Mark I Howells

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/679048/publications.pdf

Version: 2024-02-01

111 papers	6,826 citations	71102 41 h-index	64796 79 g-index
234 all docs	234 docs citations	234 times ranked	5736 citing authors

#	Article	IF	Citations
1	Considering the energy, water and food nexus: Towards an integrated modelling approach. Energy Policy, 2011, 39, 7896-7906.	8.8	990
2	OSeMOSYS: The Open Source Energy Modeling System. Energy Policy, 2011, 39, 5850-5870.	8.8	538
3	Integrated analysis of climate change, land-use, energy and water strategies. Nature Climate Change, 2013, 3, 621-626.	18.8	498
4	Connecting climate action with other Sustainable Development Goals. Nature Sustainability, 2019, 2, 674-680.	23.7	363
5	Energy access scenarios to 2030 for the power sector in sub-Saharan Africa. Utilities Policy, 2012, 20, 1-16.	4.0	200
6	Incorporating flexibility requirements into long-term energy system models â€“ A case study on high levels of renewable electricity penetration in Ireland. Applied Energy, 2014, 135, 600-615.	10.1	181
7	Lighting the World: the first application of an open source, spatial electrification tool (OnSSET) on Sub-Saharan Africa. Environmental Research Letters, 2017, 12, 085003.	5.2	151
8	Assessing the technical wind energy potential in Africa a GIS-based approach. Renewable Energy, 2015, 83, 110-125.	8.9	148
9	A model of household energy services in a low-income rural African village. Energy Policy, 2005, 33, 1833-1851.	8.8	138
10	A Methodology to Assess the Water Energy Food Ecosystems Nexus in Transboundary River Basins. Water (Switzerland), 2016, 8, 59.	2.7	137
11	Global Insights Based on the Multidimensional Energy Poverty Index (MEPI). Sustainability, 2013, 5, 2060-2076.	3.2	111
12	Modelling elements of Smart Grids â€“ Enhancing the OSeMOSYS (Open Source Energy Modelling) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	8.8	102
13	A cost comparison of technology approaches for improving access to electricity services. Energy, 2016, 95, 255-265.	8.8	101
14	Determinants of electricity demand for newly electrified low-income African households. Energy Policy, 2008, 36, 2812-2818.	8.8	99
15	A GIS-based approach for electrification planningâ€"A case study on Nigeria. Energy for Sustainable Development, 2015, 29, 142-150.	4.5	98
16	Wind energy assessment considering geographic and environmental restrictions in Sweden: A GIS-based approach. Energy, 2015, 83, 447-461.	8.8	97
17	An indicative analysis of investment opportunities in the African electricity supply sector â€" Using TEMBA (The Electricity Model Base for Africa). Energy for Sustainable Development, 2016, 31, 50-66.	4.5	96
18	From the development of an open-source energy modelling tool to its application and the creation of communities of practice: The example of OSeMOSYS. Energy Strategy Reviews, 2018, 20, 209-228.	7.3	82

#	Article	IF	Citations
19	Assessing integrated systems. Nature Climate Change, 2014, 4, 246-247.	18.8	79
20	Resilience of the Eastern African electricity sector to climate driven changes in hydropower generation. Nature Communications, 2019, 10, 302.	12.8	78
21	Economic analysis of standalone wind-powered hydrogen refueling stations for road transport atÂselected sites in Sweden. International Journal of Hydrogen Energy, 2015, 40, 9855-9865.	7.1	77
22	Smart and Just Grids for sub-Saharan Africa: Exploring options. Renewable and Sustainable Energy Reviews, 2013, 20, 336-352.	16.4	76
23	Adding value with CLEWS â€“ Modelling the energy system and its interdependencies for Mauritius. Applied Energy, 2014, 113, 1434-1445.	10.1	75
24	Net-zero deep decarbonization pathways in Latin America: Challenges and opportunities. Energy Strategy Reviews, 2020, 30, 100510.	7.3	73
25	Impact of political and economic barriers for concentrating solar power in Sub-Saharan Africa. Energy Policy, 2017, 102, 52-72.	8.8	70
26	Rural electrification options in the Brazilian Amazon. Energy for Sustainable Development, 2014, 20, 36-48.	4.5	64
27	Energy modelling and the Nexus concept. Energy Strategy Reviews, 2018, 19, 1-6.	7.3	64
28	Connecting the resource nexus to basic urban service provision â€“ with a focus on water-energy interactions in New York City. Sustainable Cities and Society, 2017, 31, 83-94.	10.4	62
29	The benefits of geospatial planning in energy access â€“ A case study on Ethiopia. Applied Geography, 2016, 72, 1-13.	3.7	61
30	The Role of Open Access Data in Geospatial Electrification Planning and the Achievement of SDG7. An OnSSET-Based Case Study for Malawi. Energies, 2019, 12, 1395.	3.1	61
31	Climate, land, energy and water (<scp>CLEW</scp>) interlinkages in <scp>B</scp>urkina <scp>F</scp>aso: An analysis of agricultural intensification and bioenergy production. Natural Resources Forum, 2012, 36, 245-262.	3.6	60
32	Desalination using renewable energy sources on the arid islands of South Aegean Sea. Energy, 2016, 94, 262-272.	8.8	60
33	Interactions between energy security and climate change: A focus on developing countries. Energy Policy, 2011, 39, 3750-3756.	8.8	58
34	Electrification pathways for Kenyaâ€“linking spatial electrification analysis and medium to long term energy planning. Environmental Research Letters, 2017, 12, 095008.	5.2	57
35	Perspective of comprehensive and comprehensible multi-model energy and climate science in Europe. Energy, 2021, 215, 119153.	8.8	57
36	Supporting security and adequacy in future energy systems: The need to enhance long-term energy system models to better treat issues related to variability. International Journal of Energy Research, 2015, 39, 377-396.	4.5	56

