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Energy Agenda

European Union – Latin America and the Caribbean

Index

Presentation

The incorporation of the European Union (EU) as an observer in the Latin American Energy Organization (OLADE) represents a development of considerable relevance for the countries of both regions. Primarily, due to the historical political, economic and cultural ties, where important free trade agreements have been added in recent years. Next, due to shared perspectives on energy matters, particularly the common objective of guaranteeing a secure and sustainable supply in response to the environmental crisis. Further, due to the profound changes in global geopolitics in recent years, which have increased global uncertainty and highlighted the need to strengthen the ties of cooperation between nations. Finally, energy integration is essential for both parties and the joint efforts towards electricity integration in the Latin American and Caribbean region, represent a significant milestone of this exchange.

Humanity is facing a difficult time, as the environmental crisis is causing severe climate impacts leading to the deterioration of ecosystems, the depletion of natural resources and a rise in pollution. Its effects on productive activities and the health of the populations in both Latin America and the Caribbean (LAC) and the EU not only threaten future generations but have already become an inescapable reality of the present.

The war between Russia and Ukraine has had very severe economic and energy impacts, particularly for the EU, which has been compelled to intensify efforts to diversify, reduce fossil fuel consumption and strengthen domestic energy production—especially renewable energy sources. For their part, LAC countries have not been immune to the effects of this conflict either—not only due to the increase and volatility in key energy prices, but also because of the disruption in food exports from Ukraine, which has significantly raised imports costs across the region.

On the other hand, recent protectionist measures have brought the global order to a crossroads, after forty years characterized by globalization. This is likely to influence the redefinition of economic policies, as well affect trade and investment flows between different regions of the world. In this context, the EU has emphasized the need to strengthen and renew relations between LAC and the EU:

"In a rapidly evolving global context, the EU-LAC relationship is in need of renewal. Growing geopolitical challenges, a devastating pandemic, global climate and environmental crises, technological changes, and rising inequalities all underscore the urgency to intensify dialogue and enhancing cooperation between close and trusted partners. As preferred partners, the EU and LAC must collaborate to build on their collective strengths, safeguard common interests, and jointly address global challenges"[1].

Consequently, the EU's accession to OLADE is particularly timely. Both regions share interesting coincidences in terms of energy, with common challenges related to security, efficiency and integration, as well as in the imperative transition to renewable energy in response to the environmental crisis and the degradation of ecosystems. It will be essential to promote new efforts in cooperation, investment, and trade to jointly address the complex energy challenges confronting both regions.

In turn, the vast majority of countries in both regions have endorsed the global commitments made at COP28 (Dubai, November 2023) to triple renewable energies and double the energy efficiency ratio by 2030.

1 European Commission, A new agenda for relations between the EU and Latin America and the Caribbean, Brussels, 07-06-2023.

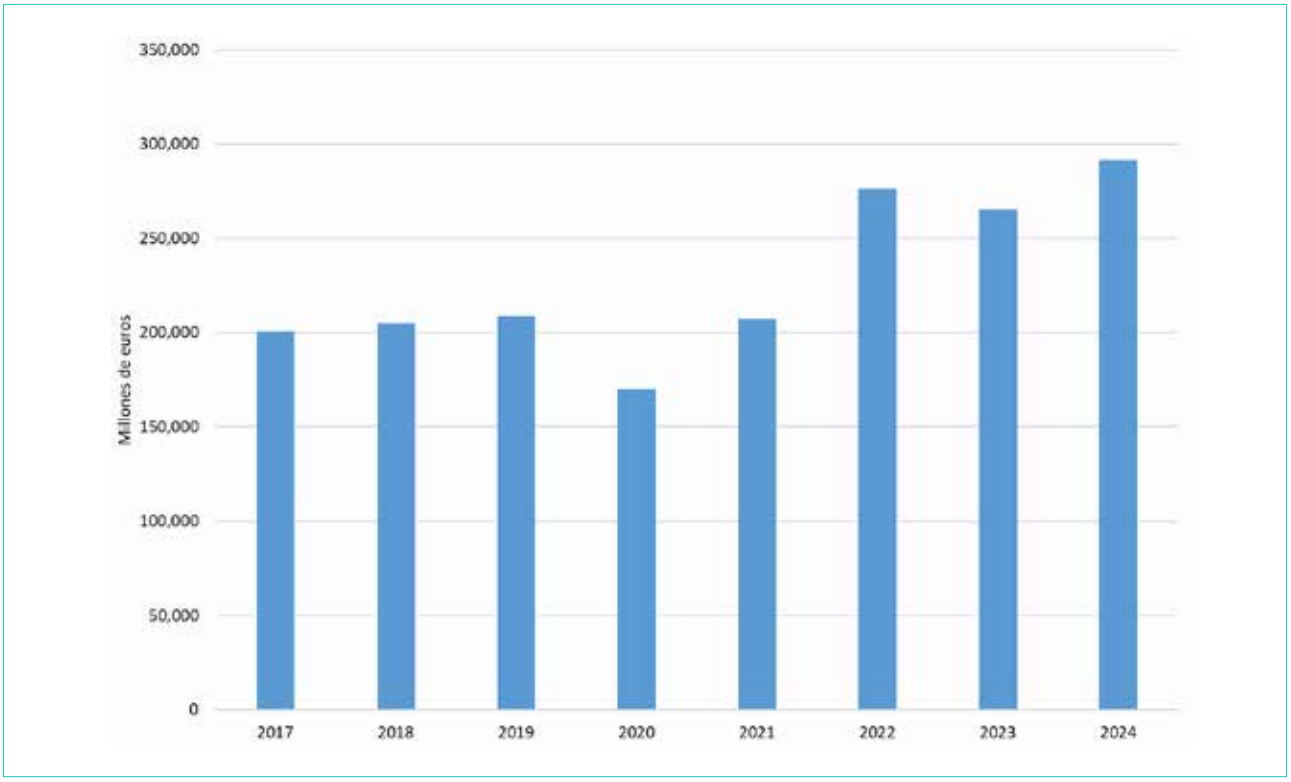
1.
EU-LAC Economic-Trade Relations
Global Trade and Investment

Economic relations between the EU and LAC countries are of historical importance.

In recent decades, the signing of association agreements between the EU and most LAC countries has confirmed the mutual interest in consolidating and deepening economic relations between the two regions. Currently, the EU, concerned about recent changes in the global geopolitical and economic order, underscores the need to strengthen and renew its relations with LAC [2]. As President von der Leyen stated in the speech delivered in Montevideo in December 2024 during the meeting with Mercosur leaders "(…) In an increasingly confrontational world, we demonstrate that democracies can rely on each other. (…) We are like-minded partners. We both believe that openness and cooperation are the true engines of progress and prosperity."

2 Comisión Europea, o. cit.

Graph 1: EU-LAC trade in goods



Source: Trade Map.

The EU is LAC's third-largest trading partner, after the US and China, with total two-way merchandise trade reaching €206.683 billion in 2017 and rising to €291.534 billion in 2024 (Graf 1).

