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Issue brief Chile: A case study in regional energy leadership

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Transforming energy systems in emerging markets and developing economies (EMDEs) to address climate change requires a significant increase in investment. However, existing initiatives to fund this transformation are wholly insufficient for these economies to generate clean energy at the scale required to meet rising demand while minimizing emissions. Several institutions have proposed a variety of investment structures to bridge this financing gap. This case study of Chile's energy sector—and others complementing a primary report—illustrates the potential for a guarantee-based mechanism to leverage private investment in EMDEs at a far greater multiple than other approaches currently being proposed.[1]

Overview: Chile's energy targets

Chile has emerged as a Latin American leader in clean energy and climate action. The share of modern renewables in Chile's final energy consumption is more than 25 percent, placing the country seventh in the region. It has shown sustained interest in reducing emissions and was among the first nations globally to commit to a 2050 net-zero target, setting a strong tone for its energy transition.[2]

In December 2024, Chile reached an important milestone in its transition to renewable energy, with wind and solar power contributing 42 percent of the country's electricity, the highest level recorded so far.[3] By the end of the year, wind, solar, and hydropower sources collectively supplied 64 percent of electricity needs (Figure 3).[4] Chile's strong solar radiation in the north and winds in the south position it well for expanding renewable energy even further, suggesting a promising future for the green electrification of the economy.

1. Amin Mohseni-Cheraghlou and Frank Willey, "Scaling up Private Capital for Climate Investment in Emerging Markets," Atlantic Council, June 16, 2025, https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/scaling-up-private-capital-for-climate-investment-in-emerging-markets; Ian Callaghan, et al., "Guarantees 2.0: Meeting Climate Finance Needs in the Global South," Atlantic Council, September 18, 2023, https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/guarantees-2-0-meeting-climate-finance-needs-in-the-global-south.
2. "Playbook of Solutions to Mobilize Clean Energy Investment in EMDEs," World Economic Forum, October 2, 2024, 10, https://www3.weforum.org/docs/WEF_Playbook_of_Solutions_to_Mobilize_Clean_Energy_Investment_in_EMDEs_2024.pdf.
3. "Chile Surpasses 40% Wind and Solar for the First Time in December," Ember, January 10, 2025, https://ember-energy.org/latest-updates/chile-surpasses-40-wind-and-solar-for-the-first-time-in-december.
4. "Chile," International Energy Agency, last visited September 17, 2025, https://www.iea.org/countries/Chile.

