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Electricity Generation

Report in Latin America and the Caribbean



Monthly electricity generation report in LAC, October 2025

OLACDE publishes the monthly electricity generation report for Latin America and the Caribbean (LAC) to monitor monthly and year-on-year variations, as well as the contributions of each energy source in the electricity generation mix.

In this context, considering the electricity sector as a key driver of economic, social, and environmental development, having up-to-date information on monthly electricity generation is strategic for the comprehensive monitoring and evaluation of the electricity system. This report highlights the evolution of electricity generation until October 2025.

1. Electricity Generation October 2025

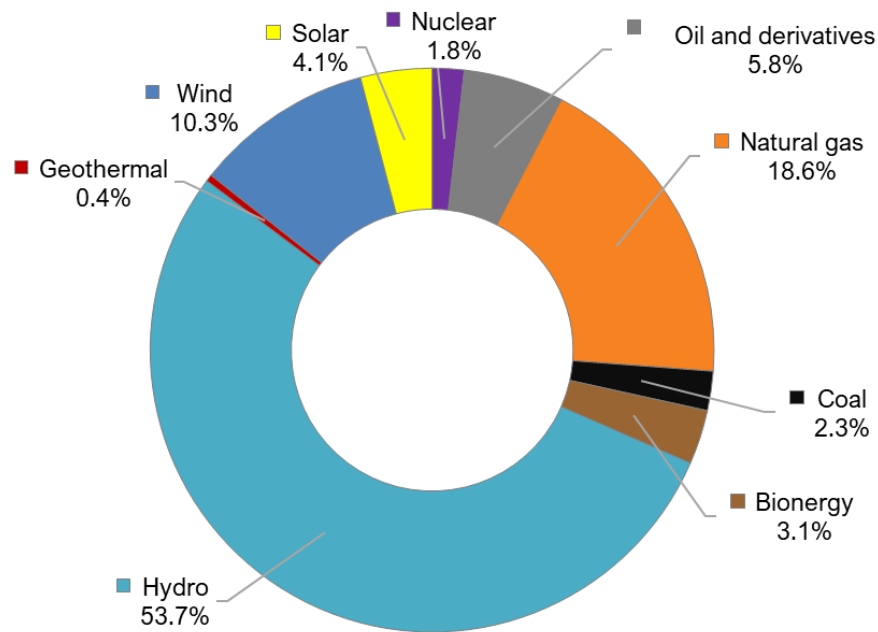
In October 2025, a total of 158 TWh of electricity was generated in LAC, of which more than 50% came from hydropower, registering during this month the highest value of hydroelectric generation since June 2025.

Regarding electricity generation from natural gas, it shows one of the lowest values since February 2025. This is due to the favorable hydrological conditions observed during those months, which allow the system to rely less on fossil fuel sources, mainly natural gas and petroleum derivatives.

Regarding the generation with mineral coal, this has remained stable without significant variations during the last six months. In contrast, wind and solar generation in October 2025 showed a decrease compared to September 2025. In the case of wind generation, during the analyzed month tropical disturbances were recorded in the Caribbean and the Gulf of Mexico, which altered wind patterns and may have forced curtailment or operational shutdowns, affecting regional production. Regarding solar generation, the reduction is explained by increased cloud cover, especially across much of the Amazon and central-western Brazil— influenced by the onset of the South American monsoon— which reduced the irradiance available to photovoltaic plants.

Figure 1. Electricity generation by source in LAC, October 2025 ¹ (%)

¹The figures were prepared using the information available on sielAC - OLACDE [<https://sielac.olade.org/>]



Source: sieLAC – OLACDE 2026

2. Composition of electricity generation in October of the last 3 years

During October 2023, electricity generation in the region was shaped by conditions associated with the El Niño phenomenon, which led to hydrological deficits in several basins and a reduction in the availability of variable renewable resources. In particular, wind and solar generation did not exhibit a uniform pattern compared to subsequent years, as El Niño heterogeneously altered cloud cover and wind regimes across different areas of LAC. This was reflected in a lower joint contribution of these technologies and in a relative reduction in the hydroelectric contribution, which forced a greater use of thermal generation, especially natural gas, without this being sufficient to match the total levels of the following years.

