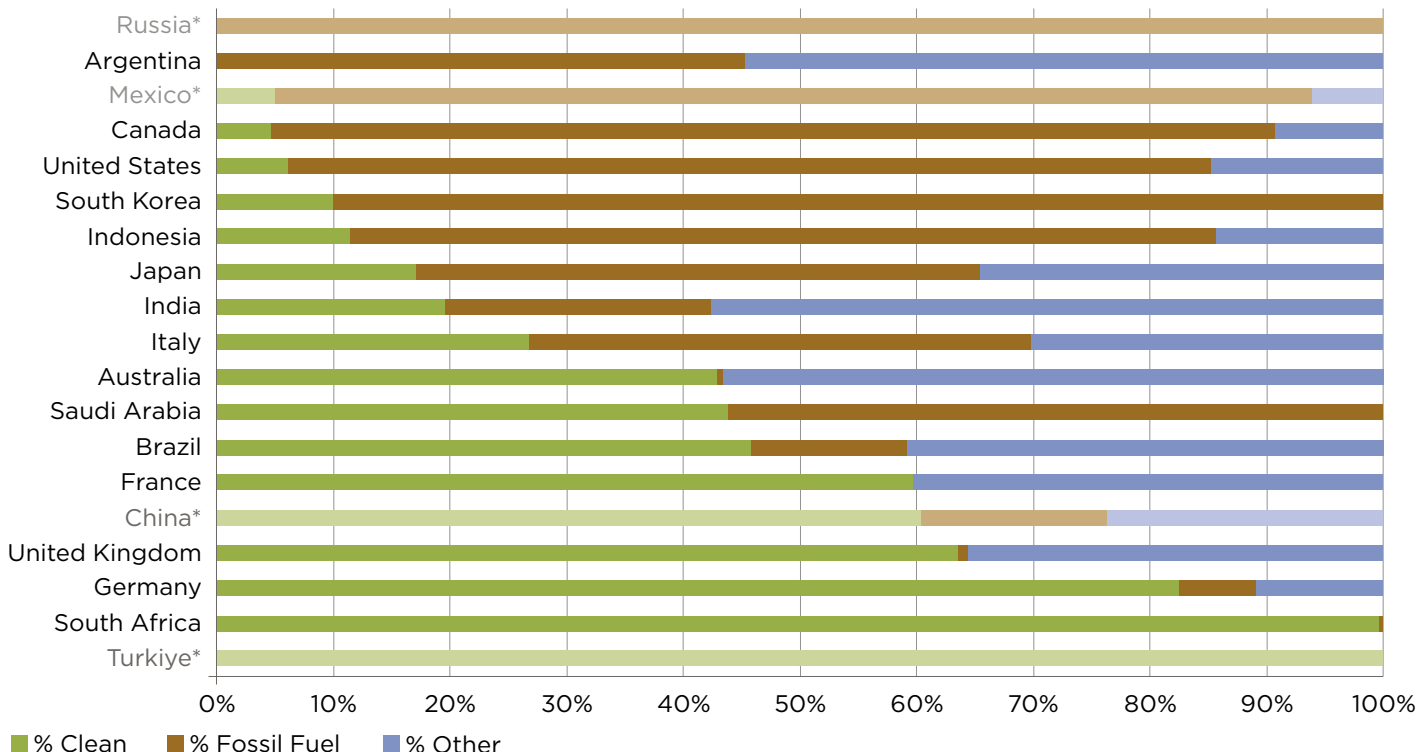
by 24% for transmission and distribution (grids), followed by 15% for large hydro. The top three financiers were: China (46% of all other finance), India (30% of all other finance) and Brazil (7% of all other finance).

- Due to a lack of transparency and reporting, we are not able to determine whether transmission and distribution finance is to support clean energy or fossil fuels. One hundred percent renewable ready grids are critical to unlocking a just transition, yet currently are underfunded.⁵³

Clean energy finance among G20 NDBs

- **NDB finance for clean energy from G20 countries averaged almost \$36 billion a year from 2016 to 2024.** This grew to \$47 billion between 2022 and 2024.

Figure 4: G20 NDB Finance by Category as a Percentage of Overall Finance, 2022-2024



Countries with * have particular data gaps for the 2022-2024 time period. More details on these gaps can be found in Table 1 in Methodology. Source: Public Finance for Energy Database, energyfinance.org.