Figure 1: Chile's total energy supply, 2024

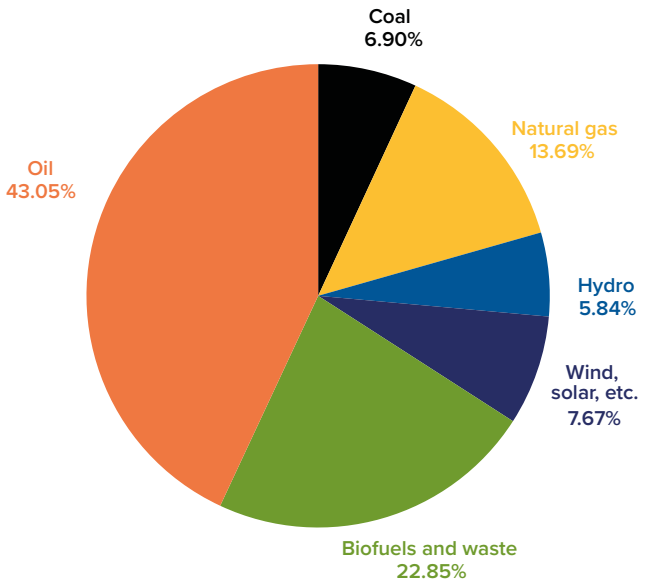


Figure 2: Evolution of Chile's total energy supply, 2000–2024

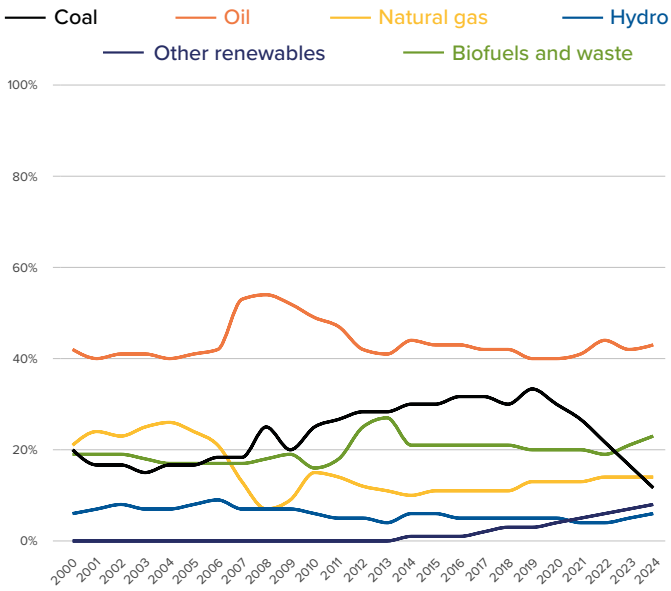


Figure 3: Chile's electricity generation sources, 2024

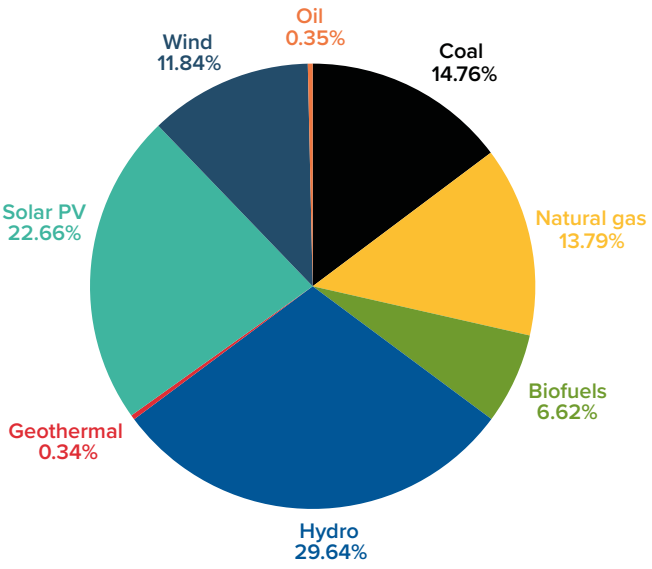
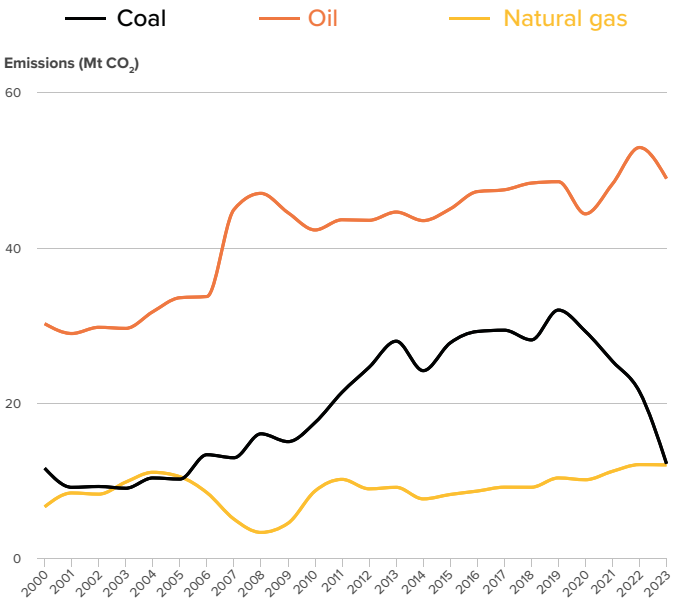


Figure 4: Evolution of Chile's CO_2 emissions by fuel, 2000–2023



Source: Chile, International Energy Agency.

