

IEA DSM TASK II Communications Technologies for Demand-Side Management



BACKGROUND

One of the first issues the IEA DSM Programme tackled when it began in 1993 was how to provide cost effective communication for energy management services in a utility environment. This work was undertaken by the participants in Task II, *Communications Technologies for Demand-Side Management*. For the following nine years, experts worked on a variety of communication issues as the energy and utility businesses made the transition from utilities with a single product to full commercial and market-driven companies.

IEA DSM TASK II

Task II initially studied how to provide cost effective communication for energy management services in a utility environment. This changed, however, as the Task progressed to a project on delivering cost effective energy management and energy efficiency improvement services, as well as a range of services that were perceived as meeting potential market and customer requirements.

Results

First, the participants defined the required energy related services that could be viable through the use of low cost communications services (e.g., remote diagnostics of energy consuming appliances, remote CHP and embedded generation management, as well as security and medical assistance provision) in the participating countries. A business assessment study showed that the most effective way to achieve financial viability when providing services to large populations is to bundle multiple and diverse services and to target specific service bundles at individual customer groups. Another important outcome of this work was the identification of those that benefit from such services. For many services, the main beneficiary proved not to be the household or small business customer, but other organizations, such as governments, ESCOs, and utility and metering companies.

Next, the participants developed specific technologies and household service access architectures. This collaboration led to the development of a flexible communications gateway pro-

tototype, *FlexGate*. The prototype was demonstrated by linking together external service providers with applications inside customers' homes. The services demonstrated were a remote metering service using Mbus protocol and a time of use energy price sensitive washing machine.

Once the gateway prototype was demonstrated, Task participants defined Field Trials to demonstrate the delivery of bundled services on a commercial basis and prime the market for wide-scale delivery. As this was the start of the market and competitive stage of the work, the Task participants agreed that it should be carried out on an individual basis and not under the auspices of the DSM Programme.

Reports

Four reports are available to download from the Task II page of the DSM web site:

- Assessment of Research, Development and Demonstration Priorities for DSM Added Services
- Evaluation of Communications to Meet Customer/Utility Requirements for DSM and Related Functions
- International Standards Activity for Customer/Utility Communications DSM and Related Functions Environments—Interim and Final Reports
- User Interface Design for Function and Communication Evaluation and Costing Model

Participants

Australia	Netherlands
Finland	Norway
France	Spain
Italy	Switzerland
Japan	United Kingdom

Duration

1993—2003

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Task II Website

<http://www.ieadsm.org/ViewTask.aspx?ID=17&Task=2&Sort=1>