

HONDURAS ENERGY OUTLOOK 2026

STRENGTHENING ENERGY
SECURITY THROUGH LNG,
FIRM CAPACITY, AND
REGIONAL INTEGRATION





Honduras is at a critical juncture in the evolution of its energy sector. Sustained growth in electricity demand, the need to improve grid reliability, and the search for competitive energy solutions are driving the addition of new baseload generation capacity.

Historically, hydropower has played a fundamental role in the national energy mix. However, climate variability and periods of drought can significantly affect generation availability, posing challenges to the stability and reliability of the electric system. At the same time, reliance on liquid fossil fuels such as diesel and bunker fuel can expose the country to higher operating costs and the volatility of international markets.

In this context, Liquefied Natural Gas (LNG) and power generation from combined-cycle plants represent a strategic opportunity to strengthen Honduras's energy security, improve the competitiveness of the electricity system, and support long-term economic growth.



Honduras' Energy Challenge

Honduras' electricity system continues to evolve in response to economic growth, industrial development, and rising energy consumption.

The Key Challenges Include:

01

Sustained growth in electricity demand.

02

The need to incorporate reliable baseload and firm capacity that remains available regardless of weather, seasonal, or other environmental conditions.

03

The use of liquid fossil fuels to cover energy generation shortfalls.

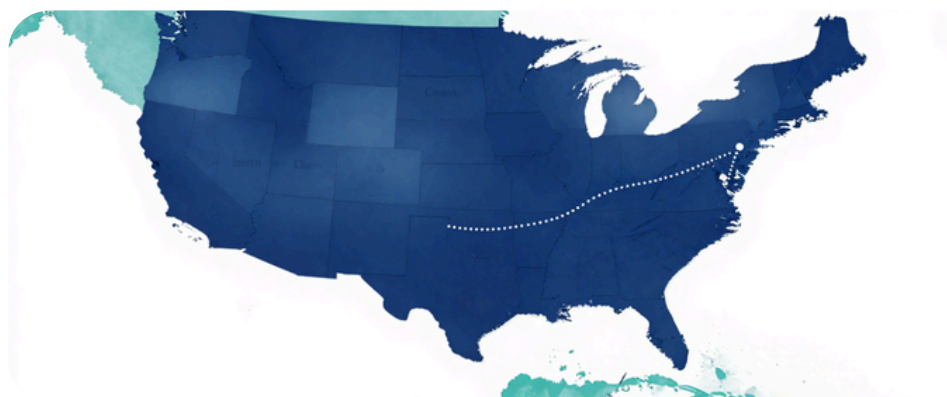
04

The need for greater system reliability and resilience.

While renewable energy will play a significant role in the country's energy future, the national system requires reliable generation sources that assures continuous operation and that ensures supply of electricity under any operating conditions.

The Strategic Opportunity of LNG

The global liquefied natural gas (LNG) market has undergone a significant transformation over the past decade, with the United States establishing itself as one of the world's leading exporters.



25%

The United States market accounts for approximately one-quarter of global LNG exports



Reliable Fuel Supply

Access to the robust U.S. market delivers total energy security.

Impact:

- Diversified fuel mix
- Insulated from global supply shocks
- Backed by a premier global market



Competitive Costs

LNG-based generation shifts dependence away from expensive liquids.

Impact:

- Stable generation costs
- Reduced reliance on costly fossil liquids
- Long-term price predictability



Greater Energy Security

True diversification strengthens the resilience of the national grid.

Impact:

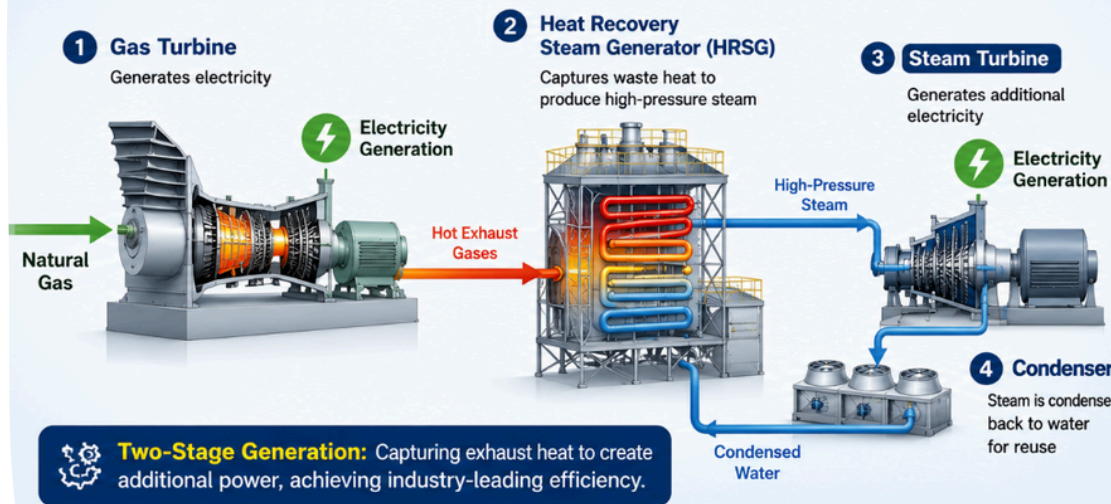
- Eliminates single-source failure risks
- Builds a resilient national power grid



Combined Cycle Technology

The Foundation of Baseload Capacity

Combined Cycle Power Plant



Combined-cycle power plants are among the most efficient and reliable technologies currently available for large-scale electricity generation.

For countries that require firm capacity and baseload generation, this technology offers significant advantages.

