

NEWSLETTER

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LATIN AMERICA AND THE CARIBBEAN STAND OUT IN THE GLOBAL MARKET FOR CRITICAL MINERALS, ACCORDING TO A STUDY BY OLADE

The Latin American Energy Organization (OLADE) has published research demonstrating the unique contribution of Latin America and the Caribbean to the global market for critical minerals.

The region contributes around 180 billion dollars, 25 percent of the global market of 700 billion dollars. The main minerals include copper (70 billion dollars), iron ore (50 billion dollars), gold (30 billion dollars), and silver (10 billion dollars).

Latin America and the Caribbean are tasked with doubling copper production and recycling efforts, anticipating the need to decarbonize the economy by 2050. Studies have shown that 20% of refined copper is produced through recycling, saving up to 80% of energy compared to mining energy. Regarding lithium, the region possesses almost 60% of resources, and production is expected to increase at least tenfold in the next 20 years.

As global demand for minerals for sustainable technologies and renewable energies rises, this study highlights the importance of anticipating this demand to avoid imbalances in supply. As a strategic mineral exporter, Latin America and the Caribbean face unique challenges and seek to improve their socio-economic situation through investment and sustainable economic growth.

In a global context that prioritizes sustainable energy and clean mobility, Latin America and the Caribbean have the potential to gradually advance in production chains through extractive resources. OLADE emphasizes the urgent need to coordinate global energy demand forecasts and create a common agenda for the extraction of strategic minerals to promote the region's socio-economic development.



OLADE HIGHLIGHTS THAT LATIN AMERICA AND THE CARIBBEAN LEAD IN THE ENERGY TRANSITION ON INTERNATIONAL CLEAN ENERGY DAY

The Latin American Energy Organization (OLADE) joins in commemorating the World Clean Energy Day established by a resolution of the United Nations General Assembly last August. This initiative aims to provide an annual milestone to strengthen actions for greater energy sustainability within the framework of the global climate urgency.

OLADE would like to take this opportunity to thank its 27 member countries for supporting this proposal, as reflected in Ministerial Decision LII/D/565 of December 2022, signed at its LII Ministerial Conference, and for the efforts they have been making to increasingly and rapidly incorporate clean energy.

- Latin America and the Caribbean are the greenest region in the world. In its primary energy matrix, 31% comes from renewable sources compared to the global average of 14%.
- The transformation of its electricity generation matrix has been remarkable. In 2015, 53% was produced from renewable sources, and by 2022, it had risen to 65%.
- In a decade, wind energy in the region has increased 30 times, and solar energy 8 times.
- In the last 5 years, Non-Conventional Renewable Energies (NCRE) have doubled their share in the region's electricity generation, now accounting for 13%. These energies will continue to expand, as over 90% of new projects in the region are based on these clean technologies.
- The growth potential of renewable energies in the region is enormous. Currently, 30% of hydropower potential is being utilized, along with 10% of wind and only 1% of solar.
- In a Net-0 scenario by 2050, wind energy will represent 22%, and solar will account for 28% of the region's installed electrical capacity.
- Electricity will play an increasingly important role. To achieve carbon neutrality, the installed capacity across the region must triple, with electricity rising from 19% to 36% in final energy consumption. The investment required for this by 2030 is USD 500 billion.

The responsibility for this transition involves everyone: governments, businesses, academia, and organizations like OLADE, committed to this change and the development of a more sustainable energy model in the region.

Advances and Challenges in the Energy Transition in Latin America and the Caribbean

During the CAF conference “Latin America and the Caribbean: a region of solutions,” Andrés Rebolledo, Secretary of the Latin American Energy Organization (OLADE), participated in the talk “Energy: a driver for the development of the region.”

Rebolledo pointed out that Latin America and the Caribbean (LAC) are becoming one of the greenest regions in the world, thanks to regulatory policies introduced in recent years. These measures represent the first step in the local energy transition, allowing the massive integration of clean energies.

In his speech, he mentioned that the second phase of this transition will focus on the decarbonization of the entire economy, beyond the electricity markets. According to Rebolledo, the main challenge now is the decarbonization of critical sectors such as transportation and industry.

Financial issues have been identified as another significant obstacle to the transition to renewable energies. OLADE’s calculations show that \$500 billion will be needed to effectively finance the large-scale deployment of renewable energies by 2030. Another crucial aspect is energy efficiency. He argued that, although there are specific laws in this regard, energy efficiency has increased, emphasizing the need to review and strengthen these measures to ensure their effectiveness.

