Adam Hawkes

List of Publications by Citations

129 papers	5,833 citations	34 h-index	75 g-index
136 ext. papers	7,574 ext. citations	8.7 avg, IF	6.64 L-index

#	Paper	IF	Citations
129	Future cost and performance of water electrolysis: An expert elicitation study. *International Journal of Hydrogen Energy*, **2017**, 42, 30470-30492	6.7	730
128	The future cost of electrical energy storage based on experience rates. *Nature Energy*, **2017**, 2,	62.3	507
127	Energy systems modeling for twenty-first century energy challenges. *Renewable and Sustainable Energy Reviews*, **2014**, 33, 74-86	16.2	503
126	Hydrogen and fuel cell technologies for heating: A review. *International Journal of Hydrogen Energy*, **2015**, 40, 2065-2083	6.7	407
125	Projecting the Future Levelized Cost of Electricity Storage Technologies. *Joule*, **2019**, 3, 81-100	27.8	245
124	Modelling high level system design and unit commitment for a microgrid. *Applied Energy*, **2009**, 86, 1253-1265	7.9	241
123	Cost-effective operating strategy for residential micro-combined heat and power. *Energy*, **2007**, 32, 711-723	7.1	219
122	How to decarbonise international shipping: Options for fuels, technologies and policies. *Energy Conversion and Management*, **2019**, 182, 72-88	10.6	190
121	A review of domestic heat pumps. *Energy and Environmental Science*, **2012**, 5, 9291	35.4	175
120	An assessment of CCS costs, barriers and potential. *Energy Strategy Reviews*, **2018**, 22, 61-81	9.8	154
119	Levelized cost of CO2 mitigation from hydrogen production routes. *Energy and Environmental Science*, **2019**, 12, 19-40	35.4	139
118	Estimating marginal CO2 emissions rates for national electricity systems. *Energy Policy*, **2010**, 38, 5977-5987	7.2	135
117	Fuel cells for micro-combined heat and power generation. *Energy and Environmental Science*, **2009**, 2, 729	35.4	130
116	An inter-model assessment of the role of direct air capture in deep mitigation pathways. *Nature Communications*, **2019**, 10, 3277	17.4	129
115	Impacts of temporal precision in optimisation modelling of micro-Combined Heat and Power. *Energy*, **2005**, 30, 1759-1779	7.9	104
114	Solid oxide fuel cell systems for residential micro-combined heat and power in the UK: Key economic drivers. *Journal of Power Sources*, **2005**, 149, 72-83	8.9	67
113	Solid oxide fuel cell micro combined heat and power system operating strategy: Options for provision of residential space and water heating. *Journal of Power Sources*, **2007**, 164, 260-271	8.9	66

112	Long-run marginal CO2 emissions factors in national electricity systems. *Applied Energy*, **2014**, 125, 197-205	10.7	63
111	Fuel cell micro-CHP techno-economics: Part 1 – model concept and formulation. *International Journal of Hydrogen Energy*, **2009**, 34, 9545-9557	6.7	63
110	The Natural Gas Supply Chain: The Importance of Methane and Carbon Dioxide Emissions. *ACS Sustainable Chemistry and Engineering*, **2017**, 5, 3-20	8.3	61
109	Temporally explicit and spatially resolved global offshore wind energy potentials. *Energy*, **2018**, 163, 766-781	7.9	57
108	Temporally-explicit and spatially-resolved global onshore wind energy potentials. *Energy*, **2017**, 131, 207-217	7.9	54
107	Techno-economic modelling of a solid oxide fuel cell stack for micro combined heat and power. *Journal of Power Sources*, **2006**, 156, 321-333	8.9	54
106	Fuel cell micro-CHP techno-economics: Part 2 – Model application to consider the economic and environmental impact of stack degradation. *International Journal of Hydrogen Energy*, **2009**, 34, 9558-9569	6.7	52
105	Societal Transformations in Models for Energy and Climate Policy: The Ambitious Next Step. *One Earth*, **2019**, 1, 423-433	8.1	52
104	Methane emissions: choosing the right climate metric and time horizon. *Environmental Sciences: Processes and Impacts*, **2018**, 20, 1323-1339	4.3	51
103	Characterising the distribution of methane and carbon dioxide emissions from the natural gas supply chain. *Journal of Cleaner Production*, **2018**, 172, 2019-2032	10.3	49
102	Performance assessment of tariff-based air source heat pump load shifting in a UK detached dwelling featuring phase change-enhanced buffering. *Applied Thermal Engineering*, **2014**, 71, 809-820	5.8	48
101	Techno-economic assessment of biogas-fed solid oxide fuel cell combined heat and power system at industrial scale. *Applied Energy*, **2018**, 211, 689-704	10.7	48
100	Integration of biomass into urban energy systems for heat and power. Part I: An MILP based spatial optimization methodology. *Energy Conversion and Management*, **2014**, 83, 347-361	10.6	45
99	A greener gas grid: What are the options. *Energy Policy*, **2018**, 118, 291-297	7.2	44
98	Global levelised cost of electricity from offshore wind. *Energy*, **2019**, 189, 116357	7.9	42
97	Fair electricity transfer price and unit capacity selection for microgrids. *Energy Economics*, **2013**, 36, 581-593	8.3	40
96	Assessing the Feasibility of Global Long-Term Mitigation Scenarios. *Energies*, **2017**, 10, 89	3.1	37
95	A dynamic model of global natural gas supply. *Applied Energy*, **2018**, 218, 452-469	10.7	32

