Supplementary Materials

Table S1. List of articles retrieved based on RQ2 query.

	Authors	Full paper retrieved ? (Y/N)	Cited by	Document Type
[77]	Gaun, A.; Schmautzer, E. Biomass-Fuelled Stirling Micro Combined Heat and Power Plants. In Proceedings of the 2007 International Conference on Clean Electrical Power, Capri, Italy, 21–23 May 2007; pp. 429–432. https://doi.org/10.1109/ICCEP.2007.384249.	Y	5	Conference paper
[78]	Chen, W.-L.; Huang, C.-W.; Li, Y.-H.; Kao, C.-C.; Cong, H.T. Biosyngas-fueled platinum reactor applied in micro combined heat and power system with a thermophotovoltaic array and stirling engine. Energy 2020, 194, 116862. https://doi.org/10.1016/j.energy.2019.116862.	Y	17	Article
[41]	Damirchi, H.; Najafi, G.; Alizadehnia, S.; Ghobadian, B.; Yusaf, T.; Mamat, R. Design, Fabrication and Evaluation of Gamma-Type Stirling Engine to Produce Electricity from Biomass for the Micro-CHP System. Energy Procedia 2015, 75, 137–143. https://doi.org/10.1016/j.egypro.2015.07.240.	Y	17	Conference paper
[47]	Takeuchi, M.; Suzuki, S.; Abe, Y. Development of a low-temperature-difference indirect-heating kinematic Stirling engine. Energy 2021, 229, 120577. https://doi.org/10.1016/j.energy.2021.120577.	Y	7	Article
[53]	Crema, L.; Alberti, F.; Bertaso, A.; Bozzoli, A. Development of a pellet boiler with Stirling engine for m-CHP domestic application. Energ. Sustain. Soc. 2011, 1, 5. https://doi.org/10.1186/2192-0567-1-5.	Y	12	Article
[48]	Ulloa, C.; Míguez, J.L.; Porteiro, J.; Eguía, P.; Cacabelos, A. Development of a Transient Model of a Stirling-Based CHP System. Energies 2013, 6, 3115–3133. https://doi.org/10.3390/en6073115.	Y	21	Article
[45]	Lombardi, S.; Bizon, K.; Marra, F.S.; Continillo, G. Effect of Coupling Parameters on the Performance of Fluidized Bed Combustor—Stirling Engine for a Micro CHP System. Energy Procedia 2015, 75, 834–839. https://doi.org/10.1016/j.egypro.2015.07.149.	Y	6	Conference paper
[71]	Alanne, K.; Jokisalo, J. Energy analysis of a novel domestic scale integrated wooden pellet-fueled micro-cogeneration concept. Energy and Buildings. 2014, 80, 290–301. https://doi.org/10.1016/j.enbuild.2014.05.035.	Y	6	Article
[79]	Ma, D.G.; Jiang, X.B.; Zhang, X.; Ma, Y. Experimental Analysis of Micro-CHP Based on Biomass Direct-Fired Stirling Engine. AMM 2012, 151, 36–40. https://doi.org/10.4028/www.scientific.net/AMM.151.36.	Y	1	Conference paper