- Overall, wind has received the largest share of clean energy financing, receiving almost 37% of all financing between 2016 and 2024, followed by solar energy, receiving 27%. Between 2022 and 2024 this trend shifted, with solar receiving the largest share of clean energy finance at 28%, followed by wind receiving 27%.
- The top three clean energy financiers between 2022 and 2024

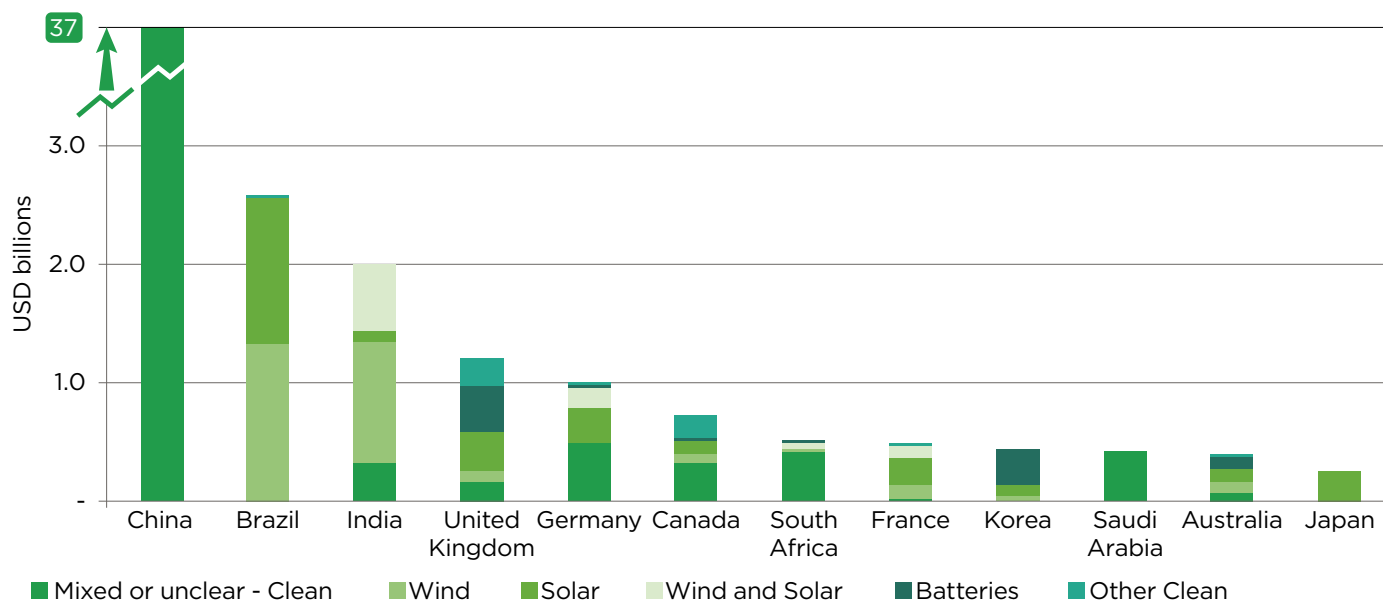
were China (\$36.6 billion annual average), Brazil (\$2.6 billion annual average), and India (\$2 billion annual average).

- Between 2022 and 2024, 87% of all NDB clean energy finance was provided through loans (both concessional and non-concessional), followed by 6% through guarantees, 5% through equity, 2% mixed, and less than 1% as grants.