94	On policy instruments for support of micro combined heat and power. *Energy Policy*, **2008**, 36, 2973-2982	7.2	31
93	Estimation of inter-fuel substitution possibilities in China's transport industry using ridge regression. *Energy*, **2015**, 88, 260-267	7.9	30
92	An agent-based model for energy investment decisions in the residential sector. *Energy*, **2019**, 172, 752-768	7.9	29
91	Perspective of comprehensive and comprehensible multi-model energy and climate science in Europe. *Energy*, **2021**, 215, 119153	7.9	28
90	Spatially resolved model for studying decarbonisation pathways for heat supply and infrastructure trade-offs. *Applied Energy*, **2018**, 210, 1051-1072	10.7	26
89	The role of advanced demand-sector technologies and energy demand reduction in achieving ambitious carbon budgets. *Applied Energy*, **2019**, 238, 351-367	10.7	25
88	The carbon credentials of hydrogen gas networks and supply chains. *Renewable and Sustainable Energy Reviews*, **2018**, 91, 1077-1088	16.2	24
87	Exploring the Feasibility of Low-Carbon Scenarios Using Historical Energy Transitions Analysis. *Energies*, **2017**, 10, 116	3.1	24
86	The appropriate use of reference scenarios in mitigation analysis. *Nature Climate Change*, **2020**, 10, 605-610	21.4	23
85	Long-term development of the industrial sector Case study about electrification, fuel switching, and CCS in the USA. *Computers and Chemical Engineering*, **2020**, 133, 106602	4	22
84	Clustered spatially and temporally resolved global heat and cooling energy demand in the residential sector. *Applied Energy*, **2019**, 250, 48-62	10.7	20
83	The capacity credit of micro-combined heat and power. *Energy Policy*, **2008**, 36, 1457-1469	7.2	20
82	Life cycle environmental impacts of natural gas drivetrains used in UK road freighting and impacts to UK emission targets. *Science of the Total Environment*, **2019**, 674, 482-493	10.2	19
81	Assessing the impact of future greenhouse gas emissions from natural gas production. *Science of the Total Environment*, **2019**, 668, 1242-1258	10.2	19
80	The effect of spatial resolution on outcomes from energy systems modelling of heat decarbonisation. *Energy*, **2018**, 155, 339-350	7.9	19
79	The value of electricity and reserve services in low carbon electricity systems. *Applied Energy*, **2017**, 201, 111-123	10.7	17
78	A novel energy systems model to explore the role of land use and reforestation in achieving carbon mitigation targets: A Brazil case study. *Journal of Cleaner Production*, **2019**, 232, 796-821	10.3	17
77	The Contribution of Non-CO2 Greenhouse Gas Mitigation to Achieving Long-Term Temperature Goals. *Energies*, **2017**, 10, 602	3.1	16

