Iain Staffell

List of Publications by Year in Descending Order

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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.

97 papers	8,199 citations	40 h-index	90 g-index
100 ext. papers	10,804 ext. citations	12.1 avg, IF	7.11 L-index

#	Paper	IF	Citations
97	What if we never run out of oil? From certainty of peak oil to peak demand. *Energy Research and Social Science*, **2022**, 85, 102407	7.7	2
96	High-resolution large-scale onshore wind energy assessments: A review of potential definitions, methodologies and future research needs. *Renewable Energy*, **2022**, 182, 659-684	8.1	7
95	Island in the Sea: The prospects and impacts of an offshore wind power hub in the North Sea. *Advances in Applied Energy*, **2022**, 6, 100090		1
94	From the geopolitics of oil and gas to the geopolitics of the energy transition: Is there a role for European supermajors?. *Energy Research and Social Science*, **2022**, 88, 102634	7.7	2
93	Existing tools, user needs and required model adjustments for energy demand modelling of a carbon-neutral Europe. *Energy Research and Social Science*, **2022**, 90, 102662	7.7	0
92	Policy choices and outcomes for offshore wind auctions globally. *Energy Policy*, **2022**, 167, 113000	7.2	0
91	The contribution of taxes, subsidies, and regulations to British electricity decarbonization. *Joule*, **2021**, 5, 2625-2645	27.8	1
90	Wind, rain, fire and sun: Towards zero carbon electricity for New Zealand. *Energy Policy*, **2021**, 150, 112109	7.2	2
89	The impact of the UK's COVID-19 lockdowns on energy demand and emissions. *Environmental Research Letters*, **2021**, 16, 054037	6.2	7
88	Stabilisation wedges: measuring progress towards transforming the global energy and land use systems. *Environmental Research Letters*, **2021**, 16, 064011	6.2	2
87	The future of coal investment, trade, and stranded assets. *Joule*, **2021**, 5, 1462-1484	27.8	8
86	Understanding New Zealand's wind resources as a route to 100% renewable electricity. *Renewable Energy*, **2021**, 170, 449-461	8.1	8
85	How can LNG-fuelled ships meet decarbonisation targets? An environmental and economic analysis. *Energy*, **2021**, 227, 120462	7.9	11
84	Organic waste to energy: Resource potential and barriers to uptake in Chile. *Sustainable Production and Consumption*, **2021**, 28, 1522-1537	8.2	4
83	A framework to evaluate how European Transmission System Operators approach innovation. *Energy Policy*, **2021**, 158, 112555	7.2	1
82	The NExus Solutions Tool (NEST) v1.0: an open platform for optimizing multi-scale energy, water, and system transformations. *Geoscientific Model Development*, **2020**, 13, 1095-1121	6.3	19
81	Impact of climate change on the cost-optimal mix of decentralised heat pump and gas boiler technologies in Europe. *Energy Policy*, **2020**, 140, 111386	7.2	18

80	Comparative life cycle assessment of lithium-ion battery chemistries for residential storage. *Journal of Energy Storage*, **2020**, 28, 101230	7.8	19
79	A parametric model for wind turbine power curves incorporating environmental conditions. *Renewable Energy*, **2020**, 157, 754-768	8.1	27
78	Quantifying the impact of policy on the investment case for residential electricity storage in the UK. *Journal of Energy Storage*, **2020**, 27, 101140	7.8	13
77	Elecxit: The cost of bilaterally uncoupling British-EU electricity trade. *Energy Economics*, **2020**, 85, 104598	8.3	9
76	Grid-scale energy storage **2020**, 119-143		2
75	Electric vehicles **2020**, 145-163		2
74	On the socio-technical potential for onshore wind in Europe: A response to Enevoldsen et al. (2019), Energy Policy, 132, 1092-1100. *Energy Policy*, **2020**, 145, 111693	7.2	5
73	Offshore wind competitiveness in mature markets without subsidy. *Nature Energy*, **2020**, 5, 614-622	62.3	39
72	Real-time carbon accounting method for the European electricity markets. *Energy Strategy Reviews*, **2019**, 26, 100367	9.8	35
71	Current status of automotive fuel cells for sustainable transport. *Current Opinion in Electrochemistry*, **2019**, 16, 90-95	7.2	148
70	Getting prices right in structural electricity market models. *Energy Policy*, **2019**, 129, 1190-1206	7.2	14
69	The Nexus Solutions Tool (NEST): An open platform for optimizing multi-scale energy-water-land system transformations **2019**,		3
68	Estimating country-specific space heating threshold temperatures from national gas and electricity consumption data. *Energy and Buildings*, **2019**, 199, 368-380	7	5
67	Global levelised cost of electricity from offshore wind. *Energy*, **2019**, 189, 116357	7.9	42
66	How to decarbonise international shipping: Options for fuels, technologies and policies. *Energy Conversion and Management*, **2019**, 182, 72-88	10.6	190
65	Projecting the Future Levelized Cost of Electricity Storage Technologies. *Joule*, **2019**, 3, 81-100	27.8	245
64	The role of hydrogen and fuel cells in the global energy system. *Energy and Environmental Science*, **2019**, 12, 463-491	35.4	1196
63	Opening the black box of energy modelling: Strategies and lessons learned. *Energy Strategy Reviews*, **2018**, 19, 63-71	9.8	112