Figure 5: Share of modern renewables in Chile's final energy consumption (percentage), 2000–2022 (ranked thirty-third in the world in 2022)

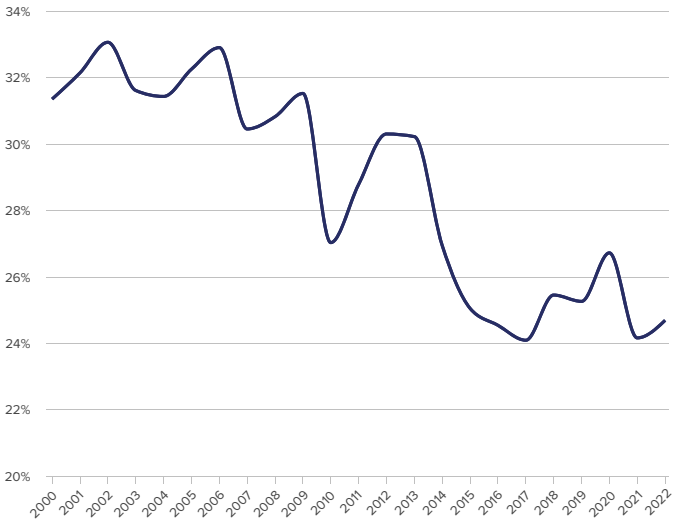
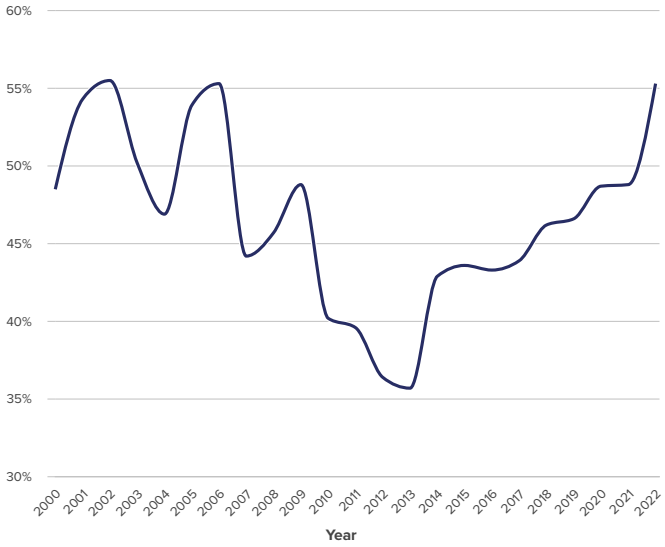


Figure 6: Renewables share of Chile's electricity generation (percentage), 2000–2022 (ranked forty-sixth in the world in 2022)



Source: Chile, International Energy Agency.

The country has many opportunities for additional growth in renewables, but it will also need to overcome challenges to achieve net-zero targets. In 2024, fossil fuels still dominated Chile's overall energy mix, accounting for nearly 64 percent of the mix (Figures 1 and 2), while renewables—mainly hydropower, wind, and solar—contributed just 13 percent, even though renewable sources contributed the bulk of the electricity generated.[5] Moreover, Chile will need to close transmission infrastructure gaps and connect renewable resources with faraway demand centers such as its capital of Santiago.

With public funds expected to provide 26 percent of total needed capital expenditure, financing Chile's transition to net-zero by 2050 will hinge on private investment.[6]

Advantages: A long-standing vision and robust legal framework

Chile was an early adopter of renewable energy policies, beginning in 2008 with the Non-Conventional Renewable Energy Law (Law 20.257).[7] The law mandates that electricity companies with a capacity exceeding 200 megawatts (MW) source a specified percentage of their energy from renewable sources. Initially, the requirement was set at 5 percent from 2010 to 2014, and was set to reach 10 percent by 2024. Meanwhile, the 2012 Distributed Generation Law (Law 20.571) increased the limit on self-generation from 100 kilowatts (kW) to 300 kW, enabling homes and businesses to send excess electricity back to the grid in exchange for lower energy bills.[8]