76	Modelling the natural gas dynamics in the Southern Cone of Latin America. *Applied Energy*, **2017**, 201, 219-239	10.7	15
75	UK microgeneration. Part I: policy and behavioural aspects. *Proceedings of Institution of Civil Engineers: Energy*, **2009**, 162, 23-36	0.7	15
74	Key findings from the core North American scenarios in the EMF34 intermodel comparison. *Energy Policy*, **2020**, 144, 111599	7.2	15
73	A geographic information system-based global variable renewable potential assessment using spatially resolved simulation. *Energy*, **2020**, 193, 116630	7.9	14
72	Demand side flexibility from residential heating to absorb surplus renewables in low carbon futures. *Renewable Energy*, **2019**, 138, 598-609	8.1	13
71	Spatially-resolved urban energy systems model to study decarbonisation pathways for energy services in cities. *Applied Energy*, **2020**, 262, 114445	10.7	13
70	The role of energy storage in the uptake of renewable energy: A model comparison approach. *Energy Policy*, **2021**, 151, 112159	7.2	13
69	A two-step optimization model for quantifying the flexibility potential of power-to-heat systems in dwellings. *Applied Energy*, **2018**, 228, 215-228	10.7	13
68	Assessing domestic heat storage requirements for energy flexibility over varying timescales. *Applied Thermal Engineering*, **2018**, 136, 602-616	5.8	11
67	The impact of liquefied natural gas and storage on the EU natural gas infrastructure resilience. *Energy*, **2020**, 209, 118367	7.9	11
66	Impact of dynamic aspects on economics of fuel cell based micro co-generation in low carbon futures. *Energy*, **2018**, 155, 874-886	7.9	11
65	How can LNG-fuelled ships meet decarbonisation targets? An environmental and economic analysis. *Energy*, **2021**, 227, 120462	7.9	11
64	Simulating the game-theoretic market equilibrium and contract-driven investment in global gas trade using an agent-based method. *Energy*, **2018**, 160, 820-834	7.9	10
63	UK microgeneration. Part II: technology overviews. *Proceedings of Institution of Civil Engineers: Energy*, **2010**, 163, 143-165	0.7	10
62	Modelling cost-effective pathways for natural gas infrastructure: A southern Brazil case study. *Applied Energy*, **2019**, 255, 113799	10.7	9
61	The Impact of Shale Gas on the Cost and Feasibility of Meeting Climate Targets—A Global Energy System Model Analysis and an Exploration of Uncertainties. *Energies*, **2017**, 10, 158	3.1	9
60	Role of fuel cell based micro-cogeneration in low carbon heating. *Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy*, **2011**, 225, 198-207	1.6	9
59	Private landlords and energy efficiency: Evidence for policymakers from a large-scale study in the United Kingdom. *Energy Policy*, **2020**, 142, 111446	7.2	8

