

# Prof. Hannah E. Daly

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Google Scholar: [link](#)

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## Professional Appointments

2019 – present	University College Cork	Professor (since 2022) in Sustainable Energy
2015 – 2019	International Energy Agency, Paris	World Energy Outlook: Energy access & SDGs
2012 – 2015	UCL Energy Institute, London	Research Associate in Energy Systems Modelling.

### Periods of maternity leave:

Nov. 2015 – Apr. 2016  
Aug. 2018 – Jul. 2019

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## Education

2009 – 2012	University College Cork	Ph.D. “Transport energy demand: techno-economic modelling and scenarios for Irish climate policy”.
2004 – 2009	University College Cork	BSc (Hons) Mathematical Sciences
2007 – 2008	UC Santa Cruz	University of California Scholarship

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## Research

I lead a group of 8 researchers within UCC’s Energy Policy and Modelling Group (2 research fellows, 1 senior research coordinator, 2 research support officers and 4 doctoral researchers) focussing on modelling accelerated decarbonisation pathways for Ireland’s energy system and climate overshoot scenarios. I oversee the development of the TIMES-Ireland Model, which has become a central tool to provide an evidence-base for Irish energy and climate policy. I am the PI or co-PI of ongoing research projects valued at €4 million, including the CAPACITY project, funded by the Irish Government Department of Communications, Climate Action and Environment, which was awarded the UCC President’s Award for Contribution to the SDGs. I was a lead author of Ireland’s Climate Change Assessment (ICCA), 2024.

### Active research projects

Project	Funder	Description	Funding	Role	Period
SHIELD (Safeguarding Ireland’s Energy Transition against Critical Materials)	EPA	Safeguarding Ireland’s Energy Transition against Critical Materials Supply Disruption and Geopolitical Dynamics	€328k	Co-PI	2024-26

Supply Disruption and Geopolitical Dynamics)					
CAPACITY (Climate Action Pathways & Absorptive Capacity) Phase 2	Department of Communications, Climate Action and Environment	Energy modelling services to the Climate Action Modelling Group (CAMG)	€2.9m	PI	2023-28
SELFS	Environmental Protection Agency (EPA)	Sustainable integrated pathways for carbon-negative energy, land and food systems	€440k	PI	2023-27
SFI/MaREI ERBE PhD award	Energy Resilience in the Built Environment	Jeanne Spillane PhD award: The integrated achievement of clean energy and climate goals	€140k	Co-PI	2023-27
SFI/MaREI PhD award	MaREI, SFI	Weipeng Xie: Modelling a zero-carbon energy system for Ireland	€185k	PI	2023-26

### Completed research projects

- Sustainable Energy Authority of Ireland Research Fellowship in energy systems modelling, PI. €324k, 2023-26.
- SFI/MaREI PhD award: Modelling sustainable energy transitions for Ireland. €107k, 2020-24
- Ireland's Climate Change Assessment (ICCA) – Vol. 4, PI and Academic lead author, €209k, 2021-24
- CCAC/EPA Carbon Budget Research Fellowship: Modelling Ireland's path to a net-zero energy system: Informing carbon budgets to 2050. €215k, PI. 2021-23.
- CAPACITY (Climate Action Pathways & Absorptive Capacity). Co-PI. €2.35m, 2018-22
- Energy access & Africa modelling capacity project development at IEA.
- Collaborator, Horizon 2020 Grant No 691739 – REEM: “Role of technologies in an energy efficient economy – model based analysis policy measures and transformation pathways to a sustainable energy system”, total EU contribution €4 million.
- Convened International BE4 Workshop on Behaviour within Energy/Engineering/ Economics/Environmental Models, April 2015, funded by IEA-ETSAP
- Introducing modal shifting in TIMES, January – June 2012, funded by IEA-ETSAP
- Irish Research Council for Science, Engineering and Technology EMBARK PhD scholarship, 2009–12.

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### Pedagogical profile

Programme Director, BSc Sustainability (forthcoming, 2026).

Awarded the UCC President's Award for Excellence in Teaching, 2022.

