

The Munib and Angela Masri Institute of Energy and Natural Resources

*Cordially invites to a virtual live talk
via WebEx on*

Prospects and Challenges for Sustainable Energy System Enhancement in Middle East Countries

**Wednesday, October 27, 2021
3:00 pm (Beirut Time)**

The decarbonization of energy systems has become an essential priority as countries strive to achieve the goals of the 21st Conference of Parties (COP21) agreement to reduce the impacts of climate change. Given this will require global de-fossilization, transitioning to sustainable energy solutions in non-OECD, fossil resource-rich and/or hot climate regions, is gaining considerable importance. Middle East countries face unique, exacerbated challenges in meeting their domestic power, cooling and water demands, but also unique opportunities for sustainable energy transitions. This Talk will provide an overview of energy trends in Middle East countries, and potential technical and economic solutions for energy sustainability enhancement. In the building/urban sector, the focus will be on exploitation of renewable/waste energy sources and novel selected refrigeration concepts for space cooling. System design, technology performance and availability, and practical deployment aspects will be discussed. In industry, emphasis will be placed on alternative energy vectors from renewable/low-carbon power. Power-to-X (PtX) conversion pathways and the potential roles and drivers of PtX in industry will be discussed and contrasted with regional- and urban-scale PtX applications.



By **Valerie Eveloy PhD**
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Dr. Valerie Eveloy is a professor in the department of mechanical engineering at Khalifa University (KU), Abu Dhabi, United Arab Emirates. She holds a Ph.D. degree in mechanical engineering (Dublin City University, Ireland) and a M.Sc. degree in physical engineering (National Institute of Applied Science, France). She holds a Ph.D. degree in mechanical engineering (Dublin City University, Ireland) and M.Sc. degree in physical engineering (National Institute of Applied Science, France). Prior to joining Khalifa University, she was with The Petroleum Institute (now part of Khalifa University), the University of Maryland-College Park, and Nokia. She has led as principal investigator sponsored research projects focusing on energy system modeling optimization, energy recovery, sustainable cooling, and hydrogen from renewable power. She is an editorial board member of Energy Conversion and Management and the International Journal of Thermofluids, and associate editor of Frontiers in Energy Research. She has received several research awards including the Academic of Distinction Leadership Excellence for Women Award recognizing professional excellence in women in the Gulf regional energy sector in 2017.

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