



FACTSHEET

# BRAZIL'S INVESTMENT PLAN UNDER CIF'S RENEWABLE ENERGY INTEGRATION PROGRAM (CIF REI)



Brazil has submitted a plan to the CIF Renewable Energy Integration Program (CIF REI) to reduce barriers and promote the integration of renewable energy into the country's electric system. The \$70 million plan will span seven years, from 2023 to 2029.

Currently, Brazil relies heavily on hydroelectric power, which has led to energy crises due to droughts. To address this, Brazil aims to diversify its energy sources and reduce greenhouse gas emissions. The Investment Plan focuses on expanding variable renewable energy (VRE) and distributed grids.

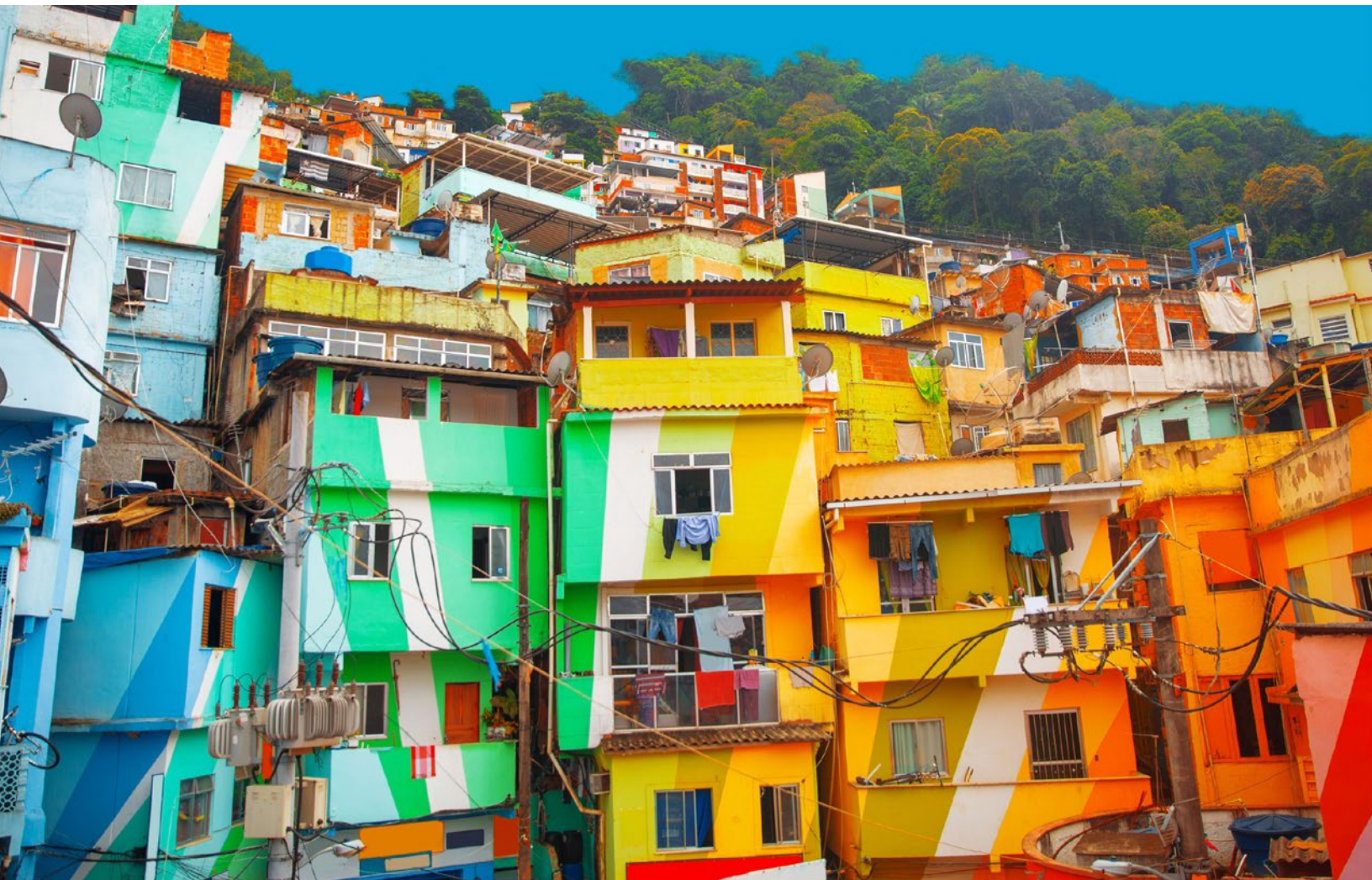
CIF-REI funding will provide low-cost financing for technologies and business models that facilitate the integration of VRE. The plan consists of three components, with the Inter-American Development Bank (IDB) implementing Components 1 and 2, and the World Bank (WB) implementing Component 3.

