Henrik Lund

List of Publications by Year
in descending order

153 papers	22,207 citations	15504 65 h-index	8630 146 g-index
191 all docs	191 docs citations	191 times ranked	12004 citing authors

#	Article	IF	Citations
1	4th Generation District Heating (4GDH). Energy, 2014, 68, 1-11.	8.8	1,548
2	A review of computer tools for analysing the integration of renewable energy into various energy systems. Applied Energy, 2010, 87, 1059-1082.	10.1	1,244
3	Renewable energy strategies for sustainable development. Energy, 2007, 32, 912-919.	8.8	1,107
4	Smart Energy Systems for coherent 100% renewable energy and transport solutions. Applied Energy, 2015, 145, 139-154.	10.1	873
5	Energy system analysis of 100% renewable energy systemsâ€"The case of Denmark in years 2030 and 2050. Energy, 2009, 34, 524-531.	8.8	865
6	Integration of renewable energy into the transport and electricity sectors through V2G. Energy Policy, 2008, 36, 3578-3587.	8.8	844
7	Smart energy and smart energy systems. Energy, 2017, 137, 556-565.	8.8	679
8	The role of district heating in future renewable energy systems. Energy, 2010, 35, 1381-1390.	8.8	644
9	Heat Roadmap Europe: Combining district heating with heat savings to decarbonise the EU energy system. Energy Policy, 2014, 65, 475-489.	8.8	607
10	100% Renewable energy systems, climate mitigation and economic growth. Applied Energy, 2011, 88, 488-501.	10.1	583
11	Smart Energy Europe: The technical and economic impact of one potential 100% renewable energy scenario for the European Union. Renewable and Sustainable Energy Reviews, 2016, 60, 1634-1653.	16.4	549
12	From electricity smart grids to smart energy systems â€" A market operation based approach and understanding. Energy, 2012, 42, 96-102.	8.8	520
13	Status and perspectives on 100% renewable energy systems. Energy, 2019, 175, 471-480.	8.8	489
14	The role of compressed air energy storage (CAES) in future sustainable energy systems. Energy Conversion and Management, 2009, 50, 1172-1179.	9.2	438
15	Large-scale integration of wind power into different energy systems. Energy, 2005, 30, 2402-2412.	8.8	428
16	The status of 4th generation district heating: Research and results. Energy, 2018, 164, 147-159.	8.8	395
17	The first step towards a 100% renewable energy-system for Ireland. Applied Energy, 2011, 88, 502-507.	10.1	377
18	Response to â€˜Burden of proof: A comprehensive review of the feasibility of 100% renewable-electricity systemsâ€™. Renewable and Sustainable Energy Reviews, 2018, 92, 834-847.	16.4	354

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19	Large-scale integration of optimal combinations of PV, wind and wave power into the electricity supply. Renewable Energy, 2006, 31, 503-515.	8.9	336
20	Potential of renewable energy systems in China. Applied Energy, 2011, 88, 518-525.	10.1	259
21	A renewable energy system in Frederikshavn using low-temperature geothermal energy for district heating. Applied Energy, 2011, 88, 479-487.	10.1	241
22	Comparative analyses of seven technologies to facilitate the integration of fluctuating renewable energy sources. IET Renewable Power Generation, 2009, 3, 190.	3.1	231
23	Optimal operation strategies of compressed air energy storage (CAES) on electricity spot markets with fluctuating prices. Applied Thermal Engineering, 2009, 29, 799-806.	6.0	223
24	Practical operation strategies for pumped hydroelectric energy storage (PHES) utilising electricity price arbitrage. Energy Policy, 2011, 39, 4189-4196.	8.8	210
25	A renewable energy scenario for Aalborg Municipality based on low-temperature geothermal heat, wind power and biomass. Energy, 2010, 35, 4892-4901.	8.8	201
26	Wind power integration using individual heat pumps â€“ Analysis of different heat storage options. Energy, 2012, 47, 284-293.	8.8	197
27	Integrated energy systems and local energy markets. Energy Policy, 2006, 34, 1152-1160.	8.8	188
28	EnergyPLAN â€“ Advanced analysis of smart energy systems. Smart Energy, 2021, 1, 100007.	5.7	188
29	The technical and economic implications of integrating fluctuating renewable energy using energy storage. Renewable Energy, 2012, 43, 47-60.	8.9	182
30	Smart energy cities in a 100% renewable energy context. Renewable and Sustainable Energy Reviews, 2020, 129, 109922.	16.4	173
31	Trends in tools and approaches for modelling the energy transition. Applied Energy, 2021, 290, 116731.	10.1	173
32	Simulation versus Optimisation: Theoretical Positions in Energy System Modelling. Energies, 2017, 10, 840.	3.1	168
33	Optimal designs of small CHP plants in a market with fluctuating electricity prices. Energy Conversion and Management, 2005, 46, 893-904.	9.2	163
34	Heat Roadmap Europe: Large-Scale Electric Heat Pumps in District Heating Systems. Energies, 2017, 10, 578.	3.1	163
35	Towards future infrastructures for sustainable multi-energy systems: A review. Energy, 2019, 184, 2-21.	8.8	162
36	Modelling of energy systems with a high percentage of CHP and wind power. Renewable Energy, 2003, 28, 2179-2193.	8.9	157

