


#	<p>Liaros Stylianos Mechanical Engineer MSc</p>	
Title:		
Presentation title:	<p>Well-to-Wheel Exergoenvironmental and social cost of electrifying the Greek transport sector: The case of the Kos – Kalymnos complex</p>	
<p>According to the latest official data, for the majority of countries, approximately 40% of the national energy consumption is attributed to the building sector. Worldwide, buildings are responsible for almost a third of the final energy consumption, while being an equally important source of CO₂ emissions. Considering the energy consumption potential of the building sector along with the technological progress met in many fields of construction and design, drastic energy reduction in the building sector is both realistic and of great importance so as to tackle climate change, promote energy security and preserve the scarce nonrenewable energy sources of our planet. In this context, the building sector has the potential to contribute in reducing the environmental degradation by minimizing energy consumption in existing and newly designed buildings. The prediction of building's energy consumption requires, among others, detailed logging of weather data in the area of the installment. The most commonly used weather datasets in models, simulating the energy balance of the buildings with at least an hourly time step, are Typical Meteorological Years (TMYs). TMYs, being based upon real weather data, are able to represent the long-term climate of a specific location. The present work is bound to contribute to the investigation of the thermal energy consumption of the building sector. As a case study, a Greek residential building's energy consumption was simulated in each one of the four local Climatic Zones, for a period spanning from October to April. In an effort to quantify the differences upon utilizing real weather data versus TMYs produced through the implementation of a fifteen-year period real weather data, simulations were conducted using both methods. The results suggested that the thermal energy consumption was slightly overestimated when using TMY whether datasets accompanied by a slight deviation varying according to the four Climatic Zones investigated.</p>		
CV:		
<p>Liaros Stylianos MSc. (male) holds a Mechanical Engineering Degree from the Technological Education Institute of Western Macedonia and an MSc in Energy Degree from the University of Heriot Watt, while he is currently undergoing his second MSc in Energy and Environmental Investments. He belongs to the research team of the Laboratory of Soft Energy Applications & Environmental Protection and belongs to the academic staff of the Piraeus University of Applied Sciences. He has a sound experience in the industrial cooling sector, energy study and simulation of the building sector and HVAC applications. In terms of research activities, he has an acute interest for Exergoeconomics, Solar Assisted HVAC systems and Desiccant Cooling.</p>		