Table 1: EU-LAC trade in goods (year 2024)

Regions	Values (million euros)
MERCOSUR	108,842
Mexico	71,372
Comunidad Andina	35,357
CARICOM	15,560
Chile	18,836
Resto	41,567

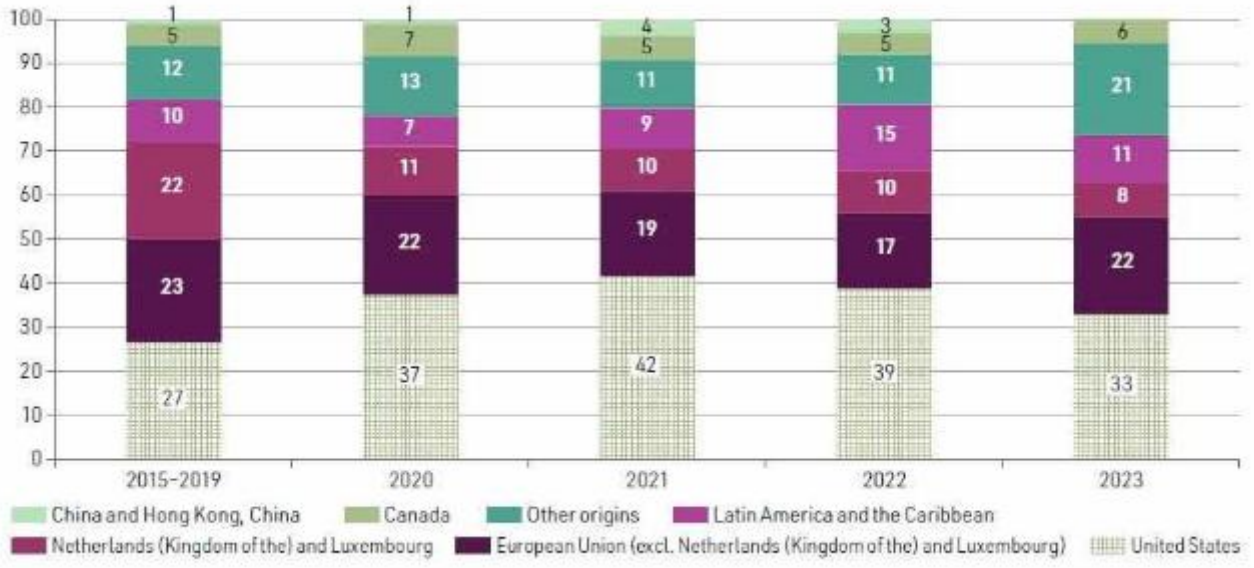
Source: Trade Map,

It is worth noting that when trade in services is included, total trade between the two regions increase by at least 20% of the registered rate.

On the other hand, the EU is the leading source of foreign direct investment (FDI) in LAC, in competition with the United States, with a cumulative stock of €800 billion as of the end of 2023[3]—a figure that exceeds the EU's combined FDI in China, India, Japan and Russia. In recent years, these investments have been primarily directed toward renewable energy and key sectors for the ecological transition, as well as information and communications technologies.

According to ECLAC's latest report of foreign investment flows in LAC, the United States and the EU remain the region's principal investors. EU countries account for nearly one-fifth of all foreign investment sources in the region. Among EU members states, Spain stands out as the leading investor in LAC. In 2023, It ranked second in terms of individual investment in the region, after the US (11% of the total) and is the source of 52% of total EU investments[4] (Graph 2).

Graph 2: Distribution in percentage of foreign investment inflows into LAC by origin (year 2023)



Source: ECLAC, Foreign Direct Investment in Latin America and the Caribbean 2024, Santiago, Chile.

3 According to CAF in "Cinco beneficios de las inversiones de la UE para América Latina y el Caribe", August 18, 2023.
4 ECLAC, La Inversión Extranjera Directa en América Latina y el Caribe 2024, Santiago, Chile.

According to CAF, the European Union has announced plans to invest €45 billion in Latin America and the Caribbean over the coming years in projects that accelerate the green transition, digital transformation and human development (clean hydrogen production, critical raw materials, expansion of data cabling network, and the production of more advanced vaccines)[5].

At a time when unilateral tariff initiatives are being implemented, it is important to highlight that the EU and LAC share a commitment to multilateralism—both within the World Trade Organization (WTO) and on the commitments of the 2030 Agenda and the Paris Agreement on Climate Change.

Strengthening trade and investment relations between the EU and LAC can make a significant contribution to a sustainable recovery in both regions. This process can be enhanced by the EU's technological expertise and experience in key areas such as renewable energy and digital transformation. It is essential to capitalize on the opportunities offered by the extensive network of association agreements between the EU and its LAC partners.

This is particularly relevant in the current context, as LAC is experiencing a second "lost decade" since the eighties, with an average growth of just 0.9% between 2015 and 2024, amid recent protectionist measures affecting both regions.

The potential of partnership agreements, cooperation initiatives, and new investments can play a crucial role in revitalizing the region's economy and enhancing its resilience to climate change, thereby contributing to global efforts in mitigation and adaptation.

1.1. Energy trade between EU and LAC

Energy relations between the EU and LAC have undergone a rapid transformation, with significant implications for bilateral trade and investment. As will be discussed in paragraph 2, the EU has been compelled to reduce its dependence on Russian gas in order to safeguard its energy security, prompting a diversification of its sources of supply and to make substantive progress in the production of renewable energy.

According to TradeMap data updated to 2023 and expressed in trade value in dollars, energy trade between the EU and LAC highlight the following:

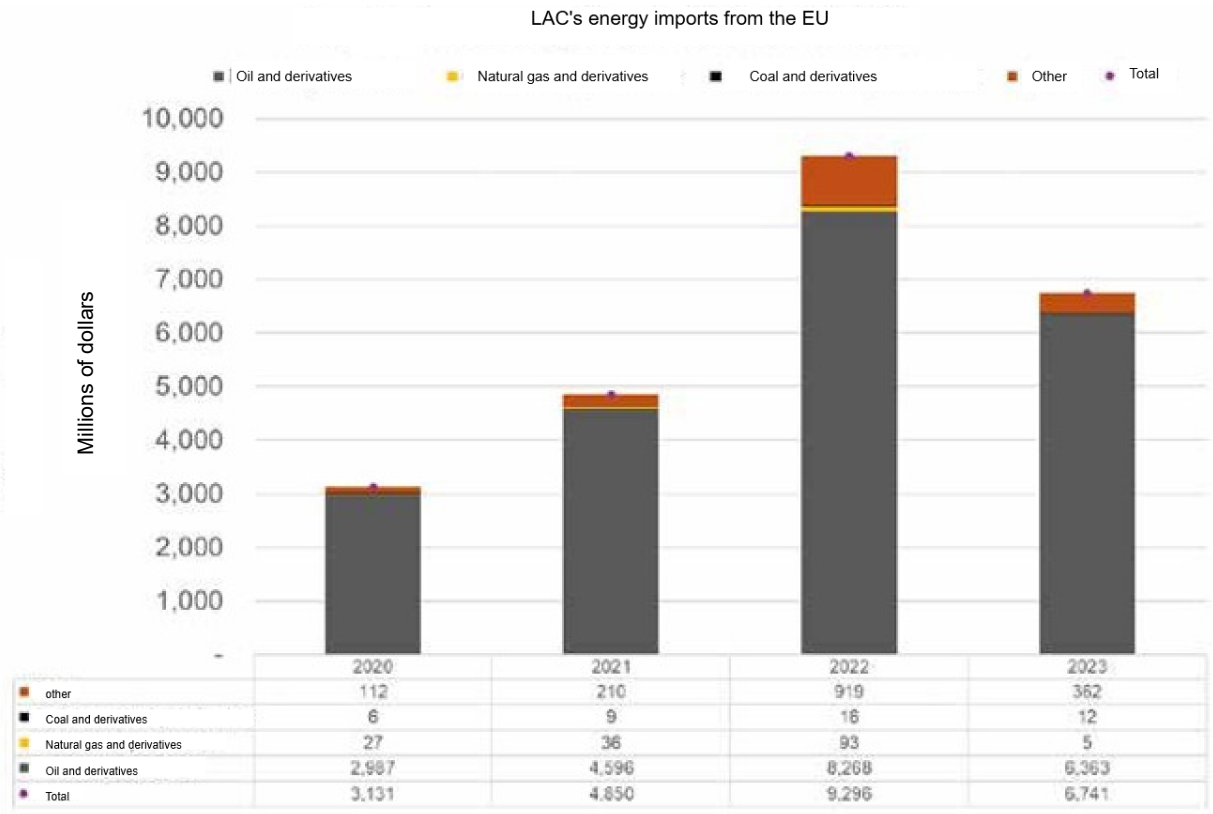
I. Energy trade between the EU and LAC has grown steadily in recent years. Trade in this sector has grown in recent years from US$10,887 billion in 2020 to US$35,707 billion in 2023.

