

CONSULTATION RESPONSE TEMPLATE

<i>NAME OF RESPONDENT</i>	Bord Gáis Energy
<i>CONTACT DETAILS</i>	Ger Harnett
<i>TYPE OF COMPANY</i>	Supplier
<i>INTEREST IN DSM</i>	Supplier of electricity and home services

Bord Gáis Energy welcomes the opportunity to comment on the Demand Side Vision for 2020 consultation paper (SEM-10-052).

The paper is wide ranging in scope, and as the paper itself acknowledges, touches on areas which are a matter for Government, including discussion of subsidies for technologies and energy efficiency schemes. We strongly welcome that the SEM Committee is taking such a complete viewpoint of how a Demand Side Vision for 2020 should work. We understand that outputs of this paper will comprise policies which the SEM Committee can take forward itself, and policy positions to input into the other entities for consideration, e.g. the Departments, Sustainable Energy Authority of Ireland, and Energy Savings Trust. These other entities are likely to hold their own consultations on such matters, perhaps under different contexts. Bord Gáis Energy may also respond to those consultations, and therefore will focus on the areas that we understand to be directly under the influence of the SEM Committee.

As this is one of the first SEM Committee consultations taking many retail areas into account, for example, smart metering and time-of-use tariffs, we suggest that the retail Harmonisation Working Group be utilized to bring forward any policy initiatives which impact both retail markets simultaneously. This forum is currently successful in guiding retail harmonization between Northern Ireland and Ireland, and therefore is well placed to advise on the integration of a Demand Side Vision for the SEM, which must impact both retail markets simultaneously.

We are broadly in support of the qualitative positions – with one missing key area noted below – taken in the final demand side vision conclusions within the paper, although we may disagree with the finer particular characterizations of various technologies. Care must be taken in two areas, however, in pursuing these conclusions into active policy.

- To the degree possible, proper quantification of the benefits of the various options counterbalanced by alternatives (where available) to achieve the end goal to ensure the qualitative results are appropriate. It would be sensible to consider whether appropriately

incentivised generation would be better placed to more efficiently deliver some of the identified benefits to the system without investment in subsidy and structure for a difficult to quantify *accessible* demand resource; and

- Tempering the policy with a pragmatic viewpoint of the available resource to manage change within the industry, both in terms of retail market change and wholesale market change.

We would like to emphasise three areas within the demand side measures listed in the paper:

- **Prepayment metering:** Under the policy areas of competitiveness, sustainability, and potentially security of supply, prepayment metering is notable by its absence within the paper. It is acknowledged that work continues to develop in this area in Ireland in particular, but unlike regional integration and the smart metering programmes, it gets no mention. It has been demonstrated that where a customer opts for a prepayment meter, that consumption decreases between 4.9%¹ and 12.8%² for that customer over the previous credit meter installation. Bord Gáis Energy also believes that prepayment metering, which directly links the consumption of energy to a customer's purchase decision, could be another element in the arsenal of achieving EU 20-20 targets. While this may have been implicitly considered by the paper as part of smart metering with in-home displays, its explicit absence from the consultation paper is surprising. Given the materiality of demand reduction we have to question the reasons for its omission. Within the paper, we believe a reaffirmation of the prepayment option being made easily and cheaply to all consumers should be present.
- **Home and Office Automation;** Bord Gáis Energy recently responded to the CER Smart Metering Consultation (SEM/10/161b), stressing the value of examining the benefits of separating the communications elements of the Irish smart metering rollout from the metering elements, both to the head-end data collection and within the home. We welcome the initial view put forward in the SEM Committee paper that smart metering – should it proceed in Northern Ireland and Ireland – should maintain a degree of flexibility to allow for more cost effective, standardized communications and control systems to be interfaced into the existing smart meter specification. On the topic of standardisation, given that most players in Ireland operate in both jurisdictions, a policy of coordination of smart metering standards would be most useful.
- **Industrial/Commercial-Scale Demand Side Response;** The ongoing discussions regarding market coupling have already considered day-ahead pricing changes to the wholesale market

¹ Northern Ireland

² Salt River Project - Arizona

at this time. Such developments should be cognisant of the potential benefits for demand side participation in the market.