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37	Large-scale integration of wind power into the existing Chinese energy system. Energy, 2011, 36, 4753-4760.	8.8	156
38	Perspectives on fourth and fifth generation district heating. Energy, 2021, 227, 120520.	8.8	149
39	Renewable heating strategies and their consequences for storage and grid infrastructures comparing a smart grid to a smart energy systems approach. Energy, 2018, 151, 94-102.	8.8	148
40	Future district heating systems and technologies: On the role of smart energy systems and 4th generation district heating. Energy, 2018, 165, 614-619.	8.8	147
41	Energy system analysis of marginal electricity supply in consequential LCA. International Journal of Life Cycle Assessment, 2010, 15, 260-271.	4.7	142
42	The effectiveness of storage and relocation options in renewable energy systems. Renewable Energy, 2008, 33, 1499-1507.	8.9	136
43	Zero energy buildings and mismatch compensation factors. Energy and Buildings, 2011, 43, 1646-1654.	6.7	131
44	Heat roadmap China: New heat strategy to reduce energy consumption towards 2030. Energy, 2015, 81, 274-285.	8.8	130
45	Management of surplus electricity-production from a fluctuating renewable-energy source. Applied Energy, 2003, 76, 65-74.	10.1	123
46	Two energy system analysis models: A comparison of methodologies and results. Energy, 2007, 32, 948-954.	8.8	121
47	New CHP partnerships offering balancing of fluctuating renewable electricity productions. Journal of Cleaner Production, 2007, 15, 288-293.	9.3	118
48	Limiting biomass consumption for heating in 100% renewable energy systems. Energy, 2012, 48, 160-168.	8.8	114
49	Conversion of individual natural gas to district heating: Geographical studies of supply costs and consequences for the Danish energy system. Applied Energy, 2010, 87, 1846-1857.	10.1	110
50	The role of Carbon Capture and Storage in a future sustainable energy system. Energy, 2012, 44, 469-476.	8.8	106
51	Integrated transport and renewable energy systems. Utilities Policy, 2008, 16, 107-116.	4.0	102
52	Energy efficiency analysis and impact evaluation of the application of thermoelectric power cycle to todayâ€™s CHP systems. Applied Energy, 2010, 87, 1231-1238.	10.1	99
53	System behaviour of compressed-air energy-storage in Denmark with a high penetration of renewable energy sources. Applied Energy, 2008, 85, 182-189.	10.1	98
54	Management of fluctuations in wind power and CHP comparing two possible Danish strategies. Energy, 2002, 27, 471-483.	8.8	93

