Leveraging Long-Term Energy Scenarios Planning Frameworks to Mobilize Climate Finance in Latin America & the Caribbean

September 2024

IDB

Latin America and the Caribbean challenges

Energy Planning Frameworks

Climate Finance Mobilization

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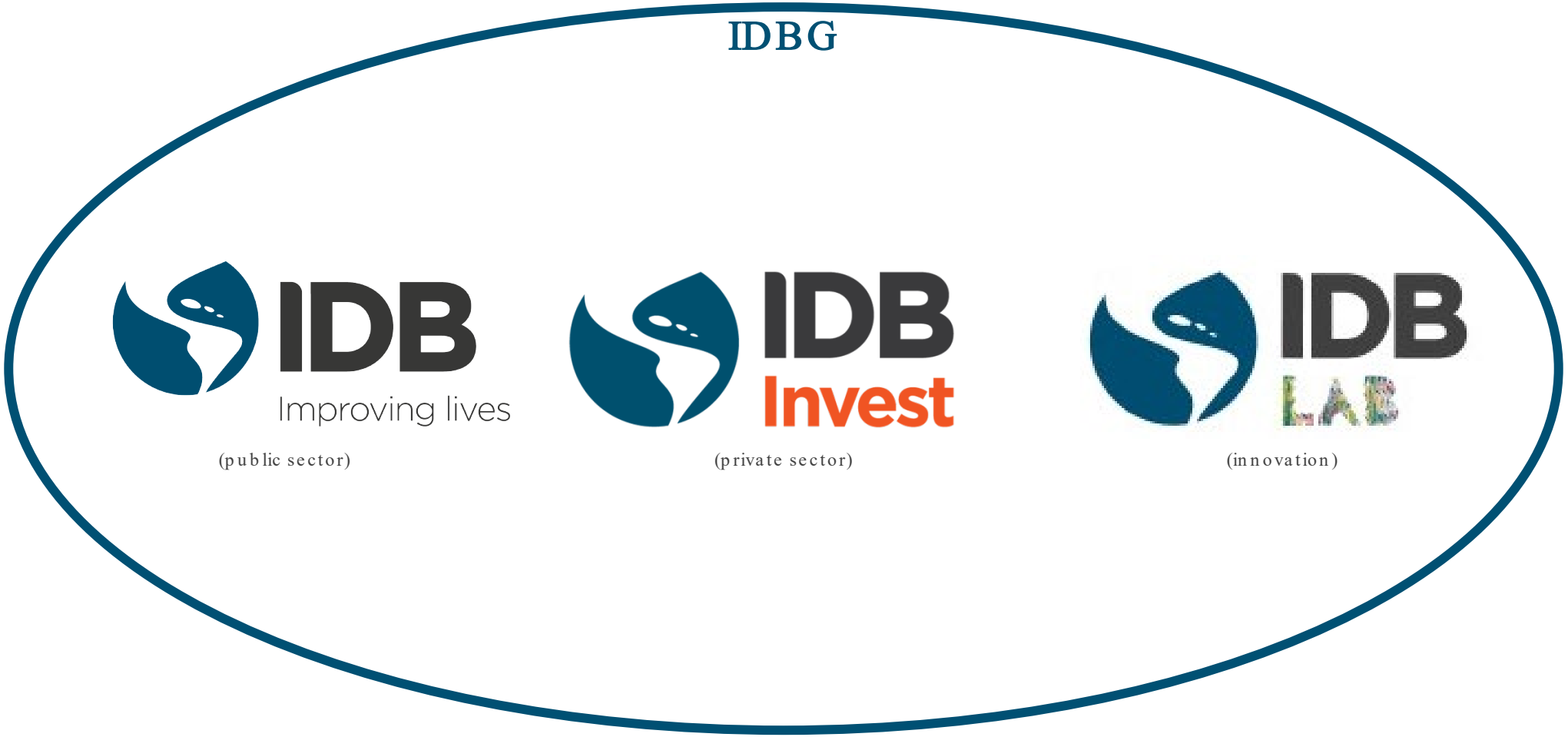
The IDBG is structured in 3 different organizations to address the needs of Latin America and the Caribbean



The IDB Energy Division fosters the region's energy transition and its sustainable development goals