### Postgraduate research supervision

- PhD supervision (ongoing):
  - Jeanne Spillane, UCC. ERBE (Energy Resilience in the Built Environment) 2023-27 (expected)
  - Neha Jaggeshar, UCC. 2023-27 (expected)
  - Weipeng Xie, UCC. 2023-27 (expected)
  - Tianing Zhao, UCC. 2024-28 (expected)
- PhD supervisor (past):

- Ankita Gaur, UCC. *Modelling sustainable energy transitions for Ireland: Capturing technological, economic and social realities*. 2020–24 (PhD viva July 2024)
- Jason McGuire, UCC. *Modelling residential sector in energy systems models*. 2019–24 (PhD viva February 2024)
- Vera O’Riordan, UCC. *Passenger transport energy demand in the context of Ireland’s Climate Action Plan*. 2019–23 (PhD viva December 2023)
- Xuebing Wang, UCL. *The Impacts to the International Aviation Industry by including it to the EU-ETS*. Graduated 2019.
- Vahid Aryanpur, UCC. *Improving the Ability of Energy Systems Optimisation Modelling to Inform National Energy Policymaking*. 2019–23; Graduated 2023
- Masters research supervision: Primary supervisor to MEngSc and MSc research dissertations of 10 students to completion at UCL & UCC.

## Undergraduate and postgraduate lecturing

- NE3003, NE6013 and NE5003 module (Sustainable Energy, UCC) coordinator (since 2019)
- NE1001 (Introduction to Energy Engineering, UCC), module coordinator (2019–2022)
- UWM Sustainability, guest lecturer (since 2019)
- NE4001 (Energy Systems Modelling, UCC), module coordinator (since 2019)
- BEGC15 (Modelling Methods and Scenarios, University College London), 2014–2015 (teaching assistant)

## Further education and training

- Delivering climate and energy training lectures for UCC’s Sustainability Academy, including to Department of Foreign Affairs Climate Diplomacy training (2024/25), Climate Leadership Training to UCC University Leadership Team (2023).

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## Contribution & Outreach

### Outreach & policy engagement

- **Monthly columnist** – “At a Time of Climate Crisis” – for Irish Times newspaper since 2022; frequent [op-eds](#) in national newspapers and [media interviews](#) on TV, radio, podcasts and newspaper
- Winner, **UCC Research Communicator of the Year** (2023)
- **Lead Author** of Ireland’s Climate Change Assessment ([ICCA](#)) (2021–24)
- **Policy working groups and committees:**
  - Climate Change Advisory Council Carbon Budgets Working Group (2020–24)
  - Dept. Taoiseach Climate Action Unit Research & Modelling Group (2022– present)
  - Climate Action Plan workshops convened by DECC (2022, 2023, 2024)
  - National Economic & Social Council (NESC) working group on Agriculture and Climate (2022)
- **Advisory boards:**
  - Community Foundation for Ireland (since 2022)
  - Linte na Farraige, Creative Climate Action (2021–22)
  - Scientific Advisor, “We Only Want the Earth” RTÉ Lyric FM/BAI documentary (2023)
- **Expert testimony** for Joint Oireachtas (parliamentary) Committee on Climate Action and Environment ([2021](#), [2022](#), [2023](#), [2024](#), 2025)
- **Chair** of UCC School of Engineering Outreach Committee (2021–24)
- **Judge** for Mary Mulvihill Award for Science Communications (2023)
- Supporter of **Women in STEM:**
  - Keynote speaker, J&J WiSTEM2D Awards Ceremony, Jan 2022
  - Ran “Inspiring Women in Climate and Energy” event in March 2020 in collaboration with UCC Women in STEM society with a panel of senior women
- Selected [Public talks](#)

## University Consultancy

I regularly undertake consultancy projects through UCC's Consultancy Office, totalling around €100k of external income since 2021. Clients include Friends of the Earth, the National Economic and Social Council, the Broadcasting Authority of Ireland, Friends of the Irish Environment and ESB. The report "Data Centres in the Context of Ireland's Carbon Budgets" was given the **2025 award for UCC Consultancy Project of the Year**.