II. Energy trade with the EU consistently results in a surplus for LAC, with the region's annual energy exports usually amounting three times or more than its imports from the EU.

III. oil and its derivatives account for 92.5% of EU energy sales to LAC.

5 At a meeting of EU and CELAC finance ministers, organized by the Spanish government and CAF; September 15,2023, Santiago de Compostela

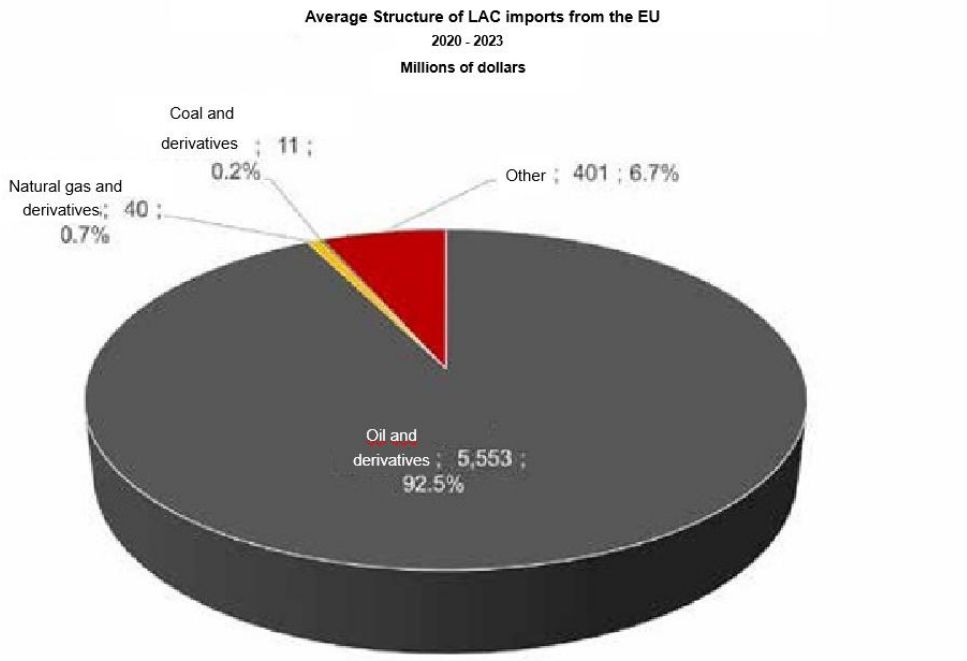
Graph 3



	2020	2021	2022	2023
other	112	210	919	362
Coal and derivatives	6	9	16	12
Natural gas and derivatives	27	36	93	5
Oil and derivatives	2,987	4,596	8,268	6,363
Total	3,131	4,850	9,296	6,741

Source: Author's elaboration based on information from Trade Map

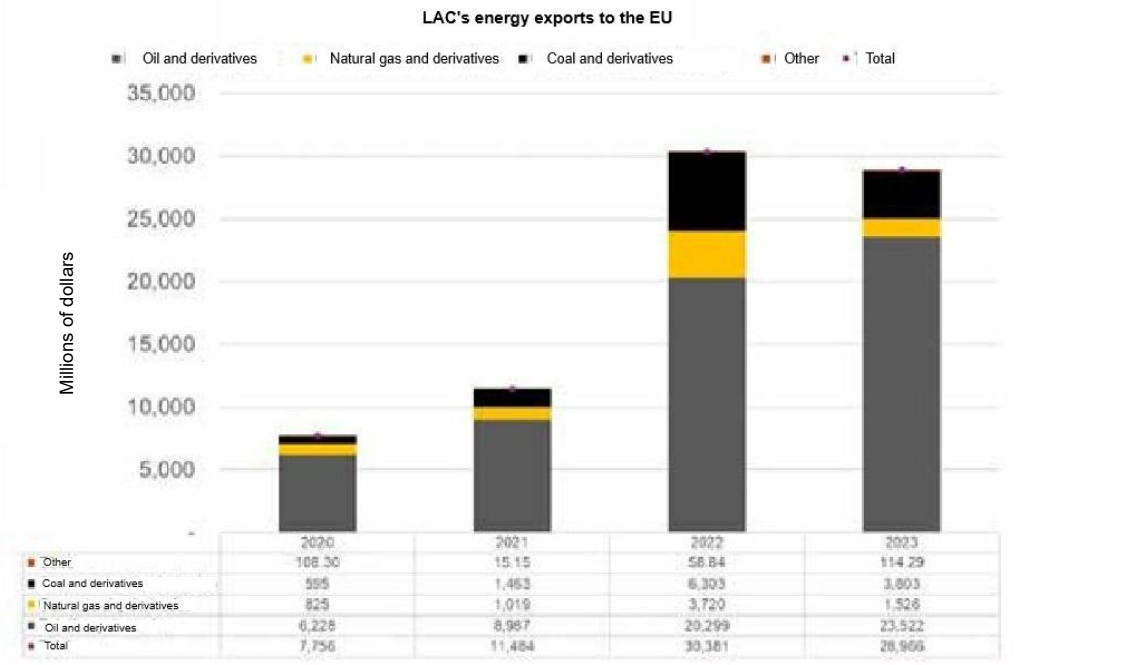
Graph 4



Source: O, cit.

IV. For its part, LAC's energy exports to the EU have been growing in recent years and gaining share in the region's total sales to that market. In 2020, energy accounted for 7% of LAC's total exports to that market and in 2023 for 19%.

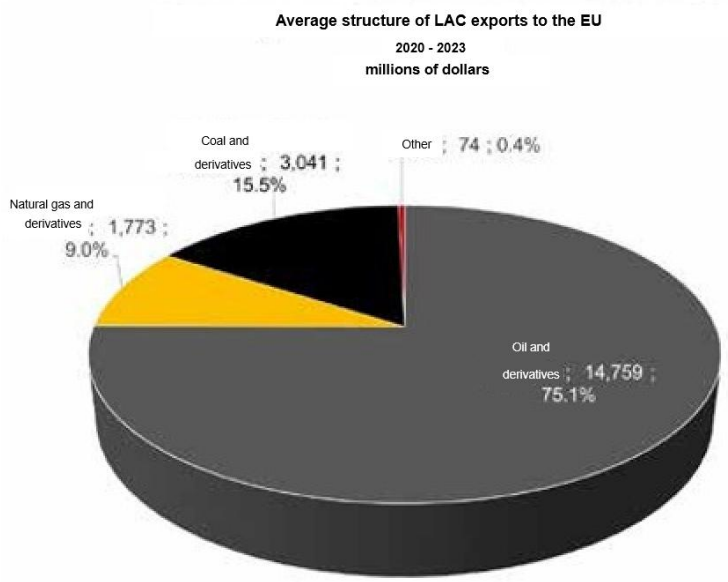
Graph 5



Source: O. Cit.