Regional presence

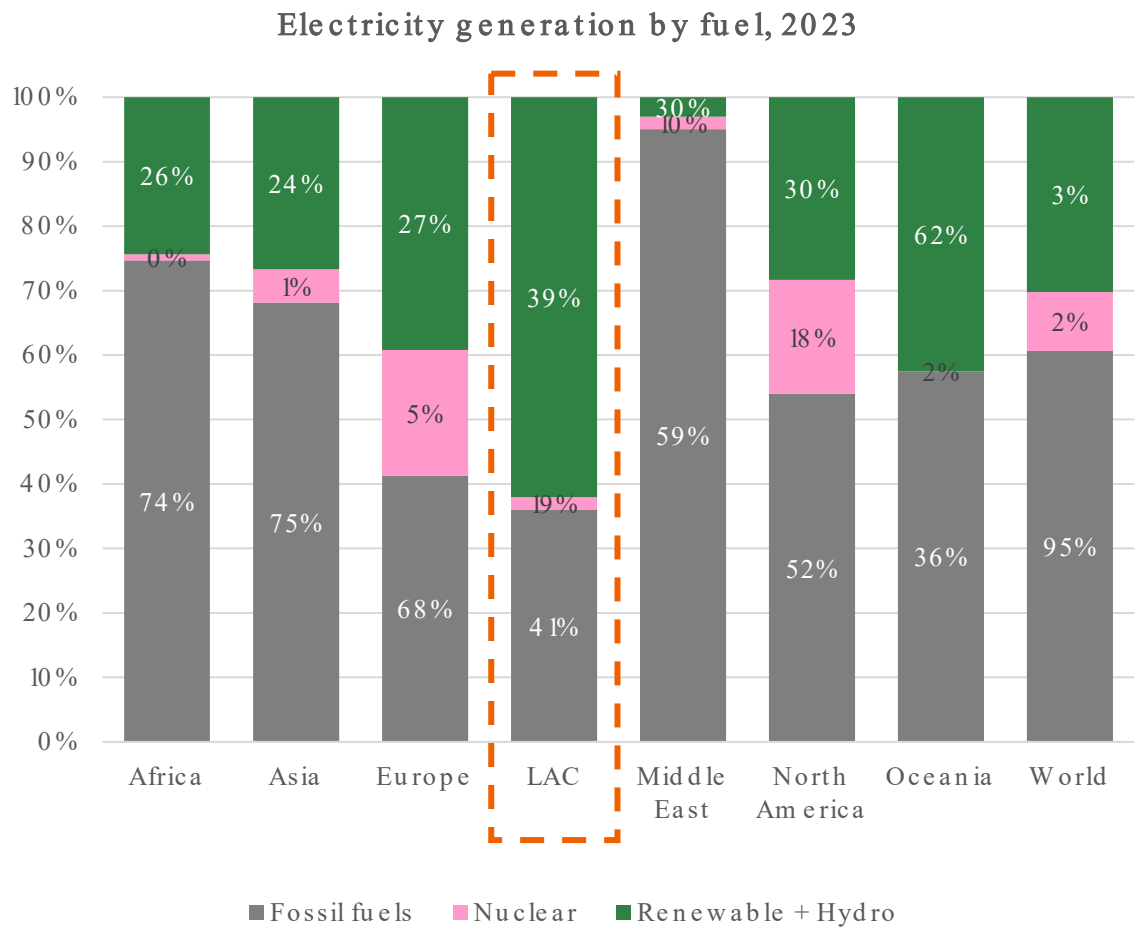
We support Latin America and the Caribbean achieve

a **resilient, low-carbon and inclusive energy transition**,

to enhance competitiveness and

improve the quality of life of its inhabitants

Latin America and the Caribbean has achieved impressive milestones in its energy transition



Achievements

- 60% of electricity comes from renewables
- 97% of electricity services coverage
- More than 5,000 electric buses in the streets

Challenges

- Fossil fuels still relevant in transport and industry
- Large investment needs in just energy transition

Note: Ember regions. LAC refers to Latin America and the Caribbean
Source: Energy Institute (2024) 'Statistical Review of World Energy'; Our World in Data (2024) 'Electricity production by source, World'

The region has important challenges to materialize a just, secure and affordable energy transition

Investment needs

Increase from 66 billion in 2022
to at least 150 billion a year by 2030*

Energy prices

Electricity prices 143 USD/MWh
vs. 106 USD/MWh (USA), 93 USD/MWh (China)

Energy access

16 million without access to electricity
81 million without access to clean cooking fuels

Electricity losses

17% on average
US$ 10-16 billion/year lost

(*) Required to meet the commitments of the Paris Agreement, according to IEA estimates.