Chile has also been phasing out coal-fired power plants as part of its commitment to carbon neutrality by 2050. Since 2019, the country retired more than 1.2 gigawatts (GW) of coal

5. Ibid.
6. "Green Growth Opportunities for the Decarbonization Goal for Chile: Report on the Macroeconomic Effects of Implementing Climate Change Mitigation Policies in Chile 2020," Chile Ministry of Finance, March 2020, https://documents1.worldbank.org/curated/en/968161596832092399/pdf/Green-Growth-Opportunities-for-the-Decarbonization-Goal-for-Chile-Report-on-the-Macroeconomic-Effects-of-Implementing-Climate-Change-Mitigation-Policies-in-Chile-2020.pdf.
7. "Law No. 20.257 on Non-Conventional Renewable Energies," Climate Change Laws of the World, 2008, https://climate-laws.org/document/law-no-20-257-on-non-conventional-renewable-energies_0bc5.
8. "Law No. 20571 Regulating the Payment of Electricity Tariffs of Residential Generators," Climate Change Laws of the World, 2012, https://climate-laws.org/document/law-no-20571-regulating-the-payment-of-electricity-tariffs-of-residential-generators_87e9.

capacity from eleven plants.[9] An additional nine units are being considered for retirement or conversion to natural gas between 2024 and 2025. Recognizing this shift's impact on workers and communities, the government has introduced a Just Transition Strategy aimed at providing economic support and creating new job opportunities in the renewable energy sector.

Meanwhile, the Energy Storage and Electromobility Law (Law 21.505), passed in 2022, was designed to strengthen energy storage systems.[10] By improving electricity reliability during peak demand, the law aims to further reduce reliance on coal and support the transition to cleaner energy sources.

Additionally, Chile's Framework Law on Climate Change (2022) established a robust regulatory framework targeting carbon neutrality by 2050, creating incentives for private investment in clean energy, strengthening the country's approach to environmental policy, and aligning Chile's efforts with international climate goals. A pivotal component of this law is the Long-Term Climate Strategy (ECLP), which outlines a comprehensive roadmap for reducing emissions and enhancing climate resilience over the next three decades.[11] Most recently, in December 2024, the Ministry of Finance released a draft of the Taxonomy of Environmentally Sustainable Economic Activities (T-MAS), which aims to standardize and identify environmentally sustainable economic activities and clarify public and private-sector investments.[12]

With strong government support, an evolving legal framework, and abundant natural resources, Chile is poised to become a leader in renewable energy production, green hydrogen, storage capacity, and electric vehicles over the coming decades.

Financing the transition: Recent funding and future needs

To support its climate initiatives, Chile has relied on diverse financial instruments. Organisation for Economic Co-operation and Development (OECD) climate-related development finance data from 2015 to 2019 show that climate funds represent the largest portion at 60 percent, totaling $241 million across ten projects.[13] These funds were distributed through a combination of debt, equity, and results-based payments—equity and results-based payments hold a similar share, while grants comprise the smallest portion. Debt instruments constitute another large share of funding, primarily sourced through bilateral agreements, which account for 39 percent of total climate finance, contributing $160 million across sixty-one projects. Private donor contributions were negligible, accounting for less than 1 percent of total funding, with only four projects. The Chilean government has also tapped innovative financing mechanisms. For example, it issued Latin America's first sovereign green bonds, totaling $2.377 billion in 2019, to fund clean transport, energy efficiency, renewable energy, and other green projects.[14]

In addition to leveraging financial instruments, Chile has taken steps to integrate climate policies into its economic system. In 2014, the government approved a carbon tax, requiring major polluters to pay $5 per ton of carbon dioxide, although Chile might need to raise this carbon price substantially to drive deep decarbonization.[15] The tax officially took effect in 2017, and had generated more than $298 million by the following year, with the majority coming from the power sector.[16] The revenue has been used to support public services and environmental initiatives, as well as other priority government spending.

