



Demand Side Bidding

What is Demand Side Bidding?

Demand Side Bidding (DSB) is a mechanism that enables consumers to actively participate in electricity trading, by offering to undertake changes to their normal pattern of consumption.

What are the implications of DSB?

Rescheduling of loads, or agreed load reductions, can help maintain the balance between electricity supply and demand, and maintain the quality and security of supply. This could enable electricity prices to be reduced in the short term, and the number of generators and size of networks to be decreased in the long term. This may result in improved energy efficiency and reduced greenhouse gas emissions.

How do consumers participate?

Consumers can participate in DSB individually or as a group, with bidding undertaken directly with the market or through an electricity retailer, municipality or trader acting as an 'aggregator' of numerous bids.

Which consumers can participate in DSB?

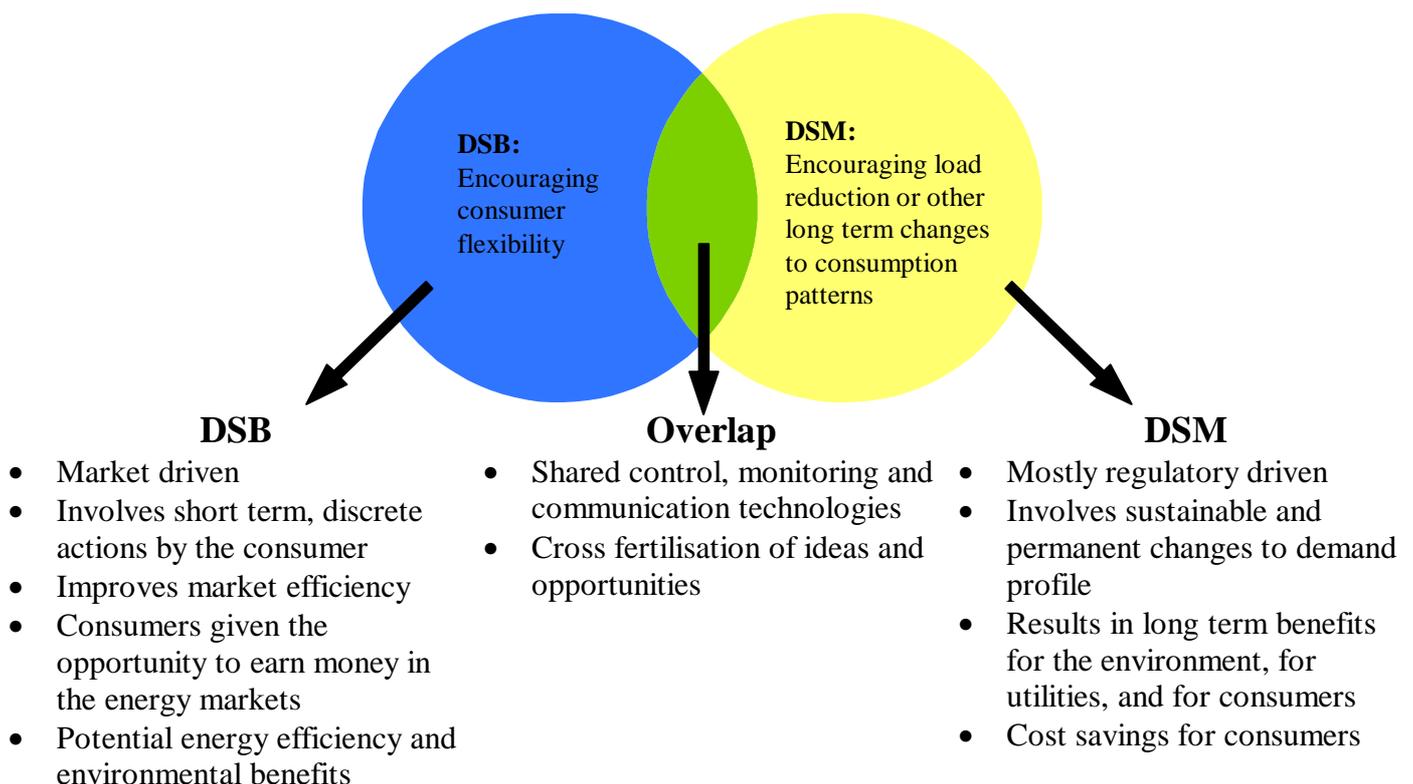
Any consumer can participate in DSB so long as they have the flexibility to make changes to their normal electricity demand profile and install the necessary control and monitoring technology to execute bids and demonstrate bid delivery.