Fossil fuel finance among G20 NDBs

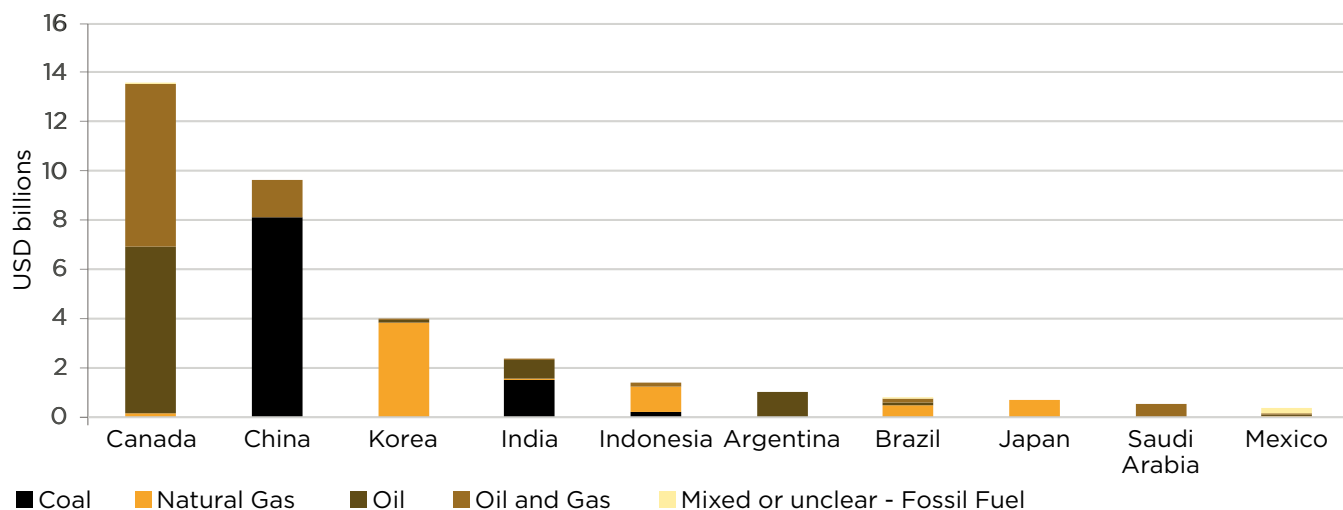
As Figure 6 shows, Canada (\$13.5 billion annually), China (\$9.6 billion annually), and South Korea (\$4 billion annually) were the top three fossil fuel financiers between 2022 and 2024. Canada's fossil fuel finance makes up over 39% of all NDB fossil fuel finance between 2022 and 2024. Canada's public banks, particularly Export Development Canada and the Canada Infrastructure Bank, are expecting to

Figure 5: Top 12 G20 Countries' Clean Energy Finance From National Development Banks, Annual Average 2022-2024, USD Billions



Source: Public Finance for Energy Database, energyfinance.org

Figure 6: Top 10 G20 Domestic Fossil Fuel Financiers 2022-2024, Annual Average, USD Billions



Source: Public Finance for Energy Database, energyfinance.org

increase their domestic support for oil and fossil gas in 2026 to support federal government priority projects like the Ksi Lisims floating LNG terminal in British Columbia.⁵⁴

We also find that:

- **NDB finance for fossil fuels from G20 countries averaged at least \$28 billion a year from 2016 to 2024.** This grew to \$35 billion between 2022 and 2024, largely due to \$24 billion provided by the China Development Bank for coal in 2022, and almost \$28 billion in support from Export Development Canada for the TransMountain Pipeline over 2023 and 2024. Together, these two projects

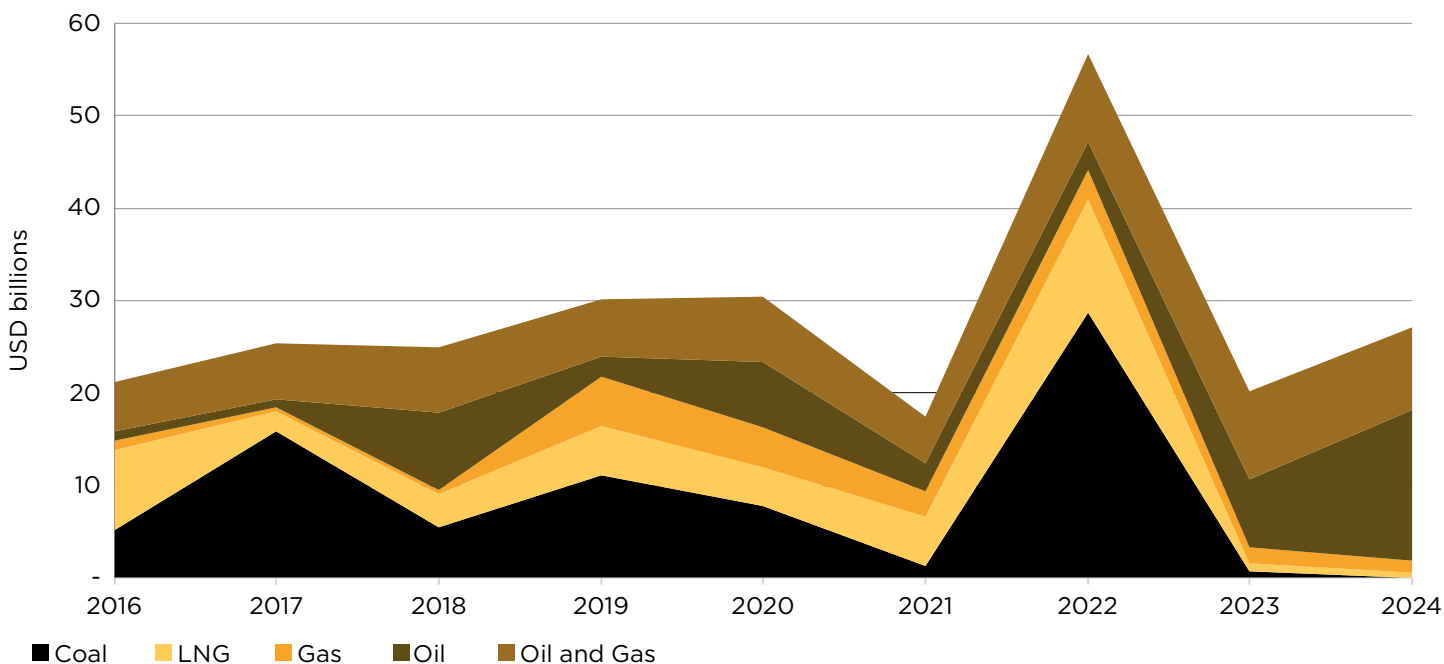
represented 50% of all fossil fuel finance among G20 NDBs between 2022 and 2024.

