

Dr. Eftim Popovski

ENERGY SYSTEMS ENGINEER

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Overview

Energy Engineer with expertise in district heating & cooling and HVAC systems, leveraging geospatial data science with QGIS and Python for energy optimization and urban infrastructure planning. Skilled in spatial modeling and data-driven solutions to enhance efficient infrastructure deployment.

Experience

IREES | Senior Researcher / Project Manager **2019 - present**

- Applied research and consulting on renewable heating and municipal heat planning
- Led multiple projects on municipal heat planning, district heating and cooling
- Developed GIS Tools for urban energy planning

Fraunhofer Institute for Systems and Innovation Research ISI | Researcher **2016 - 2019**

- Analyzed energy system transformation pathways and infrastructure requirements
- Co-authored studies on renewable energy integration in the European energy sector
- Developed models for district heating and industrial energy efficiency

Zikol DOO, Sanmarti DOO **2011 - 2015**

- Provided technical support for REHAU products in the construction sector
- Designed and supervised HVAC installation for construction projects
- Coordinated with contractors and ensured compliance with standards

Education

Albert-Ludwig-University of Freiburg | PhD | Environment and Natural Resources **2024**

Thesis title: Modeling and techno-economic assessment of renewable heat supply technologies and district heating potentials

University of Applied Sciences | M.Sc. | Mechanical Engineering **2016**

Ss. Cyril and Methodius University, Skopje | B.Sc. | Mechanical Engineering **2011**

Skills & abilities

- Energy Systems Modeling & Techno-Economic Assessment
- District Heating & Renewable Energy Technologies
- Data Analysis: Python, SQL, Power BI
- HVAC Design: AutoCAD
- Spatial Analysis: QGIS
- Microsoft 365
- Project Management & Stakeholder Engagement
- Academic Research & Publications
- Languages: Macedonian (native), German (C2), English (C2), South Slavic languages (C1)

Top 5 Clifton Strengths

1. Learner
2. Analytical
3. Relator
4. Deliberative
5. Achiever

Publications

Popovski Eftim, Tobias Fleiter, Ragwitz Mario. *The role of solar district heat in the energy transition of Germany*, Energy 310 (2024) 133176 <https://doi.org/10.1016/j.energy.2024.133176>

Popovski Eftim, Ragwitz Mario, Brugger Heike. *Decarbonization of district heating and deep retrofits of buildings as competing or synergetic strategies for the implementation of the energy first principle*. Smart Energy 10 (2023) 100096 doi.org/10.1016/j.segy.2023.100096

Popovski E, Aydemir A, Fleiter T, Bellstädt D, Büchele R, Steinbach J, *The role and costs of large-scale heat pumps in decarbonising existing district heating networks - A case study for the city of Herten in Germany*, Energy 2019, 180: 918-933, <https://doi.org/10.1016/j.energy.2019.05.122>

Popovski E, Fleiter T, Santos H, Leal V, Fernandes E. *Technical and economic feasibility of sustainable heating and cooling supply options in southern European municipalities e a case study for Matosinhos. Portugal*, Energy 2018;153:311-323. <https://doi.org/10.1016/j.energy.2018.04.036>

Mandel Tim, Kranzl Lukas, Popovski Eftim, Sensfuß Frank, Müller Andreas, Eichhammer Wolfgang. *Investigating pathways to a net-zero emissions building sector in the European Union. What role for the Energy Efficiency First principle?* Energy Efficiency (2023) doi.org/10.1007/s12053-023-10100-0

Billerbeck Anna, Breitschopf Barbara, Winkler Jenny, Bürger Veit, Köhler Benjamin, Bacquet Alexandre, Popovski Eftim, Fallahnejad Mostafa, Kranzl Lukas, Ragwitz Mario. *Policy frameworks for district heating: A comprehensive overview and analysis of regulations and support measures across Europe*. Energy Policy 173 (2023) 113377 doi.org/10.1016/j.enpol.2022.113377