V. As shown in Graph 6, LAC exports to the EU are somewhat more diversified; approximately 75% consist of oil and Its derivatives, 15% of coal and 9% of natural gas.

Graph 6



Source: O. Cit.

VI. Energy accounts for an average of 4% of total European sales to LAC, whereas the EU represents a relatively more important market for LAC's energy products.

VII. The most important trade relationship in the region's trade with the EU corresponds to trade flows between the EU and Brazil, which accounts for 35% of LAC's total energy trade with the EU. This is followed by Mexico, representing 18% of this exchange.

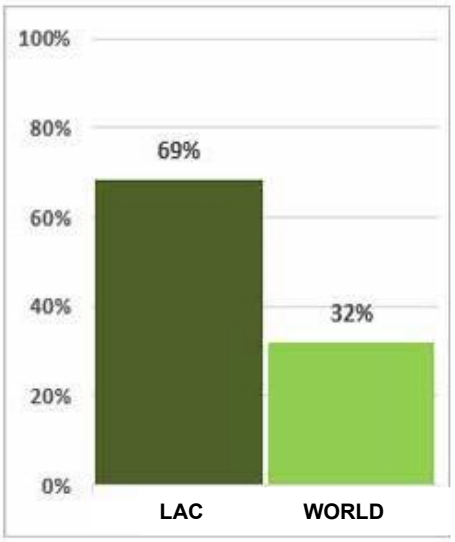
Unlike in other traditional exporting regions, energy crisis does not appear to have rekindled European interest in Latin American fossil resources. Nevertheless, investments and cooperation for the energy transition seem to be very interesting.

LAC is emerging as a highly attractive region for advancing the external dimension of the European Green Deal. Since 2011, foreign direct investment (FDI) in Latin America in renewable projects has exceeded investment in hydrocarbons. European companies account for 75% of FDI in renewable energies, with the strong presence of Spanish, Italian and French electricity companies.[6]

The inflow of European capital in LAC in the recent decade has stimulated the region's renewable energy sector, particularly in electricity generation, increasing the share of renewable sources in this sector.

Most notably, the renewability index in LAC (which measures the proportion of electricity generated from renewable sources relative to total electricity generation), reached 69%, nearly double the world average. Nevertheless, this figure still reflects a significant weight of hydropower (Graph 7).

Graph 7: Renewability index of energy sources in LAC, 2024



Source: OLADE, Electric Power Generation in LAC, December 2024.

As a result, LAC has become a valuable partner for the EU in advancing the energy transition. The complementarity and cooperation potential between the two regions for the energy transition go beyond solar, wind and green hydrogen developments.

On the other hand, the EU has shown a particular interest in ensuring access to critical minerals and rare earths elements—essential materials for the energy transition—including niobium, silver, copper, lithium, cobalt, tin, iron and molybdenum. LAC holds 25% of the world's reserves of these minerals.

Consequently, cooperation between the EU and LAC is both essential and forward-looking to address the challenges of the energy transition. This collaboration can provide technological and social solutions that benefit both regions, contributing to a greener, more inclusive and equitable economy[7].

6 G. Escribano and I. Urbasos "¿Por qué importa América Latina a la UE en energía? Diversificación, compañeros de transición y nuevas cadenas de valor", Elcano Royal Institute, 21-03-2023, Madrid, Spain.

7 Energytran Project, Research infrastructure cooperation for energy transition between European and Latin American and the Caribbean countries

As will be discussed in section 2, both the EU and LAC have committed to promote this transition, confronting significant challenges while also seizing valuable opportunities.

Through the European Green Deal, the EU has set ambitious targets to achieve climate neutrality by 2050, including the modernization of its energy networks and the promotion of diverse renewable sources. On the other hand, LAC–a region endowed with abundant key natural resources–represents a strategic opportunity to diversify its economies and generate greater added value.

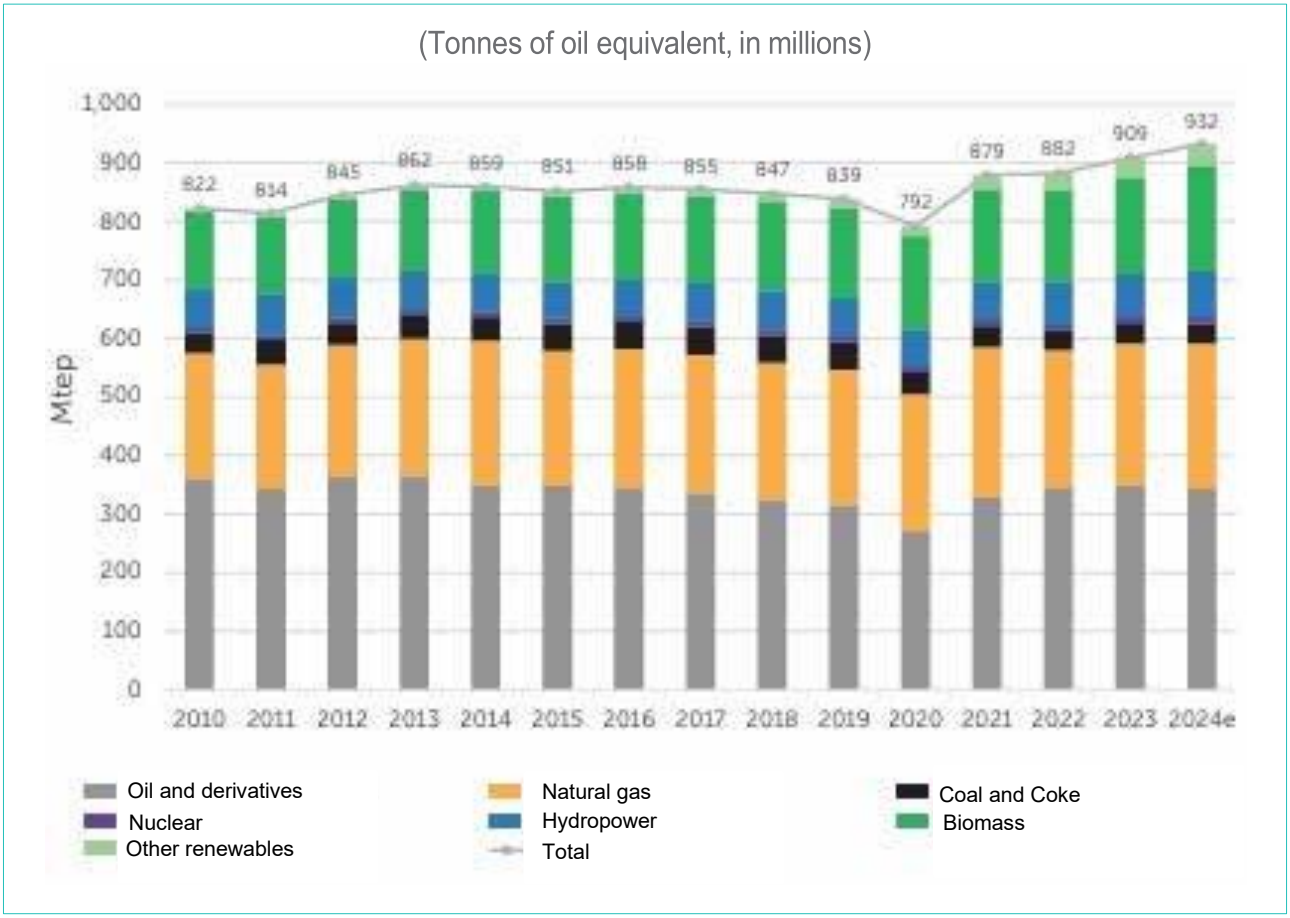
2.
Energy Cooperation between the EU and LAC

There are notable coincidences between the EU and LAC on energy issues, including challenges related to security, efficiency and integration, as well as with growing investment in renewable energies.