- Between 2016 and 2024, **the largest share of fossil fuel finance (40%) has supported midstream, transportation, and processing projects.** This is followed by downstream projects (33%).
- **Coal has received the largest share (30%) of G20 domestic fossil fuel finance over time.** The largest portion of coal finance, 61%, has come from India. This was followed by China, which has provided 31% of all coal finance among the G20, though we only found one \$24 billion aggregate transaction from

a Chinese institution, so it is likely our dataset undercounts China’s coal finance. This is followed by transactions recorded as oil and fossil gas, which have received 26% of all fossil fuel finance, followed by transactions that were exclusively for gas, which has received 25% of all finance.

- **LNG projects have received 68% of all domestic fossil gas finance between 2016 and 2024.** South Korea provides 73% of this LNG finance. The large spike in oil finance from 2023 to 2024 is almost all attributed to Canada and its investment in the TransMountain Pipeline.

Figure 7: G20 Domestic Fossil Fuel Finance by Energy Type, 2016-2024, USD Billions



Source: Public Finance for Energy Database, energyfinance.org

3. CASE STUDIES OF NATIONAL DEVELOPMENT BANK CASE STUDIES

NDBs' actions typically reflect the policy goals, governance, and mandates they are given by government owners. In practice, this means many NDBs prioritize fossil fuels and private sector maximization over the public interest. But alongside examples of damage to climate and communities, there are also many best practices from NDBs that can be replicated. NDBs have a much wider variety of governance and financial mechanisms than MDBs or private banks.⁵⁵ Here, we present case studies of a selection of NDBs that offer concrete examples of how NDBs can be reshaped into more effective tools for a just and rapid decarbonisation of the economy.

Brazilian Development Bank, Brazil – A rising climate giant, progress on safeguards needed

Brazil's Brazilian Development Bank (BNDES) was founded in 1952, and is now one of the biggest PDBs in the world⁵⁶ with assets totalling \$136 billion in 2024.⁵⁷ Unlike many other NDBs, the bank has incorporated climate considerations into its core strategy,⁵⁸ linking its financing to the fulfillment of Brazil's national climate goals. It is one of the very few NDBs with a clear finance restriction on coal fired power plants,⁵⁹ although it lacks an oil and fossil gas exclusion policy. The Climate Fund, hosted by BNDES, has become a major player in Brazil's energy transition, successfully issuing green bonds on international markets, and allocating more than \$2



Electricity workers. (Unique Konzept (CC BY-SA 4.0.)

billion in loans in 2025.⁶⁰ As a result, between 2016 and 2024, BNDES has been the second largest financier of clean energy among G20 NDBs, reaching \$2 billion per year on average. However, this finance has come with concerns over the quality of support provided and the respect of key safeguards. The Brazilian wind power boom – partly financed by BNDES – has been criticized for including projects that lack the consent of rural communities,⁶¹ damaging their homes and ecosystems. The BNDES Climate Fund – itself part-funded by oil revenues from state-owned Petrobras – has also funded projects with questionable climate benefit, such as \$500 million to companies to produce ethanol fuel from crops,⁶² which can fuel deforestation as well as increase carbon emissions and the use of pesticides.

