

## **IESVic Seminar**

- DATE:** Thursday, April 5th, 2018
- TIME:** 1:00 – 2:00 pm
- LOCATION:** Engineering Office Wing. (EOW) Room 230
- SPEAKER:** **Mattia Baldini**  
PhD Candidate  
Technical University of Denmark (DTU)
- TITLE:** ***Energy Savings Versus Energy Supply – Modelling Energy Systems***

**Abstract:** Danish energy policy includes ambitious targets for energy savings that are important for reducing CO<sub>2</sub>-emissions and the dependency of fossil fuels. Large saving potentials exist, however, excluding the properties of energy supply with regard to marginal fuels and marginal capital costs some may lead to socio-economic in-optimal solutions. The project develops methods and models to address both energy saving and energy supply to ensure optimality in investments on both sides simultaneously. Dynamic aspects of costs curves and energy system modelling will be essential. The research project will examine what makes Danish households and industries investing in energy saving solutions.

The objective of the project is to understand key parameters related to energy saving and energy supply. This includes:

- Clarify the value of various types of energy savings linking to the energy supply fuels and technology costs.
- Building a tool to compare saving cost curves with supply cost curves in order to find trade-off between these when reaching certain renewable energy targets or fossil fuel reductions.
- Extending the energy system optimisation model Balmorel, to include energy saving investments in additional end-use sectors (households and industry).
- Analyse different policy scenarios with the expanded Balmorel model.

The aim of the external stay in Canada is to propose a comparison between Canadian and Danish achievements, experiences and future development on the modelling, application and impact of energy efficiency in the industry sector.

*For further information, please contact the IESVic office (250) 721-6295.*