

Brian O Gallachoir

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

115
papers

3,993
citations

31
h-index

60
g-index

115
ext. papers

4,859
ext. citations

7.2
avg, IF

6.03
L-index

#	Paper	IF	Citations
115	Techno-economic review of existing and new pumped hydro energy storage plant. <i>Renewable and Sustainable Energy Reviews</i> , 2010 , 14, 1293-1302	16.2	379
114	The role of hydrogen in low carbon energy futures – A review of existing perspectives. <i>Renewable and Sustainable Energy Reviews</i> , 2018 , 82, 3027-3045	16.2	223
113	Impacts of Electric Vehicle charging under electricity market operations. <i>Applied Energy</i> , 2013 , 101, 93-102.	10.7	190
112	A strategic review of electricity systems models. <i>Energy</i> , 2010 , 35, 4522-4530	7.9	179
111	Soft-linking of a power systems model to an energy systems model. <i>Energy</i> , 2012 , 42, 303-312	7.9	158
110	Energy access scenarios to 2030 for the power sector in sub-Saharan Africa. <i>Utilities Policy</i> , 2012 , 20, 1-16	3.3	157
109	Incorporating flexibility requirements into long-term energy system models – A case study on high levels of renewable electricity penetration in Ireland. <i>Applied Energy</i> , 2014 , 135, 600-615	10.7	140
108	The impact of sub-hourly modelling in power systems with significant levels of renewable generation. <i>Applied Energy</i> , 2014 , 113, 152-158	10.7	132
107	Integrating short term variations of the power system into integrated energy system models: A methodological review. <i>Renewable and Sustainable Energy Reviews</i> , 2017 , 76, 839-856	16.2	122
106	Energy and emissions forecast of China over a long-time horizon. <i>Energy</i> , 2011 , 36, 1-11	7.9	101
105	A perspective on the potential role of renewable gas in a smart energy island system. <i>Renewable Energy</i> , 2015 , 78, 648-656	8.1	95
104	Impacts of Inter-annual Wind and Solar Variations on the European Power System. <i>Joule</i> , 2018 , 2, 2076-2090	10.7	81
103	Modelling the impacts of challenging 2050 European climate mitigation targets on Ireland's energy system. <i>Energy Policy</i> , 2013 , 53, 169-189	7.2	81
102	Coal use for residential heating: Patterns, health implications and lessons learned. <i>Energy for Sustainable Development</i> , 2017 , 40, 19-30	5.4	73
101	A review of the role of distributed generation (DG) in future electricity systems. <i>Energy</i> , 2018 , 163, 822-836	10.7	69
100	A review of approaches to uncertainty assessment in energy system optimization models. <i>Energy Strategy Reviews</i> , 2018 , 21, 204-217	9.8	66
99	The role of hydrogen in high wind energy penetration electricity systems: The Irish case. <i>Renewable Energy</i> , 2004 , 29, 471-489	8.1	65

98	Can we meet targets for biofuels and renewable energy in transport given the constraints imposed by policy in agriculture and energy?. <i>Journal of Cleaner Production</i> , 2010 , 18, 1671-1685	10.3	62
97	Incorporating travel behaviour and travel time into TIMES energy system models. <i>Applied Energy</i> , 2014 , 135, 429-439	10.7	59
96	Adding value to EU energy policy analysis using a multi-model approach with an EU-28 electricity dispatch model. <i>Energy</i> , 2017 , 130, 433-447	7.9	50
95	Addressing the technical and market challenges to high wind power integration in Ireland. <i>Renewable and Sustainable Energy Reviews</i> , 2013 , 19, 692-703	16.2	50
94	The long haul towards decarbonising road freight A global assessment to 2050. <i>Applied Energy</i> , 2018 , 216, 678-693	10.7	48
93	Long-term energy models: Principles, characteristics, focus, and limitations. <i>Wiley Interdisciplinary Reviews: Energy and Environment</i> , 2013 , 2, 158-177	4.7	48
92	Modelling the impacts of challenging 2020 non-ETS GHG emissions reduction targets on Ireland's energy system. <i>Energy Policy</i> , 2013 , 62, 1438-1452	7.2	44
91	An integrated gas and electricity model of the EU energy system to examine supply interruptions. <i>Applied Energy</i> , 2017 , 193, 479-490	10.7	43
90	Supporting security and adequacy in future energy systems: The need to enhance long-term energy system models to better treat issues related to variability. <i>International Journal of Energy Research</i> , 2015 , 39, 377-396	4.5	40
89	Fossil fuel and CO2 emissions savings on a high renewable electricity system A single year case study for Ireland. <i>Energy Policy</i> , 2015 , 83, 151-164	7.2	38
88	Quantifying stranding risk for fossil fuel assets and implications for renewable energy investment: A review of the literature. <i>Renewable and Sustainable Energy Reviews</i> , 2019 , 116, 109402	16.2	37
87	Derivation of Intertemporal Targets for Large Pumped Hydro Energy Storage With Stochastic Optimization. <i>IEEE Transactions on Power Systems</i> , 2013 , 28, 2147-2155	7	35
86	Financial incentives to mobilise local citizens as investors in low-carbon technologies: A systematic literature review. <i>Renewable and Sustainable Energy Reviews</i> , 2017 , 75, 534-547	16.2	33
85	Modelling the economic impacts of 500MW of wave power in Ireland. <i>Energy Policy</i> , 2012 , 45, 614-627	7.2	32
84	Improved modelling of thermal energy savings potential in the existing residential stock using a newly available data source. <i>Energy</i> , 2015 , 90, 759-767	7.9	31
83	Modelling the impacts of building regulations and a property bubble on residential space and water heating. <i>Energy and Buildings</i> , 2011 , 43, 166-178	7	31
82	How private car purchasing trends offset efficiency gains and the successful energy policy response. <i>Energy Policy</i> , 2009 , 37, 3790-3802	7.2	30
81	Wind turbine availability: Should it be time or energy based? A case study in Ireland. <i>Renewable Energy</i> , 2011 , 36, 2967-2971	8.1	30