Key Benefits



HIGH EFFICIENCY

Modern combined-cycle power plants achieve significantly higher efficiency levels than those of conventional thermal generation technologies.



OPERATIONAL RELIABILITY

Combined-cycle power generation provides:

- Continuous power generation.
- Reliable energy capacity.
- Operational flexibility.
- Support for the integration of renewable energy sources



LOWER EMISSIONS

Compared to technologies based on liquid fuels, natural gas-powered energy plants significantly reduce emissions while maintaining high levels of operational performance.



COST STABILITY

Power generation using LNG and combined-cycle technology contributes to greater price stability and the economic sustainability of the electricity system.

Key Takeaway

Combined-cycle technology bridges the gap between sustainability and security, providing the stable, non-intermittent baseline power that expanding economies require.



Honduras as a Regional Energy Hub

One of Honduras's greatest strategic assets is its participation in the Central American Electrical Interconnection System (SIEPAC). This regional infrastructure connects the power grids of multiple Central American nations, unlocking active participation in a dynamic, unified electricity market.





SIEPAC

In spanish: Sistema de Interconexion Elctrica de los Paises de America Central



Regional Opportunities

Strengthening power generation capacity could allow Honduras to:

-  Improve the reliability of its national electricity system.
-  Actively participate in regional energy trade.
-  Export exceeding energy generation when conditions are favorable.
-  Contribute to the energy stability of neighboring countries that require firm capacity.

The Bottom Line

This situation positions Honduras not only as an energy generator meeting its domestic demand but also as a potential strategic player in the regional energy market.



Driving the Growth of Renewable Energy

The global energy transition requires a balanced mix of renewable sources and technologies capable of ensuring a reliable supply when weather conditions limit production. Natural gas serves as the critical bridge, enabling clean growth without sacrificing reliability.

THE 5 PILLARS OF GRID SUPPORT

Intermittent System Backup

Backing up the system during periods of low renewable energy generation.

Advanced Power Quality

It provides essential grid support including frequency regulation, voltage control, and reactive power compensation, thereby ensuring the system's operation reliability.

Safe Grid Interconnection

Enabling the safe integration of more renewable energy sources into the power grid.

Low-Impact Thermal Baseline

Providing high thermal efficiency and less environmental impact on performance compared to other thermal-based power plants

Emergency Contingency Buffer

Supporting the creation of an energy system with greater resilience in the face of contingencies.

The Blueprint for Progress

A diversified energy mix that combines renewable energy, energy storage, and efficient natural gas-powered generation can provide a solid foundation for the country's energy development.



CH4's Experience in Energy Infrastructure

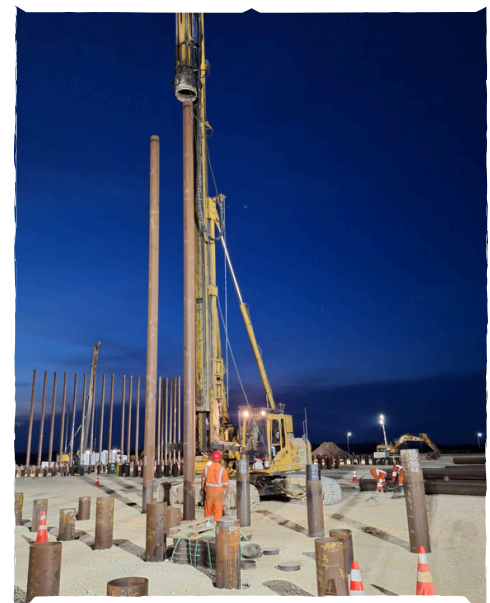
The successful development of large-scale energy projects requires much more than just technology. It requires expertise in engineering, project execution, financial structuring, and comprehensive infrastructure management.

CH4 has extensive experience in the development and execution of complex energy projects in Latin America and the Caribbean.

Regional Experience

CH4 and its business partners participated in Guyana's renowned Gas-to-Energy project, which included the engineering, procurement, and planning phases, and secured project financing of a 300-MW power plant and associated natural gas infrastructure development.

- ✓ LNG-to-Power Infrastructure design, procurement and construction.
- ✓ Development of combined-cycle energy projects.
- ✓ EPC and EPCM energy solutions execution.
- ✓ Financial structuring of energy projects.
- ✓ Integration of U.S.-based engineering technologies and standards compliance.



Featured Case Study: The 300-MW Gas-to-Energy Infrastructure Project, Guyana.

Funding for Large-Scale Energy Infrastructure

One of the most important factors for the development of modern energy infrastructure is the access to competitive, long-term financing. LNG and power generation projects require robust financial structures, bankable models, and alignment with international financial institutions.

The 5 Financing Pillars



Export credit agencies



Multilateral development banks



Commercial financial institutions



Infrastructure-focused development funds



Public-private partnership schemes

STRATEGIC VALUE

Proper financial structuring can accelerate the implementation of strategic projects and make it easier to attract international investment.



Strategic Recommendations to Honduras Energy Needs

With the aim of strengthening the country's energy security and competitiveness in the regional energy supply chain, the following priorities may be considered:

01

INCREASE RELIABLE GENERATION CAPACITY

Develop infrastructure capable of meeting the projected growth in the domestic electricity demand.



02

DIVERSIFY THE ENERGY MIX

Reduce the reliance on a single source of power generation or fuel.



03

CAPITALIZING ON LNG OPPORTUNITIES

Capitalize on Honduras' strategic location to gain access to natural gas supplies from the United States market.



04

STRENGTHEN REGIONAL INTEGRATION

Maximize the opportunities offered by the participation in SIEPAC and the Regional Electricity Market.



05

PROMOTE BANKABLE PROJECTS

Promote initiatives that can attract private investment and international financial institutions.





CH4



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