[46]	García, D.; Suárez, M.-J.; Blanco, E.; Prieto, J.-I. Experimental and Numerical Characterisation of a Non-Tubular Stirling Engine Heater for Biomass Applications. Sustainability 2022, 14, 16488. https://doi.org/10.3390/su142416488.	Y	2	Article
[54]	Voronca, S.-D.; Siroux, M.; Darie, G. Experimental Characterization of Transitory Functioning Regimes of a Biomass Stirling Micro-CHP. Energies 2022, 15, 5547. https://doi.org/10.3390/en15155547.	Y	0	Article
[80]	Kramens, J.; Vigants, E.; Liepins, I. Experimental study of factors influencing the efficiency of Stirling engine biomass microcogeneration unit. In Proceedings of the 2021 IEEE 62nd International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), Riga, Latvia, 15–17 November 2021; pp. 1–4. https://doi.org/10.1109/RTUCON53541.2021.9711686.	Y	0	Conference paper
[81]	Stouffs, P. Hot air engines. J. Appl. Fluid Mech. 2011, 4, 1–8.	Y	9	Article
[82]	Kallio, S.; Siroux, M. Hybrid renewable energy systems based on micro-cogeneration. Energy Rep. 2022, 8, 762–769. https://doi.org/10.1016/j.egyr.2021.11.158.	Y	24	Article
[36]	Cardozo, E.; Erlich, C.; Malmquist, A.; Alejo, L. Integration of a wood pellet burner and a Stirling engine to produce residential heat and power. Appl. Therm. Eng. 2014, 73, 671–680. https://doi.org/10.1016/j.applthermaleng.2014.08.024.	Y	31	Article
[36]* duplicate record in SCOPUS	Cardozo, E.; Erlich, C.; Malmquist, A.; Alejo, L. Integration of a wood pellet burner and a Stirling engine to produce residential heat and power. Appl. Therm. Eng. 2014, 73, 671–680. https://doi.org/10.1016/j.applthermaleng.2014.08.024.	Y	19	Article
[57]	Damirchi, H.; Najafi, G.; Alizadehnia, S.; Mamat, R.; Azwadi, C.S.N.; Azmi, W.; Noor, M. Micro Combined Heat and Power to provide heat and electrical power using biomass and Gamma-type Stirling engine. Appl. Therm. Eng. 2016, 103, 1460–1469. https://doi.org/10.1016/j.applthermaleng.2016.04.118.	Y	50	Article
[83]	Gliński, M.; Bojesen, C.; Rybiński, W.; Bykuć, S. Modelling of the Biomass mCHP Unit for Power Peak Shaving in the Local Electrical Grid. Energies 2019, 12, 458. https://doi.org/10.3390/en12030458.	Y	10	Article
[50]	Miccio, F. On the integration between fluidized bed and Stirling engine for micro-generation. Appl. Therm. Eng. 2013, 52, 46–53. https://doi.org/10.1016/j.applthermaleng.2012.11.004.	Y	16	Article

[42]	Najafi, G.; Hoseini, S.; De Goey, L.; Yusaf, T. Optimization of combustion in micro combined heat and power (mCHP) system with the biomass-Stirling engine using SiO2 and Al2O3 nanofluids. Appl. Therm. Eng. 2020, 169, 114936. https://doi.org/10.1016/j.applthermaleng.2020.114936.	Y	7	Article
[60]	Huang, Y.; Wang, Y.; Chen, H.; Zhang, X.; Mondol, J.; Shah, N.; Hewitt, N. Performance analysis of biofuel fired trigeneration systems with energy storage for remote households. Appl. Energy 2017, 186, 530–538. https://doi.org/10.1016/j.apenergy.2016.03.028.	Y	22	Article
[40]	Cardozo, E.; Malmquist, A. Performance comparison between the use of wood and sugarcane bagasse pellets in a Stirling engine micro-CHP system. Appl. Therm. Eng. 2019, 159, 113945. https://doi.org/10.1016/j.applthermaleng.2019.113945.	Y	33	Article
[84]	Badea, N.; Ion, I.V.; Cazacu, N.; Paraschiv, L.; Paraschiv, S.; Caraman, S. Renewable Energy Sources for the mCCHP-SE-RES Systems. In Design for Micro-Combined Cooling, Heating and Power Systems; Badea, N., Ed.; Green Energy and Technology, Springer: London, UK, 2015; pp. 91–131. https://doi.org/10.1007/978-1-4471-6254-4_4.	Y	1	Article
[44]	Kramens, J.; Vīgants, E.; Liepiņš, I.; Vērnieks, L.; Terjanika, V. Research of a Biomass Boiler with Stirling Engine Microgeneration Unit. Environ. Clim. Technol. 2021, 25, 587–599. https://doi.org/10.2478/rtuect-2021-0043.	Y	2	Article
[85]	Kramens, J.; Vīgants, E.; Liepiņš, I.; Terjanika, V. Research of biomass micro-cogeneration system integration with a solar pv panels in zero-energy family building. ETR 2021, 1, 132–138. https://doi.org/10.17770/etr2021vol1.6568.	Y	0	Conference paper
[49]	Voronca, S.-D.; Siroux, M.; Darie, G.; Kallio, S. Simulating ON-OFF Regimes on a Micro-CHP Using Biomass. IOP Conf. Ser. Earth Environ. Sci. 2022, 1050, 012010. https://doi.org/10.1088/1755-1315/1050/1/012010.	Y	0	Conference paper
[86]	Ferrari, M.L.; Pascenti, M.; Traverso, A.; Rivarolo, M. Smart Polygeneration Grid: A New Experimental Facility. In Volume 3: Cycle Innovations; Education; Electric Power; Fans and Blowers; Industrial and Cogeneration; American Society of Mechanical Engineers: Copenhagen, Denmark, 2012; pp. 119–131. https://doi.org/10.1115/GT2012-68585.	Y	7	Conference paper
[87]	Scarpete, D.; Uzuneanu, K.; Badea, N. Stirling engine in residential systems based on renewable energy. In Proceedings of the 4th WSEAS International Conference on Energy Planning, Energy Saving, Environmental Education, EPESE'10, 4th WSEAS International Conference on Renewable Energy Sources, RES '10, pp. 124–129.	Y	8	Conference paper