## Academic service

- **PhD examination:** ETH Zurich - Jacob Mannhardt (2026 – external examiner); University College London - Leo Hofbauer (2025, external examiner); UCC - Rajas Shinde (UCC, 2025, internal examiner); UiT Norway - Koen van Grevenbroek (2024, PhD opponent); KTH Sweden - Nandi Moksnes (2024, PhD opponent); LTU Sweden - Jonas Forsberg (2024, PhD opponent); Alla Toktarovas, Chalmers University, Sweden (2023, grading committee); Diego Lopez, Universidad de Alcala, Spain (2023, examination committee); Laura Mehigan, UCC (2022, internal examiner); Aobha Hickey, UCC, (2022, Chair), Dennis Dreier, KTH, Sweden (2020, opponent).
- **Selection committees:** Sustainable Futures Senior Lecturer, UCC (2022, Chair, associate professor), University of Oslo (2022, shortlisting panel), UCC Head of Geography (2023).
- **Peer review:** *Nature Climate Change, Joule, Environmental Research Letters, Climate Policy, Applied Energy, Energy Strategy Reviews*, International Energy Agency *World Energy Outlook* reports.
- **Scientific Advisory Board:**
  - DIAMOND, Horizon Europe (2023- )
  - National Land Use Evidence Review (EPA) (2022)
  - HIA-IM (2023-26)
- **Grant review:** Academy of Finland, Electric power and energy engineering review panel (2023, 2025) & sustainable energy review panel (2025); European Commission expert review (2024).
- **IEA task participant** to TCP ETSAP/ Annex XV: Energy systems and sustainable development goals, appointed by SEAI.

## Other

- **University decarbonisation**
  - Member UCC Academic travel working group, 2024
  - Co-Convenor of ERI Sustainability Book Club, since 2022
  - Lead UCC delegation to COP27, Nov 2022
- Invited guest lectures to Yale University: annual since 2020
- Auditor of the UCC Mathsoc in 2005-06, convenor Irish Mathematics Student Conference in 2006, UCC *Bene Merenti* and *Society of the Year* awards 2006.

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## Scientific publications (links to [Google Scholar](#), [Semantic Scholar](#), [ORCID](#))

### Peer-reviewed journal articles

1. Duffy et al., (2025) National temperature neutrality, agricultural methane and climate policy: reinforcing inequality in the global food system. *Environmental Research Letters*. 10.1088/1748-9326/adf12d
2. Xie et al., (2025) Negative emissions technologies in energy system models and mitigation scenarios - a systematic review. *Applied Energy*. <https://doi.org/10.1016/j.apenergy.2024.125064>

