

f everything goes according to plan, 2024 will witness the completion of the Ariadne Interconnection, a \$1.1 billion project linking the electricity system of the island of Crete to the national mainland grid in Attica, delivering huge benefits to the Greek people. This is the largest electrical infrastructure initiative ever undertaken by Greece, and one of the top five most innovative direct-current projects ever attempted in Europe. Most importantly, it will reduce Greece's overall annual electricity bill by as much as \$600 million and, critically, reduce Crete's carbon emissions from electricity production to precisely zero.

Despite its size, the Ariadne Interconnection is only one part of a larger initiative to use islandto-mainland interconnections and decarbonize the country's power production mix. A similar project to connect the Cycladic Islands (including Santorini) is due to be rolled out a year later. "These interconnections help reduce Greece's electricity cost in two ways." says Yannis Karampelas, who, as CEO of ADMIE HOLDING, a Greek-listed company that owns 51% of the Greek Transmission System Operator, is responsible for the current rapid transformation of the Greek electricity sector. "On one level, it relieves the islands of the expense of generating power from oil, which the rest of Greece currently has to subsidise. On another, the construction of more system networks allows us to accelerate the integration of renewable energy sources to the grid, which will ultimately reduce the cost of electricity even further."

With its abundance of sun, sea, and wind, it is hardly surprising that in recent years Greece has led the way in attracting investment for Renewal Energy Sources (RES) projects, with several major European utilities, including Iberdrola SA, Enel SpA and Électricité de France SA, developing renewable projects across the country. The commitment and enthusiasm for decarbonization that Karampelas exudes are also being channelled into several other innovative "greening" projects that are high on ADMIE's agenda.

For starters, the company is expanding its energy storage capacity, which will increase the operator's ability to store excess electricity during periods of low demand and ensure that ADMIE can provide reliable and affordable electricity to its customers during peak periods. "Lithium-ion batteries are currently the most popular form of storage for small scale applications," says Karampelas, "but other technologies like pumped hydro storage and compressed air energy storage may be more effective for large-scale, grid-energy storage."

Karampelas is also actively exploring ADMIE's offshore wind development options and has established an in-house task force dedicated to the effort. The company is also working closely with the Greek government to develop a supportive regulatory framework for the sector's development.

Together they are exploring solutions that best fit Greece and its economy. "Our seas are deep, and we can't build structures anchored to the seabed, because they would need to be too close to our islands and coasts, and this would have a detrimental effect on our tourist industry," says Karampelas. "This means that we are waiting for floating wind farm technology to mature." This, he believes, is just over the horizon, and he is determined that ADMIE will be ready and waiting to harness its potential when available.

Alongside its domestic activities, ADMIE is playing a central role in promoting Greece's

integration into the pan-European and wider energy infrastructure network. Its development of the domestic part of the second Greece-Bulgaria interconnection, for instance, will triple the energy transferred between the two countries. The company is also conducting a feasibility study for a secondary reinforcing interconnection between Greece and Italy.

ADMIE also assists in new, strategic international interconnections launched in the Eastern Mediterranean region (Greece-Cyprus-Israel and Greece-Egypt), with the aim of making Greece a green energy corridor between Europe, North Africa and the Middle East. The possibility of developing other interconnections with Albania, Turkey, North Macedonia, and Austria are also under consideration.

"While our national strategy is to harness our natural resources to transform Greece into a truly green country -- and we are looking to break the 10 gigawatt RES barrier in the near future -- our wider mission is to establish the nation as an energy hub for the Southeastern Mediterranean region, as is the vision of Greek Prime Minister Kyriakos Mitsotakis," says Karampelas. "This will take a little longer, but we are getting there step by step."

That goal includes attracting more foreign investment. "The potential for strong returns is high," Karampelas says. "Institutional investors should be giving Greece some very serious consideration."