[88]	Scarpete, D.; Uzuneanu, K. Stirling engines in generating heat and electricity for micro—CHP systems. In Proceedings of the 11th WSEAS International Conference on Robotics, Control and Manufacturing Technology, ROCOM'11, 11th WSEAS International Conference on Multimedia Systems and Signal Processing, MUSP'11, Venice, Italy, 8–10 March 2011; pp. 149–154.	Y	2	Conference paper
[39]	Renzi, M.; Brandoni, C. Study and application of a regenerative Stirling cogeneration device based on biomass combustion. Appl. Therm. Eng. 2014, 67, 341–351. https://doi.org/10.1016/j.applthermaleng.2014.03.045.	Y	55	Article
[59]	Uzuneanu, K.; Scarpete, D.; Badea, N. Technical assessment and thermodynamic analysis of a prime mover Stirling engine in a micro CCHP biomass system for an isolated residence in South-East region of Romania. Wseas Trans. Environ. Dev. 2010, 6, 509–518.	Y	1	Article
[58]	Katona, B.; Laza, T. The technical applicability of Stirling engines in a Hungarian village. Chem. Pap. 2018, 72, 3093–3103. https://doi.org/10.1007/s11696-018-0531-6.	Y	1	Article
[65]	Paraschiv, I.; Badea, N.; Voncila, I.; Gaiceanu, M.; Nicolau, V. Theoretical and experimental research on the methodology of designing a system of trigeneration with renewable energy. In Proceedings of the 2013 8th International Symposium on Advanced Topics in Electrical Engineering (ATEE), Bucharest, Romania, 23–25 May 2013; pp. 1–6. https://doi.org/10.1109/ATEE.2013.6563494.	Y	2	Conference paper
[38]	Pantaleo, A.M.; Ciliberti, P.; Camporeale, S.; Shah, N. Thermo-economic Assessment of Small Scale Biomass CHP: Steam Turbines vs ORC in Different Energy Demand Segments. Energy Procedia 2015, 75, 1609–1617. https://doi.org/10.1016/j.egypro.2015.07.381.	Y	18	Conference paper
[69]	Staffell, I.; Baker, P.; Barton, J.P.; Bergman, N.; Blanchard, R.; Brandon, N.P.; Brett, D.J.L.; Hawkes, A.; Infield, D.; Jardine, C.N.; et al. UK microgeneration. Part II: Technology overviews. Proc. Inst. Civ. Eng. Energy 2010, 163, 143–165. https://doi.org/10.1680/ener.2010.163.4.143.	Y	33	Review
[89]	Ferreira, A.C.; Silva, J.; Teixeira, S.; Teixeira, J.C.; Nebra, S. Analysis of the different renewable energy sources in the performance of a Stirling engine. In Proceedings of the 32nd International Conference on Efficiency, Cost, Optimization, Simulation and Environmental Impact of Energy Systems, Wrocław, Poland, 23–28 June 2019; pp. 2369–2381.	N	1	Conference paper
[90]	Kallio, S.; Siroux, M.; Voronca, S.-D. Energy and exergy analysis of biomass-fuelled micro-CHP unit. In Proceedings of the ECOS 2021—34th International Conference on Efficency, Cost, Optimization, Simulation and Environmental Impact of Energy Systems, Taormina, Italy, 27 June–2 July 2021; pp. 86–97.	N	1	Conference paper