3. Aryanpur et. al. (2024) Implications of accelerated and delayed climate action for Ireland's energy transition under carbon budgets. *npj Climate Action* 3 (1), 97. <https://www.nature.com/articles/s44168-024-00181-7>
4. McGuire et. al., (2024): Advancing Cost-Optimal Residential Decarbonisation Pathways: An Examination of Heat Pumps and Thermal Efficiency. *Energy and Buildings*, <https://doi.org/10.1016/j.enbuild.2024.114383>
5. McGuire et. al., (2024): Is District Heating a cost-effective solution to decarbonise Irish buildings? *Energy* Vol 296. <https://doi.org/10.1016/j.energy.2024.131110>
6. Gaur et. al., (2024): Dispersed settlement patterns can hinder the net-zero transition: Evidence from Ireland. *Energy Strategy Reviews* vol 51. <https://doi.org/10.1016/j.esr.2024.101296>
7. JJ Cuenca, H Daly, BP Hayes (2023): Sharing the grid: The key to equitable access for small-scale energy generation. *Applied Energy*, 349. <https://doi.org/10.1016/j.apenergy.2023.121641>
8. Hollands, A., Daly, H (2023): Modelling the integrated achievement of clean cooking access and climate mitigation goals: An energy systems optimization approach. *Renewable & Sustainable Energy Reviews*, 173, 113054 <https://doi.org/10.1016/j.rser.2022.113054>
9. McGuire, J., ... Daly, H (2023) Developing decarbonisation pathways in changing TIMES for Irish homes. *Energy Strategy Reviews* <https://doi.org/10.1016/j.esr.2023.101086>
10. O'Riordan, V., ... Daly, H. (2023): Impact of an Emissions-based Car Tax Policy on CO2 Emissions and Tax Revenue of Private Cars in Ireland. *International Journal of Sustainable Transportation* <https://doi.org/10.1080/15568318.2022.2132562>
11. Balyk, O., ... Daly, H. (2022): TIM: Modelling pathways to meet Ireland's long-term energy system challenges with the TIMES-Ireland Model (v1.0), *Geoscientific Model Development*, <https://doi.org/10.5194/gmd-2021-359>
12. Gaur, A., ..Daly, H (2022) Low energy demand scenario for feasible deep decarbonisation: Whole energy systems modelling for Ireland. *Renewable and Sustainable Energy Transition* <https://doi.org/10.1016/j.rset.2022.100024>
13. Aryanpur, V., .. Daly, H., . (2022):. Decarbonisation of passenger light-duty vehicles using spatially resolved TIMES-Ireland Model. *Applied Energy*. <https://doi.org/10.1016/j.apenergy.2022.119078>
14. O'Riordan, V., ... Daly, H (2022). How and why we travel – Mobility demand and emissions from passenger transport. *Transportation Research Part D: Transport and Environment*. <https://doi.org/10.1016/j.trd.2022.103195>
15. Long, A et al. (2021). "Infant Feeding and the Energy Transition: A Comparison between Decarbonising Breastmilk Substitutes with Renewable Gas and Achieving the Global Nutrition Target for Breastfeeding." *Journal of Cleaner Production* 324: 129280. <https://doi.org/10.1016/j.jclepro.2021.129280>
16. Crowley, F et al (2021). "The Impact of Labour Market Disruptions and Transport Choice on the Environment during COVID-19." *Transport Policy* 106: 185–95. <https://linkinghub.elsevier.com/retrieve/pii/S0967070X21001037>
17. S Pye, O Broad, C Bataille, P Brockway, HE Daly, R Freeman, A Gambhir... (2020). Modelling net-zero emissions energy systems requires a change in approach. *Climate Policy* <https://doi.org/10.1080/14693062.2020.1824891>
18. Jewell J., ... Daly H., ..., van Vuuren D. (2020) Reply to: Why fossil fuel producer subsidies matter. *Nature*. doi: 10.1038/s41586-019-1921-9 . <https://doi.org/10.1038/s41586-019-1921-9>
19. DeCarolis J, Daly H., Dodds P, Keppo I, Li F, McDowall W, Pye S, Strachan N, Trutnevyte E, Usher W, Winning M, Yeh S, Zeyringer M. (2017) Formalizing best practice for energy system optimization modelling. *Applied Energy*, 194 184–198. <https://doi.org/10.1016/j.apenergy.2017.03.001>
20. OY Edelenbosch, DP van Vuuren, C Bertram, S Carrara, J Emmerling, H Daly, A Kitous, DL McCollum, N Saadi Failali (2017) Transport fuel demand responses to fuel price and income projections: Comparison of integrated assessment models. *Transportation Research Part D: Transport and Environment*. 55, 310–321. <https://doi.org/10.1016/j.trd.2017.03.005>
21. Edelenbosch, O. Y., McCollum, D. L., van Vuuren, D. P., Bertram, C., Carrara, S., Daly, HE, ... & Karkatsoulis, P. (2017). Decomposing passenger transport futures: Comparing results of global integrated assessment models. *Transportation Research Part D: Transport and Environment*. <https://doi.org/10.1016/j.trd.2016.07.003>
22. Edelenbosch, O.Y., Vuuren, D.P., Bertram, C., Carrara, S., Emmerling, J., Daly, H., Kitous, A., McCollum, D., & Failali, N.S. (2017). Transport fuel demand responses to fuel price and income projections: Comparison of integrated assessment models. *Transportation Research Part D-Transport and Environment*, 55, 310–321.