The International Energy Agency (IEA) scenarios for the global energy transition illustrate the challenge ahead

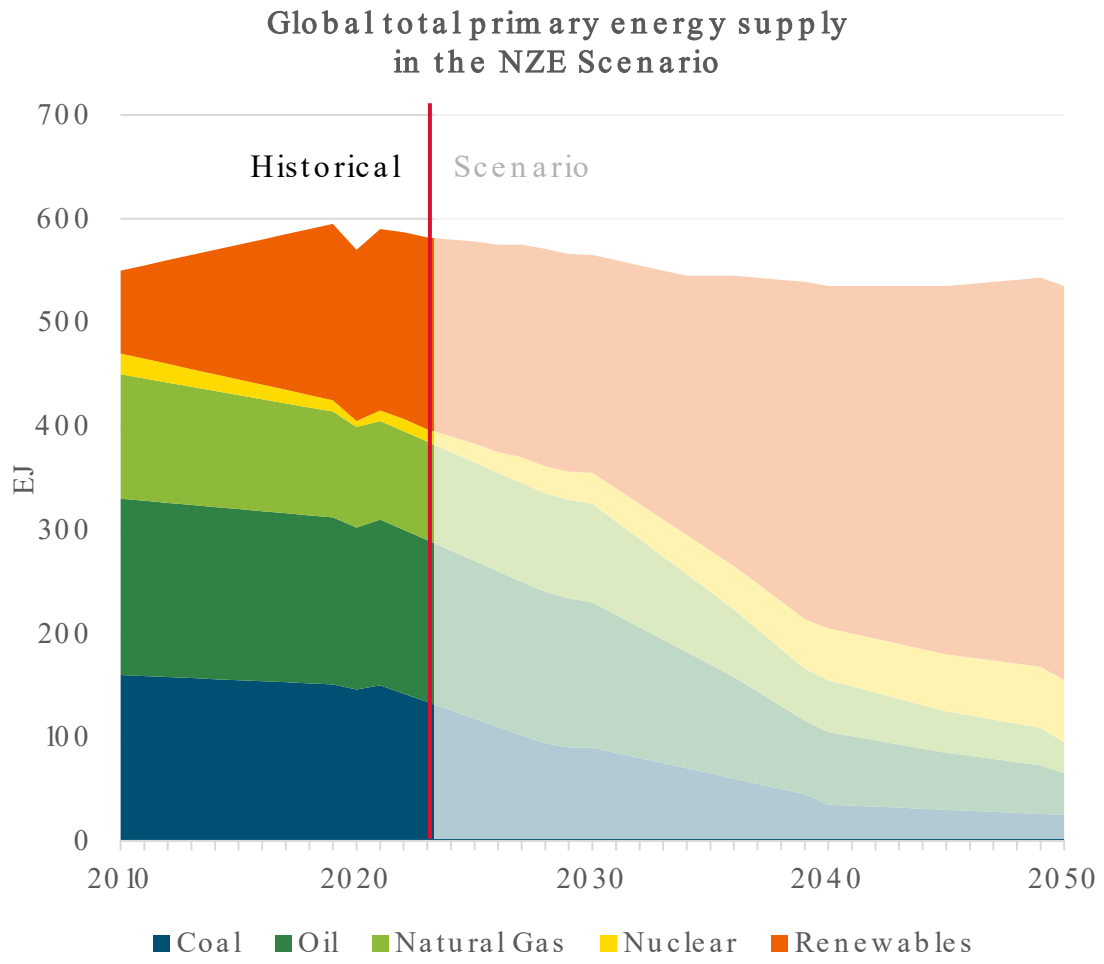
Stated Policies Scenario (STEPS)
Maps out a trajectory that reflects current countries policy settings, based on a detailed sector-by-sector assessment of policies in place or under development.

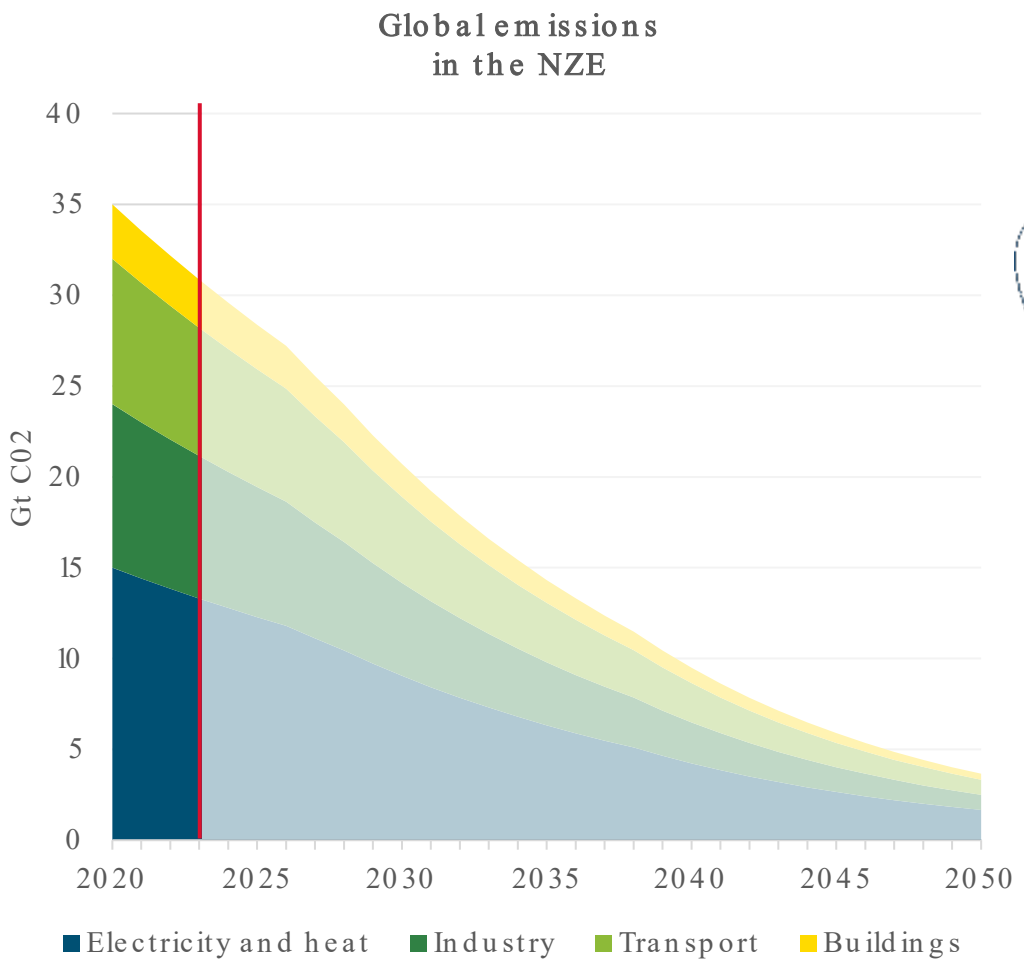
Announced Pledges Scenario (APS)
Assumes that all long-term emissions and energy access targets, including net zero commitments,
will be met on time and in full, even where policies are not yet in place to deliver them.