[91]	Janowski, T.; Holuk, M. Renewable energy sources to supply home power plants; [Odnawialne źródła energii w elektrociepłowniach domowych]. Prz. Elektrotechniczny 2012, 88, 151–154. 92.	N	2	Article
[92]	Voncila, I.; Badea, N.; Cazacu, N.; Paraschiv, I. Set of rules in order to develop control systems bases of domestic policies using renewable energy. In Proceedings of the 6th WSEAS International Conference on Dynamical Systems and Control, CONTROL ’10, Sousse, Tunisia, 3–6 May 2010; pp. 123–128.	N	2	Conference paper
[93]	Gailfuß, M. Special biomass. Innovative technologies. Electricity generation from timber; [Special biomasse. Innovative technologien. Stromerzeugung aus holz]. BWK—Energ. - Fachmag. 2001, 53, 3–9.	N	0	Article
[52]	Borisov, I.; Khalatov, A.; Paschenko, D. The biomass fueled micro-scale CHP unit with stirling engine and two-stage vortex combustion chamber. Heat Mass Transf. 2022, 58, 1091–1103. https://doi.org/10.1007/s00231-021-03165-z.	N	4	Article

Table S2. List of articles retrieved based on RQ3 query.

	Authors	Full paper retrieved ? (Y/N)	Cited by	Document Type
[8]	Aliabadi, A.A.; Thomson, M.J.; Wallace, J.S.; Tzanetakis, T.; Lamont, W.; Di Carlo, J. Efficiency and Emissions Measurement of a Stirling-Engine-Based Residential Microcogeneration System Run on Diesel and Biodiesel. Energy Fuels 2009, 23, 1032–1039. https://doi.org/10.1021/ef800778g.	Y	33	Article
[15]	Brandoni, C.; Arteconi, A.; Ciriachi, G.; Polonara, F. Assessing the impact of micro-generation technologies on local sustainability. Energy Convers. Manag. 2014, 87, 1281–1290. https://doi.org/10.1016/j.enconman.2014.04.070.	Y	33	Article
[74]	Elmer, T.; Worall, M.; Wu, S.; Riffat, S.B. Fuel cell technology for domestic built environment applications: State of-the-art review. Renew. Sustain. Energy Rev. 2015, 42, 913–931. https://doi.org/10.1016/j.rser.2014.10.080.	Y	237	Review
[16]	İncili, V.; Dolgun, G.K.; Georgiev, A.; Keçebaş, A.; Çetin, N.S. Performance evaluation of novel photovoltaic and Stirling assisted hybrid micro combined heat and power system. Renew. Energy 2022, 189, 129–138. https://doi.org/10.1016/j.renene.2022.03.030.	Y	7	Article
[76]	Khadse, P.N.; Khadse, N.M. Design of off grid trigeneration system using renewable energy sources for residential purpose in India. In Proceedings of the 2017 IEEE International Conference on Power, Control, Signals and Instrumentation Engineering (ICPCSI), Chennai, India, 21–22 September 2017; pp. 1959–1965. https://doi.org/10.1109/ICPCSI.2017.8392056.	Y	0	Conference paper
[75]	Mazhar, A.R.; Khan, H.Z.; Khan, M.K.; Ahmed, A.; Yousaf, M.H. Development and Analysis of a Liquid Piston Stirling Engine. Eng. Proc. 2022, 23, 34. https://doi.org/10.3390/engproc2022023034.	Y	0	Article
[94]	Paraschiv, S.; Paraschiv, L.S.; Serban, A. Increasing the energy efficiency of a building by thermal insulation to reduce the thermal load of the micro-combined cooling, heating and power system. Energy Rep. 2021, 7, 286–298. https://doi.org/10.1016/j.egyr.2021.07.122.	Y	20	Article
[73]	Rosato, A.; Sibilio, S.; Angrisani, G.; Canelli, M.; Roselli, C.; Sasso, M.; Tariello, F. The micro-cogeneration and emission control and related utilization field. In Energy Solutions to Combat Global Warming; Springer: Cham, Switzerland, 2017; Volume 33, pp. 795–834.	Y	4	Conference paper