Banco Popular, Costa Rica – Worker-owned and green

With a hybrid structure between public ownership and workers' cooperative, Banco Popular is an example of how an NDB can respond to community needs and be accountable to people and communities. Costa Rica's Banco Popular has been transformed over the last decade⁶³ into a "green" bank with environmental sustainability given the same weight as the profit motive. It lends to micro, small, and medium enterprises, funding rooftop solar, land conservation, and energy efficient lighting,⁶⁴ all while being one of the most democratic banks in the world. It has become the third largest bank in the country,⁶⁵ with \$75 billion in assets.⁶⁶ Banco Popular is governed as a cooperative – any worker holding

a savings account for over a year has the right to share ownership in it.⁶⁷ Its highest governing authority is a 290-member assembly of social and economic sector representatives, giving direction to the bank's seven-person board of directors, themselves elected partly from the assembly and partly from the government.⁶⁸

KfW Germany – Democratically governed with a social purpose

Germany's NDB Kreditanstalt für Wiederaufbau (KfW) was set up in 1948 for post-war reconstruction,⁶⁹ and has many of the elements that other NDBs could learn from to become useful tools in the transition. Described as "perhaps the most widely known and respected (if imperfect) public development bank in the world,"⁷⁰ it has assets exceeding EUR 550 billion – more than twice the total assets of the World Bank.⁷¹ Eighty percent owned by the German federal government and 20% by the German states, its board of supervisory directors includes many sections of German society including unions, business, and elected local government representatives.⁷²

Reflecting the reality that public banks are evolving institutions, KfW has been made and remade based on the policy needs of successive governments. KfW took a substantial green turn for the first time in the late 1990s and early 2000s, adopting an energy transition strategy.⁷³ Since 2016, KfW has on average provided almost \$274 million annually for domestic clean energy, compared to \$80 million for fossil fuels.⁷⁴ KfW has also provided long-term, low-interest-rate loans to German local authorities, municipally owned companies, and non-profit organizations for projects improving energy efficiency in buildings, at rates

that allow them to be repaid through savings in energy payments.⁷⁵ KfW fulfills many public policy functions and public-public collaborations – during the COVID-19 pandemic period, KfW played a major role in delivering a government-sponsored pandemic aid programme, and still made an annual average return of €1.43 billion,⁷⁶ with all returns being reinvested for further lending.

However, no public bank is perfect. KfW was heavily criticized for its involvement in the 2007/8 subprime mortgage crisis, primarily through its role as the largest shareholder in a subsidiary that invested in toxic U.S. subprime mortgage-backed securities, costing German taxpayers billions and forcing KfW's head to resign.⁷⁷ More recently, KfW has been directed by the government to finance more fossil fuels due to the energy security crisis triggered by Russia's invasion of Ukraine. KfW itself saw this direction by the government as creating contradictions in its mission.⁷⁸ In addition, while this briefing is focused on KfW's domestic role, the bank's international public financing for fossil fuels is a source of continuing controversy.⁷⁹ Especially, its export promotion branch, IPEX, has been continuously involved in fossil fuel financing.

Korea Development Bank – Fossil fuel giant missing out on aiding the transition

Founded in 1954 and wholly owned by the Korean government,⁸⁰ KDB is an institution that currently funds heavily-polluting industries but would have a huge impact if it shifted to financing the transition. KDB fulfills a range of functions supporting domestic industry, social infrastructure, and

overseas energy projects, while issuing bonds to key Korean industries.⁸¹ It is a very large bank, with assets totalling \$221 billion in 2023.⁸²

The bank has very few environmental restrictions, and data shows it provides large amounts of financing to fossil fuels.⁸³ These projects are often controversial – KDB finances a large number of LNG carriers, and is in the top 10 financial institutions investing in fossil fuels in Africa, holding back a transition.⁸⁴ KDB provided \$6.4 billion in domestic fossil fuel support between 2020 and 2024.⁸⁵

Beyond Korea's shores, KDB is also a significant overseas fossil fuel financier, with KRW 61.3 trillion (\$41 billion) in finance directed to international energy projects between 2020 and 2024. Fossil fuels accounted for 74.5% of that total.⁸⁶ Research indicates that KDB and its related institutions are missing out on creating 60,000 additional clean energy jobs with their focus on fossil fuels.⁸⁷ This, as well as KDB's sheer size, demonstrates the tremendous benefits that KDB could unlock if it changed direction.

Mexico – Promising signals from retooled existing institutions

Under the Mexican government of Claudia Sheinbaum, existing institutions are being re-shaped to aid the transition. Publicly-owned banks like Bancomext and Nacional Financiera – institutions with a long history – are expected to form a cornerstone of the government's new economic plan.⁸⁸ These banks are acting as key financing arms to support the state-owned utility Comisión Federal de Electricidad (CFE) as the central owner, investor, and coordinator of Mexico's renewable

energy expansion.⁸⁹ The CFE plans to reach universal energy access in Mexico largely by providing free solar panels to low-income populations vulnerable to heat stress.⁹⁰ This is a good example of NDBs being used to support public institutions like energy utilities and public goals like universal energy access.