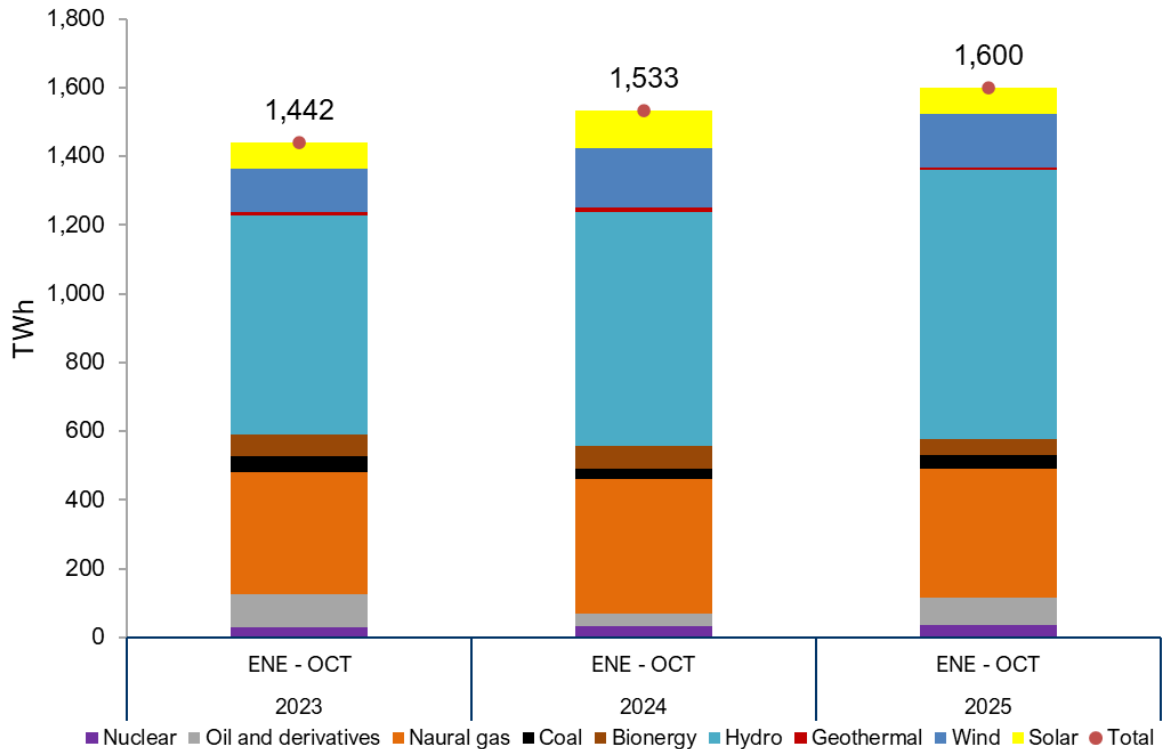
On the other hand, October 2024 was a very warm month, causing droughts in some areas and flooding in others. In the countries of the Caribbean there were heat waves, increasing the demand for air conditioning and therefore greater use of natural gas for electricity generation. In general terms, in the LAC region, hydroelectricity increased compared to October 2023 but has not yet reached the values recorded in October 2025. Meanwhile, generation with wind energy could be affected by wind variations due mainly to tropical storms.

As for October 2025, much of tropical South America experienced above-normal precipitation, improving reservoir levels and increasing hydroelectric generation compared to October of the previous year.

In conclusion, the evolution of electricity generation in October for the years 2023–2025 clearly reflects the influence of the main climate patterns in LAC. While 2023 was conditioned by El Niño, generating hydrological deficits and greater thermal dependence; 2024 stood out for high

temperatures and high cyclonic activity that modified the availability of variable renewable resources. In 2025, the early onset of the South American monsoon and very favorable hydrological conditions drove a strong increase in regional hydroelectric generation, offsetting reductions in solar and wind caused by cloud cover and tropical disturbances in the Caribbean and the Gulf of Mexico.

