



COUNTRY ASSESSMENT REPORT Costa Rica

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1.1 Country Assessment Report Template

Country Name	Costa Rica
Introduction	Costa Rica is located in Central America, sharing borders with Nicaragua and Panama. The population is nearly 5 million, mostly concentrated in San Jose, the largest city while the rest live in the surrounding metropolitan regions. It has a GDP of ~95 billion USD, growing at the rate of 4.2% (UNCTAD, 2025) Costa Rica is one of the leading producers of electricity using renewable sources. The country has emerged as a global leader in renewable energy by utilizing clean sources of electricity generation, such as hydroelectric, geothermal, wind, and solar power. The policy has prioritized sustainability as a part of their national plans through policies like VII National Energy Plan 2015-2030. This aims to continue 100% use of renewable electricity generation and to diversify the energy mix (Climate Action Tracker, 2024).

1.2 Electrical Generation and Demand

Generation	Technology	Volume (GWh)
	Wind	1239 GWh – 9.8%
	Hydro	8412 GWh – 66.6%
	Geothermal	1498 GWh - 11.9%
	Biofuels	59 GWh – 0.5%
	Solar	88 GWh – 0.7%
	Oil	1331 GWh – 10.5%
	Total	12627 GWh (IEA, 2024)
Demand	Sector	Demand (TJ)
	Residential	15763 TJ – 40.5%
	Commercial/Service/Public Sector	14839 TJ – 38.1%
	Industrial	6948 TJ – 17.9%
	Agriculture and Forestry	1350 TJ – 3.5%
	Total	38900 TJ (IEA, 2023)
The total installed capacity is more than 3500 MW, and 99% of this is derived from renewable sources (TNI, 2024).		

1.3 Electrical Interconnection and Import/Export

Connected country	Capacity (MW)	Annual import fromcountry (GWh)	Annual export to country (GWh)
Nicaragua	300	-	-
Panama	300	-	-
Additional information	Costa Rica is electrically interconnected with Nicaragua and Panama through the Central American Electrical Interconnection System, a regional transmission network operating at 230 kV that links six Central American countries into a single synchronous grid. The interconnection consists of multiple cross-border transmission lines (two with Nicaragua and three with Panama), enabling bidirectional electricity flows and participation in the regional electricity market (MER) (RenewableWatch, 2026) 2.1% of total electricity consumption in Costa Rica was imported (IEA, 2024)		

1.4 Market Structure

There is a state monopoly within the Costa Rican electricity market. The Instituto Costarricense de Electricidad (ICE) is a public institute that oversees the rational development of the electricity market and generation and is also the largest generator of electricity in the country and has absolute control over transmission and distribution. ICE is also the only agent allowed by the government to participate in the Central American Regional Market.

In addition to this, multiple municipal authorities such as Junta Administrativa del Servicio Electrico de Cartago (JASEC), Empresa de Servicios Públicos de Heredia (ESPH), Compañía Nacional de Fuerza y Luz (CNFL), and Cooperatives such as COOPELESCA, COOPESANTOS, COOPEGUANACASTE, and COOPEALFARORUIZ, are the main generators and distributors in concessioned territories of Costa Rica (ICLG, 2025). These Municipal authorities and cooperatives are independent, legally authorised companies that operate within their own concession areas but function as part of a single national electric system in collaboration with the state-owned ICE. The overall system is managed and regulated by the Public Services Regulatory Authority (ARESEP) and the Ministry of Environment and Energy (MINAE).

IPPs are allowed to generate energy through renewable sources only and are required to sell the generation to ICE or other public distributors and cooperatives under specific agreements. They are restricted to a limited capacity and cannot surpass 30% of the national capacity. Only 15% of the total generation systems can be under private companies under the Build-Own-Operate (BOO) contracts to sell energy to ICE.

The Ministry of Environment and Energy (MINAE) is the department responsible for environmental policy issuance and general planning and regulation of energy. They work towards the implementation of policies to support renewable energy development in the country. The control of the provision of electricity, efficiency, and rates is the responsibility of the Public Services Regulatory Authority – ARESEP, which also grants concessions to the IPPs that have a PPA with ICE and provides them with the technical regulations as well. (ICLG, 2025).

Currently, there is no established national REC market in Costa Rica. The voluntary market for EACs exists only by using I-RECs, rather than a local or government-mandated scheme.

