

NEWS

## STATISTICAL DATA

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# BIOFUELS IN LATIN AMERICA AND THE CARIBBEAN: KEY TO THE DECARBONIZATION OF TRANSPORTATION



EDITORIAL

The Latin American Energy Organization (OLADE), in its Technical Note titled "An Introduction to the Biofuels Sector in Latin America and the Caribbean," presents a detailed analysis of the strategic role that low-carbon biofuels play in decarbonizing transportation and their contribution to the region's energy transition.

In a context where the climate emergency demands sustainable solutions, biofuels emerge as a viable alternative to reduce greenhouse gas (GHG) emissions, particularly in sectors that are difficult to electrify, such as heavy transportation, aviation, and maritime transport.

According to the report, in 2023, Latin America and the Caribbean contributed 27% of the global production of liquid biofuels, with Brazil consolidating its position as the main player by supplying 93% of the regional production. This leadership is due to a combination of competitive advantages, such as the availability of natural resources, a robust agro-industrial capacity, and a well-established track record in the sustainable production of bioethanol and biodiesel. The importance of these fuels in the region is reflected in their sustained growth over the past decade: between 2013 and 2023, biodiesel production grew by 163%, while bioethanol increased by 36%.

Advanced biofuels, such as SAF (Sustainable Aviation Fuel) and HVO (Hydrotreated Vegetable Oil), represent high-potential alternatives for reducing emissions in aviation and maritime transport, sectors where the transition to carbon-free technologies faces technological and economic barriers. In the region, it is essential to develop more robust sustainability regulatory frameworks, improve logistical infrastructure, and strengthen traceability systems in the production chain to ensure the sector's sustainability and to achieve carbon neutrality by 2050. This will imply a 360% increase in regional liquid biofuel production, reaching 172,990 thousand cubic meters.

In this context, OLADE reaffirms its commitment to developing comprehensive strategies that facilitate the decarbonization of transportation in Latin America and the Caribbean, contributing to global climate objectives and strengthening the region's energy security. The consolidation of the biofuels sector will be key to advancing towards a cleaner and more resilient energy matrix.

### OLADE AND ECUADOR STRENGTHENS GENDER EQUITY IN THE ENERGY-MINING SECTOR WITH A NEW INTERINSTITUTIONAL AGREEMENT



In an official ceremony presided over by the Republic of Ecuador in the city of Quito, a strategic agreement was signed on February 19 between the Latin American Energy Organization (OLADE) and Ecuador's Ministry of Energy and Mines. The event was attended by representatives from the ministries of Environment, Water, and Ecological Transition; Transportation and Public Works; Agriculture and Livestock; and Telecommunications, as well as state-owned and private companies. The agreement was signed by OLADE's Executive Secretary, Andrés Rebolledo; the Minister of Energy and Mines, Inés Manzano; and the 30% Club. Its main objective is to establish a roadmap to integrate gender equity into Ecuador's energy-mining sector by 2025. This commitment will enable an assessment of the current gender equity situation in the energy sector and the definition of concrete strategies to increase female participation in technical and leadership roles.

Currently, in Latin America and the Caribbean, women represent only 25% of the workforce in the energy sector and less than 30% in STEM fields. However, with the implementation of inclusive policies and training programs, this figure is projected to reach 35% by 2030.

Through this initiative, OLADE reaffirms its commitment to gender equity and sustainable development, aligning with international standards and promoting more inclusive and competitive economic growth.



# CAF AND OLADE COMPLETE THE FIRST PHASE OF THE MERCOSUR GAS INTEGRATION PROJECT

Uruguay hosted the closing of Phase I of the Regional Project aimed at strengthening energy security and sustainable development in the region through a comprehensive analysis of natural gas supply, demand, and infrastructure in member countries.

The Latin American Energy Organization (OLADE) and the Development Bank of Latin America and the Caribbean (CAF) announced the successful completion of the first phase of the Mercosur Gas Integration Regional Project, marking a significant milestone in the region's energy development.

The project's first stage, which brought together experts and representatives from Argentina, Bolivia, Brazil, Chile, Paraguay, and Uruguay, has established a comprehensive assessment of the current and future landscape of natural gas in the region. The studies conducted reveal a dynamic scenario, characterized by production growth in the Neuquén and Rio de Janeiro basins, along with significant modifications to existing transportation networks.

"This first step is essential to consolidate energy integration that benefits the entire region," said Jorge Srur, CAF's Southern Regional Manager. He highlighted the partnership with OLADE and stated that "the results obtained not only allow us to identify opportunities for infrastructure optimization but also reaffirm our commitment to a fair and sustainable energy transition. As a development bank, we seek to be a catalyst that links technical knowledge with the necessary financing, facilitating dialogue and trust between public and private actors to materialize the investments the region needs."

