

Dr James Glynn

PhD, M.Sc., M.A., B.Eng.

Energy Systems Engineer

Research Fellow (SFI MaREI Centre for Energy Climate & Marine, IRELAND)

International Energy Agency-ETSAP Executive Committee (INTERNATIONAL)

School Fellow of Engineering and Architecture (University College Cork, IRELAND)

Visiting Researcher (Faculty of Engineering, Imperial College London, United Kingdom)

Visiting Scientist (CMCC, Euro-Mediterranean Centre on Climate Change, ITALY)



- 3 Nature group papers in the last 18 months, with 3 currently in review.
- Leading the €1.4M CHIMERA project with 18 researchers in Ireland & China. Leading Development of TIMES-World Model.
- CO-PI on €2.5M CAPACITY project providing service provision to Irish Government for climate action transition modelling and policy insights. Leading development of TIMES Ireland Model (TIM)
- Leading expert in TIMES energy system modelling
- Co-Convenor of ISIMIP project on climate variation, fluctuations and Extreme impacts on energy system working group
- >15 years academic & industry experience
- >60 journal/conference papers, book chapters & reports
- €5.8 million in research funding
- Supervision: 6 Masters & 4 PhDs
- Extensive project management incl. lead

SKILLS OVERVIEW

| | |
|------------------------------------|---|
| Research Interests | Energy systems modelling; Integrated assessment modelling; Mitigation technology & policy pathways; Hybrid Multi-model methods. Equitable decarbonisation; Sustainable development; Energy security, Climate variation, fluctuations and Extreme impacts on energy systems. |
| Technical Skills | Expert TIMES developer. Coordinating TIMES_IRELAND, TIMES-GEO and previous ETSAP-TIAM coordinator; developer of MACRO/MSA, climate and local air pollution, monte carlo analysis, and parametric time slice resolution TIMES extensions; data visualisation & mining. |
| Peer Recognition | Invited Expert to Irish Climate Action Committee on the pre-legislative scrutiny of the Climate Action Bill 2020. Irish representative on the IEA-ETSAP Executive Committee. Invited Expert to on IEA Energy Technology Perspectives in energy systems modelling and carbon capture and storage. Invited Expert for the European Commission DG Clima, DG Ener, USA GOV DoE, JPI-Climate, Oil and Gas Climate Initiative, IEAGHG, Irish Climate Change Advisory Council, SEAI. Awarded School Fellowship for contributions above and beyond research requirements for mentoring, supervision and lecturing of undergraduate and research postgraduates. |
| Supervision, Mentoring & Lecturing | Prepare lectures, notes & assignments for 3 masters courses, 3 undergraduate courses, delivered invited lectures to UL & NUIG masters courses, & EU Commission knowledge transfer workshops. EU Commission TIAM expert; supervise 7 students & mentoring with team PhD & Post-Docs. |
| Funding Record | Won competitive proposals during PhD & Post-Doc & Research Fellowships from international & national, research & industry sources; led & contributed to 9 successful grant proposals. ~€5.8 million from 6 different funders |
| Communication | Excellent written & presentation skills; wide dissemination of research findings in academic journals, national & international conferences, government briefs, infographics & support, industry workshops/reports, NGO & public seminars, Television, Radio, Social media. |

Project Management Leading and coordinating a team of 18 researchers between Ireland and Beijing. Collaborated management of international projects; technical & financial reporting; Senior EPMG-MaREI member of 28 researchers. steering committee member of I3E-COSMO, BEAM-ME (DLR), METIS (European Commission model) & Climate-Lab. Completed 4 year PhD;

ACADEMIC, AND CONSULTING WORK EXPERIENCE

School Fellow (November 2020 – Present) School of Engineering and Architecture, University College Cork
Awarded for Peer recognition for fulfilling very important roles to the School's academic activity, from providing tuition in lectures, tutorials or labs, to providing significant supervision roles of postgraduate and final year project works, to enabling the School to avail of unique top-class research facilities

Visiting Researcher, (June 2019 – Present) Faculty of Engineering, Imperial College London
Awarded for contribution to research in the Faculty of Engineering and the Grantham Institute in Imperial College London.

Visiting Scientist, (April 2019 – Present) CMCC Foundation – Euro-Mediterranean Center on Climate Change
Awarded for contribution to research in the CMCC for hybrid macroeconomic (CGE) energy systems modelling.

Research Fellow (May 2018 – Present; level 3 of 4), MaREI Centre UCC – Lead the SFI-NSFC CHIMERA Project (€1.4M). The SFI-NSFC research partnership project is developing a state of the art global hybrid energy systems model in the TIMES framework for exploring global energy-environment-economy research questions around achieving the United Nations sustainable development goals, the UN Paris Agreement climate goals, local air pollution, and the Chinese one belt one road policy.

Postdoctoral Researcher, (April 2016 – April 2018; level 2/10), University College Cork.
SFI MaREI centre spoke funded research on energy-economy modelling.

The research project developed hybrid-energy-economy modelling capacity for Irish & global decarbonisation pathways to understand the macroeconomic feedbacks and social impacts of deep decarbonisation towards future equitable zero carbon energy systems.

The methodologies and work of this project included:

- TIMES-MACRO energy system model development; Irish-TIMES & ETSAP-TIAM-MACRO
- Extensive engagement with academic, industry, and public sector through meetings, workshops, poster and event presentations, knowledge transfer workshops, & conferences

The project has resulted in the following outputs & additional outcomes:

- Developing methods & insights leading to successful SFI-NSFC €960,000 research grant
- Developing SSPs, MACRO, climate model, local air pollution & debugging in ETSAP-TIAM
- Results presented in seminars, meetings, national and international workshops
- Results published on global macroeconomic impacts of local air pollution damage costs
- Paper: Zero carbon energy system pathway & macroeconomic impacts for Ireland
- Increased collaboration, projects, & working papers with national (CCAC, ESRI etc.) & international organisations (IEA-ETP, UCL, PSI, CIRED, TODAI, Oxford, Imperial, OGCI, etc.)
- Commercialisation of supervised research of spatial fuel switching to Gas Networks Ireland
- Lead and manage international research consortium on the role of CCS in IAMs

Visiting Researcher CIRED, Paris (January 2016 – April 2016) University College Cork

A research collaboration (invited at COP21), between PhD submission and defence, to develop a soft linking approach to a hybrid integrated assessment model - TIAM-KLEM – linking a global integrated energy systems model to a global general equilibrium macroeconomic model.

Consulting Globally, (January 2015 – Present)

Providing energy systems modelling expertise to Irish government departments, US department of Energy, European commission, Korean Government, Industry, and financial services.

PhD Researcher (October 2011 – December 2015) School of Engineering, University College Cork

Thesis: Assessing Energy Security and Macroeconomic Feedback in National and Global Integrated Energy Systems Models.

