

CONSULTATION RESPONSE TEMPLATE

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<i>TYPE OF COMPANY</i>	Energy Management System
<i>INTEREST IN DSM</i>	Opportunities for our customers to save on energy costs

SECTION 2

QUESTION 1: Do you agree with our characterisation of the four types of benefits that demand side management can provide?

ANSWER:

We believe end-user value should be more central to the demand side vision. There is much focus on costs within the supply chain, but these only translate to end-user value in efficient markets.

We question the role of supplier in increasing competition, or increasing the efficiency of the market. E.g. demand response through flexible pricing and interval metering is more likely to increase the cost for the supplier while reducing revenue. Suppliers will naturally seek to compensate for this, e.g. through a fixed premium (thus on average reducing if not eliminating end-user value of demand response) or offering cheaper, fixed price based alternatives.

Reduction in carbon emissions is not listed.

QUESTION 2: Are there other cost savings which you believe demand side management can deliver?

ANSWER:

If the focus is on end-user value, then competition will result in cost savings for the end-user.

QUESTION 3: Are there additional studies and reports (to those listed in **Error! Reference source not found.**)

which you are aware of and believe we should review?

ANSWER:

DRR VALUATION AND MARKET ANALYSIS, January 6, 2006, IEA DR Task XIII

DEMAND SIDE MANAGEMENT PROGRAMME, TASK XII: DEMAND RESPONSE RESOURCES Final report, 2006,IEA

THE POWER TO CHOOSE, Demand Response in Liberalised Electricity Markets, 2003, IEA

Demand Response: a decisive breakthrough for Europe, 2008, CapGemini

Demand Response Data Availability System (DADS), Preliminary Report Phase I & II, 2009, NERC

Benefits of Demand Response and Recommendations, 2006, U.S. Department of Energy

A NATIONAL ASSESSMENT OF DEMAND RESPONSE POTENTIAL, June 2009, Federal Energy Regulatory Commission

QUESTION 4: What other insights do you have from your experience of demand side management adopted internationally?

ANSWER:

Generally, uptake of Demand Response is slow. We believe one of the main reasons is unfair competition with the programs offered by TSOs, who can simply spread costs over all the market participants. E.g. as suggested in the consultation document, customers of WPDR are probably overpaid and this is paid for by the market as a whole.

We agree that small and medium sized enterprises are more difficult to engage. The key is to minimise the effort for customers, e.g. through automation, and maximise the value-add. The former is the function of the industry. For the latter, market design will be required to properly appreciate the value of Demand Response.

QUESTION 5: Are you aware of other quantitative findings from international experience which you believe are important for us to capture and consider?

ANSWER:

See Q3.

QUESTION 6: Do you agree with our identified drivers of future value for demand side response/management? Are there any additional drivers we should consider?

ANSWER:

We agree and particularly with the notion that peak shifting, or more generally load shifting, is a type of storage. We believe that all demand response, except for energy efficiency, is either a form of load shifting or alternative energy sources (e.g. on-site generators or using gas instead of electricity for the same function). In either case, the end-user ultimately consumes the same amount of energy, if not more. End-user value is therefore not the price

at the time demand is reduced, but rather the spread between the price at different times or alternative energy sources. There are only a few cases, which are not under the control of the end-user or market, where this may not be the case, e.g. if heating is shifted to a time when ambient temperature happens to be higher (thus requiring less heating).

SECTION 3

QUESTION 7: Are there any other aspects of current demand side activity in Ireland which should be captured?

A few suppliers are currently offering variable (day ahead) prices for small to medium enterprises. End-user value is not clear as the bill structure is not transparent, making it hard to assess what, if any, premium is added to the bill compared to other price plans.

ANSWER:

QUESTION 8: Do you agree with our high level assessment of the potential for demand side management in Ireland by 2020?

ANSWER:

If properly incentivised there could be a large shift from gas based space and water heating to wind electricity based. This would require a properly functioning power markets from a price point of view with variable DUOS and DUOS costs.

There is significant load shifting capability in refrigeration and cold stores, water/ wastewater treatment and reflect a good portion of the figures.

We feel that there is significantly more than 120MW of flexible distributed generation in Ireland. This figure could be closer to 1000 MW North and South counting CHP and standby generators.