80	Economic modelling of price support mechanisms for renewable energy: Case study on Ireland. <i>Energy Policy</i> , 2007 , 35, 1172-1185	7.2	30
79	Modelling private car energy demand using a technological car stock model. <i>Transportation Research, Part D: Transport and Environment</i> , 2011 , 16, 93-101	6.4	29
78	Modelling future private car energy demand in Ireland. <i>Energy Policy</i> , 2011 , 39, 7815-7824	7.2	29
77	Development of a modelling framework in response to new European energy-efficiency regulatory obligations: The Irish experience. <i>Energy Policy</i> , 2009 , 37, 5363-5375	7.2	29
76	Building a wave energy policy focusing on innovation, manufacturing and deployment. <i>Renewable and Sustainable Energy Reviews</i> , 2010 , 14, 2339-2358	16.2	29
75	Decarbonizing China's iron and steel industry from the supply and demand sides for carbon neutrality. <i>Applied Energy</i> , 2021 , 298, 117209	10.7	29
74	Quantifying the impacts of national renewable electricity ambitions using a North-West European electricity market model. <i>Renewable Energy</i> , 2015 , 80, 604-609	8.1	28
73	A comprehensive review on the benefits and challenges of global power grids and intercontinental interconnectors. <i>Renewable and Sustainable Energy Reviews</i> , 2019 , 107, 274-287	16.2	27
72	Burning peat in Ireland: An electricity market dispatch perspective. <i>Energy Policy</i> , 2009 , 37, 3035-3042	7.2	27
71	Using indicators to profile energy consumption and to inform energy policy in a university case study in Ireland. <i>Energy and Buildings</i> , 2007 , 39, 913-922	7	27
70	Co-benefits? Not always: Quantifying the negative effect of a CO2-reducing car taxation policy on NO emissions. <i>Energy Policy</i> , 2013 , 63, 1151-1159	7.2	26
69	Decomposition analysis of gas consumption in the residential sector in Ireland. <i>Energy Policy</i> , 2012 , 42, 19-36	7.2	25
68	Future energy and emissions policy scenarios in Ireland for private car transport. <i>Energy Policy</i> , 2012 , 51, 172-183	7.2	25
67	The combined role of policy and incentives in promoting cost efficient decarbonisation of energy: A case study for biomethane. <i>Journal of Cleaner Production</i> , 2019 , 219, 278-290	10.3	23
66	Energy security assessment methods: Quantifying the security co-benefits of decarbonising the Irish Energy System. <i>Energy Strategy Reviews</i> , 2017 , 15, 72-88	9.8	22
65	Investigating the energy transition to a coal free residential sector in Kazakhstan using a regionally disaggregated energy systems model. <i>Journal of Cleaner Production</i> , 2018 , 196, 1532-1548	10.3	22
64	Energy Security Analysis: The case of constrained oil supply for Ireland. <i>Energy Policy</i> , 2014 , 66, 312-325	7.2	22
63	Monitoring energy efficiency trends in European industry: Which top-down method should be used?. <i>Energy Policy</i> , 2010 , 38, 6910-6918	7.2	22