Meanwhile, Guido Maiulini, Head of Strategic Advisory at OLADE, emphasized that "this project is fundamental to consolidating, in a single space, the planning documents contributed by the countries. This allows us to move towards a shared transportation model and identify the main bottlenecks affecting both new supply and future demand. Based on this, we can advance towards greater integration of knowledge to precisely characterize the possibilities for optimizing the existing structure and the potential needs for new infrastructure."

Uruguay, the host country for the closing events of this phase, demonstrated its strategic role in regional energy integration, standing out for its predominantly renewable energy matrix and key infrastructure, such as the Cruz del Sur gas pipeline. The events were attended by high-level representatives from Uruguay's energy sector, including Elisa Facio, Minister of Industry, Energy, and Mining; Walter Verri, Deputy Minister of Industry, Energy, and Mining; Nicolás Spinelli, General Manager of ANCAP; Carlos Bellomo, General Manager of Montevideo Gas and Conecta; and Ruben Chaer, Manager of Technical and National Dispatch at ADME.

Minister of Industry, Energy, and Mining, Elisa Facio, highlighted that "the study conducted in Phase I of the Mercosur Gas Integration Regional Project, financed by CAF, provides us with a valuable roadmap to assess the current state of gas infrastructure, identify barriers, and generate proposals for its sustainable utilization. The need to review and update the Southern Cone scenario is imperative due to Argentina's increased production, especially in Vaca Muerta, and Bolivia's declining production." She added, "For the development of the natural gas industry in Uruguay, securing supply is essential. The mitigation of supply risk could be achieved through active participation in interconnections between Argentina and Brazil, with primary sources such as Vaca Muerta and backup alternatives from Brazil via natural gas or liquefied natural gas."

The next phases of the project will focus on infrastructure optimization and the development of strategic transportation project profiles. OLADE will implement a unified methodology for demand and supply projections, working closely with member countries to incorporate their existing methodologies and recent projections.

The project will continue throughout 2025, aiming to strengthen regional energy security and contribute to the energy transition and sustainable development goals of Latin America and the Caribbean.

### OLADE AND WMO SIGN MEMORANDUM TO BOOST THE ENERGY TRANSITION IN LATIN AMERICA AND THE CARIBBEAN

The Latin American Energy Organization (OLADE) and the World Meteorological Organization (WMO) have signed a Memorandum of Understanding with the aim of promoting a sustainable energy transition in Latin America and the Caribbean.

The agreement establishes a framework for cooperation to plan the efficient use of renewable energy sources, such as wind, solar, and hydropower, as well as strengthening the resilience of energy infrastructure to the impacts of climate change. It also includes the implementation of early warning systems for risk management in the energy sector, promoting security and energy independence in the region.

This alliance will enable the integration of climate information into regional energy planning, facilitating the identification and assessment of renewable energy sources, as well as the adaptation of infrastructures to the effects of climate change.

Some of the priority actions in this alliance include:

Renewable Energy: Technical support for the assessment and forecasting of renewable sources, such as wind, solar, and hydropower.

Climate Resilience: Analysis of the impacts of climate change on energy infrastructures and development of strategies to strengthen adaptation.

Risk Management and Early Warnings: Development of monitoring and climate prediction tools to prevent adverse impacts on the energy sector.



Technical and Scientific Cooperation: Exchange of data, joint research, and capacity building in meteorology applied to energy.

Con este acuerdo, OLADE y la WMO reafirman su compromiso de promover un futuro energético más limpio, resiliente y accesible para todos los países de América Latina y el Caribe.

With this agreement, OLADE and WMO reaffirm their commitment to promoting a cleaner, more resilient, and accessible energy future for all countries in Latin America and the Caribbean.







The Latin American Energy Organization (OLADE) presents its 2025 Training Program to promote a sustainable energy transition in Latin America and the Caribbean, which will be developed through its Energy Training Platform for Latin America and the Caribbean (CapevLAC). This initiative aims to strengthen technical capacities in both the public and private sectors of the region's energy industry.

The program covers various crucial topics for the region's energy development across five strategic lines:

• Policies, Gender, and Energy, where challenges and opportunities in the energy sector will be explored, focusing on investment attraction, access to financing, and energy planning. Additionally, the integration of a gender perspective in energy policies will be addressed, promoting fair and equitable access to energy.

• Energy Transition and Sustainable Development, which will address the main challenges and opportunities in the energy transition towards sustainable development, with a comprehensive approach that includes energy efficiency, industrial and transport decarbonization. Key social aspects, energy access gaps, and the promotion of local value chains will also be explored.