The PhD research developed a range of analytical frameworks and energy system modelling methods ranging from energy security index metrics, energy system scenario analysis, and to hybrid macroeconomic feedback impacts from equitable energy system decarbonisation.

The methodologies include:

- Energy systems modelling & hybridisation developing IE-TIMES-MACRO
- Development of ETSAP-TIAM-MACRO for exploring global equitable decarbonisation
- Development of a framework and analysis of Irish energy security, past & policy direction
- Organisation of two international workshops on hybrid-TIMES modelling methods
- Statistical analysis and data mining of equitable carbon budgets & mitigation finance

The outputs and outcomes of this doctoral research include the following:

- Published cited papers, book chapters, government policy, and SEAI reports
- Became internationally recognised advanced TIMES user, Ireland & Global
- Contributed to national energy policy formulation via consultation and technical reports delivered to SEAI, Department of Energy and Department of Environment
- EU DG-CLIMA contact & led UCC UNFCCC COP21 side event on equitable decarbonisation

INDUSTRY WORK EXPERIENCE

Research Engineer & CFD Expert, (June 2007 – July 2009), HMRC, University College Cork

Computational Fluid Dynamic Modeller of Ocean energy prototypes in development.

Built and used a high performance computer cluster for mathematical modelling of tidal and wave ocean energy prototype devices in research & development TRL phase 2-5.

Project Engineer, (January - June 2007), Renewable Power Generation, Dublin, IRELAND.

Wind energy auto-production feasibility providing site appraisal, financial, and energy analysis.

Computer Aided Design Teacher & Design Engineer, (2004 – 2005), Roche Engineering, Galway

EDUCATION

PhD in Energy Engineering, 2011-2015, University College Cork. Thesis: Assessing Energy Security & Macroeconomic feedback in National and Global Integrated Energy Systems Models

M.A. in Economic & Environmental Modelling, 2010 – 2011, National University of Ireland Galway.
Thesis: Total Social Economic Value of Community Wind Farms.

M.Sc. in Energy Systems and the Environment, 2005 – 2006, Strathclyde.
Thesis: Design of Biomimetic Passive Control of Oscillating Hydrofoils in Tidal Energy Capture.

B.Eng. in Mechanical Engineering, 2000 – 2004, National University of Ireland Galway.
Thesis: Research, Development, Design and Construction of a Beta-Type Stirling Engine.

RECENT PROJECTS

Irish Government, Department of Communications, Climate Action and Environment - CAPACITY December 2018 – December 2022

The 2015 Paris Agreement contains a commitment to “Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels”. Ireland, like most other countries, has ratified the Paris Agreement. Adhering to Paris Agreement temperature goals will require “global peaking of greenhouse gas emissions as soon as possible... rapid reductions thereafter ... so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century”. Despite this high-level commitment, a clear and detailed pathway that would align Ireland with the Paris Agreement goals has yet to be developed and agreed.

Energy system models can support the exploration, development, decision-making and governance of long-term pathways consistent with the long-term Paris Agreement goals. The Energy Policy and Modelling Group at MaREI have developed a suite of energy modelling tools together with an internationally recognized expertise in their development and usage. The CAPACITY project will further develop and update these tools to facilitate insights and robust decision making about the appropriate long-term decarbonisation pathway for Ireland. The CAPACITY project will also work closely with policy-makers in Ireland to enhance the absorptive capacity of the governance system to utilise the insights from these energy modelling tools.

<https://www.marei.ie/project/capacity/>

IEA-ETSAP SubRES project (Update & replace eTech Briefs) Jun 2018 – Present

<https://iea-etsap.org/index.php/etsap-projects>

IEA-ETSAP: ETSAP-TIAM.v3 Update Nov 2017 – Present

<https://iea-etsap.org/index.php/etsap-projects>

SFI-NSFC CHIMERA Project May 2017 – Present

The Paris Agreement achieves global consensus on the ambition to limit anthropogenic climate warming to “well below 2°C” and to pursue efforts towards 1.5°C.

Integrated assessment models (IAMs) are a key methodological tool for systematically investigating long term trade-offs between the energy system, the climate system and the broader socio-economic systems. Such models play an important role in underpinning the scientific debate on climate change mitigation and adaptation options. Their results inform assessments by bodies such as the IPCC, and feed directly or indirectly into advice taken up by national and international policy makers, industry, regulators and citizens groups.

In this project we investigate the ambitious Paris Agreement 1.5°C goal, through novel integrated multi-model multi-scale coupling of detailed technology rich energy systems models for China, Ireland and the World.

We aim to outline the impacts of additional costs and trade-offs of rapid deep decarbonisation, and give critical insights into technology roadmaps and policy pathways on how the zero carbon transition to sustainability could affect societal sectors and household income groups.

We aim to quantify the impacts of a zero carbon energy system upon local-air pollution, public health, water quality, climate damages, employment and economic stimulus.

<https://www.marei.ie/project/chimera/>

IEA-ETSAP: Addressing uncertainty in TIMES [ETSAP-TIAM] using Monte Carlo Analysis Nov 2017 – Jun 2019

This project expands the TIMES modelling framework with computationally efficient Monte Carlo Analysis (MCA) method, suitable for probabilistic risk assessment. By attaching probabilities to inputs, MCA allows uncertainty quantification, such as likelihood in achieving certain policy targets, and the relationships between inputs and outputs. Correlated inputs can be represented by their joint probability distribution, which is then given as an input to the MCA. The methodology is tested with the ETSAP-TIAM model, analysing 2C pathways.

OPEN ACCESS code, scripts and manual Here:

<https://iea-etsap.org/projects/TIMES-MCA%20Final%20Report.zip>

IEA-ETSAP: Linking TIMES to GTAP Nov 2017 – Jun 2019

<https://iea-etsap.org/index.php/etsap-projects>

IEAGHG: CCS in Energy and Climate Scenarios Mar 2017 – Nov 2018

Integrated assessment models (IAMs) quantify the interactions and trade-offs between societal demands for energy, economic, and environmental services, using a systems approach. These systems are typically the energy system, the economy, the earth-land system, the water system and atmospheric climate system, although every IAM does not necessarily include all these systems and have varying degrees of completeness or complexity.

The mathematical approach underpinning each IAM can vary across the models. Classifications include whether a model's equations finds a partial equilibrium or general equilibrium between supply and demand, whether or not the model is attempting to optimise or simulate, the range of sectors included in the model, the treatment of discounting of costs, the temporal resolution and treatment of foresight; all of these influence the model dynamics and responsiveness in differing ways. Each IAM has its own strengths and weaknesses. Some industry medium-term models based on econometric simulation techniques describe their analysis as outlooks, implying a level of forecasting accuracy, while most research long-term IAMs do not claim to have forecasting capabilities as the future is too uncertain, and instead gain insights by describing sets of potential futures under scenario analysis covering a broad range of uncertainty in input assumptions.