Net Zero Emissions by 2050 (NZE)
Sets out a pathway for the global energy sector to achieve net zero CO2 emissions by 2050,
updating the landmark IEA analysis first published in 2021. (Normative).

Source: IEA (2023) World Energy Outlook

NZE scenario: rapid renewable adoption to cut global emissions

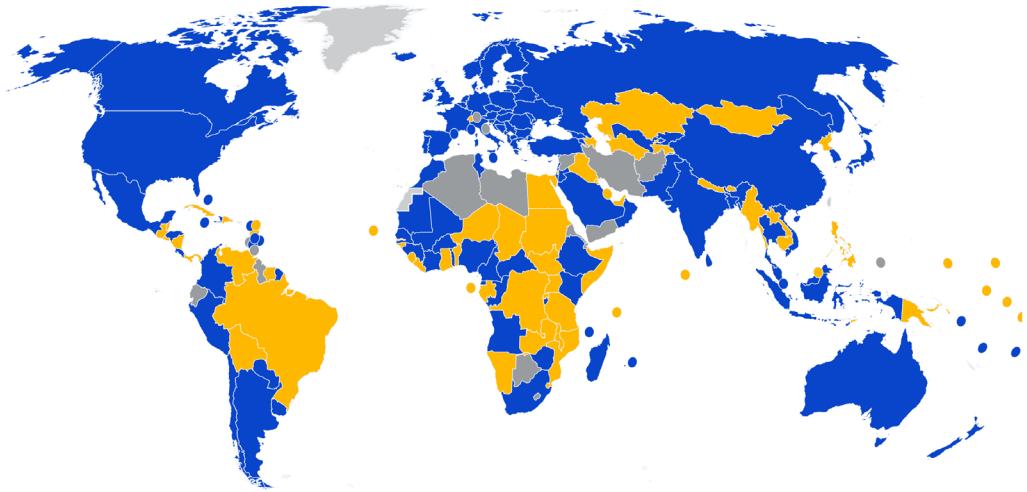




Note: STEPS refers to IEA Stated Policies Scenario, APS refers to IEA Announced Pledges Scenario, and NZE refers to IEA Net Zero Emissions by 2050 (NZE)
Source: IEA (2023) World Energy Outlook

Most LAC countries have announced targets to advance the energy transition, but much remains to be done

Nationally Determined Contributions (NDCs)