Component 1 aims to invest in technologies that increase the flexibility of the energy system to

accommodate more VRE resources. Component 2 provides funding for projects, technical assistance, and feasibility studies. Component 3 covers shared infrastructure for green hydrogen (GH2) projects and the development of an innovation hub for research and development.

Funding under Components 1 and 2 can support activities such as modernizing hydroelectric power plants, decarbonizing isolated systems, improving transmission equipment, and implementing intelligent metering infrastructure. Energy storage technologies, including pumped hydropower, GH2, and batteries, will also be expanded.

Under Component 3, a GH2 hub will be developed to support VRE integration and mobilize private investments. The program also aims to address technological challenges related to VRE, such as digitalization, telecommunication infrastructure, technology security, and cybersecurity.



The program expects to achieve significant outcomes, including reductions in greenhouse gas emissions, increased VRE implementation, access to clean energy for millions of people, cost reductions in the electrical system, smart meter implementation, and the empowerment of consumers as prosumers. The program also aims to promote gender and social inclusion goals.

In addition to the expected outcomes mentioned earlier, the program aims to achieve several other goals. It plans to modernize nearly 5,000 MW of hydropower plant capacity, resulting in a reduction of 57 million metric tons of greenhouse gas emissions. The implementation of 1.6 GW of VRE per year will contribute to the country's clean energy goals.

Furthermore, the program seeks to provide reliable, clean, and modern energy services to approximately 3.1 million people who currently lack access. By utilizing flexible methodologies, the program aims to reduce the cost of the electrical system by \$2.07 billion. This reduction in costs will benefit both the government and consumers.

The program also aims to lower average operating costs by over 75 million BRL per year. This will lead to financial savings and improved efficiency in the operation of the electrical system.

Another important aspect of the program is the development of green hydrogen (GH<sub>2</sub>) capacity. By 2034, it aims to have 6 GW of installed GH<sub>2</sub> capacity, with a production of nearly 1 million tons per year. This will contribute to Brazil's efforts to decarbonize its energy sector and promote the use of clean and sustainable fuels.

To facilitate the implementation of demand response programs, the program plans to deploy 1.5 million smart meters. These meters will enable consumers to actively participate in the electrical industry by adjusting their electricity consumption based on price signals and grid conditions. This demand flexibility will support the integration of VRE sources and enhance the overall operation of the electrical system.

By deploying digital technologies, the program also aims to achieve further cost reductions in transmission, energy storage, and overall network flexibility. These technological advancements will improve the efficiency and reliability of the energy system.

Lastly, the program emphasizes its commitment to gender and social inclusion goals. It aims to ensure that the benefits of the program reach all segments of society, promoting equality and empowering marginalized communities.

Overall, the Renewable Energy Integration Investment Plan in Brazil is a comprehensive strategy aimed at diversifying the country's energy mix, reducing greenhouse gas emissions, increasing renewable energy deployment, improving energy access, and promoting sustainability and inclusivity.



## THE CLIMATE INVESTMENT FUNDS

c/o The World Bank Group  
1818 H Street NW, Washington, D.C. 20433 USA

Telephone: +1 (202) 458-1801  
Internet: [www.cif.org](http://www.cif.org)



@CIF\_action



ClFaction



ClFaction



ClFaction



ClFaction



@CIF\_action