CCS is represented in most IAMs and plays a key role in a large number of energy and emissions scenarios. While IAMs often align on high level messaging about the value and need for CCS, the actual role, impact and applications (e.g. power vs industrial, coal vs gas, CCS vs BECCS) vary considerably. Due to the nature of scenario making, the input data, background calculations and assumptions are not always presented in a clear and transparent way together with the results.

<https://www.ieaghg.org/publications/technical-reports/reports-list/9-technical-reports/948-2019-05-ccs-in-energy-and-climate-scenarios-2>

IEA-ETSAP: Enhancing and Preparing TIMES for High-Performance Computing (HPC) 2016 – 2017

The first objective of this project is to assess if TIMES can run on the Linux platform. Additionally, the project also aims for enhanced use of TIMES to be ready for High-Performance Computing. In modern computing terms, it would be prudent to ignore the latest advancements with multiple CPUs and High-Performance Computing Grids.

OPEN ACCESS Scripts, codes and manuals here:

<https://iea-etsap.org/index.php/etsap-projects>

IEA-ETSAP: Introducing Local Air Pollution in IEA-ETSAP TIAM 2015 – 2016

The Integrated Assessment Model TIAM-MACRO model was extended to consider externalities related to Local Atmospheric Pollution (LAP) of 15 world regions. Externalities are changes of welfare due to activities (in our case the impacts of LAP originated from the energy and transportation system) without being reflected in market prices (hence not paid by the polluters). TIAM-MACRO contributes to coherent and consistent policy analyses and insights both at the world and regional level and correlates demand for energy services to macro-economic developments across regions and time until the end of the 21st century.

<https://iea-etsap.org/index.php/etsap-projects>

IEA-ETSAP: Linking Energy Systems Models to Macro Economic Models Jan 2014 – Jun 2015

The objective is to improve methodologies for providing feedback from energy systems model results to the economic drivers and for determining the economic impacts of different energy scenarios.

<https://iea-etsap.org/index.php/etsap-projects>

IEA-ETSAP: ETSAP-TIAM.v2 Update 2014 – 2015

TIAM comprises several thousand technologies in all sectors of the energy system. It is characterized by several technical and economic parameters and by emission coefficients for the three main GHG's: CO₂, CH₄, and N₂O. The following new features have been added to TIMES: linearised climate equations; multi-stage stochastic programming; new formulation for the forcing equation (linear approximation of forcing), allowing greater flexibility and power to the ETSAP-TIAM; and the possibility of binding each and every component of the cost objective function.

<https://iea-etsap.org/index.php/etsap-projects>

RECENT PUBLICATIONS

- Seleshi G. Yalew*, Michelle TH van Vliet, David EHJ Gernaat, Fulco Ludwig, Ariel Miara, Chan Park, Edward Byers, Enrica De Cian, Franziska Piontek, Gokul Iyer, Ioanna Mouratiadou, **James Glynn**, Mohamad Hejazi, Olivier Dessens, Pedro Rochedo, Robert Pietzcker, Roberto Schaeffer, Shinichiro Fujimori, Shouro Dasgupta, Silvana Mima, Silvia R. Santos da Silva, Vaibhav Chaturvedi, Robert Vautard, Detlef P. van Vuuren. Global trends in climate change impacts on the energy sector and the need for multi-model assessments, **Nature Energy**, 2020 - www.nature.com/articles/s41560-020-0664-z 2020
- Gaffney, F., Deane, J. P., Drayton, G., **Glynn, J.**, & Gallachóir, B. P. Ó. (2020). Comparing negative emissions and high renewable scenarios for the European power system. **BMC Energy**, 2(1), 1–13. <https://doi.org/10.1186/s42500-020-00013-4>
- Realmonte, G., Drouet, L., Gambhir, A., **Glynn, J.**, Hawkes, A., Köberle, A. C., & Tavoni, M. (2020). Reply to “High energy and materials requirement for direct air capture calls for further analysis and R&D.” **Nature Communications**, 11(1), 10–11. <https://doi.org/10.1038/s41467-020-17204-6>
- Realmonte Giulia, Drouet Laurent, Gambhir Ajay, **Glynn James**, Hawkes Adam, Köberle Alexandre C, Tavoni Massimo 2019 An inter-model assessment of the role of direct air capture in deep mitigation pathways. **Nature Communications** (DOI: 10.1038_s41467-019-10842-5)
- Winning, M., Price, J., Ekins, P., Pye, S., **Glynn, J.**, Watson, J., McGlade, C., 2019. Nationally Determined Contributions under the Paris Agreement and the costs of delayed action. **Climate Policy** 0, 1–12. <https://doi.org/10.1080/14693062.2019.1615858>
- Tarun, S., **Glynn, J.**, Deane, P., Gargiulo, M., Rogan, F., Ó Gallachóir, B 2019. High performance computing for energy system optimisation models – An exploratory study. **Energy Policy**, Vol 128 PP 66-74
- Glynn, J.**, Gargiulo, M., Chiodi, A., Deane, P., Ó Gallachóir, B., 2019. Zero carbon energy system pathways for Ireland consistent with the Paris Agreement. **Climate Policy** 19:1, 30-42.
- Kypreos, S., **Glynn, J.**, Panos, E., Giannidakis, G., Ó Gallachóir, B. 2018. Energy, Climate Change and Local Atmospheric Pollution Scenarios evaluated with the TIAM-MACRO Model. **Systems** 6, 10; pp 1-18