58	Going smart, staying confused: Perceptions and use of smart thermostats in British homes. *Energy Research and Social Science*, **2019**, 57, 101228	7.7	8
57	A multi-model analysis of long-term emissions and warming implications of current mitigation efforts. *Nature Climate Change*, **2021**, 11, 1055-1062	21.4	8
56	Challenges in the harmonisation of global integrated assessment models: A comprehensive methodology to reduce model response heterogeneity. *Science of the Total Environment*, **2021**, 783, 146861	10.2	8
55	Biomass supply chain optimisation for Organosolv-based biorefineries. *Bioresource Technology*, **2014**, 159, 387-96	11	7
54	The Techno-Economics of Small-Scale Residential Heating in Low Carbon Futures. *Energies*, **2017**, 10, 1915	3.1	7
53	Supply Chain Mixed Integer Linear Program Model Integrating a Biorefining Technology Superstructure. *Industrial & Engineering Chemistry Research*, **2018**, 57, 9849-9865	3.9	7
52	Where is the EU headed given its current climate policy? A stakeholder-driven model inter-comparison. *Science of the Total Environment*, **2021**, 793, 148549	10.2	7
51	Asset stranding in natural gas export facilities: An agent-based simulation. *Energy Policy*, **2019**, 132, 132-155	7.1	6
50	Fuel cell systems for small and micro combined heat and power (CHP) applications **2011**, 233-261		6
49	Reply to "High energy and materials requirement for direct air capture calls for further analysis and R&D". *Nature Communications*, **2020**, 11, 3286	17.4	6
48	The impact of demand uncertainties and China-US natural gas tariff on global gas trade. *Energy*, **2019**, 175, 205-217	7.9	5
47	Agent-based scenarios comparison for assessing fuel-switching investment in long-term energy transitions of the India's industry sector. *Applied Energy*, **2020**, 274, 115295	10.7	5
46	An agent-based modelling approach to simulate the investment decision of industrial enterprises. *Journal of Cleaner Production*, **2020**, 267, 121835	10.3	5
45	Modelling the technical potential of bioelectricity production under land use constraints: A multi-region Brazil case study. *Renewable and Sustainable Energy Reviews*, **2020**, 123, 109765	16.2	5
44	Design of fuel-cell micro-cogeneration systems through modeling and optimization. *Wiley Interdisciplinary Reviews: Energy and Environment*, **2012**, 1, 181-193	4.7	5
43	Optimal mix of climate-related energy in global electricity systems. *Renewable Energy*, **2020**, 160, 955-968	8.1	5
42	Low-cost emissions cuts in container shipping: Thinking inside the box. *Transportation Research, Part D: Transport and Environment*, **2021**, 94, 102815	6.4	5
41	Confronting mitigation deterrence in low-carbon scenarios. *Environmental Research Letters*, **2021**, 16, 064099	6.2	5

40	A Simple Assessment of Housing Retrofit Policies for the UK: What Should Succeed the Energy Company Obligation?. *Energies*, **2018**, 11, 2070	3.1	5
39	Results from Industrial Size Biogas-Fed SOFC Plant (DEMOSOFC Project). *ECS Transactions*, **2019**, 91, 107-116	1	4
38	Optimal selection of generators for a microgrid under uncertainty **2010**,		4
37	Techno-economic assessment of small and micro combined heat and power (CHP) systems **2011**, 17-41		4
36	Assessment of Greenhouse Gases and Pollutant Emissions in the Road Freight Transport Sector: A Case Study for S□ Paulo State, Brazil. *Energies*, **2020**, 13, 5433	3.1	4
35	Organic waste to energy: Resource potential and barriers to uptake in Chile. *Sustainable Production and Consumption*, **2021**, 28, 1522-1537	8.2	4
34	Can Carbon Capture and Storage Unlock □Unburnable Carbon□. *Energy Procedia*, **2017**, 114, 7504-7515	2.3	3
33	Decarbonisation of the Industrial Sector by means of Fuel Switching, Electrification and CCS. *Computer Aided Chemical Engineering*, **2018**, 1311-1316	0.6	3
32	Feasibility of domestic micro combined heat and power units with Real Time Pricing **2010**,		3
31	Cost reductions in renewables can substantially erode the value of carbon capture and storage in mitigation pathways. *One Earth*, **2021**, 4, 1588-1601	8.1	3
30	North American energy system responses to natural gas price shocks. *Energy Policy*, **2021**, 149, 112046	7.2	3
29	Impact of Drilling Costs on the US Gas Industry: Prospects for Automation. *Energies*, **2018**, 11, 2241	3.1	3
28	An Optimisation Study on Integrating and Incentivising Thermal Energy Storage (TES) in a Dwelling Energy System. *Energies*, **2018**, 11, 1095	3.1	3
27	Thermodynamic and thermal comfort optimisation of a coastal social house considering the influence of the thermal breeze. *Building and Environment*, **2019**, 155, 224-246	6.5	2
26	Spatially Resolved Optimization for Studying the Role of Hydrogen for Heat Decarbonization Pathways. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 5835-5842	8.3	2
25	Open Sugarcane Process Simulation Platform. *Computer Aided Chemical Engineering*, **2018**, 44, 1819-1824	0.6	2
24	Carbon Sequestration Potential from Large-Scale Reforestation and Sugarcane Expansion on Abandoned Agricultural Lands in Brazil. *Polytechnica*, **2019**, 2, 9-25	1	2
23	What is the future potential of CCS in Brazil? An expert elicitation study on the role of CCS in the country. *International Journal of Greenhouse Gas Control*, **2021**, 112, 103503	4.2	2