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55	Modelling the existing Irish energy-system to identify future energy costs and the maximum wind penetration feasible. Energy, 2010, 35, 2164-2173.	8.8	90
56	Smart renewable energy penetration strategies on islands: The case of Gran Canaria. Energy, 2018, 162, 421-443.	8.8	87
57	The implementation of renewable energy systems. Lessons learned from the Danish case. Energy, 2010, 35, 4003-4009.	8.8	85
58	Comparing Waste-to-Energy technologies by applying energy system analysis. Waste Management, 2010, 30, 1251-1263.	7.4	81
59	Electric grid and heat planning scenarios with centralised and distributed sources of conventional, CHP and wind generation. Energy, 2000, 25, 299-312.	8.8	79
60	Electric vehicles and large-scale integration of wind power â€" The case of Inner Mongolia in China. Applied Energy, 2013, 104, 445-456.	10.1	78
61	The benefits of 4th generation district heating in a 100% renewable energy system. Energy, 2020, 213, 119030.	8.8	74
62	Integration of renewables and reverse osmosis desalination â€" Case study for the Jordanian energy system with a high share of wind and photovoltaics. Energy, 2015, 92, 270-278.	8.8	72
63	Roles of local and national energy systems in the integration of renewable energy. Applied Energy, 2016, 183, 419-429.	10.1	69
64	Smart Energy Markets - Future electricity, gas and heating markets. Renewable and Sustainable Energy Reviews, 2020, 119, 109655.	16.4	69
65	Use of waste for heat, electricity and transportâ€"Challenges when performing energy system analysis. Energy, 2009, 34, 636-644.	8.8	67
66	Heat Roadmap Europe: Identifying the balance between saving heat and supplying heat. Energy, 2016, 115, 1663-1671.	8.8	66
67	The economic crisis and sustainable development: The design of job creation strategies by use of concrete institutional economics. Energy, 2012, 43, 192-200.	8.8	65
68	Implementation strategy for small CHP-plants in a competitive market: the case of Lithuania. Applied Energy, 2005, 82, 214-227.	10.1	64
69	Cross-border versus cross-sector interconnectivity in renewable energy systems. Energy, 2017, 124, 492-501.	8.8	64
70	Biogas plants in Denmark: technological and economic developments. Applied Energy, 1999, 64, 195-206.	10.1	63
71	Integrated transportation and energy sector CO2 emission control strategies. Transport Policy, 2006, 13, 426-433.	6.6	63
72	Electric grid stability and the design of sustainable energy systems. International Journal of Sustainable Energy, 2005, 24, 45-54.	2.4	58

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73	Future power market and sustainable energy solutions â€“ The treatment of uncertainties in the daily operation of combined heat and power plants. Applied Energy, 2015, 144, 129-138.	10.1	56
74	The importance of flexible power plant operation for Jiangsu's wind integration. Energy, 2012, 41, 499-507.	8.8	55
75	Modelling the transport system in China and evaluating the current strategies towards the sustainable transport development. Energy Policy, 2013, 58, 347-357.	8.8	55
76	The electrification of transportation in energy transition. Energy, 2021, 236, 121564.	8.8	53
77	Large-scale heat pumps in sustainable energy systems: System and project perspectives. Thermal Science, 2007, 11, 143-152.	1.1	53
78	Quantifying the influence of wind power and photovoltaic on future electricity market prices. Energy Conversion and Management, 2019, 180, 312-324.	9.2	52
79	An energy system model for Hong Kong in 2020. Energy, 2014, 68, 301-310.	8.8	51
80	Choice awareness: the development of technological and institutional choice in the public debate of Danish energy planning. Journal of Environmental Policy and Planning, 2000, 2, 249-259.	2.8	50
81	System and market integration of wind power in Denmark. Energy Strategy Reviews, 2013, 1, 143-156.	7.3	49
82	Excess electricity diagrams and the integration of renewable energy. International Journal of Sustainable Energy, 2003, 23, 149-156.	2.4	48
83	District heating and market economy in Latvia. Energy, 1999, 24, 549-559.	8.8	47
84	Implementation of energy-conservation policies: the case of electric heating conversion in Denmark. Applied Energy, 1999, 64, 117-127.	10.1	47
85	Addressing the main challenges of energy security in the twenty-first century â€“ Contributions of the conferences on Sustainable Development of Energy, Water and Environment Systems. Energy, 2016, 115, 1504-1512.	8.8	47
86	The Kyoto mechanisms and technological innovation. Energy, 2006, 31, 2325-2332.	8.8	46
87	Recent advances in methods, policies and technologies at sustainable energy systems development. Energy, 2022, 245, 123276.	8.8	46
88	Sustainable development in practice. Journal of Cleaner Production, 2007, 15, 253-258.	9.3	45
89	A Romanian energy system model and a nuclear reduction strategy. Energy, 2011, 36, 6413-6419.	8.8	45
90	The design of 100 % renewable smart urb an energy systems: The case of Bozen-Bolzano. Energy, 2020, 207, 118198.	8.8	43