- Yue, X., Rogan, F., **Glynn, J.**, Ó Gallachóir, B. 2018. From 2C to 1.5C – How ambitious can Ireland be? Lecture notes in Energy: Limiting Global Warming to Well Below 2 °C: Energy System Modelling and Policy Development. Springer books
- Karlsson, K., Norgard, J., Bermudez, J. G., Balyk, O., Wackernagel, M., **Glynn, J.**, Kanudia, A., 2018, The role of population, affluence, technological development and diet in a below 2C world. Lecture notes in Energy: Limiting Global Warming to Well Below 2 °C: Energy System Modelling and Policy Development. Springer books
- Winning, M., Pye, S., **Glynn, J.**, Scamman, D., Welsby, D., 2018. How low can we go? The implications of delayed ratcheting and negative emissions technologies on achieving well below 2C and towards 1.5C. Lecture notes in Energy: Limiting Global Warming to Well Below 2 °C: Energy System Modelling and Policy Development. Springer books
- Glynn, J.**, Gargiulo, M., Chiodi, A., Ó Gallachóir, B., 2017. Energy Security Assessment Methods: Quantifying the security co-benefits of decarbonising the Irish Energy System. SI: Modelling Energy Security. Energy Strategy Reviews.
- Glynn, J.**, Fortes, P., Krook-Riekkola, A., Labriet, M., Vielle, M., Kypreos, S., Lehtilä, A., Mischke, P., Dai, H., Gargiulo, M., Helgesen, P.I., Kober, T., Summerton, P., Merven, B., Selosse, S., Karlsson, K., Strachan, N., Gallachóir, B.Ó., 2015. Economic Impacts of Future Changes in the Energy System—Global Perspectives, in: Giannakidis, G., Labriet, M., Gallachóir, B.Ó., Tosato, G. (Eds.), Informing Energy and Climate Policies Using Energy Systems Models, Lecture Notes in Energy. Springer International Publishing, pp. 333–358.
- Glynn, J.**, Fortes, P., Krook-Riekkola, A., Labriet, M., Vielle, M., Kypreos, S., Lehtilä, A., Mischke, P., Dai, H., Gargiulo, M., Helgesen, P.I., Kober, T., Summerton, P., Merven, B., Selosse, S., Karlsson, K., Strachan, N., Gallachóir, B.Ó., 2015. Economic Impacts of Future Changes in the Energy System—National Perspectives, in: Giannakidis, G., Labriet, M., Gallachóir, B.Ó., Tosato, G. (Eds.), Informing Energy and Climate Policies Using Energy Systems Models, Lecture Notes in Energy. Springer International Publishing, pp. 359–387.
- Glynn, J.**, Chiodi, A., Gargiulo, M., Deane, J.P., Bazilian, M., Gallachóir, B.Ó., 2014. Energy Security Analysis: The case of constrained oil supply for Ireland. Energy Policy 66, 312–325. doi:10.1016/j.enpol.2013.11.043

WORKING PAPERS

- Glynn, J.**, Kypreos, S., Lehtilä, A., Yue, X., Chen, W., Ó Gallachóir, B., Panos, E. 2021, Assessing the resilience of Paris Agreement mitigation pathways to uncertainty in input parameters. **Nature Energy (In Preparation)**
- Ming Ren; Pantao Lu; Xiaorui Liu; M.S. Hossain; Yanru Fang; Tatsuya Hanaoka; Brian O’Gallachoir; **James Glynn**; Hancheng Dai, Ph.D. Low-carbon Transition Pathways for Chinese Iron and Steel Industry under Carbon Neutrality Target (**Submitted to Applied Energy**)
- Joshi, S., Mittal, S., Holloway, P., Ó Gallachóir B., Shukla, P.R., **Glynn J.** 2021 Hi-resolution assessment of global rooftop solar PV’s technical and economic potential using big data and machine learning. **Nature Communications (In Review)**
- Aryanpur, V., Chen, W., Hancheng, D., O’Gallachoir, B., **Glynn, J.**, A review of spatial resolution and regionalization in national energy systems optimization models. **Energy Strategy Reviews (under review)**
- Glynn, J.**, Ó Gallachóir, B., Burnard, K., Millar, R., Deane, P., Mac Dowell, N., 2018, The role of CCS in Integrated Assessment Model climate scenarios., International Journal of Greenhouse Gas Control. (In Preparation 2021)
- Alexandra Revez, PhD., MA., BA.; Niall Dunphy Dunphy; Clodagh Harris; Fionn Rogan; Edmond Byrne; Connor McGookin; Paul Bolger; Brian Ó Gallachóir; John Barry; Geraint Ellis; Barry O’Dwyer; Evan Boyle; Stephen Flood; **James Glynn**; Gerard Mullally (2021) Mapping public engagement in societal transitions: a scoping review . Energy Sustainability and Society
- Lei Yang, Ph.D candidate; Jingcheng Shi; James Glynn; Brian Ó Gallachóir, Wenying Chen. 2021, Modelling low carbon transition and economic impact under SSPs and RCPs Based on GTIMES. Advances in Climate Change Research. (In Review)

RECENT CONFERENCE PAPERS

- Glynn J.** 2021 Methods to explore climate impacts on zero carbon energy system mitigation pathways in TIMES-GEO. Proc ISIMIP Winter workshop 2021 – 3rd Annual Meeting of the Inter-sectoral Impact Model Intercomparison Project (ISIMIP), Virtual Online, Jan 11th 2020.
- Glynn J.** 2020 Visual analytics and scenario discovery techniques to explore large scenario ensembles & understand energy system model uncertainty: Application to 4,000 ETSAP-TIAM Paris Agreement scenarios. Proc IEA-ETSAP Winter workshop 2020 – 78th Semi-Annual Meeting of the IEA-ETSAP, Virtual Online, Dec 17th 2020.
- Yue, X., Ó Gallachóir B., **Glynn J.** 2020 Long-term energy planning towards 100% renewable electricity in Ireland with considerations of short-term constraints. Proc IEA-ETSAP Winter workshop 2020 – 78th Semi-Annual Meeting of the IEA-ETSAP, Virtual Online, Dec 17th 2020.
- Glynn J.**, Gargiulo, M., Joshi, S., Yue, X., Ó Gallachóir B. 2020. Introducing TIMES-GEO – A global IAM with hourly time resolution and high spatial resolution; exploring climate extreme impacts in pathways to a zero carbon power system. Proc IAMC 2020 – Thirteenth Annual Meeting of the Integrated Assessment Modelling Consortium, Virtual Online, Dec 4th 2020.
- Yue, X., Ó Gallachóir B., **Glynn J.** 2020 Long-term energy planning towards 100% renewable electricity in Ireland with considerations of short-term constraints. Proc IAMC 2020 – Thirteenth Annual Meeting of the Integrated Assessment Modelling Consortium, Virtual Online, Dec 4th 2020.