When analyzing the composition of the primary energy mix, as shown in Graph 11, reveals that in LAC countries the energy supply over the past fourteen years has been dominated by fossil fuels–such as coal, oil and gas–which account for a high percentage of total energy input.

In fact, LAC's energy matrix is predominantly composed of hydrocarbons, which account for over 60% of the supply. As for the energy sector produced by non-fossil sources, hydropower contributes 37%; while the remainder corresponds to non-traditional alternative energies, with solar power making notable advances—contributing 14% in 2024.

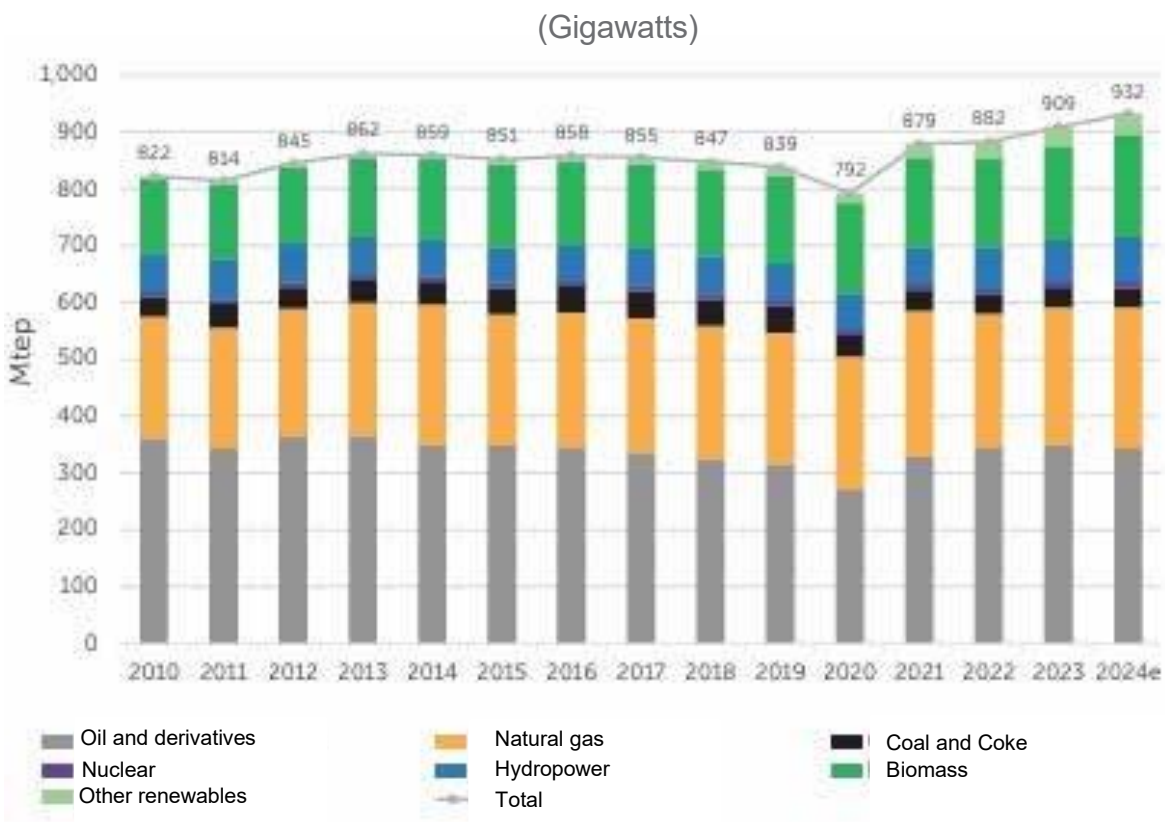
Graph 8: Total energy supply by source: 2010-2024



Source: OLADE, 2024 Energy Outlook for Latin America and the Caribbean, Quito, Ecuador.

Regarding the evolution of installed electricity generation in LAC's, there has been a significant growth in wind and solar photovoltaic power plants, as well as gas-fired power stations, alongside a reduction in thermal plants that rely on petroleum derivatives (Graph 9).

Graph 9: Installed capacity for electricity generation: 2010-2024



Source: OLADE, 2024 Energy Outlook for Latin America and the Caribbean, Quito, Ecuador.

The energy market has experienced numerous shocks and transitions over time; nevertheless, today's climate and environmental challenges require unprecedented transformations. These changes aim not only to ensure a secure and efficient supply, but, more importantly, to prioritize the development and use of clean energy[8].

The exponential rise in greenhouse gas emissions over the past 50 years has significantly worsened the climate outlook. Nevertheless, in parallel, various clean energy technology options have emerged and developed, now competing in market conditions with traditional sources.

consequently, for both LAC and EU, energy security, efficiency and integration—alongside the development of clean energies— have become unavoidable imperative.

The Executive Secretary of OLADE, Andrés Rebolledo, in the presentation of the 2024 report, emphasized the new energy challenges facing the region:

"LAC countries are not indifferent to this urgency (the climate challenge) and have established policies, goals and pathways to contribute to climate change mitigation, one key mechanism being the transition of their energy systems toward clean or low-emission energy sources, along with the promotion of rational and efficient energy use." Nevertheless, at the same time, he added:

"This transition must go together with energy security and the guarantee of supply as primary objective. Therefore, complementarity with other energy resources available in each country remains valid, as in the case

8 Konrad Adenauer Stiftung, Security, integration and Energy Transition in Latin America: Challenges and Perspectives, Belo Horizonte, 2024.

of natural gas, which, being abundant in the region with a relatively low CO2 emission factor, is considered a transition energy in the decarbonization of the sector" [9].

For its part, the European Commission, in its 2024 energy report, reveals similar concerns:

"Energy policy is critical for European competitiveness, security and decarbonization towards climate neutrality by 2050, as well as for the achievement of zero pollution, biodiversity protection and circular economy objective".[10]

Over the last few decades, the EU has had to import energy. In 2020, most of the energy available in the EU Member States came from external sources: 58% was imported and 42% from domestic production.

Of Europe's domestic production in 2022, 43% of energy came from renewable sources, while approximately 28% was generated in nuclear power plants.

In terms of imports, Russia was the EU's main supplier of fossil fuels in 2020: providing 54% of coal, 43% of gas and 27% of oil. Nevertheless, by 2024 due to the restrictions imposed, the situation has evolved, as shown in Table 2.

Table 2: EU domestic production and external energy supply in 2024 (in percentages)

Internal supply		External supply		
Products		**Products**		
			Russia	Other
Renewable	43.2			
Nuclear	27.6	Coal	0	100
Coal	19.5	Petroleum	3	97
Petroleum	3.3	Gas	17	83
Gas	6.2			
Other	0.2			

Source: Eurostat: https://ec.europa.eu/eurostat/web/interactive-publications/energy-2024#energy-consumption

9 OLADE, 2024 Energy Outlook for Latin America and the Caribbean, Quito, Ecuador.
10 European Commission, State of the Energy Union Report 2024, Brussels, 11-09-2024.
11 Data for the year 2022
12 In 2024, the two main suppliers of coal were Australia (37.3%) and the United States (32.3%).
13 In 2024, the United States (16.1%), Norway (13.5%) and Kazakhstan (11.5%) were the most important suppliers.

