

TRANSFORMATIONAL CHANGE IN TURKEY'S ENERGY EFFICIENCY: CTF'S CONTRIBUTION

This case study shares Turkey's story of transformational change toward a low-carbon economy, focusing on the contributions of the Climate Investment Funds' (CIF) Clean Technology Fund (CTF) from 2009 to 2020. It describes the country context, CIF's strategy for supporting Turkey's energy efficiency (EE) goals, and the progress Turkey has made toward transformational change in the EE sector.

COUNTRY CONTEXT

From 2001 to 2010, Turkey's economy tripled in size and its population grew by 14 percent, raising the country's electricity demand by seven percent each year between 2005 and 2013. As a consequence, its greenhouse gas (GHG) emissions increased significantly in the early 2000s, with emissions in Turkey (excluding land use and land use change and forestry) showing the highest growth among the Annex 1 countries of the UNFCCC between 1990 and 2006.

With Turkey's domestic energy production supplying less than 30 percent of its total consumption, national policy attention turned toward scaling up the deployment of renewable energy (RE) and developing the energy efficiency (EE) market in order to strengthen energy security, while also improving the country's economic competitiveness through energy savings.

To support Turkey's energy transition ambitions, CIF's Clean Technology Fund (CTF) targeted the country's small and medium-sized enterprises (SMEs) which dominated the Turkish economy. According to the Organisation for Economic Co-operation and Development (OECD), SMEs represented 99.8 percent of the country's enterprises and 76.7 percent of total employment in 2000. SMEs had traditionally struggled to access debt finance, thus their growth had been constrained. CTF addressed the SMEs' underutilized potential, providing concessional finance to help grow the economy while reducing GHG emissions.

CIF'S STRATEGY TO SUPPORT TURKEY'S ENERGY EFFICIENCY AGENDA

The 2009 CTF country investment plan detailed a strategy to accelerate Turkey's goals for economic development and more rapid GHG emission reductions through increasing EE and improving RE supply. CTF's investments targeted the energy sector because of a tightening balance between electricity demand and supply, its sizable contribution to Turkey's GHG emissions, and the estimated cost effectiveness of EE. Support was targeted at private investors and companies investing in EE measures, who were expected to benefit from the expanded



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PUBLICATIONS SERIES

Transformational Change Case Study

PUBLICATION DATE

December 2021

RELEVANT CIF PROGRAM

Clean Technology Fund (CTF)

RELEVANT COUNTRIES

Turkey

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availability of long-term financing either directly through project loans or indirectly because of the demonstration effect of the projects.

CTF adopted an intermediated approach in two major energy efficiency initiatives directed at SMEs: the Turkish Sustainable Energy Financing Facility (TurSEFF) and the Commercializing Sustainable Energy Finance project (CSEF). TurSEFF, implemented by the European Bank for Reconstruction and Development (EBRD), facilitated investments of USD250 million in EE projects delivered through five commercial banks. CSEF, implemented by the International Finance Corporation (IFC), supported a highly innovative project design that involved leveraging the deep networks that leasing companies had with SMEs.

PROGRESS TOWARD TRANSFORMATIONAL CHANGE

The changes produced by the CIF-supported investments can be considered through the five dimensions of transformational change, as identified by CIF's Transformational Change Learning Partnership (TCLP): Relevance, Systemic Change, Speed, Scale, and Adaptive Sustainability. They describe the processes and impacts necessary for transformation. Overall, advanced signals of change in the Relevance, Systemic Change, Speed, and Scale dimensions are apparent, with strong emerging signals of Adaptive Sustainability.

Relevance: The CTF strategy of targeting SMEs was highly relevant, as SMEs dominate the Turkish economy, and there was latent demand for EE services. CTF-supported projects addressed known barriers to change, specifically the commercial banks' lack of familiarity with the financing of EE projects, and more broadly, SMEs' dearth of awareness of the benefits of EE investments.

Systemic Change: CTF's investments in Turkey used concessional finance to lower the perceived risks of investing in EE/RE projects and technical assistance to increase awareness within national banks about the profitability of the EE/RE sector. A wider range of financial instruments is now available through national financial institutions to support climate-related investments made by the private sector.

Speed: The concessionality and flexibility of CTF finance enabled low-carbon investments to move forward quickly

into the second phase of CTF support after only three years. This was assisted by the involvement of three multilateral development banks (EBRD, IBRD, and IFC) with the expertise and knowledge to support the country's low carbon development trajectory.

Scale: TurSEFF and CSEF project partners were able to attract follow-on credit lines from participating banks and leasing companies on fully commercial terms, thus further scaling up EE investments. As of August 2021, the total annual energy savings delivered by TurSEFF equaled the annual electricity consumption of almost a million households in Turkey. CSEF's successful leasing model has provided a template to catalyze EE lending for commercial and industrial customers.

Adaptive Sustainability: CTF helped the Turkish EE market to achieve a more robust state of functioning, establishing the leasing of energy-efficient equipment as a commercial business model in Turkey. TurSEFF supported the development of critical capacity within commercial banks to identify and lend to RE and EE projects. The government's policies are also ensuring a resilient future for such investments, including two major milestones: the 2015 National Renewable Energy Action Plan (NREAP) and the 2018 National Energy Efficiency Action Plan (NEEAP).

REFLECTIONS AND LOOKING AHEAD

The overall coherence of the CTF programmatic approach provides a strong model for the continuing efforts to secure the transformation of Turkey's energy sector—where fossil fuels continue to dominate—toward a low-carbon energy future. Turkey should continue to follow the CTF's twin strategy of fast-tracking EE investments to reduce energy consumption while it promotes the development of RE sources. The Government of Turkey is continuing to develop further opportunities with CTF and other MDBs that will accelerate and scale up the deployment of RE and EE technologies. Further advancement and sustainability will rely on Government's own policies and practices to provide the enabling environment for continuing private sector action. Ultimately, the country's transformational change toward a low-carbon economy will require continuing concerted action by the government, the private sector, and international partners.

FIGURE 1: PROGRESS ACROSS THE DIMENSIONS OF TRANSFORMATIONAL CHANGE

The TCLP's transformational change framework identifies five dimensions of transformational change—Relevance, Systemic Change, Speed, Scale, and Adaptive Sustainability. In combination, they signal that transformational change is occurring and durable. This figure shows Turkey's progress toward transformational change in energy efficiency along all dimensions.