We believe that there are other types of load which will have a significant impact on the total demand response capacity as well.

SECTION 4

QUESTION 9: Do you agree with our definition of each individual demand side measure?

ANSWER:

There is a technical overlap between smart meters, home and office automation and industrial and commercial

scale demand side response.

QUESTION 10: Is our description of the current policy baseline for each demand side measure accurate and complete. If there are omissions please point them out.

ANSWER:

QUESTION 11: Do you agree with our categorisation of different types of “market issue” and typical remedies for each?

ANSWER:

Regarding over restrictive rules:

As mentioned several times in the consultation, in bold typing, for the demand side to participate fully as a DSU, it must be **reliable** capacity. We agree with this. Provided the industry can provide this, and we believe it can, then there **must** also be an added value associated with reliability of DSU compared to less reliable alternatives. This is currently not the case as the universal price mechanism means the DSU trades at the same price as the (unreliable) existing alternative where end-users simply respond voluntarily to day-ahead prices, with no commitment. The only possible mechanism to add value is the capacity payment, which is subject to policy rather than market forces.

For reliability to be valued properly, differential pricing must apply. If the proposed remedy of a firm day-ahead price implies a differentiation between final day ahead and final intra-day prices, then we welcome it.

Regarding insufficient competition:

The impact of competition on consumer welfare is very much driven by demand elasticity. Demand elasticity in electricity network is generally accepted to be very low and as a result electricity markets are generally not efficient. A lively demand response market introduces more demand elasticity and thus increases the efficiency of the electricity market. Rather than regulation, the remedy may be to stimulate the demand response market.

At a practical level Aggregators cannot offer DSUs in the single electricity market while suppliers who have no real incentive to do so can. This needs to be fixed in the short term!

QUESTION 12: Do you agree with our identified barriers and enablers for each of the specific demand side measures we have identified?

ANSWER:

We do not consider the threshold of 4 MW to be a major issue, provided the market design properly supports the concept of aggregators for DSUs.

Unfortunately, the market design does not support aggregators since it is not separated from the supplier. This we consider a major barrier since, as indicated earlier, we do not believe suppliers have enough interest in providing demand response services with concrete end-use value. We believe this barrier can be lifted with the

right market design.

We do not consider the limitation of zero export capacity to be a major issue, although longer term we would expect this barrier to be lifted. With the right controls it does not restrict the use of on-site generators for demand response.

Not only do we agree that the costly real-time measurement system is a barrier, we believe that it is unnecessary with the right market design.

We agree with the statements regarding WPDR, that customers are probably overpaid, that it is static and in effect its presence restricts the use of more dynamic and fairer priced mechanisms such as DSU.

QUESTION 13: Do you agree with our identified market issues for each specific demand side measure and our proposed remedies to address these?

ANSWER:

See question 12.

In 4.2.7.3 it is suggested in recommendation 3 that electricity suppliers should be involved. We propose separating aggregators from suppliers and hence that suppliers should not be involved in this activity.

Interfaces for electrical vehicles such as forklifts have already been added to energy management systems as part of an integrated solution that considers all possible loads and strategies to maximise end-user value. Making such interfaces mandatory for smart meters is not only unnecessary; we believe it will be counterproductive. Smart meters are unlikely to evolve into capable energy management systems, whereas the opposite is already the case. Furthermore, they are primarily designed (and for many operations are restricted to) communication with the supplier, who as stated earlier we believe will not drive the demand response market. Finally, the smart meter market is intended to be designed as a monopolised market which leads to potential unfair competition if it is not narrowly focussed.

QUESTION 14: What are your views on the likelihood and effectiveness of the identified policy options addressing the specified market issue and delivering the desired change?

ANSWER:

We do not expect new trials to provide more useful information about the use of DR. Instead, we suggest that new trials should focus on DSU, e.g. demonstrate the reliability that can be achieved for DR. This should be funded as an R&D activity (like proposed for storage).

We would suggest that some policy options are unnecessary as resolution should and will be found by the industry, as long as a market exists. E.g. standardisation of interfaces, and education of small to medium enterprises regarding the use of energy management systems (which should be the responsibility of the providers of such systems).

The end-user value of frequency response in consumer devices is uncertain. In fact, given that such devices by definition operate at sub-optimal points (lower efficiency), and most demand response is really load shifting, they

consume more energy over a longer period of time while there is no financial benefit for the owner.

