

Pilot project Zuidwolde - Het Hogeland

We spoke about pilot project Zuidwolde with Michiel Mulder (Kameleon Ontwikkeling). Michiel has a background in project development, wind energy and energy cooperatives. He is an independent consultant and project leader of the Zuidwolde pilot project on behalf of the municipality of Het Hogeland.

Het Hogeland context

The pilot project concerns an entire village, with many older homes. The residents may want to become owners of the district heating. The municipality supports the residents in this ambition. One of the starting points is that the old village scenery remains intact as much as possible. Michiel Mulder says, "I explain to the residents that we want to make as much energy impact as possible with as little visual impact as possible." The project is currently in an exploratory phase. The right locations for the aquifer thermal energy system with regeneration from surface water are being discussed in cooperation with market parties. The Boterdiep is a local canal that can be used to harvest heat for - as a first step - about 100 homes.

Resident communication

Interim goals are to apply for the necessary permits as quickly as possible and to properly organise the residents. At the time of the interview, a new energy cooperative has just been launched and is involved as a partner in the pilot project. Sensors are being placed in the homes to measure the consumption of hot domestic water and electricity. This measurement data will be used as input for the final design of the heat network. In addition, residents will receive an app to better assess which post-insulation of their home is desirable based on their consumption data.

The project is very much alive among the population. This is linked to natural gas extraction issues in the Groningen province. Michiel Mulder works one day a week on location in the local village hall and is therefore easily approachable for the residents. He informs residents in the way they find most comfortable: collectively or individually (in a so-called 'kitchen table conversation'). Residents will also be encouraged to blog on the energy cooperative's website about measures they have taken to reduce their heat demand.

Questionnaire

1. Is there a cooling demand? If yes, is it linked to heat demand?

No.

2. Will many heat pumps be used? If so, is some form of peak shaving being done to reduce the load on the power grid?

There are (booster) heat pumps being deployed at the homes to upgrade the temperature. The idea still seems to be to create a cluster grid at a lower temperature (LT) and feed that by connecting the regeneration to source energy from the ATES. This would then be upgraded by a collective heat pump. A design has yet to be made, starting with 100 homes.

3. Will local energy sources be used. If yes, can this be quantified? If no, what energy sources are used/where does the energy come from? 'Local' we understand here as: an energy source in the same municipality.

Yes, surface water from the Boterdiep in particular is being considered, in combination with an aquifer thermal storage. In fact, the thermal storage is regenerated with heat from surface water.

4. Will low-grade energy sources be used for low-grade demand?

Yes, heat from surface water.

5. Is the system demand-driven?

This is not yet clear. The ideas from the pilot project application all have yet to be worked out in concrete terms.

6. To what extent is fossil energy still needed? If fossil energy is still temporarily needed, during what period?

This is not yet clear. Almost certain is the use of thermal energy from surface water and aquifer thermal storage. Then heat pumps will also be needed, but it is not yet clear what the system will look like and whether co-firing via fossil energy will be required.

7. To what extent will homes be made suitable for LT? (Insulation + ventilation and/or adjustment of the delivery system)

This is still being investigated. Monitoring of current energy