


Event:
Date:
Place:

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



#	<p>Olympia Polyzou Mining & Metallurgical Engineer, PhD</p>	
Title:	Scientific member of the Geothermal Department of the Center for Renewable Energy Sources and Saving, Pikermi, Greece	
email:	pololi@cres.gr	•
Presentation title:	Financial & Market analysis of TESSe2b solution	
<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, CO₂ 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. Olympia POLYZOU (female) is a Mining and Metallurgical Engineer NTUA (2001) with a PhD on Geothermal Energy from the National Technical University of Athens (NTUA), Greece – 2007. She has 15 years of experience in Geothermal Energy. She was a Researcher (PhD candidate) in the project “HRAKLEITOS” a co-financed project by the European Social Fund (75%) and National Resources (25%), to study the “Geothermal Energy – Sustainable Development and Local Societies” (2002-2007). Since June 2007 she works for the Geothermal Energy Department of CRES. She has participated in many EU projects such as TESSe2b (Thermal Energy Storage Systems for Energy Efficient Buildings), SEPEMO-Build (SEasonalPERformance factor and Monitoring for heat pump systems in the building sector), GROUND-REACH [market development of Ground Source Heat Pumps (GSHPs)], VBC-RES, ENGINE, GROUNDHIT, LOW-BIN (ORC power generation technology development), HITI (High Temperature Instruments for supercritical geothermal RESERVOIR CHARACTERIZATION AND EXPLOITATION) and TERRA THERMA (Terrestrial Energy Recovery using Advanced sTirling Heat-pumps for Residential temperature Management). In these projects she carried out advanced heating and cooling systems including district heating and cooling systems, direct heat applications, heat pump research and demonstration, etc. She was the project manager for the SEPEMO-build project and the TERRA THERMA project from the side of CRES, as well as the Leader of the dissemination and exploitation WP in TESSE2b project. Dr. O. Polyzou is the author or co-author of more than 20 journal articles and announcements in the proceedings-abstracts of international conferences.