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

September 2024



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



Electricity generation by fuel, 2023

#### ■ Fossil fuels ■ Nuclear ■ Renewable + Hydro

#### 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









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\*



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

### **Energy access**

16 million without access to electricity81 million without access to clean cooking fuels

## **Electricity losses**

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



# 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).



## NZE scenario: rapid renewable adoption to cut global emissions



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





Long-Term Strategies (LTS)





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

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

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



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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





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Irans	mission	expansion







#### Regulation



Auctions, permitting, financing

Permitting, financing

Distributed Energy Resources Rural electrification

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



Neutralidade de carbono até 2050: Cenários para uma transição eficiente no Brasil Relativo: Final da cooperação técnica ATIV/OC.17965-BR Fevereiro da 2023







Investment needed through 2030 to meet the Sustainable Development Goals

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## Methodological guide

Guía Metodológica para Alinear la Planificación Energética y Eléctrica con las Estrategias Climáticas de Largo Plazo en América Latina y el Caribe





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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

- 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



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

### Results



Increasing the share of renewable energy in the electricity matrix Households with new or improved energy access Improvements in quality and reliability of electricity supply (average 2015-2023). **Reduction of losses in the** distribution system Adoption of energy efficiency technologies by end-users



**Progress in the transition to** electromobility



Smart meters installed at end-customers



**Capacity building for** sector professionals and beneficiaries

- ↑ 3.43% participation + 573 MW
- ↑ 14,7% coverage increase + 45.274 households
- **↓10 hrs of interruption per year** ↓ # 5,42 interruptions per year

**↓ 4,90% losses** 

- + 83.746 households 19.880 MWh in savings **↓\$6,83 M of subsidy**
- + 3.213 electric vehicles + 368 charging stations
- + 28.768 meters

+ 1.212 people, of which 372 were women



# We partnered with international donors to channel additional resources



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