

CV: David Connolly, PhD, BEng

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Profile

Results-driven and determined with a passion for making the transition away from fossil fuels and towards sustainable energy a reality. Experienced in energy planning, modelling, policy, and markets. Self-driven, but also enjoy working in teams and involved in various projects at local, national, and European level. Enjoy converting research into action, so constantly involved in promoting my work to policymakers, industry, and academics across a range of formats including scientific articles, conferences, workshops, television, newspapers, websites, and social media. Proven track-record, exemplified by the crucial role of my research in developing Europe's first ever heat strategy.

Education

2011 to 2013: University Teaching Programme (10 ECTS), Aalborg University, Denmark

2007 to 2011: Doctor of Philosophy in Energy Planning, University of Limerick, Ireland

2009 to 2010: Advanced Certificate in Agriculture (Fetac Level 6), Teagasc, Ireland

2003 to 2007: B.Eng in Mechanical Engineering, University of Limerick: First-Class Honours and winner of the University Gold Medal 2007 (Average of 98%)

1998 to 2003: Irish Leaving Certificate: 545 points out of 600 (91%)

Job Experience

Associate Professor, Aalborg University, Copenhagen, Denmark

June 2014 to date

Research: Focused on energy planning related to energy efficiency and renewable energy

- Developed heating and cooling strategies for five EU Member States
- Wrote a 100% renewable energy strategy for Europe in collaboration with the European Commission
- Published Green Plan Ireland, which is the first 100% renewable energy strategy for Ireland

Research: Became a lead developer of the EnergyPLAN software (www.EnergyPLAN.eu)

- Involved in frontend and backend coding, as well as the overall development strategy for the software
- Responsible for the strategy and maintenance of the EnergyPLAN website, which tripled its monthly visitors from 700/month to 2000/month in one year

Project Management: Led numerous research applications, work packages, and projects.

- Main author and coordinator of the Heat Roadmap Europe series (www.heatroadmap.eu), which includes 20 organisations across 10 different countries
- Work package leader in the European project, STRATEGO, successfully meeting all deliverables on time
- Successfully led a consortium of 20 organisations in a Horizon 2020 application worth €2.2 million

Communication: Successfully influenced EU policymakers with my research

- Presented the results of Heat Roadmap Europe at numerous events including industry, government representatives, the European Parliament, and European Commission.
- Heat Roadmap Europe is now referenced in various communications from the European Commission and played a key role in developing the first ever EU 'heat strategy'.

Teaching: Regularly involved in teaching, supervision, and the administration of various university programmes

- Course coordinator and semester coordinator on the Sustainable Cities Master programme
- Teacher on the EnergyPLAN PhD course annually
- Supervisor of 5-10 Master student projects each year

Assistant Professor, Aalborg University, Copenhagen, Denmark

May 2011 to May 2014

Research:

- Created new energy balances and production pathways for fuels that allow renewable electricity to be consumed by heavy-duty transport. Formed part of a new 100% renewable energy strategy for Denmark, which was presented to the Danish Minister of Energy
- Developed local energy plans for regions such as Limerick, Clare, Ballerup, and Copenhagen.

Project Management: Became deeply involved in the administration of teaching activities

- Co-created a two-year Master programme called Sustainable Cities, which began in September 2012
- Internally coordinated numerous activities relating to personnel, content, timetables, and marketing
- Designed a new energy planning course for Bachelor students

Teaching: Improved by teaching skills and created new teaching content

- Taught classes in new areas such as sustainability, economy, and systems thinking
- Completed a 10 ECTS university teaching course on teaching style, learning, and assessments
- Introduced new teaching formats, such as role-playing and student voting, as well as new assessment methods, such as open-book exams and continuous assessment portfolios

PhD Candidate, University of Limerick, Limerick, Ireland

Sep 2007 - March 2011

- **Research:** Created the first hourly model of Ireland's energy system that included electricity, heating, and transport. Quantified the benefits of electricity storage and wind power in Ireland.
- **Communication:** Published six peer-reviewed journal articles and three conference proceedings
- **Business:** Commercialised software to identify suitable locations to build electricity storage.
- **Teaching:** Taught laboratory workshops, tutorials, and lectures in physics and energy.

Industrial Engineer, Boston Scientific Corporation, Galway, Ireland

June 2005 - Feb 2006

Worked in a team of 12 engineers, where my primary responsibility was to design custom components on the manufacturing line to improve quality and quantity. Completed over 50 designs during eight months, all completed on time.

Research Highlights

- Published 25 peer-reviewed journal articles, generating +1300 citations, as well as 20 conference proceedings, 4 book chapters, and 22 reports.
- Involved in projects worth over €25 million in research funding to date.
- Led a successful EU project under the Horizon 2020 framework worth €2.2 million.
- Coordinator of the Heat Roadmap Europe project, which includes 20 organisations across various universities, consultancies, and industry partners. This work played a central role in the creation of Europe's first ever 'heat strategy' and Paul Hodson, who is head of the Energy Efficiency Unit in DG Energy of the European Commission, officially referred to it as "the most advanced on the EU's heating and cooling sector as a whole".
- Extensive dissemination of my research around the world, which has included several government buildings, the European Parliament, and the European Commission.
- TV appearances on RTE's Eco Eye: [Season 13, Episode 6](#) and [Season 14, Episode 8](#).

Teaching Highlights

- Delivered approximately 10,000 student-hours of classroom teaching and carried out many different types of student exams/assessments.
- Supervised 25 Bachelor/Master student projects.
- Co-created a new two-year master programme, called [Sustainable Cities](#). Currently coordinate one of the four semesters and one of the six courses in this programme. Since it began, the course has doubled in size and now attracts approximately 35 students each year.

Awards

2010: Won the [Globe Forum](#) 'Early Career Research Award', which included PhD and postdoctoral researchers for my innovative research on sustainable energy.

2007: Won the University of Limerick Gold Medal for graduating with the highest academic results from the 2007 graduating class, which included approximately 2200 students.

2007: Awarded a PhD scholarship from The Irish Research Council for Science, Engineering and Technology (IRCSET) as well as The Advanced Scholars award from the University of Limerick.

Software Skills

General Office Admin	Energy Planning	Mechanical Engineering	Software Development
MS Office: advanced user	EnergyPLAN	LabVIEW	Delphi Pascal
Adobe Connect for webinars	energyPRO	GX Developer	MATLAB
WordPress	HOMER	ProMechanica	
Adobe Dreamweaver	LEAP	ProEngineer	
Adobe Photoshop		SolidWorks	

Other Interests

Sports enthusiast, especially Gaelic football. Chairperson of Copenhagen GAA in 2014, guiding the club to their first Nordic Championship. Voted Player of the Year in Copenhagen GAA in 2013. I also enjoy soccer, rugby, running, travelling, and current affairs.