



Development of smart-grid infrastructure in autonomous islands of the Aegean Sea

| | |
|---|---|
| Location | Greece: Lesbos, Limnos, Milos, Kythnos and Santorini |
| Beneficiary | DAFNI – Network of Sustainable Aegean Islands |
| CoM signatory | Yes, as supporting structure |
| Sector | Local infrastructure, RES |
| ELENA contribution | EUR 688,670 |
| Project development services (PDS) financed by ELENA | The ELENA assistance will support the development of the investment programme in smart grids infrastructure, and to a lesser extent in photovoltaic systems and charging stations for electric vehicles in the 5 islands. |
| Description of ELENA operation | <p>A project team will be established at DAFNI to manage the whole investment programme in cooperation with their partners, in particular Public Power Corporation S.A. (PPC) and an ESCO.</p> <ul style="list-style-type: none"> • Development and set up of the smart grids • Financial structuring and implementation of the collective PV scheme • Implementation of recharging stations for electric cars in the five islands • Detailed analysis of the islands' electricity systems; development of a partnership agreement and a business plan for the system operator • Monitoring and commissioning of the project and on-site support |
| Timeframe | 2011-2014 |
| Basis for investment identification | <ul style="list-style-type: none"> • The proposed investment project will build on the knowledge acquired in a pilot project that was implemented in the island of Kythnos in 2007 (micro-grid). • Sustainable Energy Action Plans in 20 Aegean islands. |
| Investment programme description | <p>It will combine on five islands (Lesbos, Lemnos, Kythnos, Milos and Santorini) three complementary components related with the new possibilities created by smart grids: decentralised production of RES, energy management using the possibilities created by the smart meters. The components are:</p> <ul style="list-style-type: none"> • Installation of smart electricity meters and installation of energy control centres • Installation of new photovoltaic (PV) systems • Installation of charging stations for Electric Vehicles |
| Investment to be mobilized | Approximately EUR 52 million |
| Expected results | <ul style="list-style-type: none"> • Increase of the RES electricity penetration levels in the five selected islands, from 15% of the annual energy demand of each island to 30% • Energy savings of around 42GWh/year in the five islands. |
| Leverage factor | 77 |
| Market replication potential | It is the first implementation of smart grids in the country, and is of particular relevance for islands not connected to the continent's grid; it could be successfully replicated in municipalities in other islands of the Aegean sea, as well as in other European islands and municipalities. |
| Project status | Signed on 22 July 2011 |
| Contact at Beneficiary | Alexis Chatzimpiros ac@aegean-energy.gr |