



COUNTRY ASSESSMENT REPORT Nicaragua

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1.1 Country Assessment Report Template

Country Name	Nicaragua
Introduction	Nicaragua is a Central American nation with an estimated population of around 6.8 million people. It has a developing economy with a nominal GDP in the low tens of billions of U.S. dollars, and its economic activity is driven by agriculture, services, and manufacturing sectors. The country features diverse terrain, including coastal plains, volcanic highlands, and large lakes, and experiences a tropical climate with wet and dry seasons that influence energy production and consumption patterns. Nicaragua has expanded its electrification coverage in recent years, though access remains below that of many regional neighbours as of 2023. Its electricity sector draws on a mix of renewable resources such as wind, geothermal, hydroelectric, biomass and thermal generation, reflecting efforts to diversify energy supply while addressing affordability and reliability challenges.

1.2 Electrical Generation and Demand

Generation	Technology	Volume (GWh)
	Oil	1697 GWh
	Hydropower	469 GWh
	Biofuels	914 GWh
	Wind	665 GWh
	Solar	27 GWh
	Geothermal	751 GWh
	Total	4525 GWh
Demand	Sector	Demand (TJ)
	Industry	4403 TJ
	Residential	4574 TJ
	Commercial and public services	4310 TJ
	Primary Activities	347 TJ
	Others	455 TJ
	Total	14089 TJ (IEA, 2023)

1.3 Electrical Interconnection and Import/Export

Connected country	Capacity (MW)	Annual import from country (GWh)	Annual export to country (GWh)
SIEPAC	300 MW	817 (IEA, 2023)	
Additional information	Nicaragua's electricity grid is part of the Central American Electrical Interconnection System (SIEPAC), which links Nicaragua with neighbouring countries (Costa Rica, Honduras, El Salvador, Guatemala, and Panama) to support electricity trade, reliability, and supply balancing across the Regional Electricity Market (MER). The regional system operates as a network rather than with strict bilateral borders. SIEPAC comprises a 1,800-kilometre, 230-kilovolt transmission line linking the national grids (Energy for Growth Hub, 2024).		

1.4 Market Structure

Nicaragua's national grid (the Sistema Interconectado Nacional, SIN) has an installed capacity of roughly 1.8 GW (1849 MW). Generation technologies include both renewable and thermal sources, reflecting a transition towards cleaner energy but with continued reliance on oil-fired power plants.

Electricity generation in Nicaragua is provided by a mix of public and private companies. Key state-owned actors

include Hidrogesa, which focuses on hydroelectric generation, and ENEL (Empresa Nacional de Electricidad), the national energy company with interests in generation and sector development. Private generators own the majority of installed capacity and operate mainly under long-term power purchase agreements with distributors or large consumers. In recent years, private investment has played a growing role in financing and developing utility-scale solar projects. Electricity transmission is centrally managed by the state-owned ENATREL (Empresa Nacional de Transmisión Eléctrica), which owns and operates the high-voltage network and oversees the national electrification program, while system operation and dispatch are coordinated through the National Load Dispatch Centre. Distribution and retail supply are carried out by regulated monopoly concessionaires, with Disnorte-Dissur acting as the primary distributor serving most of the country. Sector governance and oversight are provided by the Ministry of Energy and Mines (MEM), which sets national energy policy, and the Nicaraguan Energy Institute (INE), which regulates tariffs, technical standards, and market compliance.

Nicaragua's electricity market operates on an unbundled model, with generation, transmission, and distribution functioning as separate segments. Power is primarily traded through long-term bilateral contracts between generators and distribution companies or large industrial consumers, rather than a fully competitive national spot market. At a regional level, Nicaragua participates in the Central American Regional Electricity Market (MER) via the SIEPAC interconnection, enabling cross-border electricity trade and short-term dispatch among member countries, with import-export balances shifting based on domestic supply and demand conditions. Additionally, net-metering policies support distributed renewable generation, allowing small-scale producers (up to ~5 MW) to feed surplus electricity back into the grid under regulated technical and commercial frameworks ([EUCA Trade, 2023](#)).

