

High-level Coupling and Control of District Heating Grids

Within the EU-funded project *ThermaFLEX* three district heating grids in the area of Leibniz (south of Graz) should be coupled. For this task a optimization-based energy management system (EMS) will compute optimal operation plans for the individual heat producers as well as the desired heat exchange between the networks.

- Mixed-Integer Linear Programming (MILP)-based EMS approach
- High-Level control and computation of optimal heat exchange and optimal exchange price and comparison of different strategies.
 - Global optimum
 - Nash optimum
- Simulation study as well as real-time implementation
- Scenario analysis with regards to: additional storage buffers and exchange capacity
- Project partner: BEST Bioenergy and Sustainable Technologies