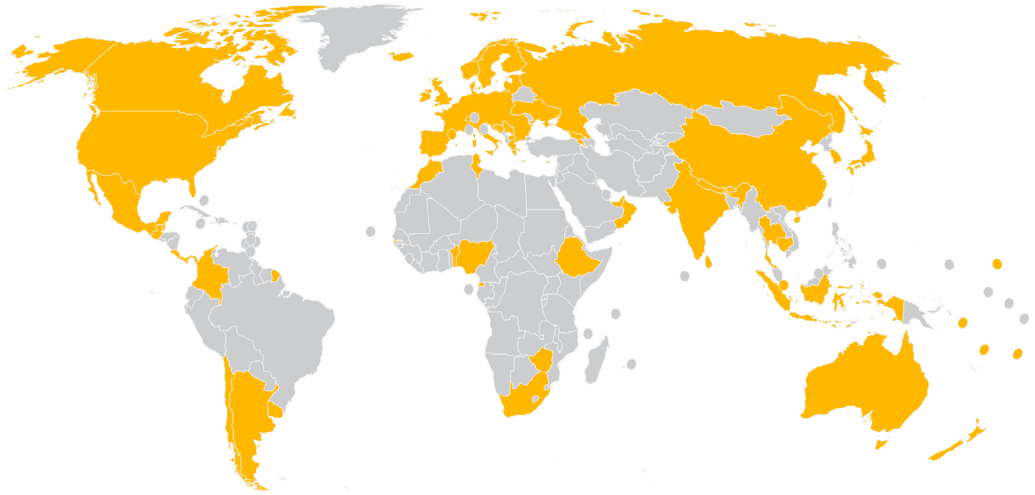
- Submitted New or Updated NDC with Reduced Total Emissions
- Submitted New or Updated NDC
- Not Applicable
- No Information

178 **countries** (94.1% of global emissions) have submitted a **new or updated NDC**

109 **of the 178 countries** (80.9% of global emissions) have submitted a **new or updated NDC with reduced total emissions** compared to their initial NDC

Click on the country or see table below to compare with previous NDC

Long-Term Strategies (LTS)



- Long-term Strategy Submitted — 73 Parties
- No Document Submitted — 139 Parties

Source: Climate Watch (2024)

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Energy Planning Frameworks

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Planning is fundamental to identify investment needs

Challenges in current planning frameworks

- Higher levels of uncertainty (technological, climate, demand).
- Restrictions not fully considered in traditional planning efforts (permitting, tech).
- Power systems planning not fully aligned with long term energy planning (net zero).
- Multi-energy-carrier or economy wide planning not commonly used in the region.

Regulation must translate planning into investments

Planning	Regulation
 	 
Renewable energy expansion	Auctions, permitting, financing
Transmission expansion	Permitting, financing
Distribution and access	Distributed Energy Resources Rural electrification
Energy sector decarbonization	H2, Evs, Industry, Aviation, Shipping

IDB Support for Energy Planning Studies

Bolivia - National Energy Plan (2021-2050)

Brazil – Energy scenarios for an efficient energy transition (2024-2050)

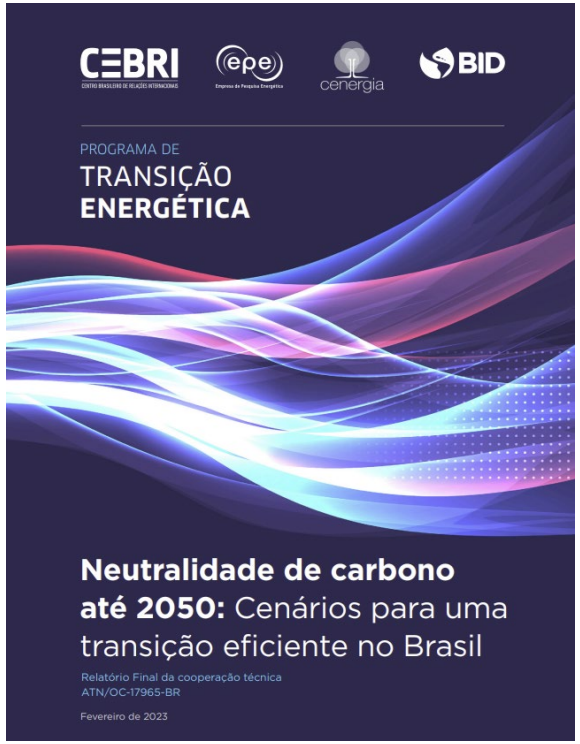
Panamá - Cost-benefit analysis of the energy transition (2024-2050)

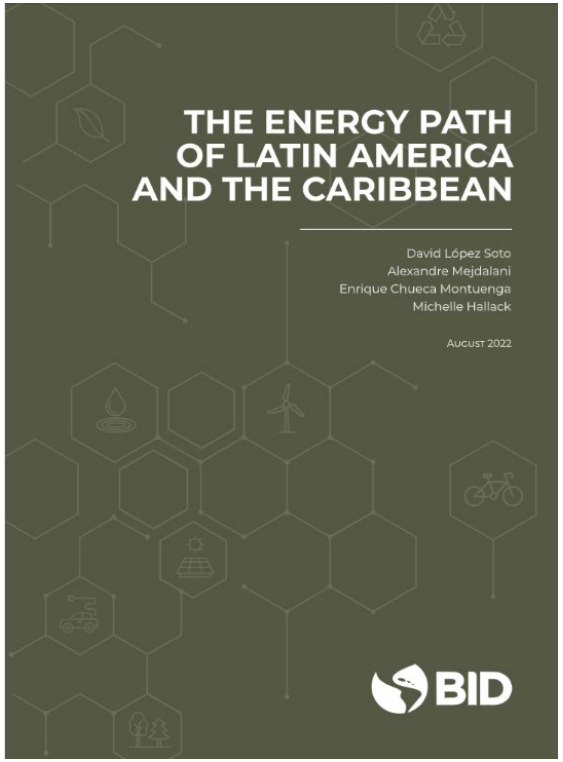
Dominican Republic - Planning studies, including BESS, Coal retirement, decarbonization

