

BEST PRACTICE



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Moving away from oil-based energy import

Tilos, Greece - 400 inhabitants

Micro-grid – Wind energy – Solar energy

As many Greek small islands, Tilos is dependant on oil-based energy imports via underwater cables, which are often subjected to faults. With the TILOS project, the municipality wants to ensure service continuity and contribute to renewable energy growth.



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Project in a Nutshell

Technology Innovation for the Local Scale Optimum Integration of Battery Energy Storage (TILOS) is a European research project engaging 13 participating enterprises and institutes from 7 European countries (DE, FR, EL, UK, SE, IT, ES). The project was awarded €15 million and it aims to demonstrate the potential of local and small-scale battery storage to serve a multipurpose role within an island micro-grid that also interacts with a main electricity network. Among others, the project aims to achieve large-scale RES penetration and asset value maximization through the optimum integration of a hybrid RES (a wind turbine with an output of 800kW and solar panels with an output of 160kW) power station together with advanced battery storage, distributed, domestic heat storage, smart metering and demand side management DSM.

Impact & Next steps

A total of 50 smart meters and DSM panel devices have been installed in local homes. An additional 100 were planned for installation by the end of 2017. The devices allow for real time monitoring of electricity consumption as well as for remote control of certain electricity loads, which in turn enables the application of DSM strategies that encourage people to use less energy at peak times. Several training seminars have been held to help the local population fully exploit the potential of smart meters and DSM devices for energy saving and optimal electricity use. The project also positively impacted on tourism: the people of Tilos are benefiting from the increased visibility of the project, which was awarded 2 EU Sustainable Energy Awards in 2017.

Replicability: Challenges & Success Factors

The people of Tilos are reported to have a strong environmental culture and they were very open regarding the implementation of the project, also because it contributed towards the elimination of the power cuts. This is largely thanks to the former mayor, who fought for the protection of the local environment. The new mayor is also willing to continue on this path.



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