

Early adopters cities - Pafos

Bolzano, 27/05/15

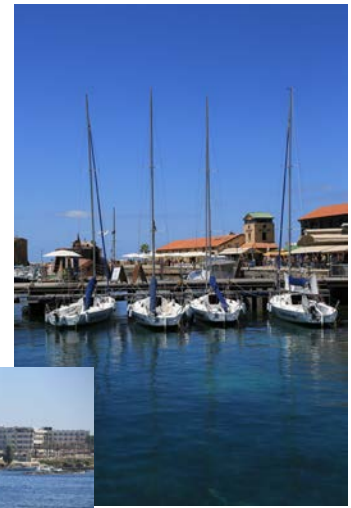
Marina Spyrou



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City of Pafos

- Coastal city (lies on the Mediterranean coast) in the southwest of Cyprus
- Capital of Pafos district
- Population (2011): 32,892
- Economy: depends largely on tourism. Resorts in Kato Pafos employs over half of Pafos population. During summer, tourism increases the population of the city dramatically and thus demand on water and energy supply increases as well.



City of Pafos

- Climate: Subtropical-Mediterranean climate
- Types of Buildings: In the traditional city centre the majority of buildings are old. Their architecture approach can either be local traditional, neoclassical, premature modern or even modern. As you move away from the city centre you can find many different kinds of buildings follow many different kinds of architectural approaches ranging from pre-modern - for the oldest, to postmodern - for the newest built examples



Regulation



The Law for the regulation of the energy performance of buildings 2006 (L.142(I)/2006), is the legal document upon which the transposition of the Energy Performance of Buildings Directive (EPBD) in Cyprus is based on. It was the first attempt ever made to regulate the energy consumption in buildings.

-The implementation of the EPBD started in 2007 with setting minimum requirements for the buildings envelope, and has been fully implemented in 2009 with the launching of the Energy Performance certificate (EPC) and the inspection of air-conditioning systems and heating systems with boilers.

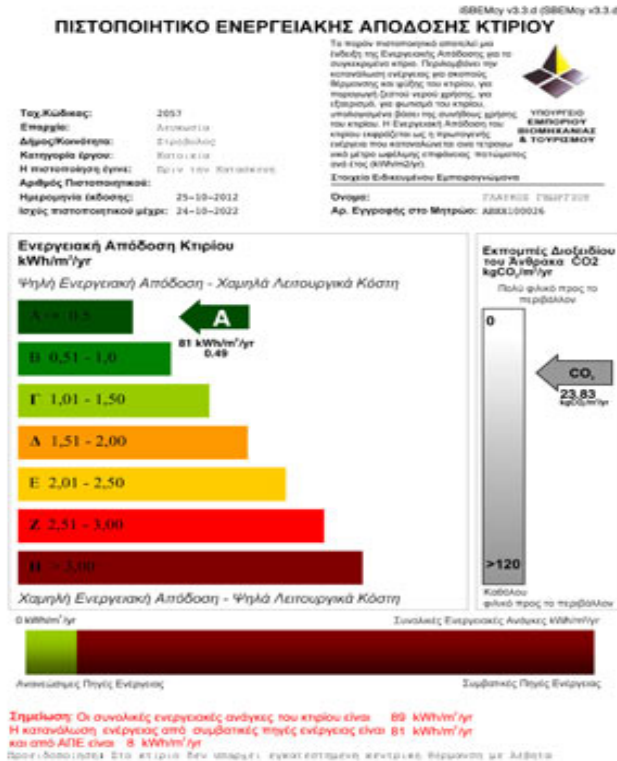
Regulation (Cont.)

- The Ministerial Order for the Minimum Energy Performance Requirements of 2007 made only thermal insulation of the elements of the building envelope mandatory (only maximum U-Values for roofs, external wall, doors, windows and floors above unheated spaces and floors in contact with the external environment were included) .
- The second Ministerial Order of 2009 keeps the same maximum U-Values for the elements of the building envelope, but makes requirements more stringent as it regulates the building as one whole entity (takes into account the U-Value of each element of the building). It also introduced requirements for integrating Renewable Energy Sources in the buildings (solar thermal systems for hot water in all residential buildings, necessary infrastructure pre-installed in case the future owner decides to install photovoltaic panels etc)



Regulation (Cont.)

Energy performance certificate



A new building or a building above 1000 m2 that undergo a major renovation, must be at least in category B to get its building permission



Main Objectives

- Become energy efficient city
- Reduce CO2 emissions
- Reduce energy needs



Existing Action Plan

- Thermal insulating materials are used to all public buildings that are being refurbished by the municipality
- Installation of power factor correction units in many public buildings
- Installation of photovoltaic (PV) panels to produce electricity
- Municipality organize awareness raising activities about energy saving (e.g. organizing seminars etc.)



Existing Action Plan

- Pumps of water supply are using power factor correction units also
- Most of the buildings (public & private) have installed solar panels for hot water supply – solar panels could be used in hotels also, to reduce energy consumption for cooling during summer.
- Incentives provided by the government, up to €25,000 per resident, under the Operational Programme "Competitiveness and Sustainable Development" which aim at large-scale energy upgrade existing buildings



Future Action Plans

- Study for use of solar panels for the operation of pumps in the municipal swimming pool
- For the Street lighting common light bulbs are going to be replaced with Led lamps for energy saving

Challenges to reach objectives

- Some of the existing buildings are too old and it costs a lot to make them energy efficient
- Insufficient information provided and difficulty in convincing the public. They take into account the initial cost instead of the short payback period and long term profit.
- Many buildings are preserved (or Heritage-listed building, Buildings of Special Architectural or Historic Interest) and we are not allowed to make any changes in their appearance (exterior and interior).

Expectations from the Replication Cluster

- Examine methods that developed through the SINFONIA so far and use them as template concerning:
 - District expected analysis and CO2 savings
 - Profitability of the tested business models
 - Business models and regulations to optimize further measured profitability

THANK YOU FOR YOUR
ATTENTION!