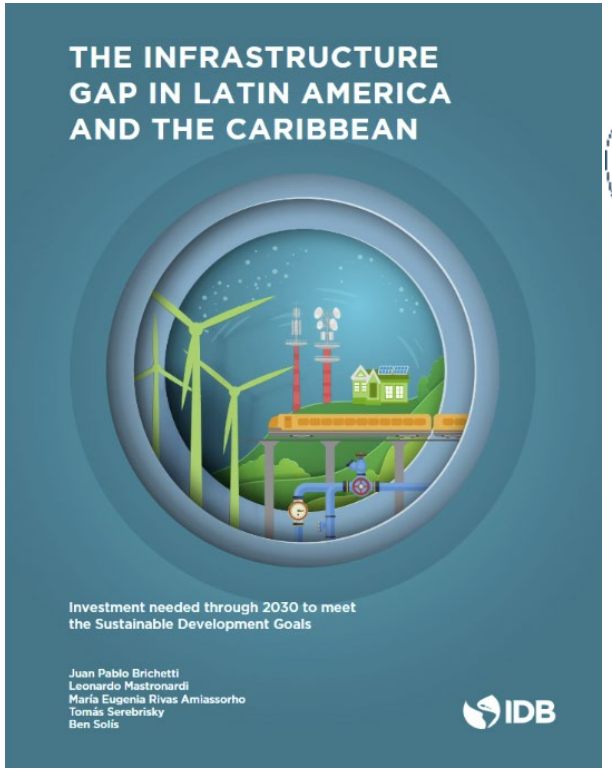
Barbados - Integrated Resource and Resilience Plan – 2020 and 2023