SECTION 2

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

ANSWER: Overall demand reduction, peak shaving, flexibility (inter and intraday) and ancillary services are *services* which DSM can provide. We agree that this is a complete list of services.

Section 2 lists a series of costs savings and other improvements which we believe might be more accurately described as benefits to demand side response.

We would state that some demand side measures introduce a new relationship between security of supply and cost. To a consumer, a gold standard security of supply means using power when one wants to with no restrictions on delivery for whatever purpose. With, for example, a degree of home automation, the customer is entering into a realm where they offset a degree of their short-term freedom of energy use for overall more efficient solutions. Not all benefits may be therefore simultaneously achievable.

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

ANSWER: The list is broadly complete.

This section, however, does not consider counterfactual possibilities. After noting binding EU requirements around demand response, is a nationwide active demand side response programme cheaper than building a peaking generator and paying for the carbon? Is the capacity service procured from demand actually cheaper than capacity availability from generation, or from interconnection? Experience with the market has shown the demand side bidding to be among the most expensive form of capacity to call. The short term active response scheme requires expensive investment in under-frequency relays.

The paper does acknowledge that demand response used for one purpose may not be available for another. We suggest that the cost of alternate methods (i.e. generation) of achieving particular aims (e.g. frequency response, capacity) be also considered when determining the best use of demand response.

QUESTION 3: Are there additional studies and reports (to those listed in Annex B) which you are aware of and believe we should review?

ANSWER: The review of demand side literature is fit for purpose to understand the nature of the demand side schemes on offer, along with what has worked in the Irish context.

What is now required is further quantitative analysis of the potential benefits and costs within the Irish context, as differences in fuel mix, size of market, interconnection, renewable penetration, market structure (e.g. capacity payment or not), use-of-system tariff (e.g. reflective of peak usage or not), roles and responsibilities (e.g. meter installation) all feed into the cost/benefit signals seen by the customer, and the resulting response obtained.

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

ANSWER: See answer to question 3.

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 answer to question 3.

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: The analysis in sections 2.4 and 2.5 captures the main drivers for demand side response.

SECTION 3

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

ANSWER: The list appears reasonably comprehensive for centrally supported activity, with the exception of **prepayment metering**. In Ireland and GB prepayment metering is considered primarily a debt recovery mechanism, and as such is important for competition (providing a mechanism for all suppliers to manage such issues with their customers). There is also evidence to suggest that keypad or prepayment metering in Northern Ireland is used as an energy budgeting tool¹.

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

ANSWER: The numbers are, as noted at the workshop by EirGrid, peak possible figures. The accessible resource may be quite smaller than this. An analysis of the stochastic utilisation of immersion heaters would be of benefit. Finally, the percentage accessible resources in newer forms of demand, for example controllable heat pumps and EVs which are designed *a priori* to interaction with smart control systems, may be higher than the existing stock of immersion use. This may alter the reports view on the relative importance between the areas of energy usage.

Furthermore, the efficiency (or lack thereof) of continuing to utilise forms of heating such an immersion relative to newer technologies needs to be understood before promoting this one specific current use of electricity in a longer-term roll out. The resulting benefits of controlling sufficient immersion heaters may be outstripped by using the setup cost to install more efficient forms of heating.

SECTION 4

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

ANSWER:

The definitions of each individual demand side measures are reasonable.

We do believe that prepayment metering is omitted from this section and in general from the paper; a review of the policies in Ireland and Northern Ireland regarding prepayment metering would be worthwhile to allow consumers in Ireland the same degree of choice as in Northern Ireland.

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:

The review is comprehensive.

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

ANSWER:

The list of market issues is comprehensive. The typical remedies are appropriate.