#	Article	IF	Citations
37	Electricity supply industry modelling for multiple objectives under demand growth uncertainty. Energy, 2007, 32, 2210-2229.	8.8	54
38	Open source software and crowdsourcing for energy analysis. Energy Policy, 2012, 49, 149-153.	8.8	49
39	Modeling the long-term impact of demand response in energy planning: The Portuguese electric system case study. Energy, 2018, 165, 456-468.	8.8	49
40	A preliminary assessment of wind generated hydrogen production potential to reduce the gasoline fuel used in road transport sector of Sweden. International Journal of Hydrogen Energy, 2015, 40, 6501-6511.	7.1	46
41	Ranking and selection of power expansion alternatives for multiple objectives under uncertainty. Energy, 2007, 32, 2350-2369.	8.8	45
42	A geospatial assessment of the techno-economic wind power potential in India using geographical restrictions. Renewable Energy, 2016, 97, 77-88.	8.9	45
43	Valuing blackouts and lost leisure: Estimating electricity interruption costs for households across the European Union. Energy Research and Social Science, 2017, 34, 39-48.	6.4	45
44	Decarbonising the transport and energy sectors: Technical feasibility and socioeconomic impacts in Costa Rica. Energy Strategy Reviews, 2020, 32, 100573.	7.3	45
45	A Geospatial Assessment of Small-Scale Hydropower Potential in Sub-Saharan Africa. Energies, 2018, 11, 3100.	3.1	44
46	Estimating the cost of energy access: The case of the village of Suro Craic in Timor Leste. Energy, 2015, 79, 385-397.	8.8	42
47	A Brazilian perspective of power systems integration using OSeMOSYS SAMBA â€“ South America Model Base â€“ and the bargaining power of neighbouring countries: A cooperative games approach. Energy Policy, 2018, 115, 470-485.	8.8	41
48	Strategies for solar and wind integration by leveraging flexibility from electric vehicles: The Barbados case study. Energy, 2018, 164, 65-78.	8.8	41
49	Long-term optimisation model of the Tunisian power system. Energy, 2017, 141, 550-562.	8.8	38
50	Grand Inga to power Africa: Hydropower development scenarios to 2035. Energy Strategy Reviews, 2014, 4, 1-10.	7.3	37
51	Natural gas in Cyprus: The need for consolidated planning. Energy Policy, 2017, 107, 197-209.	8.8	35
52	South America power integration, Bolivian electricity export potential and bargaining power: An OSeMOSYS SAMBA approach. Energy Strategy Reviews, 2017, 17, 27-36.	7.3	34
53	Challenges of data availability: Analysing the water-energy nexus in electricity generation. Energy Strategy Reviews, 2019, 26, 100426.	7.3	34
54	Cross-Scale Water and Land Impacts of Local Climate and Energy Policyâ€"A Local Swedish Analysis of Selected SDG Interactions. Sustainability, 2019, 11, 1847.	3.2	32