Bahamas - Integrated Resource and Resilience Plan (IRRP) - 2023

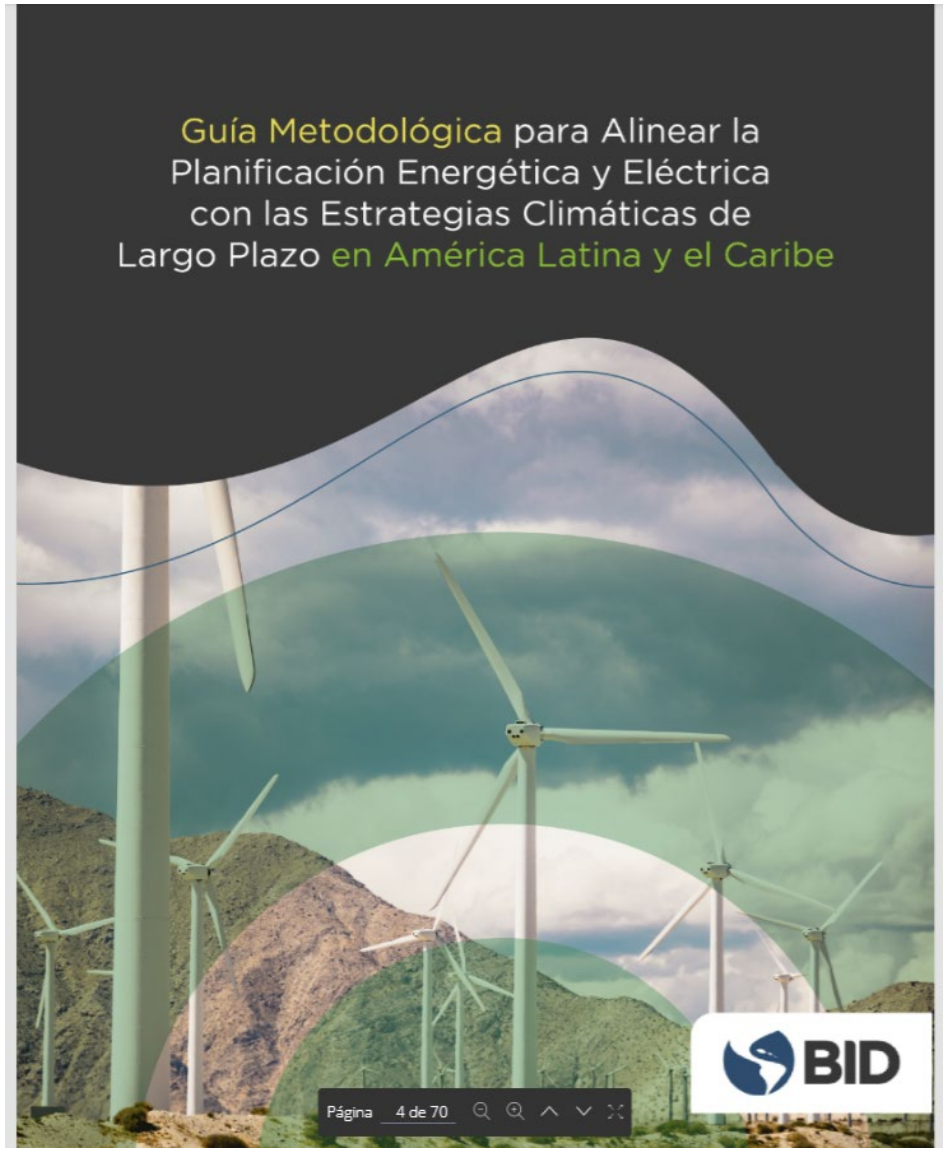
IDB Support for Energy Planning Studies







Methodological guide



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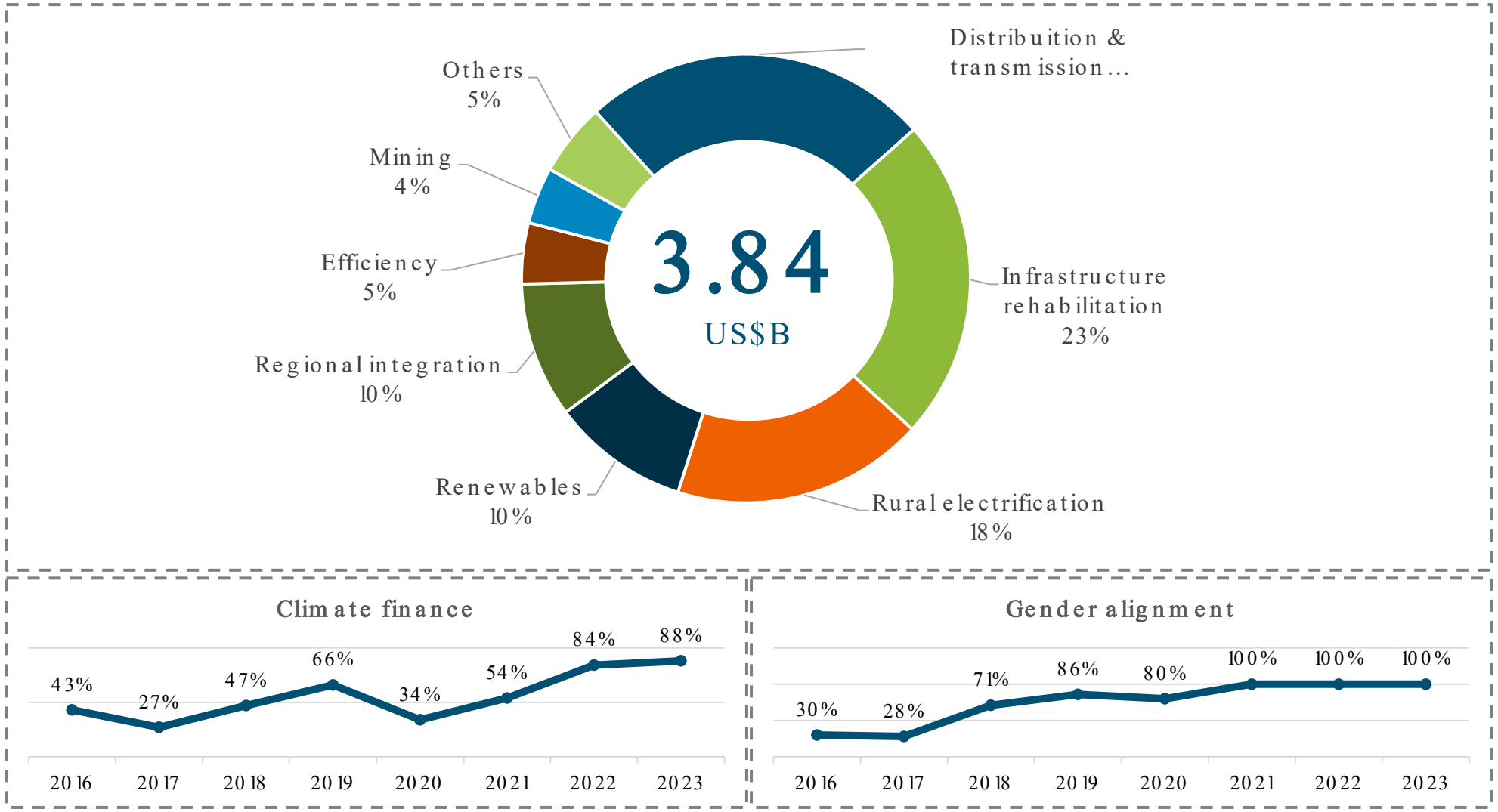
Our active portfolio is closely linked to support decarbonization, networks, and resilience