• Energy Technologies and Solutions, where we will explore the latest innovations in the energy sector, covering key technologies such as renewable energy, energy storage, geothermal energy, and nuclear power. Solutions for the circular economy and sector digitalization will also be analyzed, along with the use of clean and next-generation fuels such as low-emission hydrogen, SAF, biodiesel, and green diesel. Finally, the impact of information technologies and big data on the sector will be addressed.

• Critical Natural Resources and Sustainability, offering training in key areas such as natural gas, fossil fuels, and critical minerals, addressing their extraction, transformation, and decarbonization processes. Associated emissions will be analyzed alongside strategies for mitigating environmental impacts and reducing emissions in oil and gas projects.

• Regional Energy Integration, where we will address the challenges and opportunities in regional energy integration, electrical interconnection, and gas pipeline infrastructure. Key topics such as regulatory harmonization, energy exports in Latin America and the Caribbean, and fostering common energy agendas among countries to promote greater cooperation and efficiency in interconnected energy systems will be explored.

The courses will be offered in various modalities through OLADE's platform, including asynchronous courses (e-learning), synchronous courses (virtual and hybrid), webinars, workshops, diploma programs, and more, ensuring accessibility for participants across all countries in the region.

Participants who meet the program's requirements in the different modalities will qualify to receive the relevant certifications.

All courses are open and free of charge for participants.

We INVITE the entire regional energy sector community to join CapevLAC, with the goal of building strong technical teams in the industry while developing an engaging network of professionals across the region.

# ENERGY INFLATION IN LATIN AMERICA AND THE CARIBBEAN IN 2024 WAS 1.51%



Rate considerably lower than the total inflation in the region

In 2024, energy inflation in Latin America and the Caribbean (LAC) was 1.51%. Although it increased compared to the sector's inflation in 2023, it remains significantly lower than the region's total inflation (4.03%).

Moreover, the rise in energy prices in LAC in 2024 was much more moderate than that recorded in OECD countries (3.82%).

This demonstrates that the region has managed to be more resilient to international price increases, thanks to its renewable energy resources and regulatory-tariff measures that have helped control energy prices.

The Latin American Energy Organization (OLADE) has published today its Energy Inflation Indicator for Latin America and the Caribbean (IE-LAC) for December 2024. This report provides an analysis of energy price trends in the region, which is crucial for understanding market behavior in the sector and its impact on the economy and sustainability of Latin American and Caribbean countries.

Monthly energy inflation doubled compared to November 2024. This increase is attributed to the rise in electricity and fuel prices in several countries in the region, mainly from the third quarter of 2024, when many of them faced drought conditions.



Source: OLADE, own elaboration based on information published by the Statistical Institutes and Central Banks of OLADE Member Countries.

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In December 2024, the annual energy inflation in Latin America and the Caribbean was 1.51%, a value that remains below the total inflation, which reached 4.03%.



Source: OLADE, own elaboration based on information published by the Statistical Institutes and Central Banks of OLADE Member Countries.

Energy inflation in OECD countries increased for the third consecutive month, reaching 3.82% in December 2024, with increases in 29 of the 38 OECD countries, marking one of the highest values since September 2024.



Source: OLADE, own elaboration based on information published by the Statistical Institutes and Central Banks of OLADE Member Countries and information published by the OECD.



# OLADE PARTICIPATES IN THE ATLANTIC COUNCIL'S 2025 GLOBAL ENERGY AGENDA

The Executive Secretary of the Latin American Energy Organization (OLADE), Andrés Rebolledo, participated in the Atlantic Council's 2025 Global Energy Agenda, a key event where experts and decision-makers analyzed the main challenges and opportunities in the energy sector, with a focus on integration and energy security in Latin America and the Caribbean.

In his speech, Rebolledo highlighted the importance of overcoming regulatory barriers and strengthening regional planning to promote greater electricity interconnection. He also emphasized the key role of the region in the production of critical minerals, representing 25% of the global supply.

"Today, we supply critical minerals to the world and play a key role, but the challenge is to advance the industrialization of the sector in our region. OLADE is working to strengthen cooperation between countries and establish collective initiatives to drive this development," said Rebolledo.

Beyond extraction, he underscored the importance of building regional value chains and strengthening national industries, allowing the region to maximize this strategic advantage.

Energy integration in Latin America and the Caribbean has been a regional ambition for decades; however, it still faces challenges in becoming a reality. In this regard, Rebolledo reiterated the need to overcome regulatory barriers and strengthen regional planning for greater interconnection.

