


Event:  
Date:  
Place:

**ENERGY in BUILDINGS 2018**  
Saturday November 3, 2018  
Athens, Hellas



#	<b>Spyridon Karytsas</b> Economist, PhD, MSc	
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Presentation title:	<b>Financial &amp; Market analysis of TESSe2b solution</b>	
<p>The market study is a key basis for defining a large scale replication strategy as well as defining a differentiation and market segmentation strategy for the TESSe2b project. The study identifies the need for such a solution and includes a list of possible stakeholders and target applications, as well as a social survey. In addition, all related costs of the project have been identified, while sensitivity analyses and an assessment of the market penetration of the technologies derived from the TESSe2b project have been carried out.</p> <p>The market analysis includes a description of the heating and cooling markets, a description of the Ground Source Heat Pumps, Solar Thermal and PCM markets, as well as a depiction of the European residential sector.</p> <p>The behavioural survey, aiming at the general public of five EU Member States (Austria, Greece, Spain, Portugal and Germany), was performed between June 2016 and February 2017, in order to analyse and understand in what extent the TESSe2b solution could be adopted in different EU countries. Issues under investigation involve i) outcome expectations, ii) perceived adoption behaviour, iii) willingness to pay (in €) and iv) acceptable payback period in order to be willing to invest in TESSe2b solution.</p> <p>An estimation of the installation, operation and maintenance cost of TESSe2b solution is performed. Moreover, a financial and environmental comparison between TESSe2b solution and other technologies (heating oil, natural gas, ASHP) has been conducted for the eight participating countries. Through this study, the energy costs, energy savings, CO<sub>2</sub> savings, as well as various investment criteria (NPV, IRR, SPBP, DPBP, etc.) are estimated. Sensitivity analyses are carried out, in order to examine the influence of various factors (electricity price, heating oil price, natural gas price, heating/cooling load of the building, TESSe2b installation cost) on TESSe2b solution's simple and discounted payback period.</p>		

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CV:

**Dr. Spyridon Karytsas** (male) is an economist with a degree in Economic Sciences from the National and Kapodistrian University of Athens (2006), Master of Science in Sustainable Development (Local Development direction) from the Department of Home Economics and Ecology of Harokopio University of Athens (2009) and a PhD degree from the aforementioned University on the subject "Heating and cooling of buildings with the use of renewable energy sources: Socioeconomic factors that contribute to the diffusion of ground source heat pumps (GSHP) in the residential sector" (2016). 10 years of professional experience. Joined CRES in 2009 as a scientific member of the Geothermal Energy Department and since then has participated in the preparation, management and realization of EU and nationally funded projects such as CHEAP-GSHPs, GEMEX, GEO4CIVIC, GEO.POWER, GEOELEC, GEORISK, GROUND-MED, HIGH-COMBI, REGEOCITIES, SEPEMO, SINERGIA, TERRA THERMA and TESSE2B; has also participated in the preparation of business plans and feasibility studies. In addition, as a freelancer, he has been involved in the preparation of techno-economic, energy, and impact analysis studies. From 2011 to 2013 served as assistant to the Professor in the undergraduate courses of "Accounting" and "Agricultural Policies" of Harokopio University. Has more than 20 publications and announcements in conferences on subjects related to RES policy, technology adoption and public acceptance / awareness.