



FACTSHEET

CLEAN TECHNOLOGY FUND-
RENEWABLE ENERGY INTEGRATION
(CTF-REI) INVESTMENT PLAN FOR
TÜRKIYE

BACKGROUND

The Climate Investment Funds (CIF) Renewable Energy Integration (REI) program is the world's only climate finance program fully dedicated to supporting the upgrading and adaptation of national energy systems, to help developing countries harness the full potential of clean technologies.

To meet climate goals, the energy sector needs to rapidly shift from being fossil-based to zero-carbon. While the global capacity to generate renewable energy has rapidly expanded – by 84 percent from 2014 to 2022 alone – integrating these variable sources of energy into existing energy systems can be a costly and technically challenging process. A September 2024 IEA [report](#) found that failing to undertake integration measures in line with climate energy pledges, “...could jeopardize up to 15% of solar PV and wind energy or variable renewable energy (VRE) generation in 2030.”

The REI Program helps emerging economies solve system-wide barriers preventing the integration of intermittent renewable energy into national grids. Through highly concessional funding, REI enables countries to build the efficient and effective energy systems needed to enable the large-scale deployment of solar and wind power.

The program fills a critical gap in the energy transition by funding power grid improvements, storage technologies, and other infrastructure and policy updates that can deliver clean power where and when it is needed.

CIF selected Türkiye as one of the pioneer countries for REI investment, alongside Colombia, Brazil, Costa Rica, Fiji, Mali and Kenya.

THE CHALLENGE

Türkiye's net GHG emissions increased from 164 MtCO₂e in 1990 to 467 MtCO₂e in 2020, the fastest pace of all OECD countries over the last decade. Despite recent improvements in energy efficiency, Türkiye currently ranks globally as the 15th country with the highest GHG emissions, up from 18th in 2019.

This increase in emissions reflects continued GDP and population growth and was observed across all sectors of the economy. But the energy sector, with emissions growing 3.8-fold between 1990 and 2020, is of particular concern as Türkiye still relies heavily on fossil fuels generation.

The country is responding to this challenge with adaptation and mitigation interventions.

In October and November 2021, Türkiye ratified the Paris Agreement, committing to net zero emissions by 2053 and advancing plans for resilient decarbonization; it also created a new Directorate of Climate Change in charge of coordinating the climate transition across all levels of government. Türkiye submitted the first iteration of its NDC to the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat in April 2023, outlining climate actions and targets.

Türkiye has designed one of the most ambitious strategies globally to scale-up renewable energy generation. The strategy plans to add up to 60 GW by 2035 (5 GW per year).

To achieve this, the private sector will have to provide most of the investments needed, and the country will have to address renewable integration barriers such as lack of sufficient transmission capacity, regulatory issues and insufficient energy storage systems.

INVESTMENT PLAN HIGHLIGHTS

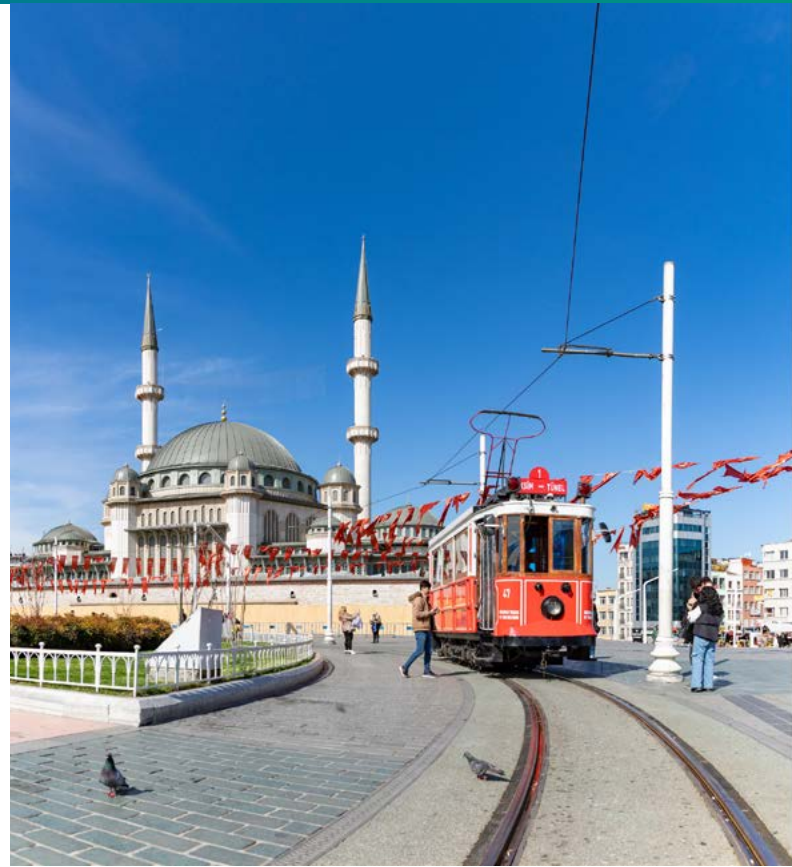
The REI Investment Plan was developed by the government of Türkiye in collaboration with the European Bank for Reconstruction & Development (EBRD) and the World Bank Group (IBRD and IFC). It aims to support the country's plan to scale-up renewable energy by 2035, including by enabling flexibility of energy systems and smooth integration of higher shares of variable renewable energy generation in Türkiye's grid.

Through the Clean Technology Fund, CIF will provide \$70 million in funding, which is expected to mobilize over \$1 billion in co-financing from partner multilateral development banks, and the public and private sectors by 2035.

COMPONENT 1: TRANSFORMING POWER TRANSMISSION SYSTEM PROJECT

- World Bank: \$750 million
- CIF: \$40 million

The Transforming Power Transmission System (TPTS) Project aims to support the transformation of the transmission system to enable an additional 60 GW of RE (specifically wind and solar) of generation capacity by 2035, in line with the government's pledge to achieve net zero emissions by 2053.



COMPONENT 2: SYSTEM FLEXIBILITY, BALANCING AND STABILIZATION AND STRENGTHENING POWER INFRASTRUCTURE

- EBRD : \$150 million
- IFC: \$150 million
- CTF: \$30 million

This component will help Türkiye's government to enhance the system flexibility, balancing, and stabilization through energy storage operations. It will also support the co-financing of investments with regard to e-mobility, specifically electric vehicles charging stations, and digitalization of the power distribution grid.

IMPACT

REI will play a crucial role in integrating renewable energy in Türkiye, including increasing:

- Renewables in the total primary energy supply by 21.6 Mtoe by 2035; equivalent to powering approximately 70 million average homes for a year;
- Increase battery capacity by 7,500 MW by 2035, equivalent to powering approximately 18 million electric vehicles for a year;
- Solar photovoltaic capacity from 13,998 MW to 52,900 MW, and wind from 11,807 MW to 29,600 MW by 2035.



THE CLIMATE INVESTMENT FUNDS

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