62	The increasing impact of weather on electricity supply and demand. *Energy*, **2018**, 145, 65-78	7.9	112
61	Rapid fuel switching from coal to natural gas through effective carbon pricing. *Nature Energy*, **2018**, 3, 365-372	62.3	81
60	Short-term integration costs of variable renewable energy: Wind curtailment and balancing in Britain and Germany. *Renewable and Sustainable Energy Reviews*, **2018**, 86, 45-65	16.2	123
59	Impacts of Inter-annual Wind and Solar Variations on the European Power System. *Joule*, **2018**, 2, 2076-2090	27.8	81
58	Temporally explicit and spatially resolved global offshore wind energy potentials. *Energy*, **2018**, 163, 766-781	7.9	57
57	Daily Marginal CO2 Emissions Reductions from Wind and Solar Generation **2018**,		1
56	Simulating price-aware electricity storage without linear optimisation. *Journal of Energy Storage*, **2018**, 20, 78-91	7.8	6
55	Impact of myopic decision-making and disruptive events in power systems planning. *Nature Energy*, **2018**, 3, 634-640	62.3	34
54	Temporally-explicit and spatially-resolved global onshore wind energy potentials. *Energy*, **2017**, 131, 207-217	7.9	54
53	A systems approach to quantifying the value of power generation and energy storage technologies in future electricity networks. *Computers and Chemical Engineering*, **2017**, 107, 247-256	4	79
52	The value of electricity and reserve services in low carbon electricity systems. *Applied Energy*, **2017**, 201, 111-123	10.7	17
51	Measuring the progress and impacts of decarbonising British electricity. *Energy Policy*, **2017**, 102, 463-475	7.2	61
50	The importance of open data and software: Is energy research lagging behind?. *Energy Policy*, **2017**, 101, 211-215	7.2	174
49	What is the Value of CCS in the Future Energy System?. *Energy Procedia*, **2017**, 114, 7564-7572	2.3	12
48	Power capacity expansion planning considering endogenous technology cost learning. *Applied Energy*, **2017**, 204, 831-845	10.7	93
47	An MILP Modeling Approach to Systemic Energy Technology Valuation in the 21st Century Energy System. *Energy Procedia*, **2017**, 114, 6358-6365	2.3	3
46	Balancing Europe's wind power output through spatial deployment informed by weather regimes. *Nature Climate Change*, **2017**, 7, 557-562	21.4	145
45	Future cost and performance of water electrolysis: An expert elicitation study. *International Journal of Hydrogen Energy*, **2017**, 42, 30470-30492	6.7	730

44	High solar photovoltaic penetration in the absence of substantial wind capacity: Storage requirements and effects on capacity adequacy. *Energy*, **2017**, 137, 193-208	7.9	12
43	The future cost of electrical energy storage based on experience rates. *Nature Energy*, **2017**, 2,	62.3	507
42	The impact of climate change on the levelised cost of wind energy. *Renewable Energy*, **2017**, 101, 575-592	2.1	63
41	Is There Still Merit in the Merit Order Stack? The Impact of Dynamic Constraints on Optimal Plant Mix. *IEEE Transactions on Power Systems*, **2016**, 31, 43-53	7	31
40	Maximising the value of electricity storage. *Journal of Energy Storage*, **2016**, 8, 212-225	7.8	81
39	Stationary Fuel Cells Residential Applications **2016**, 282-292		2
38	Electricity in Europe: exiting fossil fuels?. *Oxford Review of Economic Policy*, **2016**, 32, 282-303	6.3	44
37	Comparison of Fuel Consumption and Fuel Cell Degradation Using an Optimised Controller. *ECS Transactions*, **2016**, 71, 85-97	1	10
36	Optimal design and operation of integrated wind-hydrogen-electricity networks for decarbonising the domestic transport sector in Great Britain. *International Journal of Hydrogen Energy*, **2016**, 41, 447-475	6.7	121
35	Past, Current and Future Energy Production. *SpringerBriefs in Energy*, **2016**, 31-45	0.3	
34	Levelised Value of Electricity - A Systemic Approach to Technology Valuation. *Computer Aided Chemical Engineering*, **2016**, 721-726	0.6	11
33	Quantifying the value of CCS for the future electricity system. *Energy and Environmental Science*, **2016**, 9, 2497-2510	35.4	60
32	The role of flexible CCS in the UK's future energy system. *International Journal of Greenhouse Gas Control*, **2016**, 48, 327-344	4.2	62
31	Long-term patterns of European PV output using 30 years of validated hourly reanalysis and satellite data. *Energy*, **2016**, 114, 1251-1265	7.9	479
30	Using bias-corrected reanalysis to simulate current and future wind power output. *Energy*, **2016**, 114, 1224-1239	7.9	449
29	Hydrogen and fuel cell technologies for heating: A review. *International Journal of Hydrogen Energy*, **2015**, 40, 2065-2083	6.7	407
28	Zero carbon infinite COP heat from fuel cell CHP. *Applied Energy*, **2015**, 147, 373-385	10.7	35
27	Current energy landscape in the Republic of South Africa. *International Journal of Hydrogen Energy*, **2015**, 40, 16685-16701	6.7	32