23. Strachan N, Fais B, Daly HE (2016) Reinventing the energy modelling–policy interface. *Nature Energy*. Feb 29;1:16012. <https://doi.org/10.1038/nenergy.2016.12>
24. Fais B, Keppo I, Zeyringer M, Usher W, Daly HE. (2016) Impact of technology uncertainty on future low-carbon pathways in the UK. *Energy Strategy Reviews*. 230;13:154-68. <https://doi.org/10.1016/j.esr.2016.09.005>
25. Scott, K., Daly, HE, Barrett, J., & Strachan, N. (2016). National climate policy implications of mitigating embodied energy system emissions. *Climatic Change*, 136(2), 325-338. <https://doi.org/10.1007/s10584-016-1618-0>
26. Pye, S., & Daly, HE (2015). Modelling sustainable urban travel in a whole systems energy model. *Applied Energy*, 159, 97-107.
27. Daly HE, Scott K, Barrett J, Strachan N (2015) Indirect CO<sub>2</sub> emission implications of energy system pathways: Linking IO and TIMES models for the UK. *Environmental Science and Technology*. 49 (17), 10701-10709
28. Lott, M., & Daly, H. (2015). The Impacts of Transport Sector Decarbonisation Pathways on Air Quality and Public Health in the United Kingdom. *Journal of Transport & Health*, 2(2), S37.
29. Daly HE, Ramea K, Chiodi A, Yeh S, Gargiulo M, Ó Gallachóir B (2014) Incorporating travel behaviour and travel time into TIMES energy system models. *Applied Energy* 135 (0):429-439. <http://dx.doi.org/10.1016/j.apenergy.2014.08.051>
30. Rogan, F., Cahill, C.J., Daly, H., Dineen, D., Deane, J.P., Heaps, C.G., Welsch, M., Howells, M., Bazilian, M.D., & Ó Gallachóir, B. (2014). LEAPs and Bounds—an Energy Demand and Constraint Optimised Model of the Irish Energy System. *Energy Efficiency*, 7, 441-466.
31. Whyte K, Daly HE, Ó Gallachóir BP (2013) Modelling HGV freight transport energy demand in Ireland and the impacts of the property construction bubble. *Energy* 50 (0):245-251. <http://dx.doi.org/10.1016/j.energy.2012.12.030>
32. Leinert S, Daly HE, Hyde B, Gallachóir BÓ (2013) Co-benefits? Not always: Quantifying the negative effect of a CO<sub>2</sub>-reducing car taxation policy on NO<sub>x</sub> emissions. *Energy Policy* 63 (0):1151-1159. <http://dx.doi.org/10.1016/j.enpol.2013.09.063>
33. Rogan F, Cahill C, Daly HE, Dineen D, Deane JP, Heaps C, Welsch M, Howells M, Bazilian M, Ó Gallachóir B (2013) LEAPs and Bounds—an Energy Demand and Constraint Optimised Model of the Irish Energy System. *Energy Efficiency*:1-26. doi.org/10.1007/s12053-013-9231-9
34. Daly HE, Ó Gallachóir BP (2012) Future energy and emissions policy scenarios in Ireland for private car transport. *Energy Policy* 51 (0):172-183. <http://dx.doi.org/10.1016/j.enpol.2012.08.066>
35. Daly HE, Ó Gallachóir BP (2011) Modelling private car energy demand using a technological car stock model. *Transportation Research Part D: Transport and Environment* 16 (2):93-101
36. Daly HE, Ó Gallachóir BP (2011) Modelling future private car energy demand in Ireland. *Energy Policy* 39 (12):7815-7824. <http://dx.doi.org/10.1016/j.enpol.2011.09.027>
37. Rogan F, Dennehy E, Daly HE, Howley M, Ó Gallachóir BP (2011) Impacts of an emission based private car taxation policy – First year ex-post analysis. *Transportation Research Part A: Policy and Practice* 45 (7):583-597. <http://dx.doi.org/10.1016/j.tra.2011.03.007>

### **Selected peer-reviewed conference papers, working papers, and in-review papers**

38. Daly, H., Smith, A., Aryanpur, V., Gaur, A.S., McGuire, J.M., Yue, X., Glynn, J., & Balyk, O. (2021). Carbon Budget Scenarios for Ireland's Energy System, 2021-50.
39. Daly HE (2020). The implications of alternative warming metrics for national climate targets; (preprint: <https://bit.ly/367Yuol>)
40. F Crowley, H Daly, J Doran, G Ryan (2020) COVID-19, social distancing, remote work and transport choice. SRERC Working Paper Series: <https://www.econstor.eu/handle/10419/221739>
41. Stephen J Lee, Eduardo Sánchez Jacob, Andrés González García, Pedro Ciller Cutillas, Pablo Dueñas Martínez, Jay Taneja, Fernando Cuadra García, Julio Lumbreras Martín, H Daly, Robert J Stoner, José Ignacio Pérez Arriaga (2019) Investigating the necessity of demand characterization and stimulation for geospatial electrification planning in developing countries. Comillas repository <http://hdl.handle.net/11531/42497>

