

# Building Heating and Cooling Networks with Aquifer Thermal Energy Storage (ATES) System

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## **Abstract**

In this talk a conceptual representation of a building heating and cooling system with aquifer thermal energy storage (ATES) is introduced. A mathematical model is presented for each component (subsystem) that is involved in the heating and cooling networks of a building. By considering the interconnections between each subsystem, a single agent system dynamics is formulated.