Energy management services for prosumer communities

Wim Timmerman, 28 February 2013
AGENDA

1. The changing role of the consumer
2. Prosumer communities
3. Research domain and research questions
4. Research approach
5. Prosumer energy management environment
6. Current status
7. Discussion
CHANGING ROLE OF THE CONSUMER

The active prosumer
CHANGING ROLE OF THE CONSUMER

The participative prosumer

Grid
PROSUMER COMMUNITIES

Prosumer community
RESEARCH DOMAIN

Problem statement:

- Many prosumer community initiatives
- Goal: become energy self-sufficient, through local sustainable resources
- Just started: following evolutionary growth path
Problem statement:

- Many prosumer community initiatives
- Goal: become energy self-sufficient, through local sustainable resources
- Just started: following evolutionary growth path
- Many technology developments: smart grids, smart meters, smart homes, ….

There is no integrated approach
Research question:

*How can we provide an energy management environment enhancing prosumer communities in their evolutionary growth path?*

Sub questions:

1. How does the evolutionary prosumer community growth path look like, and who are the stakeholders in the value network?
2. What are the requirements of prosumer communities and the stakeholders in the value network?
3. Which components are needed for an energy management environment that meets the requirements?
4. How can we validate this environment?
EXPLORATIVE CASE STUDIES

Grunneger Power

Lochem Energie

Texel Energie

Zeenergie
USER REQUIREMENTS
GROUP DECISION ROOM
PROSUMER COMMUNITY ENERGY MANAGEMENT ENVIRONMENT
PROSUMER DASHBOARD

Service portfolio

- History
- Planning
- Matching
- Billing

Prosumer dashboard

Personal service portfolio
- Service 1
- Service 2
- ....

Community service portfolio
- Service 1
- Service 2
- Service 3
- ....

Personal Profile

Energy management service provider
Current status

Last phase of research:
- *Refining concept of energy management environment*
- *Student starts implementing prototype*
- *Writing my dissertation*

To be done:
- *Validation of the concept*
- *Finish dissertation*
- *Review by dissertation committee*
Op naar de finish!
DISCUSSION
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Thanks for your attention