9. "Chile: Policies & Action," Climate Action Tracker, last visited September 17, 2025, https://climateactiontracker.org/countries/chile/policies-action/.
10. "Law No. 21,505 on Electric Energy Storage and Electromobility Is Published," Carey Abogados, November 22, 2022, https://www.carey.cl/en/law-no-21505-on-electric-energy-storage-and-electromobility-is-published.
11. "Chile's Long-Term Climate Strategy: The Path to Carbon Neutrality and Resilience by 2050," Chile Ministry of the Environment, 2021, https://unfccc.int/sites/default/files/resource/CHL_LTS_2021_EN_0.pdf.
12. "Sistema de Clasificación o Taxonomía de Actividades Económicas Medioambientalmente Sostenibles de Chile (T-MAS)," Chile Ministry of Finance, December 2024, https://cms.hacienda.cl/ciudadana/assets/documento/descargar/df6620edf2776/1735646399.
13. "Country Brief: Chile," Green Climate Fund, Independent Evaluation Unit, August 2021, https://ieu.greenclimate.fund/sites/default/files/evaluation/priv-country-brief-chile.pdf#:~:text=data%20on%20climate,in%20Chile%20is%20sourced%20from.
14. "Chile: Financial Strategy on Climate Change," Chile Ministry of Finance, December 2019, 19, https://cambioclimatico.mma.gob.cl/wp-content/uploads/2020/12/Financial-Strategy-on-Climate-Change-Chile-EN.pdf#:~:text=market%20development.
15. "Chile: Selected Issues," International Monetary Fund, Western Hemisphere Department, January 20, 2023, https://www.elibrary.imf.org/view/journals/002/2023/037/article-A003-en.xml.
16. "Chile's Carbon Tax: An Ambitious Step towards Environmentally Friendly Policies and Significant Greenhouse Gas Emission Reductions," Deutsche Gesellschaft für Internationale Zusammenarbeit and United Nations Development Programme, September 2019, https://transparency-partnership.net/system/files/migrated_document_files/190927_gpd_chile_carbontax_web.pdf.

Chile's energy transition is further aided by international investors, who have heavily backed Chile's renewable expansion.[17] Foreign companies account for about 77 percent of the $6.9 billion in private energy investments projected for 2024–2028.[18]

Financing for Chile's green hydrogen ambitions is also strong, with a $1-billion investment facility planned through the country's economic development agency, CORFO (La Corporación de Fomento de la Producción), to catalyze private investment across the hydrogen value chain. In parallel, the Ministry of Energy launched its National Green Hydrogen Strategy, with the goals of becoming a key player in the global hydrogen market and developing 25 GW of electrolysis capacity by 2030.[19]

Still, accelerating Chile's transition to net-zero emissions will require much more funding. The government expects the journey toward carbon neutrality by 2050 to require an estimated $48.6 billion in upfront investment.[20] The most significant capital investment is needed for electromobility ($23.1 billion), which includes electric public transport and private vehicle adoption. However, current analyses suggest that, with the right policies, many mitigation investments will pay for themselves over time via operational savings. Projected savings in operational and maintenance expenses could reach $80.1 billion, resulting in a net economic gain of $31.5 billion. Sustainable buildings and the sustainable industry offer net benefits of $11.1 billion and $9.6 billion, respectively.[21]

Unlocking capital: A guarantee facility to drive private investment

Due to Chile's favorable climate policies, successes leveraging public finances and private investment to decarbonize, and high renewables potential, it is well positioned to attract additional private capital on a larger scale. A proposed financial instrument that could close the financing gap is the Emerging Markets Climate Investment Compact (EMCIC).[22] EMCIC is designed to unlock $100–500 billion in private capital over the next decade to drive green energy and nature-based investments in emerging markets and developing economies (EMDEs). Structured as a large-scale loan guarantee facility, EMCIC would offer institutional investors credit guarantees that cover up to 80 percent of non-currency risks across portfolios of climate-related projects. These risks, which are common to all energy projects to varying degrees, include regulatory and revenue risks, transmission bottlenecks and curtailment, price volatility, and permitting and environmental challenges. The lender will need to evaluate each project's specific risks to its portfolio and seek guarantees only for those projects for which the risks fit within parameters established by EMCIC. The compact's primary goal is to elevate these investments to "investment grade" status in the view of internal credit committees, significantly lowering the perceived risk and facilitating greater private capital flows into promising renewable energy sectors, such as Chile's. EMCIC is envisioned to be funded by a coalition of sovereign governments from high-income economies with strong economic ties to Chile and other emerging markets, alongside support from major foundations and sovereign wealth funds.