Finally, the quality and affordability of energy were highlighted as pressing issues for the region. Pointing out that there are still 16 million people in Latin America and the Caribbean without access to electricity, Rebolledo emphasized the need for concerted efforts to close this gap and ensure that the energy transition benefits the entire society.

In this way, the CAF Conference positions itself as a decisive space for dialogue and the exchange of ideas, reaffirming its desire to become a reference platform for debate and the creation of effective solutions in the region.



THE ETRELA PROJECT PROMOTES RENEWABLE ENERGY AND ENERGY EFFICIENCY EDUCATION IN SEVEN LATIN AMERICAN AND CARIBBEAN COUNTRIES



In an important step to improve and promote renewable energy sources and energy efficiency in Latin America and the Caribbean, the ETRELA consortium, led by OLADE, implements the project in seven countries: Argentina, Brazil, Colombia, Honduras, Peru, Dominican Republic and Uruguay. The project focuses on capacity building and education, generating a multiplier effect that in the future will provide professionals capable of meeting the challenges inherent to the energy transition.

The project, led by OLADE, with the support of RENAC and Global Factor as its technical arm, receives funding from the German government through the International Climate Initiative (IKI) and focuses on the development of renewable energies and energy efficiency in Latin America and the Caribbean as a strategy for mitigating and adapting to climate change.

This initiative, whose second phase was officially presented in Brazil, Colombia, Honduras and the Dominican Republic through events coordinated between the consortium, the Ministries/Secretaries of Energy and the German Embassies in each country, will carry out a series of activities such as equipping demonstration centers, training courses for trainers and generating spaces for discussion on quality standards for education in renewable energies and energy efficiency in the country.

The events in Honduras and the Dominican Republic were held in January and February 2024, while the presentations in Brazil and Colombia took place in November 2023.



OLADE PRESENTS ITS EXECUTIVE TRAINING PROGRAM FOR THE YEAR 2024 “ENERGY TRANSITIONS AND INTEGRATION IN LATIN AMERICA AND THE CARIBBEAN

The Latin American Energy Organization (OLADE) presents its Executive Training Program for the year 2024 that will be developed in its Energy Training Platform for Latin America and the Caribbean (CAPEVLAC). This initiative aims to strengthen technical capacities, both in the public and private sectors of the region’s energy sector.

The Program covers various topics, crucial for the energy development of the region, through a modular training in 16 courses, organized into five Thematic Pillars:

- Technologies and aspects related to renewable energy, nuclear energy, clean and new generation fuels, low-emission hydrogen, sustainable aviation fuel (SAF), biodiesel, and green diesel.
- Hydrocarbons and the extractive sector, including natural gas, critical minerals, fossil fuels and their transformation and decarbonization processes, associated emissions, thermal generation, and regional gas integration.
- Just Energy Transition that includes challenges in energy efficiency, central social aspects such as gender equality and diversity in the region’s energy sector, heating and clean cooking, access gaps, productive chains and the promotion of local value chains, industrial and transport decarbonization, and electromobility.
- Energy policies that include the attraction of investments, access to financing, energy planning, and regulations in the electricity sector linked to the transmission, distribution, marketing, as well as the digitization and incorporation of Big Data in the sector.
- Regional Energy Integration and its multiple dimensions and challenges in interconnected electricity systems and pipeline infrastructure, regulatory harmonization and common energy agendas between countries.

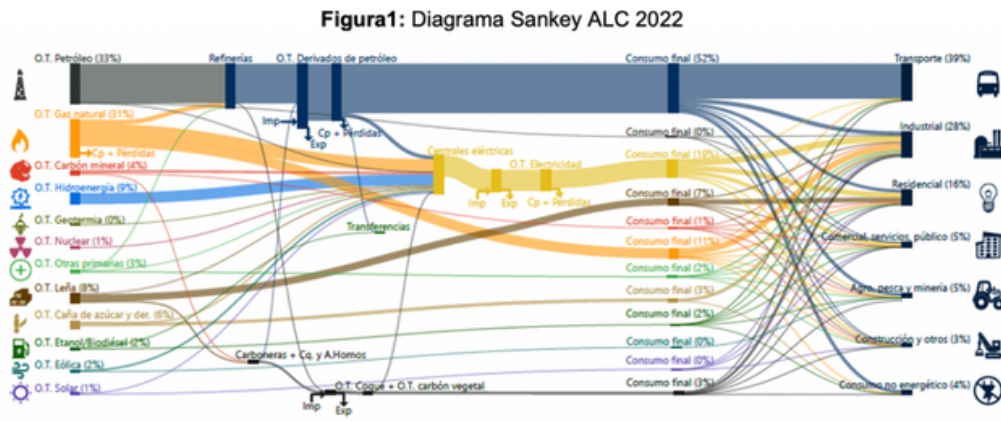
The courses will be taught in the different modalities allowed by the OLADE platform, that is: asynchronous courses (e-learning), synchronous courses (virtual and blended), webinars and workshops, which will allow greater accessibility for participants from all countries in the region.