Figure 2. Comparison of Electricity Generation for October of Each Year

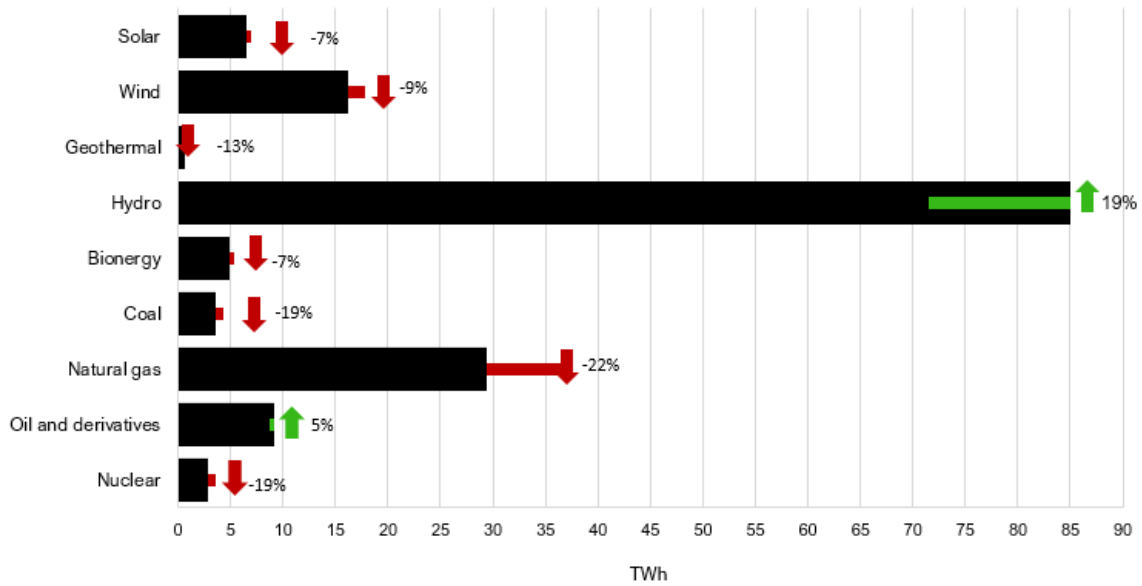


Source: sieLAC – OLACDE 2026

3. Monthly variation

Between September 2025 and October 2025, hydroelectric generation - which is the main source in LAC - shows a significant increase of 19%, becoming the largest positive contribution of the month; oil and derivatives registered a minor increase of 5%, while the rest of the technologies show falls: natural gas (-22%), solar (-7%), wind (-9%), bioenergy (-7%), geothermal (-13%), mineral coal (-19%) and nuclear (-19%). Due to the main large-scale sources in LAC are hydroelectricity and natural gas, the behavior of these two almost completely determines the monthly net balance of electricity generation.

Figure 3. Monthly variation in electricity generation by source in LAC, Sep 25 / Oct 25