To advance its energy policy, the EU proposed the following objectives [14]:

- Promote all aspects of energy security;
- Prioritize energy efficiency at all stages of the chain, from generation to final consumption;
- Promote the decarbonization in energy production and use in the EU, thereby enhancing competitiveness and supporting the achievement of climate ambition;
- Promote research and foster innovation;
- Involve all stakeholders and empower energy consumers to play a central role in the clean energy transition.

Meanwhile, Russian oil imports into the EU have plunged by 90% within a year. In February 2022, the EU bought
15,189 million tons (Mt) of Russian crude oil and refined products, including diesel, kerosene and petrol. One year later, in February 2023, those same imports totaled 1.876 Mt. The following moth, in March, they fell further to reach 1.445 Mt.

The suppliers replacing Russia include the United States, Norway, Algeria, Brazil, Angola and the United Arab Emirates.

In 2024, Russia (17.5%) was the EU's second-largest supplier of liquefied natural gas, behind the United States (45.3%). Norway was the EU's leading supplier of gaseous natural gas in 2024, with a 45.6% share, followed by Algeria (19.3%) and Russia (16.6%).

2.1. Energy Security

2.1.1. LAC in energy security

Energy security is crucial not only for the economic and social development of countries, but also for their national security, as the EU current situation demonstrates. The International Energy Agency (IEA) defines energy security as the "uninterrupted availability of energy sources at an affordable price"[16].

The survival of economies requires to ensure a continuous minimum energy supply, minimizing the risk of interruptions. At the same time, energy price is essential, as their volatility also generates uncertainty and difficulties.

Therefore, it is clear that energy security extends beyond a market issue. It is also a component of national security, ensuring countries economic stability, sovereignty and defense capacity.

LAC is a region rich in energy resources—both fossil fuels and renewable energies potential. For economic and technological reasons, its countries also exploit fossil energies to sustain energy security.

Moreover, there are valuable efforts underway, but LAC faces a complex scenario in terms of both energy security and the energy transition. In this context, it is essential to pursue solutions combining energy security and sustainable development, for which international cooperation should be a central pillar of interest.

14 The European Commission presented the REPowerEU plan in May 2022, to reduce the UE dependence on Russian imports of gas, oil and coal.
15 Euronews, 21-06-2023
16 International Energy Agency (IEA). Emergency response and energy security. OECD/IEA, Paris, 2023.

2.1.2. Energy security in the EU

As previously noted, Europe's energy—and consequently economic—security has been called into question after the start of the war between Russia and Ukraine. In response, the European Council launched the REPowerEU strategy to reduce dependence on Russian fossil fuels as soon as possible and to achieve energy security.

When its security was affected, the EU was forced to rely immediately on non-renewable sources such as coal, but at the same time accompanied by an accelerated push toward investments in renewable sources policies. Today, the EU aims to guarantee its energy security by reducing its dependence on Russia, but at the same time, including clean energy sources in its strategy.

The EU has managed to reduce its dependence on Russian gas, while energy savings have limited its consumption. At the same time, investment in renewable energy has reached record levels and investments in cross-border energy infrastructure have managed to connect several European regions that were isolated[17].

In order to replace Russian gas supplies and ensure Europe's short-term energy security, the EU has turned to alternative suppliers. Norway and the United States have become the EU's main gas suppliers—through pipeline gas and LNG, respectively—and, in the first half of 2024, provided 34% and 18% of the EU's gas imports.

There is no doubt that the green transition is essential to achieve climate goals, and it's also a key component of energy security. In this context, a particularly relevant aspect emerges that can strengthen a productive alliance between LAC countries and the EU: the dependence on critical minerals essential for driving the green transition. These minerals are abundant in LAC, which opens the door to a cooperation agenda based on mutual understanding—one that includes both the transfer of European technologies for the development of a green industry in the region, and the sustainable access to strategic raw materials.

In 2022, renewables accounted for 23% of the EU's energy consumption; but there is a strong political will to surpass this figure, with a proposed target of 42.5% of energy consumption from renewable sources by 2030.

On May 5, 2025, the European Commission presented the REPowerEU roadmap to ensure the EU's full energy independence from Russia.

The roadmap outlines a gradual phase-out of Russian oil, gas and nuclear power from EU markets, aligned with the ongoing energy transition. These measures are designed to preserve the security of the EU's energy supply while minimizing any impact on prices and markets.

Moreover, the energy security and sovereignty of countries must be reinforced alongside the energy transition, as demonstrated by the EU's experience, which has yielded positive results so far.

2.2. Energy integration

2.2.1. Integration in LAC

In Latin America, there are very successful and long-standing examples of energy integration, including the Itaipu (Brazil-Paraguay), Yacyretá (Argentina-Paraguay) and Salto Grande (Argentina-Uruguay) hydroelectric dams.

These projects have been fundamental for the energy supply of these countries.

17 European Commission, State of the Energy Union Report 2024, Brussels.

At the same time, these hydroelectric projects—symbols of union and cooperation—now take on an additional purpose, linked to the energy transition, by contributing to decarbonization and, therefore, the energy transition.

Integrated energy systems can reduce the costs of the transition to climate neutrality by optimizing benefits and surpluses, while enabling the share of costs and responsibilities.

For its part, OLADE, promotes energy integration through initiatives like "Redes Eléctricas" and supports ongoing projects such as the Central American Electrical Interconnection System (SIEPAC), the Energy Integration System of the Southern Cone (SIESUR) and the Andean Electric Interconnection System (SINEA), which are advancing in electricity interconnection efforts between countries in the region.

In addition, OLADE is focusing its efforts on monitoring studies that propose pathways to integrate gas routes into MERCOSUR, with natural gas as a transition fuel; and also promotes a Continental Electricity Integration Plan for Latin America and the Caribbean, with CELAC serving as a reference framework.

At the same time, it is important to highlight that the Brasilia Consensus has prioritized efforts by the 12 South American countries to advance the strengthening of energy ties among neighboring countries.

2.2.2. Integration in the EU

In May 2021, the EU published its "European Strategy for Energy System Integration "[18], which proposes the coordinated planning and operation of the energy system for all countries.

The Commission defines integration across multiple energy vectors— such as electricity, gas, heating and cooling— as well as infrastructure and consumption sectors. In other words, it involves moving from the current energy system consisting of several energy value chains to a multidirectional energy system.

The integrated energy system aims to enhance flexibility in the European energy system, improving resilience and security of supply by connecting different vectors. This approach not only benefits consumers but also helps reduce environmental and climate impacts, ensuring greater resilience and security of supply.

The European Community policy of integration between energy systems—by connecting different supply methods and different types of energy demand—supports energy security, linked to the energy transition and climate change mitigation.

Point 7 of the EU regulation (2022/869) of the European Parliament and of the Council provides detailed guidance on the integration of trans-European energy infrastructure:

"The trans-European energy networks policy is a central instrument in the development of an internal energy market and necessary to achieve the objectives of the European Green Deal. To achieve higher levels of greenhouse gas emission reductions by 2030 and climate neutrality by 2050 at the latest, Europe will need a more integrated energy system, relying on higher levels of electrification based on additional renewable and low-carbon sources and the decarbonisation of the gas sector. The trans-European energy networks policy can ensure that the Union energy infrastructure development supports the required energy transition to climate neutrality in line with the energy efficiency first principle and technological neutrality while considering the potential for emission reduction in the end use. It can also ensure interconnections, energy security, market and system integration, and competition that benefits all Member States, as well as energy at an affordable price for households and undertakings".