42. Daly HE, Scott K, Barrett J, Strachan N (2014) Counting Consumption-Based Energy System Emissions: Linking an Energy System and EEIO Model. Paper presented at the 37th IAEE International Conference, New York, USA, June 2014
43. Wang X, Daly, HE (2014) The economic impact on GDP growth in selected areas of building a global emissions trading scheme. Paper presented at the 4th International Association of Energy Economics Asian Conference, Beijing, China, 19–21 September 2014.
44. Daly HE, Scott K, Barrett J, Strachan N (2013) Does accounting for indirect emissions affect energy system decarbonisation pathways? Paper presented at the 13th European IAEE Conference, Dusseldorf, Germany, August 2013
45. Wang X, Daly, HE (2013) A comparison of the impacts of environmental taxation and emissions trading on Chinese Airlines. Paper presented in 14th Global Conference on Environmental Taxation, Kyoto, Japan. 17–19 October, 2013.
46. Daly HE, Ramea K, Chiodi A, Yeh S, Gargiulo M, Ó Gallachóir BP (2012) Modelling Transport Modal Choice and Its Impacts on Climate Mitigation. Paper presented at the 31st International Energy Workshop, Cape Town, South Africa, June 19th–21st, 2012
47. Daly HE, Ó Gallachóir B.P., 2011. Two technological approaches for long-term private car energy policy modelling in Ireland. in Irish Transport Research Network, August 31st – September 1st. University College Cork, Ireland. Best paper in session award.
48. Daly HE, Ó Gallachóir B (2010) Private Car Transport and the 10% RES-T Target - Quantifying the Contribution of EVs and Biofuels. In: Irish Transport Research Network, 2010, University College Dublin, Ireland, 31st August to 1st September 2010 .
49. Daly HE, Ó Gallachóir B (2010) Evaluating the Impact of Energy Efficiency and CO2 Emissions Measures on Private Car Transport Using a Stock Model. Paper presented at the International Energy Program Evaluation Conference, Paris, France, June 9th - 10th 2010.
50. Daly HE, Ó Gallachóir, B.P., (2010). Forecasting Private Car Energy Demand Using Bottom-Up Car Stock Modelling. in Young Energy Economy Engineer Seminar. November 26th – 27th 2010, Dublin, Ireland
51. Foley A.M., Daly, H.E., McKeogh E.J., Ó.Gallachoir, B.P, (2010) Quantifying the energy & carbon emission implications of a 10% electric vehicle target, International Energy Workshop, June 21st – 23rd, Stockholm, Sweden

## Book chapters

52. Daly HE, Dodds P, McDowall W (2015) The Demand Side: Challenges and options for sustainable travel: Mobility, motorisation and vehicle technologies. In Ekins P, ed. Global Energy: Issues, Potentials and Policy Implications. Oxford University Press.
53. Daly HE, Ramea K, Chiodi A, Yeh S, Gargiulo M, Ó Gallachóir BP (2015) Transport behaviour in TIMES: Modelling mode shift and travel time budgets for Ireland and California. In Labriet M. ed. Informing energy and climate policies using energy systems models. Springer.

## Reports (selected)

1. Doherty, C., & Daly, H. (2025, May). Analysis of the alignment between energy transition pathways for Irish carbon budgets with EU energy and climate targets (Working Paper No. 37). Climate Change Advisory Council. Commissioned report from the Energy Policy and Modelling Group, University College Cork ([Link](#))
2. Daly, H., et al. (2024). *Pathways for Ireland's energy system to 2050: Modelling analysis to support the Climate Change Advisory Council on the Second Carbon Budget Programme* (TIMES-Ireland Model Report). Climate Change Advisory Council ([link](#))
3. Data Centres in the Context of Ireland's Carbon Budgets: [https://www.friendsoftheearth.ie/assets/files/pdf/data\\_centrrres\\_and\\_the\\_carbon\\_budgets\\_-\\_prof\\_hannah\\_daly\\_dec\\_2024.pdf](https://www.friendsoftheearth.ie/assets/files/pdf/data_centrrres_and_the_carbon_budgets_-_prof_hannah_daly_dec_2024.pdf)
4. Assessment Of Biodiversity Considerations in the Carbon Budgets Process <https://aicbrn.net/wp-content/uploads/2024/10/WP33-Biodiversity-for-web.pdf>



