





# Renewable Energies and Energy Efficiency (4E) in Central America, Phase II

# Background

In recent years the Central American countries have launched initiatives to change their energy matrices. On the one hand this situation rose from the need to reduce the region's dependence on fossil fuels, which still cover at least one third of its energy demand, causing environmental pollution and constant cost increases in the imports of petroleum derivatives. On the other hand, hydropower production, which accounts for 40% of the installed capacity, is affected by climate change and water scarcity. Access to other sources of renewable energy is now a viable alternative. For instance, wind and photovoltaic technologies are profitable today under the conditions of the Central American market.

The region enjoys ideal conditions for the use of different types of renewable energy (solar, wind, geothermal and biomass). Besides, the industry, commerce and public institutions can save energy through energy efficiency measures.

Despite the above, initiatives for renewable energy and energy efficiency (4E) are far from being implemented at the desired scale. The main reason is the poor investment and business climate for such projects. For instance, an appropriate regulatory framework is missing, as well as tax incentives and access to financing accompanied by technical assistance to qualified personnel to plan and implement different projects.

Political and economic decision makers are increasingly aware of this problem. Governments in the region are trying to improve the investment and business climate for 4E projects. Until now, many of these initiatives are carried out at the national level, in isolation and in a disorganized manner, and are often developed without involving all stakeholders in the sector.

In this context, the 4E Program provides technical support, promoting the exchange of experiences and good practices at the international and regional levels, with an emphasis on capacity building and the technical qualification of technicians, engineers and decision makers. The lessons learned from the first phase of the program, in which many pilot projects were implemented in conjunction with the private sector, help document and demonstrate the technical feasibility and profitability of 4E projects.

Name of Program	Renewable Energies and Energy Efficiency in Central America (4E)
Contracted by	Federal Ministry of Economic Cooperation and Development (BMZ)
Countries	Central America (all SICA countries)
Implementation	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
Term	2014-2017

### Objective

Improve the framework conditions as well as institutional and individual capacity building for promoting and implementing renewable energy and energy efficiency projects (4E) in Central America, and contribute to climate change mitigation.





Left: Geothermal System, LaGeo Berlín, El Salvador

Right: Biogas Plant, Industrias la Constancia, El Salvador



Contact: Tanja Faller 4E Program Director tanja.faller@giz.de

# Approach

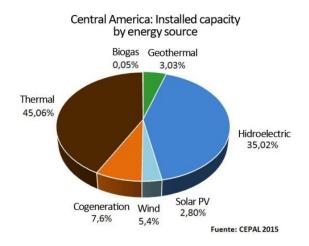
The 4E Program operates in all Central American countries; strengthening institutions and their use of dissemination platforms, particularly targeting the Secretariat of the Central American Integration System (SICA), to disseminate lessons learned and best practices, such as the ones accumulated in the first phase of the program. It promotes regional exchanges to improve framework conditions, which in turn contributes to increased implementation of 4E throughout the region. The program also develops courses and dialogue platforms for decision makers, executives of the various ministries and public sector officials. It encourages cooperation among training and education organizations, vocational centers, leaders on 4E issues and climate change mitigation. It also offers specific courses for project developers and executives of financial institutions.

A specific demand in the region triggers measures that are replicated at the following levels:

- Policy and Administration: Support for national governments and public administrations to improve the framework conditions for renewable energy projects and energy efficiency measures.
- Service Markets: institutional and personal capacity building for the implementation of 4E projects (Train the trainers, improve trade services and project financing).
- Demonstration Projects: Support private enterprises and public institutions in initiatives for the implementation of different renewable energy and energy efficiency projects, to further develop case studies for their dissemination and use in training.

## Counterpart

The SICA's General Secretariat, through its Energy Policy Coordination Unit (UCE-SICA), is the program's main counterpart. Regional organizations and their platforms, energy ministries and their counterparts in the countries, energy distribution companies, industry chambers, associations, private enterprises, training organizations and vocational education centers are also important partners for the implementation of 4E projects in the region. The 4E Program works with the German KfW Development Bank, as well as with other banks and development organizations, both regionally and nationally. The Program is implementing innovative projects through public-private partnerships (PPP) with private companies in some key sectors.



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Renewable Energies and Energy Efficiency (4E)
Boulevard Orden de Malta,
Casa de la Cooperación Alemana
Urbanizacion Santa Elena,
Antiguo Cuscatlan,La Libertad
El Salvador, C.A.
Phone +503 2121-5745
Fax +503 2121-5186
Program Director: Tanja Faller
www.giz.de/elsalvador

Contracted by the German Federal Ministry for Economic Cooperation and Development (BMZ)

Address BMZ Office:

BMZ Bonn
Dahlmannstraße 4
53113 Bonn,
Deutschland
T +49 (0)228 99 535-0

F +49 (0)228 99 535-3500

3500

poststelle@bmz.bund.de www.bmz.de

BMZ Berlin Stresemannstraße 94

> 10963 Berlin, Deutschland T +49 (0)30 18 535-0

F +49 (0)30 18 535-2501