How does the consumer benefit?

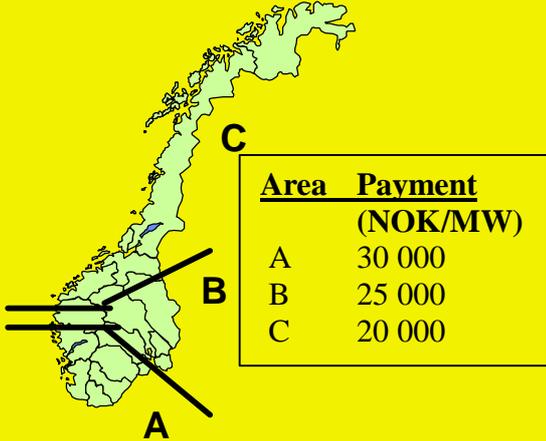
Consumers gain a financial reward, via a direct payment for the electricity they did not consume at an agreed time, or a reduced tariff or participation payment. Consumers may also benefit through improved energy efficiency in some situations.

Is DSB different from DSM?

Yes. Although DSM (Demand Side Management) and DSB are very different, they are never-the-less closely related. For example, measures for DSM can often be used for DSB, and vice-versa. The differences and similarities between DSB and DSM are summarised in the diagram below.



Examples of DSB schemes

 <p>“.. we need reliable suppliers who have the customer in focus”, O.H. Hoelsæter, Chief Executive, Statnett</p>	<p>DSB for Balancing Purposes</p> <p>Unlike most other tradable commodities, the supply and demand of electricity needs to be kept in balance at all times. Generators that are capable of increasing their output at short notice are usually relied upon when operational disturbances and deviations from the forecasts occur.</p> <p>Example.</p> <p>In Norway, such imbalances are dealt with on the Regulation Power Market. However, because there is insufficient capacity from the generators to meet the System Operator’s needs, consumers have been actively encouraged to participate by offering demand reductions. There are currently agreements on options for 1745 MW from both generators (1075 MW) and consumers (670 MW) that satisfy the System Operator’s requirements for fast response. Payments to the participants for this capacity vary depending upon the location.</p>
 <p>“In 1996, cement companies had the vision to see the advantages of participating in this scheme”, Mark Bailey, Special Markets and Trading Development Manager, Yorkshire Electricity</p>	<p>DSB for Frequency Response</p> <p>A fall in supply frequency must be corrected instantly. Normally this is achieved by having reserve generators in a state of readiness. However, consumers capable of instantaneous shutdown can also provide the same frequency correction.</p> <p>Example.</p> <p>In the UK, Yorkshire Electricity developed the first demand side frequency response service using cement companies. Now, in total, thirteen sites offer a maximum instantaneous load reduction of 110MW.</p> <p>Activities such as cement production are ideal for frequency response. They consume large, predictable and steady loads and the process of crushing and milling can easily be interrupted and restarted.</p>

To find out more



Countries participating in Task VIII are:

- Finland
- Greece
- Netherlands
- Norway
- Sweden
- Spain
- UK

This brochure was produced as part of an International Energy Agency (IEA) managed project entitled:

“Demand Side Bidding in Competitive Electricity Markets”

The project forms Task VIII of the IEA Implementing Agreement on Demand Side Management Technologies and Programmes, whose mission is:

“to promote energy efficiency and DSM for global sustainable development and business measures”

To find out more about this and other related IEA DSM projects, please visit the IEA DSM web site (<http://dsm.iea.org>).

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