5. (Lead author) Irish electricity and gas demand to 2050 in the context of climate commitments, report commissioned by Friends of the Earth, October 2022
6. (Lead author) Agriculture and Climate Action – Overview of the Science. Literature review commissioned by NESC, 2021.
7. (Contributing author): The role of carbon budgets in translating the Paris Agreement into national climate policy – MaREI Discussion paper, 2020
8. Daly H, Deane JP, Emissions and energy system implications of increasing the ambition on the 70% RES-E target – MaREI Policy Brief, 2020
9. (Contributing author): Long Term Strategy – A Net Zero Energy System for Ireland in 2050, 2019. Submitted to DCCAE Nov 2019.
10. (Lead author) IEA, IRENA, UNSD, World Bank, WHO, 2018. Tracking SDG7: The Energy Progress Report.
11. (Lead author) IEA, UNDP, IRENA. Policy Brief 1: Achieving Universal Access to Electricity, ADVANCING SDG7 IMPLEMENTATION IN SUPPORT OF THE 2030 AGENDA. Policy Briefs in Support of the first SDG7 Review at the UN High-Level Political Forum 2018. UNDESA, 2018.
12. (Lead author) IEA, 2017. Energy Access Outlook 2017: from Poverty to Prosperity. World Energy Outlook 2017 special report. OECD/IEA, Paris
13. (Lead author) IEA and World Bank, 2017. Global Tracking Framework 2017: Progress Towards Sustainable Energy for All. World Bank, April 2017.
14. (Principal author) World Energy Outlook, 2017 & 2016 OECD/IEA, Paris.
15. (Principal author) Mexico Energy Outlook – World Energy Outlook Special Report, 2016. OECD/IEA, Paris.
16. (Principal author) Energy and Air Pollution – World Energy Outlook Special Report, 2016. OECD/IEA, Paris.
17. (Contributing author) Energy and Climate Change - World Energy Outlook Special Briefing for COP 21.
18. Jewell, J., McCollum, D., Krey, V., Riahi, K., Berger, L., Bertram, C., **Daly, H.**, Fais, B., Gernaat, D., Emmerling, J., Paroussos, L., Saveyn, B., van Vuuren, D. (2016) Improving the representation of existing energy policies (taxes and subsidies) in IAMs. FP7-Cooperation-ENV Collaborative Project No 308329
19. Daly HE, Doddle PE, Fais B (2014) The UK TIMES Documentation v1.0. UCL Energy Institute.
20. Daly HE (2012) Transport energy demand: Techno-economic modelling and scenarios for Irish climate policy. PhD thesis, University College Cork. Available from <https://cora.ucc.ie/bitstream/handle/10468/1552/Thesis-HD-final-01022013.pdf?sequence=1>
21. Daly HE, Ó Gallachóir, B.P., Chiodi, A., (2012) Meeting Ireland's Greenhouse Gas Targets – Options for Private Cars. Report to National Economic & Social Council Secretariat.
22. Daly HE, Ramea K, Chiodi A, Yeh S, Gargiulo M, Ó Gallachóir BP (2012) Modal choice in a TIMES model. Report submitted to IEA-ETSAP, May 2012
23. Patrick, G., Dineen, D., Daly, H., & Ó Gallachóir, B. P. (2012). Improved Modelling of Aviation Energy Use and CO2 Emissions. Working Paper.
24. Daly, H., Dineen, D., Rogan, F., Cahill, C. (2010) Bottom-Up Energy Demand Modelling - LEAP Ireland. In Energy Forecasts for Ireland to 2020, 2010 Report, Sustainable Energy Authority of Ireland, Dublin

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## Presentations, workshops & public talks (selected, since 2013)

- Invited address, Board of Sustainable Energy Authority of Ireland, September 2025
- “Modelling pathways & shaping climate policy: Lessons from the TIMES-Ireland Model”. ETSAP workshop, Nara, Japan, June 2025
- Keynote address, Mary Robinson Climate & Biodiversity Conference, Mayo, May 2025
- Invited talk, “Data centres at a crossroads” round-table, Heinrich-Boll Foundation, Brussels, May 2025
- Invited talk, “Data centres in the context of Ireland's carbon budgets”, Leinster House (Irish Parliament), May 2025
- Invited talk, “Carbon budgets: Scientific origins, political progress” – SEAI IEA National TCP day, DECC, May 2025
- Presentation to Climate Change Advisory Council, “Analysis of the alignment of EU energy-related targets with Carbon Budgets”, April 2025
- Invited talk, DECC-IEA Energy Security in Ireland Workshop, March 2025
- Invited talk, Macroom Historical Society, January 2025.