#	Article	IF	Citations
55	Beyond free electricity: The costs of electric cooking in poor households and a market-friendly alternative. Energy Policy, 2006, 34, 3351-3358.	8.8	30
56	LEAPs and Boundsâ€"an Energy Demand and Constraint Optimised Model of the Irish Energy System. Energy Efficiency, 2014, 7, 441-466.	2.8	30
57	Multiâ€functionality of natureâ€based and other urban sustainability solutions: New York City study. Land Degradation and Development, 2018, 29, 3653-3662.	3.9	28
58	African Clean Energy Corridor: Regional integration to promote renewable energy fueled growth. Energy Research and Social Science, 2015, 5, 130-132.	6.4	26
59	Cost minimization for fully renewable electricity systems: A Mauritius case study. Energy Policy, 2019, 133, 110895.	8.8	26
60	Planning with justice: Using spatial modelling to incorporate justice in electricity pricing â€“ The case of Tanzania. Applied Energy, 2020, 264, 114749.	10.1	25
61	The Impact of Climate Change on Crop Production in Ugandaâ€"An Integrated Systems Assessment with Water and Energy Implications. Water (Switzerland), 2019, 11, 1805.	2.7	23
62	Influence of Electrification Pathways in the Electricity Sector of Ethiopiaâ€"Policy Implications Linking Spatial Electrification Analysis and Medium to Long-Term Energy Planning. Energies, 2021, 14, 1209.	3.1	23
63	A Retrospective Analysis of Energy Access with a Focus on the Role of Mini-Grids. Sustainability, 2020, 12, 1793.	3.2	22
64	Need for Reliability and Measuring Its Cost. , 2017, , 207-218.		21
65	Incorporating high-resolution demand and techno-economic optimization to evaluate micro-grids into the Open Source Spatial Electrification Tool (OnSSET). Energy for Sustainable Development, 2020, 56, 98-118.	4.5	20
66	Calabashes for kilowatt-hours: Rural energy and market failure. Energy Policy, 2010, 38, 2729-2738.	8.8	19
67	Sustainable development policies and measures: institutional issues and electrical efficiency in South Africa. Climate Policy, 2007, 7, 212-229.	5.1	17
68	Renewable energy technology integration for the island of Cyprus: AÂcost-optimization approach. Energy, 2017, 137, 31-41.	8.8	17
69	Succeeding at home and abroad: accounting for the international spillovers of citiesâ€™ SDG actions. Npj Urban Sustainability, 2021, 1, .	8.0	17
70	Nuclear power and post-2012 energy and climate change policies. Environmental Science and Policy, 2008, 11, 467-477.	4.9	16
71	OSeMOSYS-PuLP: A Stochastic Modeling Framework for Long-Term Energy Systems Modeling. Energies, 2019, 12, 1382.	3.1	16
72	Incorporating macroeconomic feedback into an energy systems model using an IO approach: Evaluating the rebound effect in the Korean electricity system. Energy Policy, 2010, 38, 2700-2728.	8.8	15

#	Article	IF	Citations
73	Accelerating the Global Transformation to 21st Century Power Systems. Electricity Journal, 2013, 26, 39-51.	2.5	15
74	Representation of Balancing Options for Variable Renewables in Long-Term Energy System Models: An Application to OSeMOSYS. Energies, 2019, 12, 2366.	3.1	15
75	Land, energy and water resource management and its impact on GHG emissions, electricity supply and food production- Insights from a Ugandan case study. Environmental Research Communications, 2020, 2, 085003.	2.3	15
76	Selected â€˜Starter kitâ€™ energy system modelling data for selected countries in Africa, East Asia, and South America (#CCG, 2021). Data in Brief, 2022, 42, 108021.	1.0	15
77	The open source electricity Model Base for Europe - An engagement framework for open and transparent European energy modelling. Energy, 2022, 239, 121973.	8.8	14
78	Mapping key economic indicators of onshore wind energy in Sweden by using a geospatial methodology. Energy Conversion and Management, 2016, 128, 211-226.	9.2	13
79	Supporting Electrification Policy in Fragile States: A Conflict-Adjusted Geospatial Least Cost Approach for Afghanistan. Sustainability, 2020, 12, 777.	3.2	13
80	Powering production. The case of the sisal fibre production in the Tanga region, Tanzania. Energy Policy, 2016, 98, 544-556.	8.8	12
81	Population cluster data to assess the urban-rural split and electrification in Sub-Saharan Africa. Scientific Data, 2021, 8, 117.	5.3	12
82	Techno-economic demand projections and scenarios for the Bolivian energy system. Energy Strategy Reviews, 2017, 16, 96-109.	7.3	11
83	A Sketch of Boliviaâ€™s Potential Low-Carbon Power System Configurations. The Case of Applying Carbon Taxation and Lowering Financing Costs. Energies, 2018, 11, 2738.	3.1	11
84	Determinants of energy futuresâ€”a scenario discovery method applied to cost and carbon emission futures for South American electricity infrastructure. Environmental Research Communications, 2019, 1, 025001.	2.3	11
85	A GIS-Based Approach to Inform Agriculture-Water-Energy Nexus Planning in the North Western Sahara Aquifer System (NWSAS). Sustainability, 2020, 12, 7043.	3.2	11
86	Development of functionalities for improved storage modelling in OSeMOSYS. Energy, 2020, 195, 117025.	8.8	11
87	A scenario discovery approach to least-cost electrification modelling in Burkina Faso. Energy Strategy Reviews, 2021, 38, 100714.	7.3	11
88	Estimating the spatially explicit wind generated electricity cost in Africa - A GIS based analysis. Energy Strategy Reviews, 2017, 17, 45-49.	7.3	9
89	The Global Least-cost user-friendly CLEWs Open-Source Exploratory model. Environmental Modelling and Software, 2021, 143, 105091.	4.5	9
90	Long-Term Energy Systems Planning. , 2014, , 215-225.		8