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91	Estonian energy system Proposals for the implementation of a cogeneration strategy. Energy Policy, 2000, 28, 729-736.	8.8	41
92	2050 pathway to an active renewable energy scenario for Jiangsu province. Energy Policy, 2013, 53, 267-278.	8.8	41
93	Energy saving synergies in national energy systems. Energy Conversion and Management, 2015, 103, 259-265.	9.2	40
94	Sustainable and cost-efficient energy supply and utilisation through innovative concepts and technologies at regional, urban and single-user scales. Energy, 2019, 182, 254-268.	8.8	40
95	Civic markets: the case of the California energy crisis. International Journal of Global Energy Issues, 2001, 16, 328.	0.4	38
96	Conflicting views of sustainability: The case of wind power and nature conservation in Denmark. Environmental Policy and Governance, 1998, 8, 1-6.	0.3	37
97	Large-scale optimal integration of wind and solar photovoltaic power in water-energy systems on islands. Energy Conversion and Management, 2021, 235, 113982.	9.2	37
98	Transition pathways towards a deep decarbonization energy systemâ€"A case study in Sichuan, China. Applied Energy, 2021, 302, 117507.	10.1	37
99	Designing a standalone wind-diesel-CAES hybrid energy system by using a scenario-based bi-level programming method. Energy Conversion and Management, 2020, 211, 112759.	9.2	37
100	Feasibility of a 1400 MW coal-fired power-plant in Thailand. Applied Energy, 2003, 76, 55-64.	10.1	36
101	District heating in 100% renewable energy systems: Combining industrial excess heat and heat pumps. Energy Conversion and Management, 2021, 244, 114527.	9.2	36
102	A Green Energy Plan for Denmark. Environmental and Resource Economics, 1999, 14, 431-440.	3.2	35
103	Energy efficient decarbonisation strategy for the Danish transport sector by 2045. Smart Energy, 2022, 5, 100063.	5.7	35
104	The four generations of district cooling - A categorization of the development in district cooling from origin to future prospect. Energy, 2022, 253, 124098.	8.8	35
105	Increasing the integration of variable renewable energy in coal-based energy system using power to heat technologies: The case of Kosovo. Energy, 2020, 212, 118762.	8.8	34
106	The role of sustainable bioenergy in a fully decarbonised society. Renewable Energy, 2022, 196, 195-203.	8.9	33
107	Smart energy Denmark. A consistent and detailed strategy for a fully decarbonized society. Renewable and Sustainable Energy Reviews, 2022, 168, 112777.	16.4	33
108	Beyond sensitivity analysis: A methodology to handle fuel and electricity prices when designing energy scenarios. Energy Research and Social Science, 2018, 39, 108-116.	6.4	32

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109	The first feasible step towards clean heating transition in urban agglomeration: A case study of Beijing-Tianjin-Hebei region. Energy Conversion and Management, 2020, 223, 113282.	9.2	32
110	Rebuilding without restructuring the energy system in east Germany. Energy Policy, 1998, 26, 535-546.	8.8	31
111	Implementing cleaner heating solutions towards a future low-carbon scenario in Ireland. Journal of Cleaner Production, 2019, 214, 377-388.	9.3	31
112	Optimal coordination of flexible resources in the gas-heat-electricity integrated energy system. Energy, 2021, 223, 119729.	8.8	30
113	Comparison of district heating expansion potential based on consumer-economy or socio-economy. Energy, 2016, 115, 1771-1778.	8.8	27
114	The MATLAB Toolbox for EnergyPLAN: A tool to extend energy planning studies. Science of Computer Programming, 2020, 191, 102405.	1.9	27
115	Performance Analysis of a Hybrid District Heating System: a Case Study of a Small Town in Croatia. Journal of Sustainable Development of Energy, Water and Environment Systems, 2015, 3, 282-302.	1.9	27
116	Energy transition in petroleum rich nations: Case study of Iran. Smart Energy, 2021, 3, 100026.	5.7	25
117	Sustainable energy and transportation systems introduction and overview. Utilities Policy, 2008, 16, 59-62.	4.0	23
118	Quantification of realistic performance expectations from trigeneration CAES-ORC energy storage system in real operating conditions. Energy Conversion and Management, 2021, 249, 114828.	9.2	23
119	Flexible energy systems: integration of electricity production from CHP and fluctuating renewable energy. International Journal of Energy Technology and Policy, 2003, 1, 250.	0.2	22
120	Does environmental impact assessment really support technological change? Analyzing alternatives to coal-fired power stations in Denmark. Environmental Impact Assessment Review, 1997, 17, 357-370.	9.2	20
121	Sustainable development of energy, water and environment systems. Energy, 2011, 36, 1839-1841.	8.8	20
122	From Carbon Calculators to Energy System Analysis in Cities. Energies, 2019, 12, 2307.	3.1	20
123	Economic feasibility of a wind-battery system in the electricity market with the fluctuation penalty. Journal of Cleaner Production, 2020, 271, 122513.	9.3	20
124	Choice awareness: the development of technological and institutional choice in the public debate of Danish energy planning. Journal of Environmental Policy and Planning, 2000, 2, 249-259.	2.8	17
125	Tool. , 2014, , 53-78.		17
126	Editorial: Sustainable development of energy, Water and Environment Systems. Energy, 2020, 190, 116432.	8.8	17

