

Case Study

To follow the electricity price



S3C related keywords:

- New products and services
- Incentives & pricing schemes
- End user feedback (system communication)
- Project communication

“Success factors for peak shaving without causing discomfort for residents”

Project Summary

Within the research project “To follow the electricity price”, field trials were conducted during two winters in Gothenburg, Sweden. The project aimed at finding ways to shift power consumption from peak hours to off-peak hours through testing incentives related to electricity prices for households in single-family houses. Among the 41 participants, a new tariff structure was introduced in parallel to remote control of household heating. The households were divided into two groups, where the heating system in one group was controlled to reduce power peaks during periods of high electricity price, while the other group was expected to take action based on spot price information offered via a web service.

The field test was performed in the grid of Göteborg Energi (DSO). Other main actors in the project were Plusenergi/Din El (electricity retailer) and the company Esselcon (operative project leader). The total list of project partners included:

- Göteborg Energi
- EME Analys
- Plusenergi/ DinEl
- University of Lund
- Fortum
- Elvaco
- Erab
- Esselcon

The project was finalized in 2009.

What sets this project apart from other Smart Grid projects?

The project setup was rather special as the main focus was to shift the electrical power use related to household heating. Many other smart grid projects focus on electricity consumption from household appliances.

What happened?

“To follow the electricity price” provides valuable insights to the behaviour of users while also indicating the strengths of different incentives. For instance, a new tariff structure can be a good way to engage, motivate and stimulate a curiosity towards electricity and energy among users. Despite some technical problems and a complex tariff setup in the project, positive effects on user load curves have been proven. This implies that users can become engaged and more aware about energy and electricity prices through an introduction of a new tariff structure, since they are individually responsible for taking actions. So, the field test has proven to raise an interest even though some users have actually stated that they didn't fully understand the concept of the scheme. A remote and direct control of household heating, on the other hand, can provide a way to shift power consumption without any loss in comfort for the residents.

Further information / Contact

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