- Joshi, S., Mittal, S., Holloway, P., Ó Gallachóir B., Shukla, P.R., **Glynn J.** 2020 Hi-resolution assessment of global rooftop solar PV's technical and economic potential using big data and machine learning. Proc IAMC 2020 – Thirteenth Annual Meeting of the Integrated Assessment Modelling Consortium, Virtual Online, Dec 4th 2020.
- Brinkerink M., **Glynn J.**, Ó Gallachóir B., Deane P. 2019 Assessing SSP IAM 1.5°C-2°C Scenarios from a power system perspective with a detailed Hourly Global Electricity model Proc IAMC 2019 - Twelfth Annual Meeting of the Integrated Assessment Modeling Consortium, Tsukuba, Japan Dec 2 2019.
- S. Joshi, B.O. Gallachoir, **J. Glynn**, Application of Custom Neural Networks in Transport Sectors Energy Service Demand Estimation for SSPs, Integrated Assessment Modeling Consortium 2019, Tsukuba, Japan, 2 December, 2019
- Glynn, J.**, Kypreos, S., Panos, E., Lehtila, A. 2019. Addressing climate change uncertainty with a monte carlo version of TIMES. Proc 38th Annual Meeting of the International Energy Workshop, International Energy Agency, PARIS. 2nd – 5th June 2019
- Glynn, J.**, Kypreos, S., Panos, E., Lehtila, A. 2019. Addressing climate change uncertainty with a monte carlo version of TIMES. Proc 75th Bi-annual Meeting of the International Energy Agency Energy Technology Systems Analysis Programme (ETSAP) Workshop, International Energy Agency, PARIS. 6th - 7th June 2019
- Glynn, J.**, Hughes, I., Rogan, F. (2019) Integrating sociotechnical transition dynamics in scenario analysis for climate mitigation and sustainable development – the case of Ireland. Oral Presentation in the Proceedings of the 1st Scenarios Forum, Denver, USA 11th-13th March 2019
- Hughes, I., Rogan, F., **Glynn, J.** (2019) Exploring the role of individual and collective psychology on governance in future scenarios. Poster presentation in the Proceedings of the 1st Scenarios Forum, Denver, USA 11th-13th March 2019
- Glynn, J.**, Deane, P., Millar, R., MacDowell, N., Allen, M., Ó Gallachóir, B.P. 2018. Carbon capture and storage in IAMS & sensitivity of CDR to CCS capture rates in ETSAP-TIAM. Proc 11th Annual Meeting of the Integrated Assessment Modelling Consortium, EU-Joint Research Centre, Seville, SPAIN. 13th-15th November 2018
- Realmonte, G., Gambhir, A., **Glynn, J.**, Hawkes, A., Koberle, A., and Tavoni, M. The role of Direct Air Capture in Deep Mitigation Pathways. Proc 11th Annual Meeting of the Integrated Assessment Modelling Consortium, EU-Joint Research Centre, Seville, SPAIN. 13th-15th November 2018
- Glynn, J.**, Deane, P., Millar, R., MacDowell, N., Allen, M., Ó Gallachóir, B.P. 2018. Carbon capture and storage in IAMS & sensitivity of CDR to CCS capture rates in ETSAP-TIAM. Proc. IEA-ETSAP Workshop IER, Stuttgart, Nov 9 2018
- Glynn J.**, Mac Dowell, N., Realmonte, G., and O’Gallachoir B. P. 2018. The role of direct air capture and carbon dioxide remove in well below 2C scenarios in ETSAP TIAM. International Energy Agency –ETSAP Workshop, 17-18 Jun 2018, Chalmers University, Gothenburg, Sweden.
- Glynn, J.**, and Ó Gallachóir B. 2018 2C or not 2C, CDR is the question. Proc. ESRI-UCC-MaREI Energy Research Workshop. ESRI, Dublin May 17 2018.
- Glynn, J.**, Millar, R., Deane, P., Mac Dowell, N., Allen, M., and Ó Gallachóir B. 2017 A review of CCS representation in techno-economic energy systems models. Proc. 5th IEAGHG CCS costs network. Imperial College London, London, September 13-14 2017.
- Glynn, J.**, Mac Dowell, N., Yue, X., Ó Gallachóir, B., 2017. Direct air capture and the role of CDR in well below 2C scenarios in ETSAP-TIAM. Integrated Assessment Modelling Consortium, Recife, Brazil, December 2017.
- Yue, X., Rogan., **Glynn, J.**, Ó Gallachóir, B., 2017. Assessing mitigation feasibility and options for Ireland in 2050 with ESOM based MACCS. Integrated Assessment Modelling Consortium, Recife, Brazil, December 2017.
- Glynn, J.**, Gherzi, F., Franck Lecocq, F., Ó Gallachóir, B., 2017. Assessing technological mitigation pathways well below 2C in hybridising ETSAP-TIAM-KLEM. International Energy Workshop, Washington DC, USA, July 2017.
- Glynn, J.**, Ó Gallachóir, B., 2017. Mitigation pathways to well below 2C in ETSAP-TIAM. IEA-ETSAP workshop, Washington DC, USA, July 2017.
- Glynn, J.**, Gherzi, F., Franck Lecocq, F., Ó Gallachóir, B., 2016. Linking TIAM-KLEM: Economic impacts of WB2D mitigation pathways. Presented at the 70th IEA-ETSAP Workshop. CIEMAT, Madrid, SPAIN, November 2016.
- Glynn, J.**, Gherzi, F., Franck Lecocq, F., Ó Gallachóir, B., 2016. Hybrid linking TIAM-KLEM: Assessing technology pathways from INDCs towards 1.5 °C. Presented at the International Energy Workshop. Cork, IRELAND, June 2016.
- Glynn, J.**, Kypreos, S., Ó Gallachóir, B., 2016. Equitable Burden Sharing for 2°C: Modelling global macroeconomic impacts, net of policy benefits, in a carbon constrained energy system using ETSAP-TIAM-MACRO. Presented at the International Energy Workshop. Cork, IRELAND, June 2016.
- Glynn, J.**, Kypreos, S., Lehtila, A., Gargiulo, M., Ó Gallachóir, B. 2015. Optimal Equitable Burden Sharing: Modelling global macroeconomic impacts of the carbon constrained energy system using ETSAP-TIAM-MSA. Presented at the International Energy Workshop, 3rd June 2015, Abu Dhabi, United Arab Emirates.
- Glynn, J.**, Kypreos, S., Lehtila, A., Ó Gallachóir, B., 2015. Who pays for climate mitigation technologies? Quantifying green capital transfers for equitable decarbonisation. Presented at the 21st Conference of the Parties, Paris, FRANCE 2nd December 2015. www.youtube.com/watch?v=l4z2XEXuCo4
- Ó Gallachóir, B., **Glynn, J.** 2015. Links between energy systems models and economic models: Learning from the IEA ETSAP experience. Presented at Our common future under climate change, 7th – 10th July 2015, UNESCO, Paris, France
- Kypreos, S., **Glynn, J.**, Gargiulo, M., Lehtila, A., Ó Gallachóir, B. 2015. Modelling Efficient and Equitable Scenarios for a Carbon Constrained World with TIAM-MACRO. Presented at Our common future under climate change, 7th – 10th July 2015, UNESCO, Paris, France

