

Powering European islands: the singular case of Cyprus

Cyprus will succeed Denmark, taking the presidency of the European Union on 1 January 2026. Best known to tourists for its beaches, landscapes, and cultural heritage, the country nonetheless exhibits a number of distinctive features that set it apart within the European Union.

Located on an island territory less than 250 km from Beirut and covering an area of 5,896 km²¹ - slightly smaller than the island of Corsica - the Republic of Cyprus constitutes an exception within the European Union. Its geographical specificity is compounded by geopolitical complexities stemming from the ongoing conflict with Turkey, which led in 1983 to the self-proclamation of the Turkish Republic of Northern Cyprus (TRNC), occupying the northern part of the island.

As we enter a new phase of the Green Deal, one of implementation across all Member States, the specificities of Cyprus's territory present both structural constraints and strategic assets to reduce emissions and to enhance its energy autonomy.

From Oil Dependence to an Emerging Energy Autonomy

With oil accounting for 85% of its energy mix, Cyprus recorded the highest greenhouse gas footprint in the European Union in 2022, with an average of 16.6 tonnes of CO₂-equivalent per capita per year, well ahead of Luxembourg (15.5 t) and Ireland (14.2 t).

This dependence on oil in its energy balance translates into high levels of imports, given that the country cannot rely on domestic oil production nor oil refineries on its territory.

This dependence could, however, weaken or even be reversed following the discovery of several natural gas fields within Cyprus's Exclusive Economic Zone (EEZ) in 2011. Among them, the Aphrodite field, located approximately 170 km south of Limassol at a depth of over 1,700 metres, is estimated to contain 127 billion cubic metres of natural gas - roughly



three times France's annual consumption. Currently operated by Chevron, commercial production at the Aphrodite site is expected to begin around 2027–2028.

Additional fields discovered between 2018 and 2022 include Calypso and Cronos (operated by Eni), Zeus (operated by Eni and TotalEnergies), and Glaucus (operated by ExxonMobil and QatarEnergy).

Together, these new resources could represent between 435 and 605 billion cubic metres of natural gas, with commercial exploitation expected to begin as early as 2027 for the Cronos and Zeus sites, and around 2030 for the Calypso and Glaucus sites.

The development of these fields could enable Cyprus not only to meet its entire domestic gas demand, but also to emerge as a natural gas exporter within the European Union, provided that the necessary gas transport infrastructure is developed and that disputes with Turkey over the delimitation of Cyprus's EEZ can be resolved.

Alongside the exploration of these gas projects, the expansion of renewable energy also represents an opportunity for Cyprus to develop its energy autonomy. The country benefits from high level of sunshine, which has enabled renewable electricity production - particularly solar photovoltaics - to grow very rapidly in recent years, rising from 9.8% of the energy mix in 2019 to 24% in 2024, including 19% from solar power alone.

¹ Southern part of the island, under the administration of the Republic of Cyprus.



Solar thermal energy, in particular, stands out as a national success, with 93.5% of households using solar water heating—placing Cyprus among the global leaders in this sector.

Two Major Challenges: Energy Isolation and Regional Tensions

These developments, however, are constrained by Cyprus's highly specific geopolitical context: the island remains both physically isolated from the rest of the European territory and in close proximity to Turkey, with whom tensions have remained high since the partition of the island.

From the very outset of exploration activities in 2007, seismic surveying and drilling operations in the Levant Basin have faced repeated acts of intimidation by Turkey, aimed at slowing or discouraging the exploitation of the discovered fields. Between 2017 and 2018, Turkey deployed research vessels and naval ships to conduct surveys within Cyprus's EEZ. In February 2018, a vessel operated by Eni and duly authorised by Cyprus was prevented by the Turkish navy from accessing a drilling site. Such incidents have continued to occur up to the present day, generating persistent delays in gas development.

Tensions with Turkey also affect the development of the electricity grid, which is essential to support the rapid expansion of renewable energy in Cyprus.

As Cyprus remains fully disconnected from the European electricity grid, it is forced to rely on very high levels of curtailment to prevent grid overload. The Cyprus Energy Regulatory Authority (CERA) estimates that in 2024, approximately 29% of available renewable electricity production was deliberately curtailed.

To better manage the intermittency of renewable energy, the expansion of the electricity grid and the development of interconnections with neighbouring countries are essential to sustaining its further deployment.

In this context, Cyprus has committed to the EuroAsia Interconnector project, which aims to link the electricity grids of Israel, Cyprus, and Greece via Crete. While the interconnector was initially scheduled to enter service by the end of 2026, the project was put on hold in March 2025 following the deployment of Turkish warships in the construction area.

Decarbonising Aviation and Shipping: A Critical Challenge for an Island Economy

Alongside these efforts to build its energy independence, Cyprus will also have to contend with the challenges associated with the energy transition in the aviation and maritime sectors. These two sectors are of strategic importance to the national economy: tourism accounts for around 20% of its GDP, and the country operates the third-largest ship registry in the

European Union, with more than 22 million gross tonnes registered.

In this context, the implementation of the European framework stemming from the Green Deal - particularly through the ReFuelEU Aviation and FuelEU Maritime regulations which set ambitious decarbonisation targets - could result in a significant increase in transport costs. This increase is driven by the progressive obligation to incorporate sustainable fuels, which remain considerably more expensive than conventional fossil fuels.

Without adequate support for the aviation and maritime sectors, as well as for the development of sustainable fuel production, the cost increases associated with the transition could lead to a contraction of air and maritime traffic, with severe economic consequences for an island nation that is heavily dependent on these transport modes for its external connectivity. ●

Cecil Coulet, Head of EU Affairs,
Équilibre des Énergies

Aerial view of the Limassol waterfront, Cyprus.



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