QUESTION 15: Are there any unintended undesirable consequences that any of the options might create elsewhere?

ANSWER:

SECTION 5

QUESTION 16: Do you agree with our identified specific demand side measures and our assessment of the different types of benefits each demand side measure provides?

ANSWER:

We feel that financial savings need to be significant from time of use tariffs. Meaning the cost savings need to reflect the fact that avoided investment in transmission and distribution networks need to be included. DUOS and TUOS charges could be made variable based on time to encourage efficient use of networks at a minimum.

QUESTION 17: Are there any additional demand side measures that we should individually identify and assess? If so, what type of benefit(s) is it felt they provide?

ANSWER:

See question 6 and 11. A possible (rough) market design, based on differential prices is:

- A DSU is registered for a site with a Measurement Point and a Supplier.
- The DSU buys a volume of consumption from the pool at the day ahead price, representing the aggregated forecasted consumption of all sites in the DSU.
- The DSU sells part of the previously bought volume back to the pool as a generator at the intra-day price (and if the intra-day price is high enough). The volume sold back can never be higher than the volume bought and not yet consumed. This is the committed size of the demand response.
- The suppliers buy the consumed volumes at the day ahead price from the DSU. Volumes bought by the DSU but not sold back to the pool will be settled at the day-ahead price, whereas volumes sold back to the pool will be settled at the intra-day price. Normal imbalance procedures apply between the DSU and pool (i.e. penalties outside the tolerance band), i.e. the DSU will be penalised if it is not reliable. The normal metered consumption at the sites is used for the settlement.

The end-user value is the spread between buy and sell minus the cost and margin for the aggregator.

QUESTION 18: Have we identified all of the relevant criteria for assessing the individual and comparative merits of the demand side measures?

ANSWER:

As mentioned before, we feel that the main criteria should be end-user value rather than the cost of operating the supply chain. The correlation between the two depends on the efficiency of competition, which rightfully has been identified as an issue.

QUESTION 19: What are your views about our approach to high level assessment of different demand side options?

ANSWER:

The approach is robust.

QUESTION 20: Do you agree with our assessment of each demand side measure against each of the identified factors?

ANSWER:

QUESTION 21: Do you agree with our overall assessment of the relative merits of the different demand side options?

ANSWER:

Yes.

QUESTION 22: Do you have any comments on our high level assessment of the benefits of different demand side measures?

ANSWER:

SECTION 6

QUESTION 23: Do you agree with our assessment of the relative priorities of different demand side options in developing a 2020 Demand Side Vision?

ANSWER:

Generally yes, see Q24.

QUESTION 24: What alternative views do you have on relative (merits and) priorities?

ANSWER:

We feel that distributed generation should have high priority.

QUESTION 25: Do you agree with our proposed high level 2020 Demand Side Vision as described above?

ANSWER:

Generally yes, see Q26.

QUESTION 26: What alternative vision would you put forward?

ANSWER:

We believe that consumers and businesses do not want to make continuous choices regarding energy consumption. It distracts them from their life or main business, thus reducing their quality of life or profitability. Instead they will rely on an agent to make the continuous choices for them, generally using an automated system. For consumers and small to medium enterprises, the agent will be an aggregator. Given the size of these segments, we believe that the aggregator market is a potentially big market, not only domestic but also with export potential, which at the moment is not supported sufficiently by the market design due to the direct link between DSU and supplier and the use of universal pricing.

QUESTION 27: Do you agree with our proposed policy pathways for implementation of the identified different policy options for realising our proposed 2020 Demand Side Vision?

ANSWER:

Generally yes, see Q28.

QUESTION 28: What alternative policy pathways would you propose based on your previous comments and responses?

ANSWER:

Rather than creating awareness for demand-side participation, it is important that first and foremost the added value of reliability is recognised in the market design.

SECTION 7

QUESTION 29: Do you have any additional view or comments you feel are important/useful for us in (a) establishing a Demand Side Vision for 2020; (b) identifying associated policy development and (c) determining policy pathways?

ANSWER:

QUESTION 30: Are there any final comments industry stakeholders wish to make about this consultation and the proposed next steps in the consultation process?

ANSWER:

None in addition to the comments above.