


Event:
Date:
Place:

Energy in Buildings Athens Conference 2023

Saturday November 11, 2023
Grand Hyatt Athens, Hellas



#	Ekaterini E. Kriezi Civil Engineer, Ph.D	
Title:	Global application expert, Danfoss A/S	
email:	ekk@danfoss.com	•
Presentation title:	Integrated energy systems with CO2 as refrigerant	
<p>The F-gas regulation in alignment with the Europe green Deal and the European Climate law, put the focus on the utilization of natural refrigerant in system with cooling demand or HVAC (heating, ventilation, and air conditioning) systems, the reduction of energy consumption and set the target towards the zero net billable systems and zero net carbon footprint. The integrated energy system is one unit, which supports both cooling and heating demands in a building, contributing to the total reduction of electricity consumption.</p> <p>The presentation will give an overview of the integrated energy systems based on vapor compression with carbon dioxide (CO₂) as refrigerant, for supermarkets, commercial building (i.e. hotels) and industrial application of heat pump chillers. The journey from the first integrated system in a discount supermarket in Norway in 2013 until a newest zero net energy smart store in Denmark in 2023 will be presented, together with some case studies of reversible heat pump for commercial buildings applications.</p>		
Short CV:		
<p>Dr. Ekaterini Kriezi, Global application expert - CO₂, Danfoss A/S, Denmark. Civil engineer. She has been working in refrigeration sector the last 12 years, focusing on thermo-fluid dynamics, CO₂ refrigeration and energy recovery devices.</p>		

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CV:

I hold a civil engineering diploma degree for Aristotle university of Thessaloniki, with a specialization in hydraulics and environmental technology, and a Ph.D. degree in coastal engineering, specializing in wave theories and wave structure interaction. I have had an international career as a researcher, consultant engineer and educator.

I have been employed by Danfoss, Denmark since 2011, in various position inside the refrigeration sector. My work has been oriented around thermo-fluid dynamics, systems and applications of carbon dioxide refrigerant. Large part of my work and research has been dedicated to energy recovery devices for CO₂ and in particular the ejectors.

Positions in Danfoss:

- **Development Engineer, CFD, R&D, 2011-2012**
- **Technology Expert, Thermofluidic, Innovation and Technology (R&D), 2012-2018**
- **Senior Specialist, Thermodynamics & System Simulation, Innovation Lab, 2018-2019**
- **Senior Specialist Application, R&D, 2019-2021**
- **Global Application Expert -CO₂, Climate Solution, 2021- currently**

For more details you can visit my LinkedIn profile: <https://dk.linkedin.com/in/ekaterinikriezi>

Parallel to my engineering career, I am a visual artist with focus on conceptual art, digital, installations, performances, and collaborative art.