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 object to any of the policy positions proposed by the SEM Committee on areas directly impacting the work of SEAI and the EST or the governments. We will focus on some of the comments made regarding the bulleted areas below. Note that we are only commenting on options within the direct remit of the SEM Committee where we suggest improvements, seek clarification, or disagree.

- **Smart Meters**

Recommendation 2: We note that in the event that the SEM Committee takes a policy position on harmonization of any functionality of smart meters in Ireland and Northern Ireland, common infrastructure should follow (e.g. ISO JTC1SC25). The retail Harmonisation Working Group is ideally placed to manage that alignment. Economies of scale suggest that with most players operating in both jurisdictions a common infrastructure (noting appropriate procurement processes) would be a great advantage.

Recommendation 3: We request more information on what the SEM Committee may oblige suppliers (or indeed Networks companies) to offer time-of-use tariffs. Bord Gáis Energy has stated in previous responses to the Commission for Energy Regulation that time-of-use tariffs will emerge as a common product from suppliers in the event of a successful programme roll-out. Competitive forces will then drive what tariffs customers choose. Direct imposition of a pro-forma time-of-use tariff on suppliers will either limit innovation, or not be popular with customers. Furthermore, depending on each supplier's cost base, may lead to unintended distortions in the competitive market. We would not be in favour of this recommendation as stated, without further information particularly its form of implementation across a deregulated supply environment, i.e. how the SEM Committee propose to oblige suppliers to offer particular tariffs.

- **Home and Office Automation**

Recommendation 1: Again, we suggest that greater coordination on the Ireland/Northern Ireland technical infrastructure will lead to economies of scale in any supplier seeking to offer a service to a customer in Ireland and Northern Ireland.

Recommendation 2: We believe that the results of the National Smart Meter Plan in Ireland should be completed prior to determining the need for dynamic trials.

- **Industrial/Commercial-Scale Demand Side Response**

Recommendation 1: The ongoing discussions regarding market coupling have already considered day-ahead pricing changes to the wholesale market. Any changes to the wholesale market rules should be cognizant of suitable access for supply within the day-ahead market, as well as generation and interconnection.

- **Aggregation of Distributed Generation**

Recommendation 1: See comments on Recommendation 1 for Industrial/Commercial Demand Side Response.

Recommendation 3: The terms and conditions within the aggregated generator contract will flow from the

license, Grid Code, T&SC and retail obligations which are common to all suppliers. Suppliers should be free to negotiate their own conditions thereafter. We recommend that efforts should focus on clarification of the functions of non-licensed entities performing aggregation functions, rather than the creation of pro-forma contracts.

- **Electric Vehicles**

Recommendation 3: The smart meter should be capable of generically interacting with a communications infrastructure, not specifically electric vehicles. There may be a risk here (stated policy regarding electric cars acknowledged and accepted) of picking “technological winners”, and embedding specific requirements into smart metering specifications.

- **Storage**

Recommendation 1: Any interaction of the demand side vision with the capacity payment review around pumped storage must also be cognizant of the ongoing review and studies by EirGrid and of the system’s overall requirements for unit flexibility in light of our increasing levels of intermittent generation.

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 answer to question 12.

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 believe that the short-list of high and medium areas for the demand side vision are broadly reasonable areas of focus, noting the gap around prepayment metering and our emphasis on maintaining flexibility and North/South commonality on the smart metering specification. We believe that quantitative analysis should be carried out at this point rather than further qualitative review.

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

ANSWER:

One concern is that there is a risk of picking technological winners, and embedding that choice into the smart metering infrastructure.

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:

See answer to question 14.

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:

As discussed before, prepayment metering should be considered explicitly within the papers' scope.

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

ANSWER:

Given the broader holistic view taken within this consultation, the inclusion of "Green Job Creation" is an understandable metric. Creation of jobs may be concentrated within a few players within the market, however, and under such circumstances could not be considered as a boon to competition. As such "Green Job Creation" may be better off outside of the "competition" heading.