United Kingdom – New possibilities from the National Wealth Fund

The former UK Infrastructure Bank – a PDB that didn't meet its initial

promise – was reorganized as the UK National Wealth Fund (NWF) in 2024.⁹¹ The NWF published its strategy in January 2026, recognising clean energy investment as a cornerstone of its mission, removing many of the barriers to effectiveness that had plagued the UK Infrastructure Bank.⁹² It has made some encouraging early investments, including in the UK's largest publicly-owned windfarm, which will generate hundreds of millions in revenue for the local government.⁹³ Independent experts have stated that while the government has given the NWF GBP 27.8 billion

(\$37.6 billion) in financing over the entire 2024-2030 parliamentary term,⁹⁴ if the NWF was allowed to raise its own bonds, it could raise over £100 billion (\$135 billion), allowing the NWF to have a transformative impact on the transition.⁹⁵

Wind turbine farm. Tunisia. Photo: Dana Smillie / World Bank (CC BY-NC-ND 2.0)



4. RECOMMENDATIONS

While this briefing shows that G20 NDBs' energy finance represents a significant underused potential, it will only be realized if society demands that NDBs improve their tools and practices, with a clear accountable steer from governments.

All governments: Equip NDBs with the mandate, democratic governance, and funding to deliver a just energy transition.

- **Establish a mandate for NDBs to deliver a just energy transition as part of wider national roadmaps or country platforms**, including goals and targets to prioritize key energy transition sectors as well as universal affordable energy access, meaningful work, social benefits, poverty reduction, and green economic development.
- **Establish a democratic, accountable governance structure.** NDBs' governing bodies should aim for a majority share of representatives to be democratically accountable, for example as elected officials, union representatives, and representatives of civil society and most-impacted communities.
- **Increase NDBs' available capital to the extent viable.** Once strong safeguards, governance, and public interest mandates are in place, governments should pursue

regular NDB capitalization through direct budgetary transfers and guarantees that enable NDBs to raise capital on bond markets. However, options to do this without the international support described below will be limited in low-income and highly indebted countries due to constraints posed by the international financial architecture.

National development banks: Move away from a narrow reliance on de-risking private investment, and instead scale the use of public interest financing mechanisms to direct fair finance to just energy transition priorities.

- Adopt implementation plans to coordinate resources towards national & local transition roadmaps and country platforms, tailoring the financial mechanisms, terms, and programs used to target priority sectors and projects.
- **Use cross-subsidization and risk balancing to raise funding for public interest priorities:** Redeploy the public revenues from higher-return activities to just energy transition needs that are less profitable or loss-making.
- **Establish public green bonds where viable** to raise international and domestic private investment and direct it towards public interest

just energy transition plans. In many low income or highly indebted countries, international financing partners providing grants or first-loss agreements to bear risk are needed for these to be viable.

- **Prioritize cross-government coordination**, for knowledge sharing and the joint financing and delivery of projects across public agencies like utilities, state-owned enterprises, government departments, and subnational governments.
- **Pursue peer financing partnerships between NDBs.** For example, regional NDB associations can use pooled public procurement to make bulk purchases of imported green technologies like grid-scale batteries. Joint political risk guarantees and shared investment funds can also help overcome cost of capital barriers.⁹⁶
- **Use progressive conditionalities for companies and financial institutions receiving NDB investment to help steer private investments towards just energy transition goals.** This can include requiring recipients to align with green taxonomies, report on just transition plans, meet gender equity and workers' rights standards, and profit share to ensure local benefits and limiting profiteering.⁹⁷

Global North governments: Prioritize funding for NDBs to support locally-led just energy transitions as one part of their wider responsibility to pay their fair share of climate finance and cancel debt in Global South countries.

- Finance partnerships with Global South NDBs to help address unfair cost of capital and debt sustainability constraints. This should include grants, long-term concessional finance, equity injections, first-loss capital, and local currency instruments that are accountable to local plans and priorities.⁹⁸
- Fund knowledge sharing among NDBs to co-create, share, and

coordinate expertise, including the formation of an NDB technical assistance fund and better NDB inclusion in global finance fora.

Transparency & safeguards: Uphold strong rights-based safeguards and standards, including transparent reporting and ending investments in harmful sectors – particularly fossil fuels.