18 European Strategy for Energy System Integration, published in the Official Journal of the European Union on May 19th,2021

2.3. Energy Efficiency

2.3.1. Efficiency in LAC

Concern about energy security has increased due to climate change and, in the case of the EU, also because of the impacts of the war in Ukraine. A secure supply is essential to ensure the growth and social conditions of populations in both the EU and LAC. Nevertheless, security of supply and climate change cannot avoid energy efficiency.

According to the Climate Change Conference (COP 27)[19], energy efficiency is the most effective response for achieving climate change mitigation. At the conference, doubling energy efficiency was proposed as one of the key measures to limit global warming.

LAC countries face an urgent need to boost economic development and improve social welfare. Nevertheless, vulnerabilities in the energy sector hinder progress toward these goals. Consequently, an adequate energy strategy that contemplates energy efficiency is unavoidable.

ECLAC highlights several barriers that hinders improvements in energy efficiency in LAC countries. These include limited access to energy services for the poorest sectors, a scarcity of efficient technologies, and limited accessibility to household appliances and appropriate technologies.

To face these challenges, it is important to implement a range of public policy instruments, which should include appropriate information, regulatory instruments, and economic and financial programs[20].

According to ECLAC, energy efficiency is a quick and effective option to reduce CO2 in the energy transition, while also helping to lower energy bills. Moreover, energy efficiency is crucial to avoid the growing demand for fossil fuels[21].

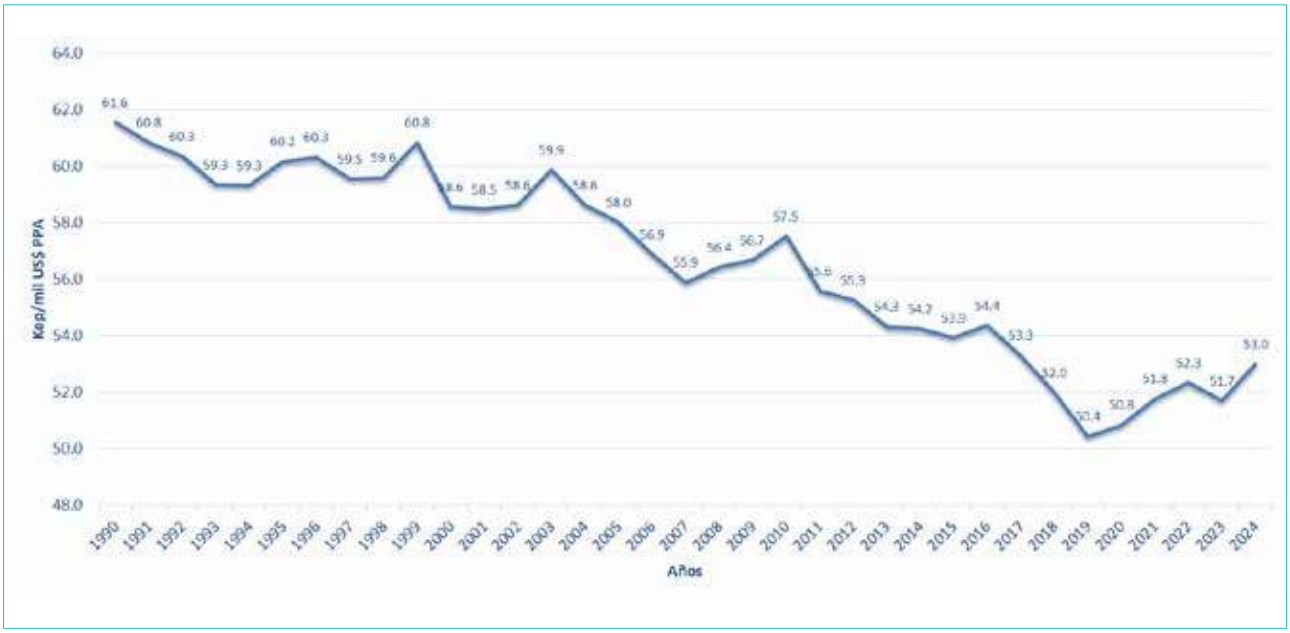
According to ECLAC, improvements in efficiency can be achieved through four main approaches: electrifying production processes with renewable energies; promoting clean cooking in homes using efficient appliances; improvement in the technical efficiency of equipment and optimizing the use of energy and materials; and encouraging changes in consumer behavior to reduce energy consumption.

LAC has demonstrated improvements in energy efficiency, reflected in the decline of energy intensity relative to GDP from the 1990s to 2023—that is, with the reduction of the amount of energy required to produce one unit of gross domestic product. And in LAC it has gone from 61.6 kep per thousand dollars of GDP PPP to 51.7 kep in 2023. Nevertheless, this downward trend experienced a setback during the pandemic period but has shown signs of recovery in recent years.

This reduction, however, has been slower compared to other regions of the world.

19 COP 27, United Nations Climate Change Conference, held in November 2022, in Egypt.
20 ECLAC, Energy Efficiency in the Sustainable and Inclusive transition of Latin America and the Caribbean: Progress and Policies, June 2024, Santiago, Chile.
21 ECLAC, O. cit.

Graph 10: Evolution of Energy Intensity 1990 -2024



Source: OLADE, Author's elaboration based on information published in: https://sielac.olade.org/

Energy efficiency represents a key solution to LAC's energy challenges. With well-designed and conducted policies, it can improve industrial productivity and facilitate access to affordable energy services for lower-income households

2.3.2. Efficiency in the EU

The September 2023 Directive on EU energy efficiency policy set a target of reducing primary and final energy consumption by 11.7% by 2030, prioritizing efficiency at all stages of the chain, from generation to final energy consumption[22].

The Directive introduces an obligation for the public sector to play an exemplary role. Their institutions must reduce their total combined final energy consumption by at least 1.9% per year compared to 2021 and renovate at least 3% of the total area of their buildings, incorporating efficient heating and cooling systems, aimed at fully decarbonize the supply of these systems by 2050.

In addition, all new buildings in the EU will be required to be zero-emission from 2030. Countries also expected to progressively install solar systems in public and non-residential buildings. Subsidies for stand-alone fossil fuels boilers will also be phased out starting in 2025.

In terms of results, a recent report by the European Commission's Joint Research Centre[23] manifest that primary energy consumption and final energy consumption in the EU have decreased by 10% and 4%, respectively, from 2000 to the present.

On the other hand, by sector of activity, the greatest reduction in final energy consumption was recorded in the industrial sector (-16.4%), followed by the residential sector (-2.4%). In contrast, the transport sector presents an increase in consumption (6.4%), while the tertiary sector experienced a growth of 16%.

Ultimately, relevant energy indicators—such as energy intensity and energy per capita—declined significantly between 2000 and 2022.

22 EU Directive 2023/1791 of the European Parliament and of the Council, Brussels, 13-09-2023
23 European Commission, Trends in energy consumption and energy efficiency in the EU, 2000-2022, Brussels, 28-02-2025.

2.4. Energy poverty

2.4.1. Energy poverty in LAC

Access to secure energy is essential for meeting basic human needs and is an indisputable objective in the pursuit of sustainable development.

Although 97% of the population in LAC has access to electricity, there is still a significant portion of the population that cannot meet their basic energy requirements for a dignified life, meaning they live in energy poverty.

The average access to electricity often obscures the significant heterogeneity in energy access, particularly when comparing rural and urban settlements. On the other hand, focusing exclusively on electricity access can hide other forms of energy deprivation.

Energy poverty cannot be measured only by the overall average of electrification, because it does not identify the great disparities existing in the region. Moreover, other indicators of energy poverty include the use and quality of energy services within the home, polluting fuels and the deficient or absent thermal insulation, among other aspects.