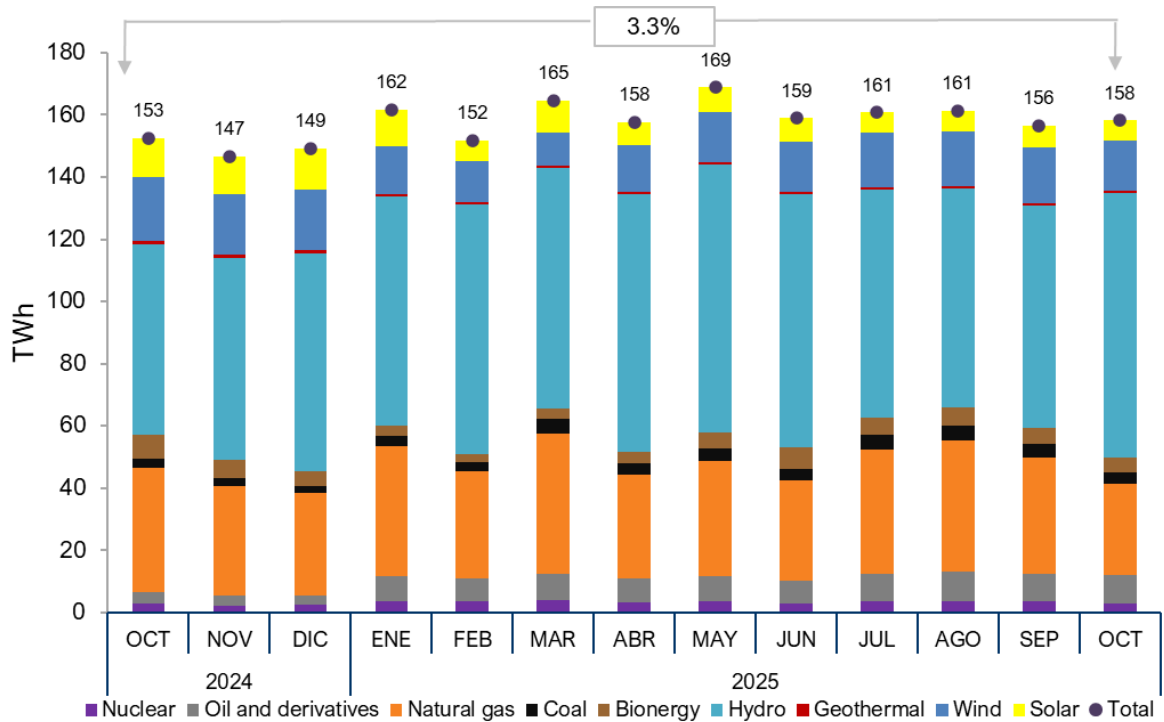


Source: sieLAC – OLACDE 2026

4. Year-on-year variation

Total electricity generation in LAC between October 2024 and October 2025 showed a growth of 3.3%. Hydroelectricity is the main source for generation, followed by natural gas, which also has a significant share. Renewable energy sources such as wind and solar show a stable contribution, although it is comparatively smaller. A generation peak is observed in May 2025 of 169 TWh and lower values in November 2024 (147 TWh). Sources such as coal, geothermal, bioenergy and nuclear show minimal variations over the period analyzed. Overall, the region's electricity system shows stability with slight growth driven mainly by hydropower.

Figure 4. Evolution of Electricity Generation by Source in LAC (Oct 2024 – Oct 2025)

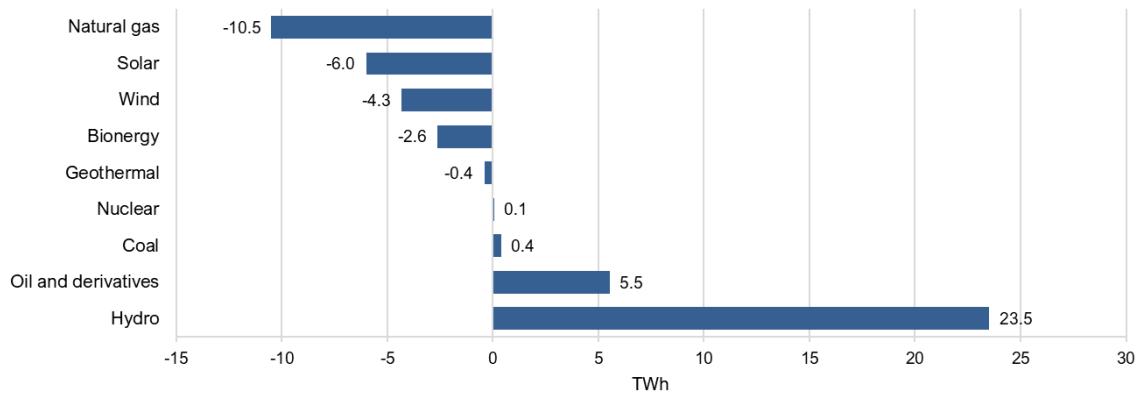


Source: sieLAC – OLACDE 2026

The year-on-year variation in electricity generation in LAC between October 2025 and October 2024 shows a marked increase in hydroelectric generation (+23.5 TWh), making it the main driver of regional growth. In contrast, there is a strong reduction in natural gas (-10.5 TWh), which suggests lower thermal dispatch. Solar (-6.0 TWh) and wind (-4.3 TWh) energy also show declines, mainly associated with weather conditions or operational availability. Bioenergy declines moderately (-2.6 TWh), while geothermal generation shows a nearly negligible variation. Among fossil sources, oil and derivatives grow 5.5 TWh, partially offsetting the lower generation from natural gas.