SELECTED REPORTS

- Ó Gallachóir B.P., Deane, P., **Glynn J.**, Rogan, F. 2020 The Role of Energy Technology in Climate Mitigation in Ireland: Irish TIMES Phase 3. Published by EPA as Research Report 326.
- Bosello, F., Gaeta, M., Gargiulo, M., Giannakidis, G., **Glynn, J.**, Parrado, R., and Standardi, G. (2019) TIMES-GTAP soft-link methodology and interface. IEA-ETSAP technical report, Paris, FRANCE. September 2019 https://iea-etsap.org/projects/TIMES-GTAP_Exchange%20file.zip
- Kypreos, S., Lehtilä, A., **Glynn, J.**, and Panos, E. (2019) Addressing Uncertainty in TIMES Using Monte Carlo Methods. IEA-ETSAP technical report, Paris, FRANCE. April 2019 <https://iea-etsap.org/projects/TIMES-MCA%20Final%20Report.zip>
- Ó Gallachóir B.P., Chiodi A., Gargiulo, M., and **Glynn J.** 2019 Informing all of government plan on Climate Action. Report to DCCAE, Jan 2019.
- Glynn, J.**, Millar, R., Deane, P., Mac Dowell, N., Allen, M., Ó Gallachóir, B. (2019) Carbon capture and storage in climate stabilisation energy scenarios. IEAGHG technical report. UK. <https://ieaghg.org/publications/technical-reports>
- Ó Gallachóir B.P., Rogan F., Deane J.P., Glynn J. and Chiodi A. 2018 Increasing Ireland's Climate Action Ambition. Report to DCCAE, Nov 2018.
- Glynn, J.**, Burnard, K., Millar, R., Deane, P., Mac Dowell, N., Allen, M., Ó Gallachóir, B., US Department of Energy Office of Fossil Energy – Energy-economy Modelling Review Workshop Report. IEAGHG, 2017
- Kypreos, S., **Glynn, J.**, Panos, E., Giannidakis, G., Ó Gallachóir, B. 2016. Energy, Climate Change and Local Atmospheric Pollution Scenarios Evaluated with the TIAM-MACRO Model. ETSAP-Project: Introducing external costs for Local Atmospheric Pollution in TIAM-MACRO to study synergies and co-benefits of climate change mitigation. Paris, France.
- Dineen, D., Howley, M., Holland, M., Cotter, E., **Glynn, J.**, Byrne Ó Cléirigh Consulting, 2016. Energy Security in Ireland: A Statistical Overview. Sustainable Energy Authority of Ireland, Dublin, Ireland.
- Gallachóir, B.Ó., Deane, P., Chiodi, A., **Glynn, J.**, Rogan, F., 2015. Energy Modelling to Inform the White Paper. Department of Communications, Energy and Natural Resources, Government of Ireland, Dublin.
- Stanislaw Nagy (KIC InnoEnergy), Thierry Badouard & Nathalie Desbrosses (Enerdata), Paul Deane & **James Glynn** (UCC) Insight-E Report: "Shale gas prospects for Europe" 2015
- Aoun M-C., Pesut D., Matosovic M., Bosnjak R., Deane P., **Glynn J.**, Ó Gallachóir B., Nagy S., Badouard T., Desbrosses N., Taliotis C. de Boncourt M., Keramidis K. 2017 Gas Security of Supply in the European Union. Chapter in Elsevier book Europe's Energy Transition - Insights for Policy Making. ISBN: 978-0-12-809806-6.
- Deane, P., Curtis, J., Chiodi, A., Gargiulo, M., Rogan, F., Dineen, D., **Glynn, J.**, FitzGerald, J., Gallachóir, B.Ó.. (2013) Technical support on developing low carbon sector roadmaps for Ireland – Low carbon roadmaps for Ireland.

INVITED LECTURES, SEMINARS, TALKS, WEBINARS, PUBLIC APPEARANCES.

ETSAP WEBINAR (2021)

- Glynn J. and Ó Gallachóir B. 2020 The role of IEA-ETSAP in decarbonising Ireland's heat: pathways to net-zero energy systems. Proc. of Sustainable Energy Authority of Ireland National Energy Research and Policy Conference. 19th November 24 2020.
- Glynn, J. 2020 MaREI Expert Witness Statement on Carbon capture and offsetting in reaching carbon neutrality as part of the pre-legislative scrutiny of the Climate Action and Low Carbon Development (Amendment) Bill 2020. Presentation to the Joint Oireachtas Committee on Climate Action. 29th October 2020, Leinster House, Dublin.
- Ó Gallachóir B. and Glynn J. 2020 Heating and cooling: pathway to net-zero. Proc. EPA Workshop: Global Pathways; key sectors and negative emissions June 24 2020.
- Ó Gallachóir B., and Glynn, J., 2019 Carbon Budgets – The Irish Context. Presentation to the Climate Change Advisory Council Carbon Budget Workshop. October 21st 2019, Dublin.
- Deane, P., Ó Ciaráin, M., Ó Gallachóir B., Collins, S., Long, A., Murphy, J., Pye, S., Glynn, J., Chiodi, A., Gargiulo, M., Rogan, F., Yue, X. 2019 MaREI Submission on LNG and Energy Security. Presentation to Oireachtas Committee on Climate Action. Leinster House, Dublin October 2019.
- Glynn, J., and Ó Gallachóir B.P. 2019 Future electricity supply within zero carbon energy system pathways for Ireland consistent with the Paris Agreement. Proc EirGrid Internal Seminar Series, Dublin 31st July 2019
- Glynn, J., Deane, P., Millar, R., MacDowell, N., Allen, M., Ó Gallachóir, B.P. 2019. Carbon capture and storage in IAM climate stabilisation scenarios. Proc ERVIA-MaREI seminar, Cork, 25th March 2019
- Glynn, J., and Ó Gallachóir B.P. 2019 Zero carbon energy system pathways for Ireland consistent with the Paris Agreement. Proc Irish Renewable Energy Summit. Croke Park, Dublin 12th February 2019
- Glynn J., Kypreos S., Panos E., Giannidakis G., Volkart K. and Ó Gallachóir B.P. 2019 Burden Sharing rules in ETSAP-TIAM-MACRO Proc. Of the ISIPEDIA workshop. Utrecht, NETHERLANDS, 30th January 2019.
- Ó Gallachóir B. Rogan, F., Watson, C., Glynn, J., 2018 MaREI research findings on climate action. Presentation to Joint Oireachtas Committee on Climate Action. Leinster House, Dublin Dec. 12th, 2018