- **Implement transparent safeguards, reporting, and standards** to ensure all projects uphold communities' free, prior, and informed consent with democratic and participatory processes, protect human rights, deliver local benefits, ensure the sustainable use of land, water, and ecosystems

across supply chains, and have timely and transparent public reporting on the terms, amounts, and quality of finance.^a

- **Avoid volatility and climate impacts by excluding new investments in fossil fuels.** End direct and indirect fossil fuel investments across the full supply chain, with limited exceptions for emergency response or near-term operational costs to maintain energy access.^b This should include dangerous, expensive distractions like carbon capture and storage, carbon dioxide removal technologies, and fossil fuel based hydrogen or ammonia (including co-firing).⁹⁹

^a This accounting should include the amount and type of financing and the full lifecycle emissions of the projects and sub-projects supported. It should be made available both as proposals in advance of project approval and once committed.

^b "Indirect" means support through associated infrastructure, technical assistance, financial intermediaries and guarantees, or policy support.

Training workers to install solar panels at health clinics in Rwanda. © Walt Ratterman, USAID (CCO)



METHODOLOGY

INSTITUTIONS COVERED

This briefing covers the NDBs of G20 governments according to the Finance in Common Public Development Banks database definition and list and includes data where we found

transaction-level or aggregate reporting on energy finance in the 2016 to 2024 time period.^{100,c} Recognizing the hybrid domestic-international function of many PDBs, this includes the domestic finance of institutions

that have a mandate to provide international finance like development finance institutions and export credit agencies where this exceeded \$1 billion or at least 20 transactions in the 2016 to 2024 time period examined.

Table 1: National Development Banks Included in Oil Change International's Public Finance for Energy Database (energyfinance.org) and Notable Data Limitations for Each.

G20 Country	Institutions covered	Data limitations and gaps
Argentina	Banco de Inversión y Comercio Exterior (BICE)	BICE does not provide a comprehensive project database. Their data comes from Freedom of Information requests completed by FARN, as well as BICE's aggregate annual reporting. We are missing data for BICE for 2016.
Australia	Clean Energy Finance Corporation Australian Renewable Energy Agency Northern Australia Infrastructure Facility (NAIF) National Reconstruction Fund (NRF)	
Brazil	Brazilian Development Bank (BNDES) Banco da Amazônia (BASA) Financiadora de Estudos e Projetos (FINEP) Banco do Nordeste (BNB)	BASA and FINEP do not have a comprehensive project database. For 2016 to 2023 data, we received detailed energy transactions directly from the institutions. However, at the time of publishing they have not yet published this data for 2024. As such we have no data for these institutions from 2024.
Canada	Business Development Bank of Canada (BDC) Canada Development Investment Corporation (CDEV) Export Development Canada (EDC) Canada Infrastructure Bank (CIB) Canada Growth Fund	Only the CIB and EDC have a comprehensive project database. EDC does not provide project totals, but provides them in a range. EDC does report on their aggregate fossil fuel totals, however they do not report on what share is international vs. domestic. EDC reporting on the impact of their Clean Energy Transition Partnership (CETP) policy to end international public finance highlighted that the policy would impact about CAD 2 billion (USD 1.5 billion) in financing, meaning the rest of their oil and fossil gas financing is likely domestic.

^c To build our dataset, we employed the widely used definition from the Finance in Common's Public Development Banks database which considers them to be stand-alone financial institutions "initiated and steered by governments with an official mission to proactively orient their operations to public policy objectives," that provide finance to domestic clients and projects. To build their list of PDBs, the Finance in Common Database uses the following qualification criteria: 1) being a standalone entity, 2) providing fund-reflow-seeking financial instruments as the main products and services, 3) funding sources going beyond periodic budgetary transfers, 4) having a proactive public policy orientation, and 5) government steering of corporate strategies.