While Central America has electricity markets with daily exchanges, South America still relies on bilateral connections without a unified approach. Additionally, natural gas plays a key role as a strategic resource with the potential to strengthen energy cooperation in the region.

"Energy integration is not just about infrastructure; it also requires solid regulatory frameworks that enable the creation of an efficient regional market. We must move towards energy planning that goes beyond the national level and incorporates a shared regional vision," added the OLADE Executive Secretary.

In this context, regulatory harmonization and regional-level planning stand out as essential elements for developing a more competitive and resilient energy market.

Rebolledo also stressed that transforming the energy sector in the region requires significant investments and a stable regulatory framework. Looking ahead to 2050, the region is expected to need to double its electricity capacity, reaching 1,000 gigawatts.

"Latin America has the opportunity to offer the world clean, competitive, and secure energy. To achieve this, it is essential to have state policies in the energy sector that guarantee long-term stability and confidence."

The energy transition does not depend solely on infrastructure and technology but also on clear rules that facilitate financing and promote sustainable investments over time.

OLADE reaffirms its commitment to the sustainable development of the region, driving regional cooperation and promoting energy integration to ensure a secure, efficient, and resilient energy future. LOW-CARBON BIOFUELS IN LATIN AMERICA AND THE CARIBBEAN: A KEY STRATEGY FOR THE ENERGY TRANSITION



The Latin American Energy Organization (OLADE) publishes its new Technical Note on the biofuels sector in the region, highlighting its role in transport decarbonization and the challenges to achieving carbon neutrality by 2050.

The Latin American Energy Organization (OLADE) presents its latest Technical Note, titled "An Introduction to the Biofuels Sector in Latin America and the Caribbean." This document analyzes the strategic role of low-carbon biofuels in transport decarbonization and their contribution to the region's energy transition.

In 2023, Latin America and the Caribbean contributed 27% of the world's liquid biofuel production, with Brazil as the main player, accounting for 93% of regional production. This position reflects the region's competitive advantages in terms of natural resources, agro-industrial capacity, and accumulated experience in the sustainable production of bioethanol and biodiesel.

Low-carbon biofuels are emerging as a key solution for reducing greenhouse gas (GHG) emissions, especially in sectors with low electrification feasibility, such as heavy transport, aviation, and maritime transport. The Technical Note highlights the potential of advanced fuels such as SAF (Sustainable Aviation Fuel) and HVO (Hydrotreated Vegetable Oil), which represent viable alternatives for advancing toward carbon neutrality in the region.

Between 2013 and 2023, biodiesel production in Latin America and the Caribbean grew by 163%, while bioethanol recorded a 36% increase. This growth reflects the sector's dynamism and the implementation of public policies such as biofuel blending mandates in several countries.

The document also highlights the region's remaining challenges, such as the need to strengthen sustainability regulatory frameworks, optimize logistics infrastructure, and ensure the traceability of the production chain.

According to OLADE's projections, achieving carbon neutrality by 2050 will require a 360% increase in regional liquid biofuel production, reaching 172,990 thousand cubic meters.

### PROSPECTIVE OUTLOOK FOR LIQUID BIOFUEL PRODUCTION IN LAC BY 2050.

Latin America and the Caribbean stand out for their vast potential in producing clean or low-netemission energy, such as plant-based liquid biofuels, specifically bioethanol and biodiesel. In terms of production volume, Brazil, Argentina, Paraguay, and Colombia lead the way. These energy vectors play a crucial role in the region's energy transition due to their versatility in replacing fossil fuels in high-energy consumption sectors such as transportation and industry.

According to the latest prospective analysis by OLADE, included in the Latin America and the Caribbean Energy Outlook 2024, under an accelerated decarbonization scenario for the region's energy sector (NETO), liquid biofuel production would need to be nearly four times the amount produced in 2023 by 2050. This increase would be necessary to reach a 25% share of energy consumption in the transportation sector and a 10% share of total final energy consumption at the regional level.

Since liquid biofuels are expected to be consumed primarily as blends with fossil-based fuels, such as gasoline and diesel, in most countries of the region, and given that the demand for these fossil fuels will decline due to the penetration of other energy sources such as electricity, natural gas, and eventually green hydrogen, the growth rate of liquid biofuel production is also projected to slow over time. For instance, the average annual growth rate is expected to be 8.3% between 2023 and 2035 and 2.2% between 2035 and 2050, as illustrated in the following figure.



#### Proyección de la producción de biocombustibles líquido en ALC al año 2050.

Fuente: Capítulo de prospectiva del Panorama Energético de ALC -2024 - OLADE