Active portfolio, january 2024



Note: Active loan operations as of january 2024; Source: IDB's projects database

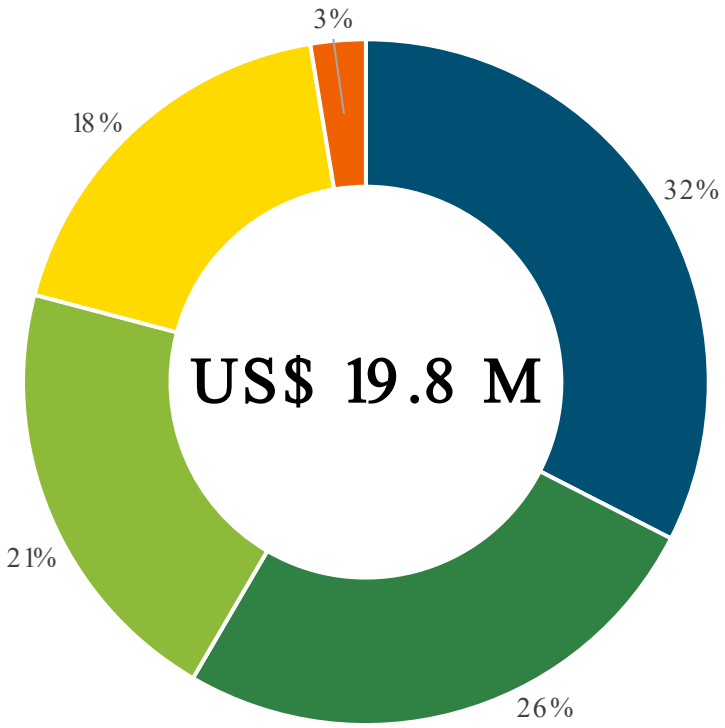
Using financial instruments from the public window, the Bank supports the entire region

Activities to enable private investment

Since 2017

- ENE has assisted **24 countries** (all but ES and VE), with **138 enabling activities or** components for the private sector
- We have channeled **U$19.8M in technical assistance** and U$72M in investment components for enabling activities and PPPs
- ENE deployed **11 PBLs** for 7 countries, where 27% of the measures (US$1,962M) supported private sector participation

Resources deployed



# activities	
Regulatory frameworks	55
Institutional strengthening	31
New business models	28
Studies and design	19
Mining sector	5
Total	**138**

The effectiveness of the Energy Division's operations made significant progress

Results

Increasing the share of renewable energy in the electricity matrix	↑ 3,43% participation + 573 MW
Households with new or improved energy access	↑ 14,7% coverage increase + 45.274 households
Improvements in quality and reliability of electricity supply (average 2015-2023).	↓10 hrs of interruption per year ↓ # 5,42 interruptions per year
Reduction of losses in the distribution system	↓ 4,90% losses
Adoption of energy efficiency technologies by end-users	+ 83.746 households 19.880 MWh in savings ↓$6,83 M of subsidy
Progress in the transition to electromobility	+ 3.213 electric vehicles + 368 charging stations
Smart meters installed at end-customers	+ 28.768 meters
Capacity building for sector professionals and beneficiaries	+ 1.212 people, of which 372 were women

We partnered with international donors to channel additional resources

CIF CLIMATE INVESTMENT FUNDS

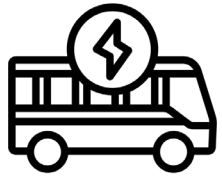
US$ 210 M

Climate change mitigation and adaptation

GREEN CLIMATE FUND

E-mobility Program for Sustainable Cities

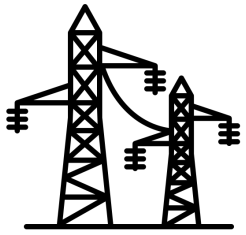
US$ 450 M



Public electric mobility and hydrogen-based

UKSIP UK Sustainable Infrastructure Program

US$ 117 M



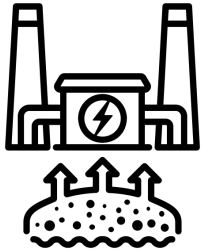
Sustainable infrastructure &regulatory frameworks

GREEN CLIMATE FUND

Sustainable Energy Facility (SEF)

US$ 192 M

Eastern Caribbean Countries



Geothermal energy

Mitigation Action Facility

US$ 13 M

Climate change mitigation

IDB

Thank you