EMCIC has several distinguishing features in comparison to other guarantee mechanisms and facilities. One distinctive feature of EMCIC is that it would not require sovereign guarantees from the countries where investments are made, which is a common barrier to project bankability in emerging market countries that often have existing indebtedness and cannot further strain their sovereign balance sheet with guarantees.[23] Instead, it would shift due diligence responsibilities onto prequalified investors, who would be required to manage diverse, standards-compliant investment portfolios across multiple markets. Second, EMCIC would provide comprehensive coverage of all risks except for currency risks, for which it will rely on market-based currency

17. "RECAI: Renewable Energy Country Attractiveness Index," EY, June 2024, https://www.ey.com/content/dam/ey-unified-site/ey-com/en-gl/insights/energy-resources/documents/ey-gl-recai-63-top-40-ranking-06-2024.pdf; "India, China, Chile, the Philippines, and Brazil Top Ranking as the Most Attractive Developing Economies for Clean Energy Investment According to Report," BloombergNEF, press release, November 29, 2023, https://about.bnef.com/insights/clean-energy/india-china-chile-the-philippines-and-brazil-top-ranking-as-the-most-attractive-developing-economies-for-clean-energy-investment-according-to-report/.
18. "Foreign Investment in Chile 2023," InvestChile Insights, November 2024, 13, https://www.investchile.gob.cl/wp-content/uploads/2024/12/FDI-Report-eng-2023.pdf.
19. "National Green Hydrogen Strategy," Chile Ministry of Energy, November 2020, https://energia.gob.cl/sites/default/files/national_green_hydrogen_strategy_-_chile.pdf.
20. "Green Growth Opportunities for the Decarbonization Goal for Chile."
21. Ibid.
22. Ian Callaghan, "Concept Note: Emerging Market Climate Investment Compact," Atlantic Council, September 2023, https://www.atlanticcouncil.org/wp-content/uploads/2023/09/Concept-Note_Emerging-Market-Climate-Investment-Compact-1.pdf.
23. Mohseni-Cheraghlou and Willey, "Scaling up Private Capital."

hedging operations. Many existing facilities only cover certain risks on projects (see table). Third, EMCIC presents a user-friendly, scalable model that reduces barriers for private investors that are unfamiliar or inexperienced with blended finance transactions while upholding robust environmental and social safeguards. EMCIC would pre-qualify private investors to use the guarantees based on a set of standards that are similar to existing standards governing climate investment-driven facilities. However, after pre-qualifying investors, the EMCIC facility would not perform due diligence itself. Instead, private investors would carry out their own due diligence, while the facility would perform spot checks on projects within each investor's portfolio to verify compliance with established standards and key performance indicators (KPIs).

By filling a crucial gap in the global financial architecture, EMCIC has the potential to catalyze a major shift in private capital toward climate solutions in Chile and other EMDEs focused on energy transition. Leveraging the already growing interest in its renewable industry, combined with EMCIC's risk-sharing mechanisms, Chile can bridge its financing gap and accelerate its low-carbon transition. EMCIC-backed projects in Chile should prioritize lower-risk investments in grid expansion, wind farms, concentrated solar power plants, and solar photovoltaic (PV), as well as the strategic retirement of coal-fired power plants in favor of cleaner natural gas alternatives. By expanding access to affordable financing and strengthening collaboration between the public and private sectors, EMCIC and similar mechanisms could further enhance Chile's competitiveness in the global clean energy market and accelerate its transition to a low-carbon economy.