1.5 Responsible Government Department

In Costa Rica, the electricity sector and environmental policy are primarily governed by three entities. As mentioned above, the sector operates a state-municipal-cooperative model where the state-owned utility holds a dominant position.

- The **Ministry of Environment and Energy (MINAE)**: Serves as the high-level govt department for the energy sector and is responsible for national energy planning and developing environmental policies. It manages concessions for power generation and distribution and is responsible for approving the environmental viability for all new power generation projects and broadly oversees the markets decarbonization goals.
- The **Public Services Regulatory Authority (ARESEP)** is the primary economic and technical regulator which sets technical standards and electricity tariffs for generation, transmission, and distribution. ARESEP monitors service quality and is the administrative body for resolving disputes between utilities or between utilities and consumers. ARESEP is expected to implement a regulatory reform package to streamline interconnection for distributed generation.
- **Costa Rican Electricity Institute (ICE)**: A state-owned, vertically integrated utility that manages the National Electric System (SEN). It is legally responsible for planning national electricity demand and preparing Generation Expansion Plans and, as mentioned above, holds a monopoly on transmission and dominates the generation and distribution markets.

Costa Rica lacks a competitive open market for MBM, it uses specific mechanisms for renewable metering and market based mechanism. ARESEP and MINAE oversee concessions and Power Purchase Agreements (PPAs) that

allow private generators to sell energy to ICE. In addition to this, the 2021 Distributed Energy Law allows consumers to sell surplus renewable energy back to the grid.

([Renewable Energy Laws and Regulations Report 2026 Costa Rica](#))

1.6 Existing/Planned Legislation

In Costa Rica, legislation regarding the use of tradable RECs is not formalised and national policy is more focussed on establishing national carbon-offsetting frameworks. Re carbon offsetting, the National Programme for Carbon Neutrality (PPCN) is the proposed framework that regulates the domestic carbon market.

- Net metering amendments - The "Law for the Promotion of Distributed Energy Resources from Renewable Sources," provides the legal framework for self-generation and net billing but does not explicitly create a national EAC or REC registry, leaving voluntary international standards like I-REC to fill the gap.
- Electricity Market Reform - Introduced in late 2022 and still under active debate in 2025, this bill seeks to liberalize the market. If passed, it could facilitate more formal EAC schemes to track renewable attributes across diverse private and public generators - however there is limited evidence that this is being introduced.

([Policies & action | Climate Action Tracker](#))

1.7 Environmental and Renewable Electricity Legislation

As of late 2025, Costa Rica is actively updating its international commitments and restructuring its energy market.

Primary legislation

- **Law for the Rational Use of Energy** (No. 7447) - Mandates energy efficiency and provides tax exemptions for renewable energy equipment.
- **National Decarbonization Plan 2018–2050** - The central strategy to achieve net-zero emissions by 2050.
- **NDC (2025–2035)** targets an approximate 53% reduction in GHG emissions.
- The previously mentioned **National Programme for Carbon Neutrality (PPCN)**: Regulates the domestic carbon market, allowing organizations to obtain "C-Neutral" certification through reduction and offsetting.
- **Biofuel Mandate** - The government is preparing to introduce a 10% ethanol-gasoline mixture starting in 2025 to reduce transport emissions.
- **Generation Expansion Plan 2024–2040** - prioritising solar, wind, and geothermal energy to diversify the mix away from hydropower vulnerability. Key upcoming projects include the El Quijote wind project (Dec 2025) and several private solar projects awarded in 2024.

([Renewable Energy Laws and Regulations Report 2026 Costa Rica](#))

1.8 Existing/Planned Certificate or Support Systems

There is no state backed EAC mechanism currently in place or references to one being planned. The government has focused on introducing a framework for the carbon market.

1.9 Extent of Engagement with Government

GCC have not engaged with specific individuals and/or policy decision makers in Costa Rica.

1.10 Expected Response from Government

There does not appear to have been a substantive change in policy regarding EAC since the publication of the last country report (2019). It seems unlikely that govt would change their stance at this stage, unless they plan to introduce a centralized attribute tracking scheme at a later date.

1.11 Proposed Restrictions

N/A

1.12 Any Other Relevant Information

1.13 Author

Complete all fields.

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