

Results of the 2nd quarter of the post-doc research project No. 1.1.1.2/VIAA/4/20/604 "START: Decision Support Tool for Decarbonisation Assessment of DistRicT Heating" project (01.04.2021 - 30.06.2021):



1. A mathematical model of the district heating reference system, which includes urban waste heat recovery, was developed in PowerSim Studio 10 program. System feedbacks, nonlinearities, and delays were included in the model. Model's boundaries, key performance indicators and dynamic nature were identified.
2. Empirical studies have been continued to create equations that describe implementation of waste heat and its coherence with the different stages of the heat supply system (heat sources, distribution networks and consumers). Statistical analysis of the obtained input data was performed to define the independent variables, as well as to create descriptive equations for the dependent variables.
3. An article "A methodology for selecting a sustainable development strategy for connecting low heat density consumers to a district heating system by cascading of heat carriers" was published in the journal Energy (Elsevier, ISSN: 0360-5442, Impact Factor 7.147, CiteScore 11.5) and can be found in the SCOPUS database.
4. Competence enhancing measures: Participation in the event within the framework of the European COST program CA 19126 "Positive Energy Districts European Network (PED-EU-NET)". Within the framework of the project, the competence on multi-criteria analysis has been improved. Networking activities were carried out in search of potential cooperation partners for the development of joint scientific articles and project applications.
5. Dissemination and communication activities of the project have been carried out - information about the project implementation has been posted on the [websites of the University of Latvia](#), and [Computational System Biology Group](#), as well as on researcher's profiles on [ResearchGate](#) and [LinkedIn](#).

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