Table 1: A comparison of proposed and active guarantee facilities

Guarantee provider	Eligible projects			Risks covered						Leverage	Funding	Target capitalization
	Clean energy	Nature-based / adaptation	SDG-aligned / other development goals	Project execution / construction	Political	Credit / default	Commercial / performance	First-loss / equity	Currency			
Proposed/In-Progress												
EMCIC	✓	✓	✗	✓	✓	✓	✓	✓ (anticipated)	✗	~1:10	5–10 developed countries	~$10B (proposed facility)
BRICS Guarantee Platform	✓	✗	✓	✗	✓	✓	✗	✓ (possible)	✗	~1:10	Existing NDB balance sheet	NDB capital: $100B authorized
The Green Guarantee Company	✓	✗	✗	✗	✗	✓	✓	✗	✗	~1:10	FCDO, GCF, NSIA, USAID / Prosper Africa, Norfund	$100M+ initial target
Active												
MIGA Guarantees	✓	✗	✗	✓	✓	✓	✓	✗	✗	~1:5–10	World Bank Group resources	$2.8B subscribed capital; targeting $20B annual issuance by 2030
IFC Guarantees	✓	✗	✗	✓	✓	✓	✓	✗	✗	~1:4–8	IFC balance sheet / blended finance	$40.9B total capital (June 2025)
iTrust Guarantee (RELP)	✓	✗	✗	✓	✗	✓	✓	✗	✗	TBF	Private investors	TBF
EFSD+	✓	✗	✓	✗	✓	✓	✓	✗	✗	~1:10	EU budget / EIB / DFIs	€60B target by 2027
African Development Bank Guarantees	✓	✗	✗	✓	✓	✓	✓	✗	✗	~1:6–8	AfDB capital base / donor trust funds	$318B authorized capital (2024)
DOE Loan Guarantee Program	✓	✗	✓	✓	✗	✓	✓	✗	✗	~1:10–15	US Federal appropriations	$290B loan authority through 2026
PIDG (GuarantCo)	✓	✓	✓	✓	✓	✓	✓	✗	✓	~1:3–10	UK, Netherlands, Switzerland, Australia, Sweden, Germany, Canada, IFC	~$1.5B in guarantees issued to date
Africa GreenCo	✓	✗	✗	✓	✗	✓	✓	✗	✓	~1:10	InfraCo Africa, IFU, GuarantCo backing	$27M GuarantCo guarantee facility
Infracredit (Nigeria)	✓	✗	✓	✓	✗	✓	✓	✗	✗ (local currency only)	~1:5–8	NSIA, GuarantCo, KfW, AFC, AfDB, InfraCo Africa	~~₦~~15B ($35M) initial capital
Asian Development Bank (ADB)	✓	✓	✓	✓	✓	✓	✓	✗	✓	~1:5–10	ADB capital / donor funds	$165B authorized capital (2024)
Asian Infrastructure Investment Bank (AIIB)	✓	✓	✓	✓	✓	✓	✓	✗	✗	~1:5–8	AIIB capital base	$100B authorized capital
IDA (World Bank)	✓	✓	✓	✓	✓	✓	✓	✗	✗	~1:5–10	IDA donor contributions	$93B IDA20 (2022-2025)
IBRD (World Bank)	✓	✓	✓	✓	✓	✓	✓	✗	✗	~1:5–10	IBRD capital / borrowings	$283B subscribed capital
European Investment Bank (EIB)	✓	✓	✓	✓	✓	✓	✓	✗	✗	~1:8–12	EIB capital / EU budget backing	€248.8B subscribed capital (2023)
Export-Import Bank of the United States	✓	✗	✗	✓	✓	✓	✓	✗	✗	Varies	US Government backing	$135B statutory exposure cap

Legend: ✓ = Covered/Eligible; ✗ = Not covered/Not eligible; **TBF** = To be finalized; **—** = Information not available; **Active** = Currently operational; **Proposed** = Under development; Leverage ratios indicate typical mobilization of private capital per dollar of guarantee/funding.

About the authors

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