Greece – Record-Breaking Country with Huge Prospects

Following the war in Ukraine, European countries are attempting to lessen their reliance on Moscow gas. Greece is in a better position than many other countries thanks to its milder temperature, shorter winters, and many projects that have already been established as a result of the country's decision to serve as the region's energy center in 2010. 2020 saw the completion of the Trans Adriatic Pipeline, and this year will see the opening of the Greece-Bulgaria Interconnector. Many initiatives will probably start up years before other countries. By 2023, the Alexandroupoli FSRU (*Floating Storage and Regasification Unit*) is anticipated to be finished, and numerous further FSRU projects will follow. The nation is concentrating on LNG (*Liquefied Natural Gas*) as a mid-term answer and renewable energy sources as a long-term one.

The country is currently reevaluating a new course of action in response to growing electricity costs and geopolitical concerns, even though the initial plans had been ambitious, including a phaseout of all lignite power plants by 2023 and aggressive renewable energy targets.

Electricity distribution and transmission system providers are spending billions of euros on smart technologies and grid infrastructure in order to be able to accommodate more than 13 GW of renewable energy by 2030 after a protracted period of underinvestment. There is potential for increased growth and acceptance of contemporary infrastructure thanks to an influx of foreign investment into the high and low-voltage grid operators as well as the natural gas distributor. Several high-profile electrical interconnector projects are being discussed, two of which aim to link Greece and Egypt to export renewable energy to Greece and other countries.

As proof of the concept of Greek energy sustainability, the country establishes a new record by using only renewable energy for five hours. According to IPTO, the nation's independent power transmission operator, it achieved a record high of 3,106 MWh (megawatt hours) of electricity at 9 am local time on October 7th, 2022. IPTO said: "For the first time in the history of the Greek electricity system, the demand was covered 100% from renewable energy sources." Greece anticipates that by 2030, renewable energy sources will make up at least 70% of its energy mix, therefore it plans to more than double its green energy capacity.

Tilos, an island in the Dodecanese group, is attempting to run totally on renewable energy as part of a €30 billion initiative financed by the EU and private capital. Nikos Mantzaris, a partner at think tank the Green Tank said that performance was important because "it shows that a 100% renewable electricity system is within reach in Greece, a concept that was considered impossible by most opinion and decision-makers in Greece before". "It is also economically preferable by far compared to electricity produced by lignite or gas, even if one includes the cost of storage," Mr. Mantzaris additionally mentioned.

Greece generated 39.4% of its electricity from renewable sources last year, including 19.8% from wind, 9.9% from hydropower, and 8.9% from solar power, according to data on electricity from Ember, an independent think tank. In 2021, it used fossil fuels to produce 61% of its electricity, including 40.6% gas and 11.3% coal. Coal provided 51.2% of the energy in 2012, compared to gas (22%), hydro (7%), wind (6%), and solar (2%).

Greece plans to use 70% renewable electricity for the entire year by 2030, according to Ember's 2030 Renewables Target tracker. Germany is aiming for 80%, Portugal for 100%, and the Netherlands for 97%. "The milestone set by Greece indicates that a renewables-dominated electrical grid is within sight," said Elisabeth Cremona, an analyst at Ember. This indicates unequivocally that renewable energy sources can power the electrical grid without sacrificing dependability. However, more work needs to be done to make sure that over the entire year, renewable energy sources in

Greece's power sector surpass fossil fuels.

The proportion of renewable energy in the mix of power is currently anticipated to reach greater than 50% by the end of 2022. Kostas Skrekas, Minister of the Environment and Energy reminded parliament that the cost of producing electricity from the sun and wind is up to five times lower than that of producing electricity from fossil fuels, even though 2GW of new renewable capacity is now anticipated to go online by the end of the year. According to him, Greece may save up to EUR 250 million for every 1 GW of renewable energy projects it connects to the grid. By the end of the decade, Greece will have replaced coal power, just like the rest of Europe. And today, Greece is demonstrating that renewables are the answer to the trilemma of high energy costs, lack of energy security, and lack of protection for climate and human health. Thousands of solar panels are being put on top terrain that has been extensively polluted by coal mining.

Greece's transition to renewable energy is undoubtedly successful. The message is clear: renewable energy can be implemented such that everyone has access to it, despite the seemingly insurmountable economic difficulties that are frequently entangled in the renewable energy issue.