Nicaragua has recently entered the market for International Renewable Energy Certificates (I-RECs) issued by GCC. The country does not currently have a compliance-based national renewable certificate system in place.

1.5 Responsible Government Department

Primarily the Ministry of Energy and Mines (**MEM**) and the Nicaraguan Energy Institute (**INE**) have authority over the electricity market and renewable energy.

1. The Ministry of Energy and Mines (MEM) is the lead agency responsible for the entire energy sector. Its mandate includes policy-setting, coordination, and general directives. It is specifically responsible for the indicative planning of the electricity sector and promotes the development of renewable energy resources like geothermal, hydroelectric, and wind. MEM also grants licenses for energy import and export activities.
2. The Nicaraguan Energy Institute serves as the national regulatory authority. Its responsibilities include applying government policies, approving electricity tariffs, adopting technical norms, and overseeing regulation and taxation within the power sector.
3. The National Load Dispatch Center (**CNDC**) is the operating entity responsible for the daily administration of the electricity market and the operation of the National Interconnected System (SIN). It schedules and dispatches available energy and maintains up-to-date maps of generation facilities and transmission lines.
4. The National Electricity Transmission Company (**ENATREL**) is the state-owned company responsible for the operation, maintenance, and planning of the national transmission system. While it does not buy or sell energy, it provides the infrastructure for its transfer.
5. Nicaragua is part of the Regional Electricity Market (**MER**) and the SIEPAC regional transmission system which involves oversight from the Regional Commission for Electric Interconnection (CRIE) which is the regulatory body for the Central American regional market. The Regional Operating Agency (**EOR**) coordinates international electricity transactions across the region.

1.6 Existing/Planned Legislation

Key Existing Legislation and Policies

- Law No. 532 is the primary law driving renewable energy investment. Recent amendments to this law are designed to extend tax and fiscal incentives until January 1, 2028. These incentives include exemptions from import duties (ITD), income tax. Its focus is on physical generation and investment.
- Law No. 272 (Electricity Industry Law) Defines the roles of the Ministry of Energy and Mines (MEM) and the National Load Dispatch Center (CNDC). The 2021 reform (Law No. 1094) introduced new regulations for the commercialization of electricity, specifically regulating import and export activities and empowers MEM to grant 10-year licenses for energy trading, which provides the regulatory basis for entities to manage energy portfolios including environmental attributes.
- Nicaragua submitted its NDC 3.0 in September 2025, setting a target of 65% renewable energy generation by 2030. The goal is anchored in the National Climate Change Policy, which links renewable expansion directly to national mitigation targets. This may continue to create a demand for tracking tools like I-RECs to verify these goals if this target is adhered to.
- The Foreign Investment Law - 2025 creates the National Foreign Investment Commission (CNIE) and requires that all 'foreign-backed energy projects' must submit quarterly compliance reports which adds a layer of administrative oversight for international companies trading I-RECs in Nicaragua.

There is no national law that currently mentions I-RECs by name.

1.7 Environmental and Renewable Electricity Legislation

As referenced above, Nicaragua's policy direction focuses on achieving energy sovereignty and meeting a 65% renewable generation target by 2030 through a state-led, centralized model. The government prioritizes the diversification of the energy matrix by extending fiscal incentives and tax exemptions for renewable projects.

While the state maintains strict control over planning and dispatch via the Ministry of Energy and Mines (MEM), the policy framework increasingly aligns with international climate commitments (NDC 3.0) and regional market integration, favoring large-scale infrastructure over decentralized generation to ensure national grid stability and reduced dependence on imported fossil fuels.

1.8 Existing/Planned Certificate or Support Systems

No centralized EAC mechanism. .

1.9 Extent of Engagement with Government

N/A

1.10 Expected Response from Government

N/A

1.11 Proposed Restrictions

GCC To undergo standard checks for attribute availability and Governmental support

1.12 Any Other Relevant Information

N/A

1.13 Author

Organization Name GCC

Signature



Name Mary Jones

DATE

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2026