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

ANSWER:

The approach taken is a reasonable qualitative approach, although as discussed above, quantification is now required. In particular under the "costs" field, medium cost spans a potential 1000% swing in costs and needs further review.

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

ANSWER:

We have not reproduced a full qualitative review of the various entries within Table 7 and Table 8. We have commented on a few areas where we see potential inconsistency or where we disagree.

- **Comments on the different smart options**

Dynamic tariffs will be very difficult to implement for all customers without advanced displays informing them of the tariff changes (or equivalently real-time information being available to the consumer through an alternative channel). Dynamic tariffs (presumably communicated to the customer) will require in-home displays as a precursor.

Static time-of-use tariffs will not have high impact (as stated in the tables) on generator margin or transmission capacity, as it is argued that generator margin will be driven by the load-net-wind characteristics (thus providing it low rating for the uptake of RES)..

- **Comments on Costs:**

Cost of delivery of advanced displays is unlikely to be low (<€5million) for a full roll out given the number of customers involved. Demand side bidding under Industrial and Commercial DSR is unlikely to be high (in excess of €50million) to implement, given the lower number of customers involved (This is identified as medium cost in Table 8).

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

ANSWER:

On the understanding that this is a 2020 vision working with renewable targets being achieved, it is understandable that static time-of-use tariffs have been designated as low. Certainly in the interim, however, time-of-use tariffs are probably of a higher value in terms of achievable demand response – as was seen by the generation investment in Northern Ireland arising from peak winter use-of-system charging, and the response to the WPDRS in Ireland.

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

ANSWER:

See answer to question 20 regarding the smart metering options, and the interaction between advanced displays and dynamic tariffs.

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:

We believe that the six options identified as high and medium value are qualitatively reasonable, noting that:

- Our primary comments above:
 - a. Inclusion in the scope of prepayment metering
 - b. Common technical infrastructure in Ireland and Northern Ireland
 - c. Ensuring that the day-ahead review underway is cognizant of the demand side
- Quantitative analysis, including considerations of alternative resources to achieve the aims to best utilize the available demand response will help finalise the core areas of focus

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

ANSWER:

See answer to question 23.

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

ANSWER:

The 2020 vision is a reasonable aspirational statement which is consistent with the arguments within the paper regarding the value of the demand side, market failures, and mitigations to those failures. Bord Gáis Energy believes the vision should explicitly state that the result of all of this functionality, technology, and price responsiveness should be – subject to the legally required national targets – lower long-term prices for consumers. Consumers will be asked to curtail their “use energy any-how any-time” standard of supply they currently enjoy. We believe that balance between cost and standard of supply is implicit within the 2020 vision statement. Without explicit inclusion of lower cost to the consumer, however, the 2020 vision over-emphasises the correct theoretical economic response of consumers, and has no references to the fact that they will likely bear the majority of the cost in the *global* investment required by the industry to make their response possible.

QUESTION 26: What alternative vision would you put forward?

ANSWER:

See answer 25.

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:

Before commenting on the detail of the policy pathways, quantification of the benefits of the six top options, further tempered by the alternative to achieve the identified benefits, and a pragmatic view on the available time, money and resource to deliver the changes, should be performed at this juncture.

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

ANSWER:

Outside of the requirement for a quantitative analysis (noting alternative sources to achieve the benefits attributed to the demand side) before stating the final policy pathway, we have noted:

- a. Inclusion in the scope of prepayment metering
- b. Common technical infrastructure in Ireland and Northern Ireland
- c. Ensuring that the regional integration work on day ahead pricing allows for firm prices for demand

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:

Our responses to other questions cover our main areas of input.

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:

As discussed in the preamble, we believe that the elements of the Demand Side Vision will form the SEM Committee's input into other consultation processes and programmes run by other agencies. It would be beneficial to understand for lack of ambiguity which policies the SEM Committee wishes to bring forward themselves, and which they will feed into other agency's processes and programmes.

ⁱ <http://www.sustainabilityfirst.org.uk/docs/smart%20meters%20pdf%20version.pdf>