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## Ai Stratis in pioneering role

Expert explains initiative to give Greek island energy solely from the sun and wind



**ANA**

***A floating desalination plant has been positioned off the island of Irakleia for a year and a half. Experts from the University of the Aegean's Informatics and Naval Electronic Technology Department are behind the project.***

By Costas Deliyiannis - Kathimerini

A Greek professor from the University of the Aegean's Informatics and Naval Electronic Technology Department is the

brains behind a project involving a floating desalination plant that has been positioned off the islet of Irakleia for 18 months.

Recently the authorities decided, on the basis of another of his initiatives, to provide funds to make the island of Ai Stratis (Aghios Efstratios) the first Greek island powered solely by solar and wind energy. Nikitas Nikitakos has the support of the inhabitants of both islands.

### **What is the significance of Ai Stratis becoming the first “green” island in the Aegean?**

We thought that Ai Stratis could become the Greek version of the Danish island of Samsø, where environmentally friendly means are not only used to produce energy and heat buildings but in farming and livestock breeding.

Ai Stratis is ideal for such an undertaking. It has a small population and we can try out various solutions that are environmentally friendly, such as ecological waste management or limiting the use of plastic. Moreover, since the daily consumption of electrical energy is low, our goal is to meet all the island's power needs from renewable sources (RES).

The island is not linked to the mainland power grid, so I believe that will help us do away with various myths about renewable sources. For example, it is generally believed that RES can only meet part of an area's power needs; the rest must come from the mainland grid. But that means that islands like Ai Stratis would need to be connected, which is financially prohibitive. In such a case, a percentage of the power produced by RES is wasted if it is not consumed immediately, as the grid takes up a specific amount of the energy produced. That happens, for example, with the power produced by wind turbines on an island at night when demand is low. Therefore our plans for Ai Stratis are to exploit ways of storing that surplus with hydrogen batteries, so it can be used when necessary.

### **So are you planning to use technology on Ai Stratis that has not been used before?**

We have several ideas in mind that could initially be tried out on Ai Stratis and in future used on larger islands or even in mainland areas. If I don't go into more detail it is because the project is still in its early stages as we have not yet reached an agreement with the local authorities regarding the specific technology to be used. We want the local community's approval of everything we do.

### **Why are local communities often opposed to RES, as in the case of wind farms on the Aegean islands?**

Opposition to these ideas is often because locals are not sufficiently informed and that is not their fault. It is inconceivable that dozens of foreigners have seen new technology at conferences, while people in the area where it is to be used don't understand it.

Sometimes the plans do not have the locals' interests as a top priority. Life in the provinces has certain disadvantages which for some is offset by proximity to nature. How can we persuade them that their future view will be a forest of wind turbines when they know that the power being produced is destined mainly for urban centers?

### **What are the needs of the inhabitants of the islands?**

The increasing frequency of drought, which means not only a shortage of drinking water but irrigation problems. Also, the production of energy for local consumption, particularly on isolated islands such as Ai Stratis. These two problems are often linked, since conventional desalination plants only worsen the problem as they require considerable amounts of power at a time when, particularly in summer, the islands barely manage to meet their

energy requirements. The inhabitants of Irakleia have first-hand experience of these problems. That is why they agreed at an assembly to accept the first floating desalination plant when we explained that it operated on a wind turbine without chemicals so as not to harm the environment.

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