62	Least cost energy system pathways towards 100% renewable energy in Ireland by 2050. <i>Energy</i> , 2020 , 207, 118264	7.9	20
61	Zero carbon energy system pathways for Ireland consistent with the Paris Agreement. <i>Climate Policy</i> , 2019 , 19, 30-42	5.3	20
60	LEAPs and Bounds—An Energy Demand and Constraint Optimised Model of the Irish Energy System. <i>Energy Efficiency</i> , 2014 , 7, 441-466	3	19
59	The Role of Bioenergy in Ireland—Low Carbon Future —Is it Sustainable?. <i>Journal of Sustainable Development of Energy, Water and Environment Systems</i> , 2015 , 3, 196-216	1.9	19
58	Improvements in the representation of behavior in integrated energy and transport models. <i>International Journal of Sustainable Transportation</i> , 2019 , 13, 294-313	3.6	18
57	Modelling the impact of EVs on electricity generation, costs and CO2 emissions. <i>Energy Policy</i> , 2013 , 61, 230-237	7.2	18
56	Modelling HGV freight transport energy demand in Ireland and the impacts of the property construction bubble. <i>Energy</i> , 2013 , 50, 245-251	7.9	16
55	Improving energy savings from a residential retrofit policy: A new model to inform better retrofit decisions. <i>Energy and Buildings</i> , 2020 , 209, 109656	7	16
54	Planning the European power sector transformation: The REmap modelling framework and its insights. <i>Energy Strategy Reviews</i> , 2018 , 22, 147-165	9.8	16
53	A 100 year review of electricity policy in Ireland (1916–2015). <i>Energy Policy</i> , 2017 , 105, 67-79	7.2	15
52	From technology pathways to policy roadmaps to enabling measures —A multi-model approach. <i>Energy</i> , 2017 , 138, 1030-1041	7.9	14
51	Comparing ODEX with LMDI to measure energy efficiency trends. <i>Energy Efficiency</i> , 2010 , 3, 317-329	3	14
50	Energizing local communities—What motivates Irish citizens to invest in distributed renewables?. <i>Energy Research and Social Science</i> , 2019 , 48, 177-188	7.7	14
49	Ex-post decomposition analysis of passenger car energy demand and associated CO2 emissions. <i>Transportation Research, Part D: Transport and Environment</i> , 2018 , 59, 400-416	6.4	13
48	Vehicle tax policies and new passenger car CO2 performance in EU member states. <i>Climate Policy</i> , 2018 , 18, 396-412	5.3	12
47	The cost of electrifying private transport —Evidence from an empirical consumer choice model of Ireland and Denmark. <i>Transportation Research, Part D: Transport and Environment</i> , 2018 , 62, 584-603	6.4	12
46	A review of spatial resolution and regionalisation in national-scale energy systems optimisation models. <i>Energy Strategy Reviews</i> , 2021 , 37, 100702	9.8	12
45	Integrating agriculture and energy to assess GHG emissions reduction: a methodological approach. <i>Climate Policy</i> , 2016 , 16, 215-236	5.3	11

44	Electric Vehicles and energy storage [A case study on Ireland 2009 ,			11
43	Technology interdependency in the United Kingdom's low carbon energy transition. <i>Energy Strategy Reviews</i> , 2019 , 24, 314-330	9.8		10
42	Analysis of electric vehicle charging using the traditional generation expansion planning analysis tool WASP-IV. <i>Journal of Modern Power Systems and Clean Energy</i> , 2015 , 3, 240-248	4		10
41	Quantifying the savings of an industry energy efficiency programme. <i>Energy Efficiency</i> , 2012 , 5, 211-224	3		10
40	Is there a future for the gas network in a low carbon energy system?. <i>Energy Policy</i> , 2019 , 126, 480-493	7.2		9
39	High performance computing for energy system optimization models: Enhancing the energy policy tool kit. <i>Energy Policy</i> , 2019 , 128, 66-74	7.2		9
38	High resolution global spatiotemporal assessment of rooftop solar photovoltaics potential for renewable electricity generation. <i>Nature Communications</i> , 2021 , 12, 5738	17.4		8
37	Regime-based transition intermediaries at the grassroots for community energy initiatives. <i>Energy Research and Social Science</i> , 2021 , 74, 101950	7.7		8
36	Techno-economic data for a multi-model approach to decarbonisation of the Irish private car sector. <i>Data in Brief</i> , 2017 , 15, 922-932	1.2		7
35	A new hybrid approach for evaluating technology risks and opportunities in the energy transition in Ireland. <i>Environmental Innovation and Societal Transitions</i> , 2020 , 35, 429-444	7.6		7
34	Identifying decarbonisation opportunities using marginal abatement cost curves and energy system scenario ensembles. <i>Applied Energy</i> , 2020 , 276, 115456	10.7		7
33	Energy-intensive manufacturing sectors in China: policy priorities for achieving climate mitigation and energy conservation targets. <i>Climate Policy</i> , 2019 , 19, 598-610	5.3		7
32	Spatial Planning of Electric Vehicle Infrastructure for Belo Horizonte, Brazil. <i>Journal of Advanced Transportation</i> , 2018 , 2018, 1-16	1.9		7
31	A comparative analysis of substituting imported gas and coal for electricity with renewables [An input-output simulation. <i>Sustainable Energy Technologies and Assessments</i> , 2018 , 30, 1-10	4.7		7
30	Comparing primary energy attributed to renewable energy with primary energy equivalent to determine carbon abatement in a national context. <i>Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering</i> , 2006 , 41, 923-37	2.3		6
29	Modal Shift of Passenger Transport in a TIMES Model: Application to Ireland and California. <i>Lecture Notes in Energy</i> , 2015 , 279-291	0.4		6
28	Soft-Linking Exercises Between TIMES, Power System Models and Housing Stock Models. <i>Lecture Notes in Energy</i> , 2015 , 315-331	0.4		6
27	Biofuels for Aviation 2017 , 79-88			4