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127	Heat Roadmap Chile: A national district heating plan for air pollution decontamination and decarbonisation. Journal of Cleaner Production, 2020, 272, 122744.	9.3	14
128	Integrated technologies for sustainable stationary and mobile energy infrastructures. Utilities Policy, 2008, 16, 130-140.	4.0	13
129	Barriers and Recommendations to Innovative Ownership Models for Wind Power. Energies, 2018, 11, 2602.	3.1	13
130	District Heating Tariffs, Economic Optimisation and Local Strategies during Radical Technological Change. Energies, 2020, 13, 1172.	3.1	13
131	Energy systems engineering. Energy, 2012, 44, 2-5.	8.8	12
132	A multi-objective optimization approach in defining the decarbonization strategy of a refinery. Smart Energy, 2022, 6, 100076.	5.7	12
133	A market equilibrium model for electricity, gas and district heating operations. Energy, 2020, 206, 117934.	8.8	11
134	Sustainable Towns: The Case of Frederikshavn â€“ 100% Renewable Energy. , 2010, , 155-168.		10
135	Fourth-Generation District Heating and Motivation Tariffs. , 2022, 1, .		10
136	Implementation of repowering optimization for an existing photovoltaicâ€pumped hydro storage hybrid system: A case study in Sichuan, China. International Journal of Energy Research, 2019, 43, 8463.	4.5	9
137	Perspectives on energy efficiency and smart energy systems from the 5th SESAAU2019 conference. Energy, 2021, 216, 119260.	8.8	9
138	Heat Roadmap Europe: strategic heating transition typology as a basis for policy recommendations. Energy Efficiency, 2022, 15, .	2.8	9
139	Sustainable Development of Energy, Water and Environment Systems. Energy, 2016, 115, 1503.	8.8	7
140	Energy, employment and the environment: towards an integrated approach. Environmental Policy and Governance, 1998, 8, 33-40.	0.3	6
141	Environmental accounts for households: A method for improving public awareness and participation. Local Environment, 1998, 3, 43-54.	2.4	6
142	Energy strategy research â€“ Charter and perspectives of an emerging discipline. Energy Strategy Reviews, 2013, 1, 135-137.	7.3	5
143	Quantifying techno-economic indicators' impact on isolated renewable energy systems. IScience, 2021, 24, 102730.	4.1	5
144	Tool. , 2010, , 51-73.		3

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145	Smart Energy Systems. Issues in Environmental Science and Technology, 2018, , 228-260.	0.4	3
146	Climate Change Mitigation from a Bottom-up Community Approach. , 2010, , 247-265.		3
147	Fuel-efficiency of hydrogen and heat storage technologies for integration of fluctuating renewable energy sources. , 2005, , .		2
148	Integrated Flexible Resources and Energy Markets in the Danish Multi-energy System. , 2019, , .		2
149	Sustainable Development of Energy, Water and Environmental Systems and Smart Energy Systems. , 0, 34, 1-4.		2
150	Towards low carbon energy systems: Engineering and economic perspectives. Energy, 2016, 115, 1345-1346.	8.8	1
151	Sustainable Towns. , 2018, , 129-146.		1
152	Empirical Examples. , 2014, , 239-325.		0
153	Bi-Level Programming for Integrating Flexible Demand in Combined Smart Energy System. , 2021, , .		0