26	The shape of future electricity demand: Exploring load curves in 2050s Germany and Britain. *Energy*, **2015**, 90, 1317-1333	7.9	142
25	Current status of fuel cell based combined heat and power systems for residential sector. *Journal of Power Sources*, **2015**, 293, 312-328	8.9	157
24	Fuel-cell (hydrogen) electric hybrid vehicles **2014**, 685-735		6
23	Divide and Conquer? ${k}$-Means Clustering of Demand Data Allows Rapid and Accurate Simulations of the British Electricity System. *IEEE Transactions on Engineering Management*, **2014**, 61, 251-260	2.6	77
22	How does wind farm performance decline with age?. *Renewable Energy*, **2014**, 66, 775-786	8.1	252
21	Atomic Models of Strong Solids Interfaces Viewed as Composite Structures. *Applied Composite Materials*, **2014**, 21, 45-55	2	3
20	The cost of domestic fuel cell micro-CHP systems. *International Journal of Hydrogen Energy*, **2013**, 38, 1088-1102	6.7	134
19	Application of Coulomb's friction law to define energy consumption of new drive-trains **2013**,		3
18	Current status of hybrid, battery and fuel cell electric vehicles: From electrochemistry to market prospects. *Electrochimica Acta*, **2012**, 84, 235-249	6.7	354
17	Fuels and fuel processing for low temperature fuel cells **2012**, 3-26		
16	A review of domestic heat pumps. *Energy and Environmental Science*, **2012**, 5, 9291	35.4	175
15	Design of fuel-cell micro-cogeneration systems through modeling and optimization. *Wiley Interdisciplinary Reviews: Energy and Environment*, **2012**, 1, 181-193	4.7	5
14	Energy and carbon payback times for solid oxide fuel cell based domestic CHP. *International Journal of Hydrogen Energy*, **2012**, 37, 2509-2523	6.7	62
13	The role of the fuel in the operation, performance and degradation of fuel cells **2012**, 249-278		2
12	Lower carbon cars by reducing dissipation in hydrogen hybrids. *International Journal of Low-Carbon Technologies*, **2012**, 7, 10-15	2.8	7
11	Results from the Microcab fuel cell vehicle demonstration at the University of Birmingham. *International Journal of Electric and Hybrid Vehicles*, **2011**, 3, 62	0.7	7
10	Hydrogen fuel cell hybrid vehicles (HFCHV) for Birmingham campus. *Journal of Power Sources*, **2011** , 196, 325-330	8.9	17
9	Fuel cell systems for small and micro combined heat and power (CHP) applications **2011**, 233-261		6

8	UK microgeneration. Part II: technology overviews. *Proceedings of Institution of Civil Engineers: Energy*, **2010**, 163, 143-165	0.7	10
7	Life cycle assessment of an alkaline fuel cell CHP system. *International Journal of Hydrogen Energy*, **2010**, 35, 2491-2505	6.7	41
6	Estimating future prices for stationary fuel cells with empirically derived experience curves. *International Journal of Hydrogen Energy*, **2009**, 34, 5617-5628	6.7	41
5	Fuel cells for micro-combined heat and power generation. *Energy and Environmental Science*, **2009**, 2, 729	35.4	130
4	UK microgeneration. Part I: policy and behavioural aspects. *Proceedings of Institution of Civil Engineers: Energy*, **2009**, 162, 23-36	0.7	15
3	Cost targets for domestic fuel cell CHP. *Journal of Power Sources*, **2008**, 181, 339-349	8.9	58
2	How Large Should a Portfolio of Wind Farms Be?. *SSRN Electronic Journal*,	1	1
1	The role of hydrogen and fuel cells in the global energy system		5