Published on *GreenEcoNet* (http://greeneconet.eu)

Installation of 100kW photovoltaic system on a textile industry roof

M. Mandalakas S.A., an established Greek textile industry installed a 100kW photovoltaic (PV) system in its plant roof.

Description of the case study:

In 2011, executives of M. Mandalakas S.A., an established Greek textile industry with a long tradition in the manufacturing of fabrics, decided to expand their business activities and installed a grid-connected photovoltaic plant on the top of the textile industry roof, taking advantage both of the favorable feed-in-tariff incentive scheme (aiming at the diffusion of RES in Greece) and the availability of free space on the flat, shadow-free roof area of the textile industrial plant accounting to approximately 3,500 m2. The 100kW PV system (comprising of polycrystalline silicon solar panels) yields energy output of 160,000 kWh/year, which is injected into the power distribution grid. Up until today, the PV installation has yielded 341,000 kWh, leading to CO2 emissions reduction of 239 tn. The decision to investigate this business venture stemmed from the fact that Greek textile industry currently encounters very difficult financial challenges, largely due to the economic recession as well as the massive importation of textiles from China or other countries selling at very competitive prices. The installation of photovoltaic systems appeared as a low-risk investment taking into account the guaranteed by Law prices in effect by that time. The pay-back duration of the investment is estimated around 5 ½ years, considering the fact that the project funding was 100% private funds, the feed-in-tariff when the contract was signed was 0.42 EUR/kWh and that the contract is valid for 20 years.

What was the type of green solution? Please select the type of solution.:
Technology/Product [1]
What does the featured solution contribute to?:
Resource efficiency
Which technology area(s) does the case study belong to?:
Energy production [2], Alternative energy [3], Solar energy [4]
How was the green solution financed?:
Private funds [5]
Operating and maintenance costs description:
3,000
Emission reductions description:
4,000 tn CO2
Technical and capacity requirements?:

No in-house expertise or incumbent infrastructure was needed except for the available free space area on the facility roof.

Regulatory framework prerequisites and constraints?:

Regulatory prerequisites for the installation of the photovoltaic system were the following:

• Get an offer terms for connection of the Power Transmission Operator (IPTO S.A.)
• Get an approval from of the Urban Planning Agency for initiating a small scale construction project.
It is also mandatory for investors, by law, to cover social security contributions amounting to about 8,000 €.

Operating and maintenance costs:
Yes, low O&M costs
Would you characterize the green solution as:
High capital intensive investment (i.e. above €30,000)
Partners:
Company name

- Mandalakas Textile Industry [6]

Relationship type:
Company that went 'green' by adopting the green solution
Company name

- REW Hellas Solartechnik Ltd [7]

Relationship type:
Company that produced the green solution,
Company that supplied or installed the green solution

Links
[1] http://greeneconet.eu/type-green-solution/technologyproduct
[2] http://greeneconet.eu/technology-area/energy-production
[3] http://greeneconet.eu/technology-area/energy-production/alternative-energy
[4] http://greeneconet.eu/technology-area/energy-production/alternative-energy/solar-energy
[5] http://greeneconet.eu/financing/private-funds
[6] http://greeneconet.eu/mandalakas-textile-industry
[7] http://greeneconet.eu/rew-hellas-solartechnik-ltd