#	Article	IF	Citations
91	Excess Mortality in England during the 2019 Summer Heatwaves. Climate, 2021, 9, 14.	2.8	8
92	An indicative assessment of investment opportunities in the African electricity supply sector. Journal of Energy in Southern Africa, 2014, 25, 2-12.	0.8	8
93	Energy Access Scenarios to 2030 for the Power Sector in Sub-Saharan Africa. SSRN Electronic Journal, 0, , .	0.4	7
94	Water impacts and water-climate goal conflicts of local energy choices â€“ notes from a Swedish perspective. Proceedings of the International Association of Hydrological Sciences, 0, 376, 25-33.	1.0	7
95	A scenario analysis of potential long-term impacts of COVID-19 on the Tunisian electricity sector. Energy Strategy Reviews, 2021, 38, 100759.	7.3	7
96	Technoeconomic data adopted for the development of a long-term electricity supply model for the Hashmite Kingdome of Jordan. Data in Brief, 2020, 30, 105391.	1.0	6
97	Implications to the electricity system of Paraguay of different demand scenarios and export prices to Brazil. Energy Systems, 2021, 12, 911-939.	3.0	5
98	Comparison of management strategies for the charging schedule and all-electric operation of a plug-in hybrid-electric bi-articulated bus fleet. Public Transport, 2020, 12, 363-404.	2.7	4
99	The effects of climate change mitigation strategies on the energy system of Africa and its associated water footprint. Environmental Research Letters, 2022, 17, 044048.	5.2	4
100	Beyond Basic Access. , 2014, , 180-208.		3
101	Technoeconomic assumptions adopted for the development of a long-term electricity supply model for Cyprus. Data in Brief, 2017, 14, 730-737.	1.0	3
102	Vulnerability of Ugandaâ€™s Electricity Sector to Climate Change: An Integrated Systems Analysis. , 2018, , 1-30.		3
103	Potential Climate Change Risks to Meeting Zimbabweâ€™s NDC Goals and How to Become Resilient. Energies, 2021, 14, 5827.	3.1	3
104	Vulnerability of Ugandaâ€™s Electricity Sector to Climate Change: An Integrated Systems Analysis. , 2019, , 1-30.		2
105	Energy futures: trends and options for the world and for South Africa, with emphasis on the generation of electricity. Transactions of the Royal Society of South Africa, 2001, 56, 74-79.	1.1	1
106	Estonian energy supply strategy assessment for 2035 and its vulnerability to climate driven shocks. Environmental Progress and Sustainable Energy, 2016, 35, 469-478.	2.3	1
107	The role of energy efficiency in the management of water resources of the Syr Darya River basin. International Journal of Environment and Sustainable Development, 2021, 20, 64.	0.3	1
108	How Modelling Tools Can Support Climate Change Policy: The Case of Costa Rica in the Energy Sector. SSRN Electronic Journal, 0, , .	0.4	1

#	Article	IF	Citations
109	A multi-criteria analysis approach to evaluate GHG mitigation and development. , 2005, , 2441-2444.		0
110	The Cost of Rural Electrification Including E-Cooking for Bolivian Medium Size Isolated Low-Lands Villages.. , 2019, , .		0
111	Vulnerability of Ugandaâ€™s Electricity Sector to Climate Change: An Integrated Systems Analysis. , 2020, , 177-205.		0