26	Economic Impacts of Future Changes in the Energy System Global Perspectives. <i>Lecture Notes in Energy</i> , 2015 , 333-358	0.4	4
25	Economic Impacts of Future Changes in the Energy System National Perspectives. <i>Lecture Notes in Energy</i> , 2015 , 359-387	0.4	4
24	Building and Calibrating a Country-Level Detailed Global Electricity Model Based on Public Data. <i>Energy Strategy Reviews</i> , 2021 , 33, 100592	9.8	4
23	Participatory methods in energy system modelling and planning A review. <i>Renewable and Sustainable Energy Reviews</i> , 2021 , 151, 111504	16.2	4
22	Long-Term Climate Change Mitigation in Kazakhstan in a Post Paris Agreement Context. <i>Lecture Notes in Energy</i> , 2018 , 297-314	0.4	3
21	Recession or retrofit: An ex-post evaluation of Irish residential space heating trends. <i>Energy and Buildings</i> , 2019 , 205, 109474	7	3
20	Impact on Electricity Markets: Merit Order Effect of Renewable Energies 2017 , 105-118		3
19	How and why we travel Mobility demand and emissions from passenger transport. <i>Transportation Research, Part D: Transport and Environment</i> , 2022 , 104, 103195	6.4	3
18	Mapping emergent public engagement in societal transitions: a scoping review.. <i>Energy, Sustainability and Society</i> , 2022 , 12, 2	3.9	3
17	Energy Policies Influenced by Energy Systems Modelling Case Studies in UK, Ireland, Portugal and G8. <i>Lecture Notes in Energy</i> , 2015 , 15-41	0.4	3
16	A Global Renewable Energy Roadmap: Comparing Energy Systems Models with IRENA REmap 2030 Project. <i>Lecture Notes in Energy</i> , 2015 , 43-67	0.4	3
15	Reflecting on a collaborative approach to a regional sustainability transition: Dingle Peninsula 2030. <i>Reflective Practice</i> , 2021 , 22, 416-430	0.9	3
14	Participatory network mapping of an emergent social network for a regional transition to a low-carbon and just society on the Dingle Peninsula. <i>Local Environment</i> , 1-15	3.3	3
13	Suitable Locations for Electric Vehicles Charging Infrastructure in Rio De Janeiro, Brazil 2017 ,		2
12	Gas Security of Supply in the European Union 2017 , 67-78		2
11	Residential stock data and dataset on energy efficiency characteristics of residential building fabrics in Ireland. <i>Data in Brief</i> , 2020 , 29, 105247	1.2	1
10	Assessing global climate change mitigation scenarios from a power system perspective using a novel multi-model framework. <i>Environmental Modelling and Software</i> , 2022 , 150, 105336	5.2	1
9	Introduction: Energy Systems Modelling for Decision-Making. <i>Lecture Notes in Energy</i> , 2015 , 1-12	0.4	1

8	Decarbonisation of passenger light-duty vehicles using spatially resolved TIMES-Ireland Model. <i>Applied Energy</i> , 2022 , 316, 119078	10.7	1
7	Doing things differently: Bridging community concerns and energy system modelling with a transdisciplinary approach in rural Ireland. <i>Energy Research and Social Science</i> , 2022 , 89, 102658	7.7	1
6	Can European electric utilities manage asset impairments arising from net zero carbon targets?. <i>Journal of Corporate Finance</i> , 2021 , 70, 102075	3.7	0
5	Flexibility & structure: Community engagement on climate action & large infrastructure delivery. <i>Energy Policy</i> , 2022 , 167, 113050	7.2	0
4	Introduction: Energy Systems Modelling for a Sustainable World. <i>Lecture Notes in Energy</i> , 2018 , 1-13	0.4	
3	From 2 °C to 1.5 °C: How Ambitious Can Ireland Be?. <i>Lecture Notes in Energy</i> , 2018 , 191-205	0.4	
2	Modeling Energy Efficiency and CO2 Emissions Reduction 2015 , 1-15		
1	Efficient and Equitable Climate Change Policies. <i>Systems</i> , 2018 , 6, 10		3