It should be noted that the electricity generation matrix focuses on hydropower and replaces natural gas with petroleum derivatives (+5.5 TWh), improving dispatch in wet months, but increasing exposure to hydrological risk and liquid fuels. In conclusion, generation is increasing, but diversification is not; future resilience will depend on restoring non-conventional renewable energy sources.

Figure 5. Year-on-year variation in electricity generation by source in LAC, Oct 2025 vs. Oct 2024



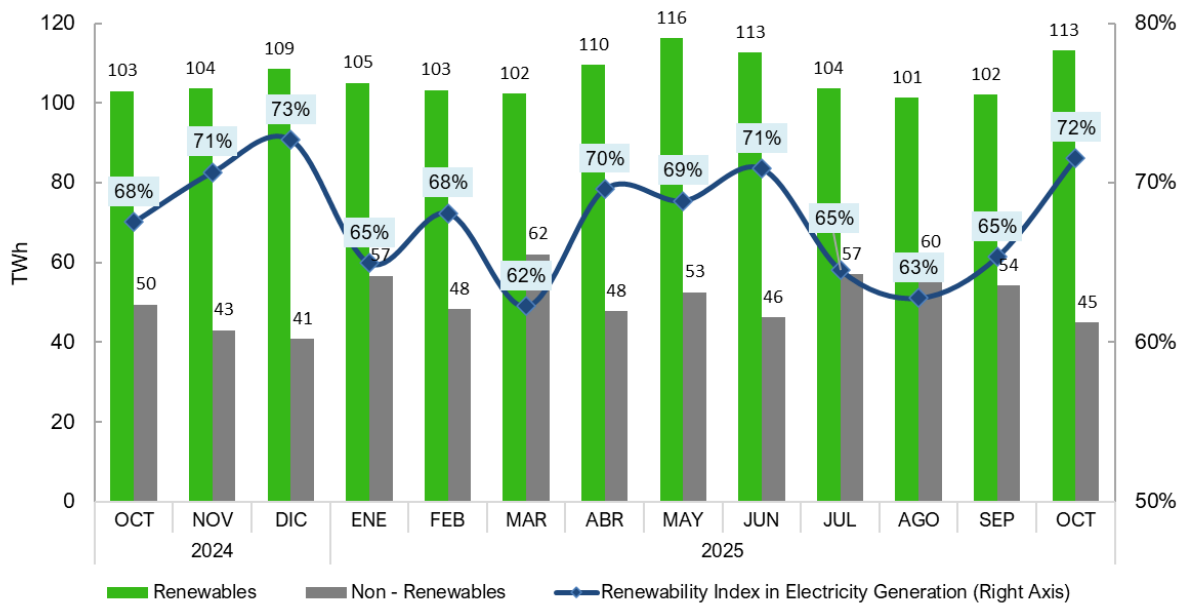
Source: sieLAC – OLACDE 2026

5. Renewability Index

The renewability index between the period October 2024 – October 2025 ranges between 62% and 73%, with peaks in December 2024 (73%) and October 2025 (72%), when fossil contributions are minimal. The most marked declines are observed in March 2025 (62%) and August 2025 (63%), months with the highest use of non-renewables. Renewability recovers quickly after each fall, showing structural stability. Renewable generation peaks in May 2025 (116 TWh), reinforcing its dominant role. Overall, the system maintains a robust and predominantly renewable matrix, with sustained variations over the analyzed period.

Of the 27 member countries of the Latin American and Caribbean Energy Organization (OLACDE), 12 exceeded the regional index of 72% in October 2025. The top performers were Costa Rica, Paraguay, and Uruguay (100%), followed by Ecuador (99%), Brazil (89%), Venezuela (89%), Colombia (86%), El Salvador and Panama (80%), Belize (77%), and Chile and Guatemala (75%), as shown in Figure 7. The heterogeneity of renewability is associated with the different structures of the electricity matrices of the countries, where one group has managed to make successful progress towards a clean transition, while for others it is still difficult to overcome dependence on fossil sources.

Figure 6. Renewability index in electricity generation, LAC



Source: sieLAC – OLACDE 2026

Figure 7. Map of the Renewability Index in electricity generation in LAC, October 2025



Source: sieLAC – OLACDE 2026



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