- Glynn, J., 2018. Carbon capture and storage in climate stabilisation energy scenarios. Proc. United States department of Energy Workshop on Carbon Capture Utilisation and Storage. University of Maryland, USA 17th October 2018
- Glynn, J., and Ó Gallachóir B. 2018 Zero carbon energy systems, carbon budgets and EVs. Presentation to senator Tim Lombard, ERI, Cork, Oct. 5th, 2018
- Glynn J., and O’Gallachoir B. P. 2018. TIMES-MSA and beyond – experiences linking Irish and Global TIMES models to macroeconomic models. Centre for Energy Policy, Strathclyde, SCOTLAND. 22nd May 2018
- Glynn J., and O’Gallachoir B. P. 2018. How much does the Green Climate Fund need to be? Presentation to green climate fund Chair Paul Oquist, University College Cork, IRELAND. 19th April 2018
- Glynn J., and O’Gallachoir B. P. 2018. Equitable capital transfers for equitable mitigation to stabilise temperature below 2C. Presentation to Centre for Global Development. University College Cork, IRELAND.
- Ó Gallachóir B., Deane P. and Glynn J. 2018 Electricity and Gas Modelling and Analysis. Presentation to US State Department Washington DC March 15 2018
- Ó Gallachóir B, Glynn J, Rogan F. and Deane P. 2017 Irish TIMES and Multi-Modelling Methods. Proc. DOE Office of Fossil Energy Energy-Economic Modeling Review Workshop, United States Energy Association, Washington DC, USA, April 3 2017
- Ó Gallachóir B., Yue X., Hanley E. and Glynn J. 2017 Long term mitigation scenarios. Presentation to Climate Change Advisory Council, ESRI, Dublin, Feb 22 2017
- Glynn J., Kypreos S., Gargiulo M., Ó Gallachóir B.P. 2016 Bridging the gap between NDCs & Paris Ambition: equitable finance for pathways well below 2°C. Proc. IEA ETSAP Workshop on Energy Models & Applications Today, Tokyo, Dec 14 2016
- Glynn J, Gherzi F. and Ó Gallachóir B.P. 2016 Linking TIAM and KLEM: Economic impacts of well below 2DS mitigation pathways Proc. IEA ETSAP Workshop Nov 17-18 Madrid.
- Glynn J, Gherzi F. and Ó Gallachóir B.P. 2016 Linking TIMES and CGE Models - IEA ETSAP Experience. Proc. IPPI CEP Workshop Nov 9 2016 Univ Strathclyde
- Krah K, Glynn J and Ó Gallachóir B. 2016 Residential household proximity to the gas network? ESRI – UCC Energy Research Workshop ESRI, Dublin 7th June 2016
- Glynn J., Lecoq F., 2016 Bridging the gap between INDCs and Paris ambition. ESRI – UCC Energy Research Workshop ESRI, Dublin 7th June 2016
- Ó Gallachóir B., Deane J.P. and Glynn J. 2016 IEA ETSAP Energy Systems Modelling - recent developments using multi-modelling techniques. Presentation to IIASA Laxenburg, Austria Jan 29 2016
- Glynn J., Kypreos S., Lēhtila A., Ó Gallachóir B.P. 2015 Who pays for climate mitigation technologies? Quantifying green capital transfers for equitable decarbonisation Presentation at UCC’s COP-21 Side Event on Equitable decarbonisation of the global energy system - regional perspectives, Le Bourget, Paris, France Dec 3 2015
- Gargiulo M., Curtis J., Glynn J., Fitzgerald J. and Ó Gallachóir B. 2015 Comparing hard-linking (TIMES-MSA) and soft-linking (TIMES-HERMES) methodologies for quantifying economic impacts of mitigation. Proc. 68th Semi-annual IEA ETSAP Workshop, October 22 – 23 2015, Sophia Antipolis, France.
- Ó Gallachóir B., Glynn J., Curtis J., Deane P., Krah K. 2015 A Strategic Approach to simultaneously improving energy affordability and energy efficiency Energy Action Fuel Poverty Conference Croke Park, Dublin 5th October 2015
- Ó Gallachóir B. and Glynn J. 2015 Linking Energy system Models with Economic Models: Learning from the IEA ETSAP experience. Proc UNESCO Conference Our Common Future Under Climate Change July 7-10 2015 Paris.
- Kypreos S., Glynn J., Ó Gallachóir B., Gargiulo M. and Lehtila A. 2015 Modelling Efficient and Equitable Scenarios for a Carbon Constrained World with TIAM-MACRO. Proc UNESCO Conference Our Common Future Under Climate Change July 7-10 2015 Paris.
- Winning M., Mcglade C., Glynn J. 2015 The regional macroeconomic effects of delayed action in meeting a global 2 degree climate target Proc. Our Common Future Under Climate Change (CFCC) Conference July 7 – 10, 2015 Paris, France.
- Ó Gallachóir B., Deane P., Glynn J., Chiodi A. 2015 Ireland’s future energy system. Proc Energy Ireland Conference June 18 2015, Dublin.
- Curtis J., Glynn J., Regan L., Ó Gallachóir B. 2015 How can we strategically address fuel poverty and simultaneously improve energy efficiency? ESRI – UCC Energy Research Workshop ESRI, Dublin 9th June 2015.
- Glynn J., Kypreos S., Gargiulo M., Ó Gallachóir B. 2015 How can we achieve a global 2°C target in an efficient and equitable manner? ESRI – UCC Energy Research Workshop ESRI, Dublin 9th June 2015.
- Gargiulo M, Glynn J., Curtis J, FitzGerald J. and Ó Gallachóir B 2014 How do future changes in the energy systems impact on the economy? Proc. ESRI – UCC Energy Research Workshop 2014 ESRI, Dublin 16th June 2014
- Ó Gallachóir B, Gargiulo M, Chiodi A, Glynn J. and Deane P. 2014 Gaining additional insights from TIMES Soft – linking with other models Presentation to Institute of Energy, Environment and Economy, Tsinghua University, June 4, 2014.
- Ó Gallachóir B.P., Deane J.P., Glynn J., Chiodi A. and Gargiulo M 2014 Modelling Future Energy & Climate Scenarios Presentation to UCC-ESB UCC Decarbonisation workshop April 4 2014
- Glynn J. and Ó Gallachóir B.P. 2013 Energy Systems Models and Macroeconomic Models: Soft Linking Irish TIMES and the IMF GIMF DSGE model to examine energy security. Proceedings International Energy Agency ETSAP Workshop June 17 – 18 2013, Paris, France
- Glynn J. and Ó Gallachóir B.P. 2013 Irelands Energy (in)Security Nexus. Proc. ESRI-UCC Energy Research Workshop June 14 2013.

- Glynn J., Chiodi A., Gargiulo M., Deane JP, Ó Gallachóir B.P. 2012 Ireland's energy (in)security Presentation to Bord Gais November 13 2012 Cork
- Ó Gallachóir B. P., Glynn J., Gargiulo M. and Chiodi A., 2012 IEA Energy Systems Modelling: Energy Security Scenarios for Ireland Proc. IIEA Workshop Energy: The next systemic risk to banking? 17th April 2012
- Ó Gallachóir B. P., Chiodi A., Gargiulo M. and Glynn J. 2012 Energy Scenarios to 2050. Proc. Environment Planning and Sustainability Colloquium, UCC March 7 2012

