Meppel heats new housing development with biogas

Reason: Meppel builds new housing development
In the course of the coming 20 years the city of Meppel will complete a unique housing development with 3,400 homes called Nieuweveense Landen. An important starting point for the construction of the development is future residents enjoying optimal home comfort at the lowest possible cost with the least impact on the environment. To achieve this the city of Meppel and RENDO set up an energy development company called MeppelEnergie.

Project: MeppelEnergie uses Smart Grids for supplying energy to homes
A system with hybrid heating based on biogas is being created for the new development. Previous studies have indicated that this system best matches the ambitions of the city of Meppel. Altogether this involves 3,400 homes, with in the first phase 444 homes being connected up.

A biogas CHP is to be used to produce electrical power and heat in the system to be built. This heat is used to supply a part of the homes with heating and hot tap water through a heat network. The electricity is used to supply heat and cold to another part of the homes with heat pumps. Residual heat from purified sewage water is used to maintain the heat balance in the ground.

The project comprises the design, the construction and demonstration of a Smart Grid to provide as efficient as possible heating with the system for the first phase of 444 homes.

Result: efficient heating provision in a new housing development
For the first 444 homes the Smart Grid has demonstrated to supply heating based on biogas as efficiently as possible. On this basis the homes in the next phases of the development can also be efficiently provided with heat based on biogas. The partners will also investigate how the residents can be encouraged to make savings using residential monitoring, participation and gaming.

Partners
The partners co-operating on this project are: MeppelEnergie, RENDO Duurzaam, the city of Meppel, iNRG, Delft University of Technology and the University of Twente.