

Manage own energy

‘Smart grids’ will let households play a role in the energy grid of the future. Robin Smale recently obtained a PhD for research on the application of this sophisticated technology.

The transition to sustainable energy brings new challenges. Fluctuations in the amount of sun and wind affect the supply of power to the grid. With smart grids, individual households can help keep the supply and demand of energy in equilibrium, thereby making the electricity grid more stable and sustainable.

These smart energy systems allow households not just to produce and consume energy but also to manage their energy. The smart grids give households information on the consumption, generation and supply of energy. As a result, people can choose to use energy at a favourable time or to store it in batteries at home.

Residents’ evenings

But Smale stresses that the human dimension needs to be taken into account when designing smart grid projects. He interviewed households who took part in grid operators’ pilot projects with smart grids. The participants thought the technology

was useful but they wanted to retain control of what the technology was doing in their own home. ‘Residents often have no idea what that battery does or whether it has benefits that are important to them, such as being self-sufficient or saving on costs.’ Grid operators could organize residents’

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evenings to make sure their smart grid project ties in with local residents’

priorities and habits, says Smale. From 2023, people will get less money for supplying solar energy to the national grid. Smale thinks smart grids will become more appealing to households then, as people will want to store or use up the energy they generate. ‘For example, you can turn the washing machine on when it’s sunny,’ explains Smale. ‘Even that is an example of energy management.’^{ss}



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Smart grids let households manage their energy production and consumption.