GOVERNMENT COMMITTEES, MEDIA, TV, RADIO, PUBLIC MEDIA, OP-EDS, BLOGS, INFOGRAPHICS AND OUTREACH

- Kathriona Devereux, 19th January 2021 In her weekly column Kathriona Devereux says humans struggle to grasp the concept that current actions will have adverse consequences in the future. (James Glynn Research quoted)
<https://www.echolive.ie/corkviews/arid-40209767.html>
- Environmental Research Institute News & Media November 2020, Energy Policy and Modelling Group advise on Climate Action and Low Carbon Development Bill. (James Glynn Expert witness evidence to the Oireachtas Committee on Climate action outlined)
<https://www.ucc.ie/en/eri/news/energy-policy-and-modelling-group-advise-on-climate-action-and-low-carbon-development-bill-.html>
- Glynn, J.**, 2020. Submission of Invited expert witness evidence to the Joint Committee on Climate Action – Scrutiny of the draft of the Climate Action and Low Carbon Development (Amendment) Bill 2020 – (James Glynn gave 2 hour expert witness to government committee) <https://www.oireachtas.ie/en/press-centre/press-releases/20201218-joint-committee-on-climate-action-launch-report-on-pre-legislative-scrutiny-on-the-draft-of-the-climate-action-and-low-carbon-development-amendment-bill-2020/>
- O'Sullivan K. 2020 Using nature to capture carbon must be recognised fully in Climate Bill - committee told. [Irish TIMES](#) 29th October 2020. (James Glynn Quoted)
- Hoard, P., 2020. Room for Improvement in 'vague' Climate Bill, Cork-based academic warns. [Irish Examiner](#) 29th October 2020
- Glynn et al, 2020, First full picture of COVID19 restrictions on Ireland's pollution levels revealed: <https://www.marei.ie/marei-covid-19-analysis/>
- Boucher-Hayes, P., 2020. Covid-19 and the Climate - Drivetime's Philip Boucher-Hayes reports on the impact of the lockdown on the environment. RTE RADIO 1 (James Glynn Interviewed for Primetime Radio)
<https://www.rte.ie/radio/radioplayer/html5/#/radio1/21771909>
- Gorey, C., 2020 How have Ireland's pollution levels changed as a result of Covid-19?, Silicon Republic: (James Glynn Interviewed)
<https://www.siliconrepublic.com/innovation/covid-19-pollution-levels-ireland-marei>
- The Journal.ie (2020) Dramatic fall in Ireland's transport pollution as we undertake "natural Experiment". (James Glynn quoted):
<https://www.thejournal.ie/transport-pollution-5102932-May2020/>
- Murray, D., 2020, Covid-19 restrictions bring a healthy drop in pollution. Business Post (James Glynn quoted):
https://www.businesspost.ie/climate-environment/covid-19-restrictions-bring-a-healthy-drop-in-pollution-8c90b952?utm_campaign=article&utm_source=twitter&utm_medium=web
- Coogan, P.J., 2020. James Glynn interviewed on impact of COVID19 on Irish CO2 emissions. 96FM radio.
<https://play.acast.com/s/corks-96-fm-opinion-line/6d7a7fad-2171-4ed7-8f9c-c5f0006cb288> (start at 1hr:43min)
- Pryce, J 2020. James Glynn interviewed about the impact of COVID19 on Irish CO2 emissions. Tipp Mid West Radio Call with Joe Pryce: <https://www.tippmidwestradio.com/schedule/#thu>
- O'Sullivan K. 2020 Coronavirus: Lockdown leads to drop in car pollution and CO2 emissions: Ireland could save 3 million tonnes of carbon this year as commuters cut car journeys. [Irish TIMES](#) 19th May 2020 2020. (Analysis Lead by James Glynn)
- A Daly H., Glynn, J., Ó Gallachóir B.P. 2020 It is not clear is the Green Party's target is feasible. [Irish Times](#) April 30 2020
- O'Sullivan K. 2020 Greens' 7% carbon cut requires 'far-reaching changes' and €40bn, experts say. [Irish Times](#) April 30 2020 (Analysis by Daly H., Glynn, J., Ó Gallachóir B.P. quoted)
- Evans, S., 2019. Direct CO2 capture machines could use a quarter of global energy in 2100. Carbon Brief 22nd July 2019. (James Glynn Research Piece) <https://www.carbonbrief.org/direct-co2-capture-machines-could-use-quarter-global-energy-in-2100>
- Khan, F (Senior Nature Energy Editor) 2019 – Scenarios Forum 2019 – Four places scenario modelling can go next – The writers of the story of our future search for greater verisimilitude. (James Glynn quoted)
<https://socialsciences.nature.com/posts/45744-scenarios-forum-2019-march-11-13-2019>
- Glynn (2018) The ups and downs and operating an electric vehicle. RTE Brainstorm. <https://www.rte.ie/eile/brainstorm/2018/0508/961065-the-ups-and-downs-of-operating-an-electric-car/>
- Glynn (2018) The other budget: why it's time for an annual carbon budget. <https://www.rte.ie/eile/brainstorm/2018/1001/999173-the-other-budget-why-its-time-for-an-annual-carbon-budget/>

Gordon Hunt (2017) Building a global electricity grid, one transatlantic cable at a time. [Silicon republic](#)

PROFESSIONAL AWARDS, HONOURS & ACTIVITIES

- Joint BEST Poster at the 13th meeting of the Integrated Assessment Modelling Consortium: Joshi, S., Mittal, S., Holloway, P., Ó Gallachóir B., Shukla, P.R., **Glynn J.** 2020 Hi-resolution assessment of global rooftop solar PV's technical and economic potential using big data and machine learning. Proc IAMC 2020 – Thirteenth Annual Meeting of the Integrated Assessment Modelling Consortium, Virtual Online, Dec 4th 2020.
- Invited to convene the ISIMIP protocol on Climate Variations, Fluctuations and Extremes in Future energy systems by PBL and PIK 2021
- Invited Expert to Irish Climate Action Committee on the pre-legislative scrutiny of the Climate Action Bill 2020.
- Irish representative on the IEA-ETSAP Executive Committee.
- Invited Expert to on IEA Energy Technology Perspectives in Systems Modelling and Carbon Capture and Storage.
- Invited Expert to JPI-Climate reporting on GHG balance in the Paris Agreement 2018
- Invited expert to European Commission on global integrated assessment modelling. September 2017
- Expert reviewer for Nature Energy, Nature Communications, Philosophical Transactions of the Royal Society, IPCC SR1.5, IEA-Energy Technology Perspectives, Energy Strategy Reviews, Energy Policy, Energy Economics, Energies, Sustainability
- Invited guest lecturer – National University of Ireland, Galway & University of Limerick
- Co-author for Insight-E energy think-tank of EU commission on security & shale gas
- Invited co-author to SEAI assessment of Ireland's energy security
- Organising and local committee member of the International Energy Workshop 2016
- COP21 – Successful COP21 side event applicant, primary contact point with EU DG-CLIMA, & lead author of paper presented at first Irish University Side Event at a UNFCCC COP. Represented University College Cork at French Embassy by invitation
- Invited expert to Irish government on energy security for white paper consultation
- Invited expert to Irish Government for input on energy poverty assessment for the Energy Affordability Strategy
- Invited to the International Monetary Fund for training on Global Integrated Monetary & Fiscal Policy Modelling – Washington D.C., USA
- Transition Galway – Local environmental organisation transitioning to a low carbon community. Co-author on Energy Chapter of "A 2030 Vision for Galway"

MEMBERSHIPS

REFERENCES

Available on request