Ultimately, it is important to highlight that women are the most affected by energy poverty, particularly in countries with a large rural population where firewood and charcoal remain widely used energy sources. By spending their time on household chores and caring for children and the elderly, women are directly affected by the use of these highly polluting energy sources.

2.4.2. Energy poverty in the EU

In the EU, adequate heating, cooling, lighting and energy are essential services necessary to ensure a decent standard of living and health. Nevertheless, the European Council estimates that 50 million households in the EU do not have access to adequate energy services.

The rise in electricity prices, combined with poorly insulated and inefficient homes, has pushed many people to live into energy poverty within the EU. This situation worsened in 2020 with the onset of the pandemic, accelerating the incidence of energy poverty.

Energy poverty demands special attention, and all EU countries have implemented various policies to combat it in their territories. Some of these measures emphasized in a social character, while others focus on improving household energy efficiency.[24]

Social assistance supports energy-poor households through social services, providing subsidies, assistance or through energy vouchers. There are also policies aimed at improving the energy efficiency of vulnerable sectors through home rehabilitation, renovation of outdated heating systems, replacing them with more efficient alternatives; subsidies for the installation of renewable energy systems to reduce fossil fuels consumption; and the replacement of household appliances.

24 Article 7 of the Revised Energy Efficiency Directive (2012/27/EU) of the European Union and its amendment (2018/2002) proposes that Member States ensure that a part of the energy efficiency measures prioritize energy-poor households.

2.5. Renewables energy

2.5.1. Renewables in LAC

LAC is responsible for only 8% of global emissions, yet its countries are seriously affected by extreme weather events, including droughts, floods, and biodiversity loss. Most of the countries in the region depend heavily on agriculture, fishing and tourism—sectors that are highly vulnerable to climate change. These impacts go beyond environmental degradation, affecting the productive activity and access to food. As emphasized by OLADE's executive secretary, Andrés Rebolledo:

"Extreme weather events such as droughts, hurricanes, and floods have become significantly more frequent and intense as a result of global warming, which is why there is an urgent need to accelerate climate change mitigation efforts by reducing carbon emissions into the atmosphere"[25]

Consequently, the transition to renewable energy sources is an essential response to the global climate crisis. Developing energy generation systems based on natural and renewable sources—such as solar and wind energy—represents a clear path to build a clean and sustainable energy future. The depth of this transformation spans economic, environmental, social and technological dimensions, demanding a synergy of interdisciplinary approaches and strategies.

The region therefore faces an immense challenge, as the primary energy sources in LAC—fossil energies and hydropower—remain essential for electricity generation, transportation and productive activities.

It is not a simple matter. From an economic perspective, the energy transition requires a redefinition of economic models and financial flows. The transition to renewable energy requires the reassessment of investments and the implementation of incentives to drive the adoption of clean technologies.

Climate concerns have gained greater visibility, and renewable energies—particularly wind and solar—have made notable progress in the region. LAC countries are advancing in the development of non-conventional renewable energies. Nevertheless, the transition in LAC must be closely aligned with energy security, because the energy supply for LAC countries is urgent.

It is worth noting that OLADE maintains its Energy Information Platform for Latin America and the Caribbean (sieLAC) up to date, with historical data available covering the period from 1970 to 2024.This platform enables the monitoring and analysis of energy demand and supply trends, as well as their alignment with the region's establish goals for climate change and adaptation. That way, national energy authorities can make timely decisions to maintain, accelerate, or, if necessary, adjust their strategies.

2.5.2. Renewables in the EU

The EU has committed to accelerate the deployment of renewable energies with a dual objective. Primarily, to reduce CO2 emissions and achieve climate neutrality by 2050. And as previously mentioned, to reduce its dependence on Russian supplies.

In September 2023, the European Parliament voted in favor of the agreement that raises the share of renewables in the EU's final energy consumption to 42.5% by 2030, although member states should strive to reach 45%. At the same time, MEPs proposed accelerating the permitting

25 OLADE, 2024 Energy Outlook for Latin America and the Caribbean, Quito, Ecuador

procedures for renewable production plants, such as solar panels and wind turbines.

The EU has also opted to use green hydrogen to produce energy, aiming to decarbonize energy-intensive industrial sectors. It is estimated that by 2050, green hydrogen could meet between 20% and 50% of energy demand in transport and between 5-20% in the EU industry. In addition, there is also an interest in increasing electricity production from marine energies.

With road transport responsible for approximately 20% of the EU's carbon emissions, the transition to zero-emission vehicles must be supported by an extensive infrastructure of charging stations. To support this transition, The EU plans to install electric charging stations for cars at least every 60 kilometers along its main roads by 2026; and recharging zones for trucks and buses at intervals of 120 kilometers by 2028.

The restructuring of the EU's energy matrix—until recently reliant on fossil fuels imports and nuclear generation—in the first half of 2024, has produced over half of the electricity for its 450 million inhabitants[26], being produced from clean, autonomous sources. This is mainly attributed to the remarkable expansion of wind and photovoltaic farms in the EU.

2.6. Global Gateway[27]

The European Commission launched this strategy in 2021. The aim is to mobilize up to €300 billion in investments through Team Europe Research, bringing together the EU, its Member States and their financial and development institutions. It seeks a transformational impact in the digital, climate and energy, transport, health, and education and research sectors.

The Global Gateway strategy represents the EU's contribution to narrowing the global investment gap. This strategy is in line with the commitment made by G7 leaders in June 2021 to launch a transparent, values-driven and high-standard infrastructure partnership to meet global infrastructure development needs.

In this regard, this Initiative will help to foster cooperation between the EU and Latin America and the Caribbean (LAC) in areas such as the green transition, digital transformation, human development, and health resilience. Investments Will focus on creating local added value, promoting growth and social cohesion.

26 A. Barrero, "The EU already generates more than half of its electricity with renewables", in Renewable Energies, 09-12-2024 conducts an analytical review of the 2024 report on the State of the European Energy Union.

27 Source: https://international-partnerships.ec.europa.eu/policies/global-gateway/global-gateway-overview_es

3.
Conclusions

The European Union and the countries of Latin America and the Caribbean face immense challenges. The uncertain geopolitical landscape, which threatens the post-World War II order, combined with the resurgence of protectionism that has ended four decades of globalization, has left both regions increasingly vulnerable.

Europe still faces the consequences of the war, which have negatively affected its economic growth. For its part, LAC is experiencing a new "lost decade" in development, marked by slow growth and a worrying increase in insecurity.

In this complex context, energy has become a key issue for both regions. The EU, long dependent on energy resources from Russia, has been forced to break this dependence and embark on a process of diversification. This process has involved not only the search for new suppliers, but also a determined push to replace fossil fuels by intensifying efforts and investments in non-conventional energies, particularly wind and solar.

In LAC, both governments and the private sector are increasingly interested in advancing the development of clean and low-emission energy sources. There is a clear concern to contribute to climate change mitigation and to achieving the Sustainable Development Goals (SDGs) by 2030. At the same time, the advancement of new technologies has facilitated the expansion of clean energy by lowering its costs, thereby creating increasing opportunities for investment and business in the region.

The growing presence of European investors in the clean energy sector in LAC should expand significantly in the coming years, not only to boost the region's economic development but also to complement the EU's energy needs. This strategic link should be deepened in light of the new geopolitical reality and the growing protectionism in global trade, which affects both regions.

Consequently, the EU's accession to OLADE is particularly timely. A convergent effort between the two regions should help to address the challenges of security, efficiency, poverty, renewable energy, and energy integration. This link can also reinforce the multilateral commitment to sustainable development, enabling to address the environmental crisis and ensuring energy security.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