- Presentation at EPMG Research Showcase Event, Engineers Ireland, December 2024
- Panellist, Community Foundation Ireland Convening, Mullingar, October 2024
- “Depicting behaviour change in long-term energy scenarios” - 5<sup>th</sup> International Forum on Long-Term Energy Scenarios, IRENA, September, 2024
- “Energy System Transition for Climate Neutrality - A Country-Level Analysis Using Cumulative Carbon Budgets” - International Energy Workshop, 2024 ([link](#))
- “The Art of Negotiation - Lessons from COP28”, MacGill Summer School, July 2024 ([link](#))
- MaREI-ESRI Seminar, June 2024 ([link](#))
- Regional Studies Association - Irish Section - Transport in the Regions Workshop, March 2024
- National Energy Demand Strategy Policy Coordination Group Meeting (CRU, DECC, DETE), March 2024
- Irish Fiscal Advisory Council - Path for the Public Finances Conference, 2024
- NTR.plc “Lunch and Learn”, January 2024
- Keynote, Irish Transportation Research Network, Aug 2023
- Panellist, McGill Summer School, Aug2023
- Is district heating a cost-effective way to heat Irish buildings? ESRI Climate & Energy Research Seminar, May 2023
- Professorial Inaugural Lecture: “Mapping the Energy Transition: Using energy systems modelling to inform rapid decarbonisation”. UCC, Apr 2023
- Fenit Wild Mind festival, Apr 2023
- IEA-ETSAP workshop speaker, Columbia University, Dec 2022
- Panellist – Science Foundation Ireland Summit, Nov 2022
- Invited speaker, Irish Planning Institute webinar, Nov 2022
- Invited speaker, Irish Society of Actuaries Webinar, Oct 2022
- Invited speaker, Cork City Council workshop on climate action, Oct 2022
- Keynote speaker as external expert, Labour Party Conference, Sept 2022
- Speaker, Irish Climate Summit, May 2022
- Panellist, Irish Wind Energy Conference, April 2022
- Keynote lecture, Society of Applied Maths Conference, University of Limerick, Jan 2022
- Invited presentations, Department of Taoiseach’s Climate Research & Modelling Group, Feb-April
- Panellist, Friends of the Irish Environment webinar. Dec 2021
- Conference presentation, Integrated Assessment Modelling Consortium, 2021
- Modelling for Policy Support – EU Conference presentation – Nov 26<sup>th</sup> 2021
- Invited speaker, IIEA webinar on COP26 ([link](#)), Nov 2021
- Webinar, Engineers Ireland ([link](#)) Nov 2021
- Keynote speaker to An Taisce AGM, Sept 2021
- Panellist, EPA Climate Conference ([link](#)), July 2021
- Invited speaker, ESB Lunch and Learn, 2021
- Invited colloquium speaker, Maynooth Department of Geography, Feb 2021
- Invited seminar, Trinity College School of Physics, Feb 2021
- Invited presentation to International Energy Agency (IEA), Jan 2020
- Presentation, UCC SDG lunchtime seminar, Nov 2020
- Panellist in Samhain Podium discussion on climate change, Clonakilty. Nov 2019
- Panellist to UCC/MaREI “Listen to the Science” debate, Nov 2019
- Keynote address, Renewable Energy Microgrids for Sustainable Development Symposium, Northwestern University, Apr 2018.
- High-level speaker, panellist and side event organiser, Global SDG7 Conference, United Nations Economic Commission for Asia and the Pacific, Feb 2018.
- Invited address, Energy Modelling Platform for Africa (EMP-A) 2018 meeting, United Nations Economic Commission for Africa, Jan 2018.
- Keynote address, UNESCAP Regional Preparatory Meeting on SDG7 for Asia-Pacific Forum on Sustainable Development. Dec 2017.
- Keynote address, RES4MED&Africa Advanced Training Course - “Deployment of renewable energy solutions: challenges and opportunities”, Nov 2017
- Keynote address, 9th Annual Meeting of the LCS-RNet in Warwick, UK, September 2017

- Panellist and panel chair, Sustainable Energy For All Forum, New York, April 2017
  - Invited speaker - Addressing the behavioural gap in energy/economy models: Outcomes of the BE4 Workshop and outlook for the state-of-the-art. In Our Common Future Under Climate Change Conference, Paris, July 2015.
  - Invited speaker & workshop coordinator - How we treat behaviour in energy system optimisation models, in International BE4 Workshop, London, Apr 2015.
  - Invited speaker - Incorporating indirect emissions into a bottom-up partial equilibrium UK TIMES energy system model, in EMIInn Workshop: Accounting for life-cycle emissions in analysis of future energy systems, London, Nov 2014.
  - Invited speaker - Low carbon scenario critical issues: Technology pathways for a low-carbon energy transition - critical insights from the energy system model UKTM In WholeSEM Annual Conference 2014. July 2014,
  - Invited speaker, WholeSEM/DECC stakeholder workshop, Whitehall, London, UK, March 2014
  - Workshop presentation - Transport energy modelling. In Modelling on the Move 6: Cycling & Transport Modelling, Westminster University, UK, Jan 2014
  - Workshop presentation - Transport infrastructure and travel demand in energy system models, in Enhancing the state of transport modelling in IAMS, Expert Workshop. IIASA Austria, Nov 2013.
  - Workshop presentation - Modelling indirect emissions within UK TIMES, in 63rd Semi-annual ETSAP meeting, International Energy Agency, Paris, June 2013.
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