

1. Smart-A (Germany)

2. What is integrated with DSM

DG

Energy storage

Smart grid technologies

3. What is the level of commercialization

Research project

Demonstration

Field test

Existing practice

4. Where to find more information?

<http://www.smart-a.org>

5. Objectives of the case

To identify synergies from coordinating energy demand of appliances with renewable energy generation and cogeneration

6. Business rationale/model

7. Technologies used

Smart home appliances and wireless or power-line communication system

8. Short description of the case

The Smart-A project assesses the overall potential for load-shifting by domestic appliances and compares this with requirements from sustainable energy generation both on the local level as well as in larger electricity systems. Based on this, the project will develop strategies how smart appliances can contribute to load management in sustainable energy systems.

The technical aspects of the assessment include an analysis of potential changes to appliances operation, of characteristics of local energy generation (from renewables and/or cogeneration) and of load management requirements in the larger electricity networks. The project also features a detailed assessment of the acceptance of a smart appliances operation by users, and an evaluation of the usability of available control technologies and communication standards.

The project is conducted in cooperation with manufacturers of appliances and electric utilities. The findings from the analysis will be tested with experts in regional case studies in selected European countries.

9. Achieved/expected results (operational savings, CO₂, efficiency enhancement)

- A thorough analysis of technological implications, user preferences, and the economic and ecological costs and benefits of an improved coordination of domestic appliances with energy supply.
- A clear understanding of how appliances should be designed to enable them for smart operation in the larger energy system.
- Guidelines how consumers can be motivated to participate in the Smart-A concept.
- An assessment of the potential implications of Smart Appliances on energy generation both at the local level as well as in the larger electricity system.
- Strategy recommendations for all relevant actors how Smart Appliances could be introduced.

10. Lessons learnt
Not yet available