22	The quantification of methane emissions and assessment of emissions data for the largest natural gas supply chains. *Journal of Cleaner Production*, **2021**, 320, 128856	10.3	2
21	Strategic natural gas storage coordination among EU member states in response to disruption in the trans Austria gas pipeline: A stochastic approach to solidarity. *Energy*, **2021**, 235, 121426	7.9	2
20	Hydrogen supply chain optimisation for the transport sector Focus on hydrogen purity and purification requirements. *Applied Energy*, **2022**, 305, 117740	10.7	2
19	A framework for modelling investment decisions in gas infrastructures. *Computer Aided Chemical Engineering*, **2016**, 38, 259-264	0.6	1
18	An optimization method to estimate the SOFC market in waste water treatment. *Computer Aided Chemical Engineering*, **2018**, 43, 415-420	0.6	1
17	The role of CCS and biomass-based processes in the refinery sector for different carbon scenarios. *Computer Aided Chemical Engineering*, **2018**, 43, 1365-1370	0.6	1
16	Methane detection and quantification in the upstream oil and gas sector: the role of satellites in emissions detection, reconciling and reporting. *Environmental Science Atmospheres*,		1
15	The policy implications of an uncertain carbon dioxide removal potential. *Joule*, **2021**, 5, 2593-2605	27.8	1
14	Pathways to commercialisation of biogas fuelled solid oxide fuel cells in European wastewater treatment plants. *Applied Energy*, **2021**, 282, 116127	10.7	1
13	A bottom-up appraisal of the technically installable capacity of biogas-based solid oxide fuel cells for self power generation in wastewater treatment plants. *Journal of Environmental Management*, **2021**, 279, 111753	7.9	1
12	Geospatial and temporal estimation of climatic, end-use demands, and socioeconomic drivers of energy consumption in the residential sector in Ecuador. *Energy Conversion and Management*, **2022**, 261, 115629	10.6	1
11	Analysis of power production and emission reduction through the use of biogas and carbon capture and storage. *Computer Aided Chemical Engineering*, **2017**, 40, 2635-2640	0.6	0
10	Translating observed household energy behavior to agent-based technology choices in an integrated modeling framework.. *IScience*, **2022**, 25, 103905	6.1	0
9	Solidarity measures: Assessment of strategic gas storage on EU regional risk groups natural gas supply resilience. *Applied Energy*, **2022**, 308, 118356	10.7	0
8	Modelling Future Agricultural Mechanisation of Major Crops in China: An Assessment of Energy Demand, Land Use and Emissions. *Energies*, **2020**, 13, 6636	3.1	0
7	Life cycle assessment of negative emission technologies for effectiveness in carbon sequestration. *Procedia CIRP*, **2022**, 105, 357-361	1.8	0
6	Hydrogen emissions from the hydrogen value chain-emissions profile and impact to global warming.. *Science of the Total Environment*, **2022**, 154624	10.2	0
5	Decision making to book oil reserves for different Brazilian fiscal agreements using dependence structure. *Energy Strategy Reviews*, **2019**, 26, 100377	9.8	

List of Publications

4	An optimisation model to determine the capacity of a distributed energy resource to contract with a balancing services aggregator. *Applied Energy*, **2022**, 306, 117984	10.7
3	Techno-economic assessment of the effects of biogas rate fluctuations on industrial applications of solid-oxide fuel cells. *Computer Aided Chemical Engineering*, **2017**, 895-900	0.6
2	A Simulator to Determine the Evolution of Disparities in Food Consumption between Socio-Economic Groups: A Brazilian Case Study. *Sustainability*, **2020**, 12, 6132	3.6
1	A Multi-period Mixed Integer Linear Program for Assessing the Benefits of Power to Heat Storage in a Dwelling Energy System. *Computer Aided Chemical Engineering*, **2018**, 43, 1451-1456	0.6