

CV: David Connolly, PhD, BEng

Current Position: Associate Professor in Energy Planning, Aalborg University
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Research skills

- **Energy System Analysis:** Methods and models for the design and evaluation of technical, environmental, and financial consequences of energy systems, with specific emphasis on 100% renewable energy.
- **Energy storage:** developed a unique set of tools to evaluate the technical and financial feasibility of constructing pumped hydroelectric energy storage. These tools have been successfully transferred from an academic research project to a commercial product.
- **Collaboration:** have successfully collaborated with international academic institutions and commercial enterprises to develop methodologies, write publications, and create commercial products.
- **Funding:** involved in research projects worth over €25 million and I have successfully led many EU, national, and local projects, including a Horizon 2020 application worth €2.2 million.

Previous Positions and Education

- 2011-2014: Assistant Professor in Energy Planning, Aalborg University, Denmark
- 2007-2011: PhD; Integration of fluctuating renewable energy using energy storage, University of Limerick
- 2003-2007: B.Eng; Bachelor of Engineering in Mechanical Engineering, University of Limerick, Ireland

Publications

- 26 papers in refereed international journals
- Scopus: >1300 Citations & H-Index of 15
- 20 papers in international proceedings
- 25 reports, book chapters, and other articles

Awards

- Gold medal award for graduating with the highest academic results from the University in 2007 (out of approximately 2,200 students)
- 2010 Globe Forum 'Early Career Research Award'

Selected publications

- Connolly D, Lund H, and Mathiesen BV. *Smart Energy Europe: The technical and economic impact of one potential 100% renewable energy scenario for the European Union*. Renewable and Sustainable Energy Reviews **2016**;60:1634–1653.
- Connolly D, Lund H, Mathiesen BV, Werner S, Möller B, Persson U, Boermans T, Trier D, Østergaard PA, Nielsen S. *Heat Roadmap Europe: Combining district heating with heat savings to decarbonise the EU energy system*. Energy Policy **2014**;65:475–489.
- Connolly D, Lund H, Mathiesen BV, Pican E, Leahy M. *The technical and economic implications of integrating fluctuating renewable energy using energy storage*. Renewable Energy **2012**;43:47-60.
- Connolly D, Lund H, Mathiesen BV, Leahy M. *The first step towards a 100% renewable energy system for Ireland*. Applied Energy **2011**;88(2):502-507.
- Connolly D, Lund H, Mathiesen BV, Leahy M. *A review of computer tools for analysing the integration of renewable energy into various energy systems*. Applied Energy **2010**;87(4):1059-1082.