Results of the 4th quarter of the post-doc research project No. 1.1.1.2/VIAA/4/20/604 "START: Decision **S**upport **T**ool for Decarbonisation **A**ssessment of Dist**R**ic**T** Heating" project (01.10.2021 - 31.12.2021):

1. After participation in the 4th Generation District Heating, Electrification, Electrofuels and Energy Efficiency session of the 7th International Conference on Smart Energy Systems, a scientific article was developed. The article develops an analytic framework for assessing the integration of waste heat into a DH system and apply this framework to estimate whether a selected case study area can achieve carbon neutrality by implementing one of the pathways for an efficient DH system as defined in the Directive 2012/27/EU. The system dynamics modelling approach is used to operationalize the framework and identify the drivers of waste heat integration.
2. Energy, economic, environmental and social indicators were selected and assessed. Three scenarios were selected for the study considering the definition of an efficient district heating system set by the Directive 2012/27/EU:
   - Scenario 1 Business-as-usual which ensures 50% of RES by using biomass as the energy source.
   - Scenario 2, where 75% of heat is produced by CHPs.
   - Scenario 3 provides maximal use of waste heat in the DH system by developing a cross-sectoral interconnection approach.
3. Competence enhancing measures were performed - a certificate was received for completing the course about system dynamics modelling from the Worcester Polytechnic Institute.
4. Networking activities were carried out in search of potential cooperation partners for the development of joint scientific articles and project applications: virtual mobility at the Lithuanian Energy Institute, Laboratory of Energy systems research; virtual meeting with the Tallinn University of Technology, Department of Energy Technology.
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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