Approximately 400 hours of training will be allocated and several courses will be held in collaboration with different agencies and institutions linked to the global and regional energy agenda.

Those who participate and approve the 2024 cycle courses will receive a distinction from the OLADE training platform.

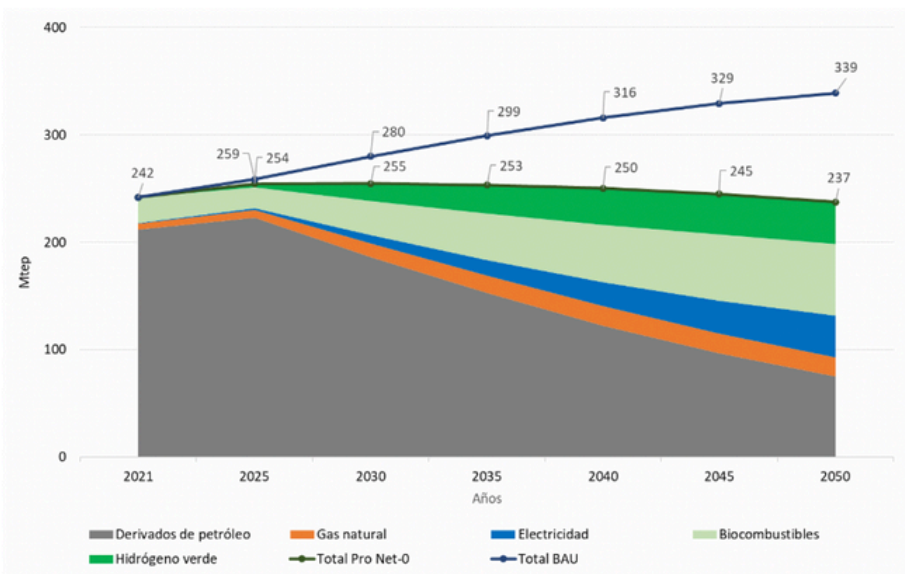
PERSPECTIVES ON FINAL ENERGY CONSUMPTION IN THE TRANSPORTATION SECTOR BY SOURCE IN LATIN AMERICA AND THE CARIBBEAN

The transportation sector is one of the most energy-intensive sectors, with a 39% share in the final consumption matrix of LAC in 2022, as shown in Figure 1. Its structural composition in terms of energy sources is predominantly comprised of petroleum derivatives, which has implications for energy security and greenhouse gas emissions. This poses a challenge for countries and their commitments to mitigate climate change through the use of cleaner and more efficient sources and technologies.



Fuente: Panorama Energético de ALC, OLADE, 2023

In this context, the latest prospective exercise conducted by OLADE, published in the Energy Outlook for LAC 2023, reveals that if current consumption patterns persist without considering the implementation of policies leading to a more sustainable transportation sector, consumption will continue to increase, reaching 339 Mtoe by 2050. This represents a 40% increase compared to the base year (2021), where petroleum derivatives accounted for 87% of consumption. However, if measures are taken to improve energy efficiency and reduce carbon emissions through electromobility, the use of green hydrogen, increased use of natural gas, and biofuels, in a decarbonization scenario, it is observed that final consumption in this sector will decrease by 2%, from 242 Mtoe in 2021 to 237 Mtoe in 2050. There will be a significant reduction in petroleum derivatives consumption of approximately 65% during the projection period, although they will remain the predominant source type in the sector with a 31% share of total consumption. In this same scenario, natural gas and biofuels consumption will triple, while electricity and green hydrogen will each reach a 16% share (see Figure 2).



Fuente: Panorama Energético de ALC, OLADE, 2023