China	Agricultural Development Bank of China China Development Bank	Neither of these institutions has a comprehensive project database or annual reports that provide aggregate totals of their energy finance. We found very limited project finance across these institutions. We have used the Climate Policy Initiative's Global Landscape of Climate Finance Data Dashboard for aggregate clean energy for China for 2017 to 2023. We do not have aggregate fossil fuel energy finance for China, so this is likely an undercount.
France	France Public Investment Bank (BPI France) Caisse des dépôts et consignations (CDC) Agence France Locale (AFL) Proparco	AFL has no comprehensive project database or annual reports that provide aggregate totals of their energy finance. We found very limited data from them.
Germany	KfW Domestic Promotion German Investment and Development Company (DEG)	
India	Power Finance Corporation REC Limited India Renewable Energy Development Agency India Infrastructure Finance Company India EXIM	No 2024 data for India Infrastructure Finance Company was available.
Indonesia	Bank Mandiri PT Indonesia Infrastructure Bank Indonesia Infrastructure Guarantee Fund (IIGF)	None of these institutions have a comprehensive project database or annual reports that provide aggregate totals of their energy finance. We found no 2024 finance for IIGF
Italy	Cassa Depositi e Prestiti (CDP) Group Servizi Assicurativi del Commercio Estero	
Japan	Development Bank of Japan Japan Bank for International Cooperation Japan Organization for Metals and Energy Security (JOGMEC) Nippon Export and Investment Insurance	Neither institution has a comprehensive project database or annual reports that provide aggregate totals of its energy finance. We found no domestic finance for 2024.
Mexico	Banco Nacional de Obras y Servicios Públicos (Banobras) Nacional Financiera (Nafin) Banjercito	None of these institutions have a comprehensive project database or annual reports that provide aggregate totals of their energy finance. We found no energy transactions for Banjercito, no 2023 or 2024 transactions from Banobras, and no 2024 transactions from Bancomext.
Russia	Export Insurance Agency of Russia Russian Development Bank	Neither institution has a comprehensive project database or annual reports that provide aggregate totals of its energy finance. We have limited data across the entire dataset and no data for 2024. Between 2022 and 2023 we found just one fossil fuel project, making it hard to draw overall conclusions on their institutions' energy finance.

Saudi Arabia	Saudi Fund for Development (SFD) Saudi Industrial Development Fund (SIDF)	Neither institution has a comprehensive project database or annual reports that provide aggregate totals of their energy finance. For the SFD, we only found data for 2015 to 2017.
South Africa	Development Bank of Southern Africa Industrial Development Corporation, National Empowerment Fund	None of these institutions have a comprehensive project database or annual reports that provide aggregate totals of their energy finance. We found no 2024 data from the Industrial Development Corporation
South Korea	Export-Import Bank of Korea Korea Trade Insurance Corporation Korea Development Bank Korea Finance Corporation	None of these institutions have a comprehensive project database or annual reports that provide aggregate totals of their energy finance. We have aggregate totals for all institutions from 2016 to 2022 for their LNG finance thanks to a freedom of information request by Solutions for Our Climate.
Türkiye	Industrial Development Bank of Turkey (TKSB)	TKSB does not have a comprehensive project database or annual reports that provide aggregate totals of their energy finance. Between 2022 and 2024, 100% of the projects we found were clean energy projects. Their overall financing during this period was quite small and represented just 0.5% of the G20's overall NDB energy finance during this period.
United Kingdom	British International Investment UK National Wealth Fund (formerly UK Infrastructure Bank)	
United States	U.S. Small Business Administration	

ENERGYFINANCE.ORG

This briefing uses data from OCI's Public Finance for Energy Database, an open access database that includes 18,000+ energy transactions with a total value of over \$2 trillion, which has been updated alongside this briefing to add domestic public finance.

Each finance entry is classified as fossil fuel, clean, or other (described below) based on the description of the project and project documents. In addition to reviewing the information made publicly available by the financial institutions and other public sources of information, this database draws information from the Infrastructure Journal Global Database, as well as Climate Policy Initiative's Global Landscape of Climate Finance Data Dashboard for aggregate clean energy for China for 2017 to 2023. We do not have aggregate fossil fuel energy finance for China, so this is likely an undercount. Where there are

aggregate estimates at the subsector level available that differ substantially from project-level reporting, we use these. This is the case for Canada, and also for Korea thanks to a freedom of access to information request from Solutions for our Climate for 2016 to 2022.

CLASSIFICATIONS OF ENERGY FINANCE

Fossil Fuel: This includes the oil, fossil gas, and coal sectors. This includes access, exploration and appraisal, development, extraction, preparation, transport, plant construction and operation, distribution, and decommissioning. It also includes energy efficiency projects where the energy source(s) involved are primarily fossil fuels.

Clean: This includes energy that is both low-carbon and has negligible impacts on the environment and human populations if implemented with

appropriate safeguards. This includes solar, wind, tidal, geothermal, and small-scale hydro. This classification also includes energy efficiency projects where the energy source(s) involved are not primarily fossil fuels.

Other: This includes projects where (a) the energy source(s) are unclear or unidentified, as with many transmission and distribution projects, and/or (b) non-fossil energy sources that typically have significant impacts on the environment and human populations are used. This includes large-scale hydro, biofuels, biomass, nuclear power, and incineration. If a project includes multiple energy sources, we split it into multiple transactions whenever possible. Otherwise, it is also classified as "Other."

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