Minutes

Demand Side Working Group Meeting

7th September 2010 (Ofgem, London)

Attendees

Antony Miller (Chair)	Ofgem
Mehadi Mansur	Ofgem
Socrates Mokkas	Ofgem
Jamie Black	Ofgem
Sabreena Juneja	Ofgem
Peter Sherry	Ofgem
Chris Webb	BOC
Ed Reed	Cornwall Energy
Eddie Proffitt	MEUC
John Lucas	Elexon
Murray Birt	CBI
Paul Mott	EDF energy
Richard Hall	Consumer Focus
Richard Street	Corona Energy
Simon Russell	Corus
Linda Hull	EA Technology Limited
Mike Wilks	Poyry
Richard Westoby	SSE
Karen Kavanagh	CER
Rob Cummings	CBI
Ilse Dubois	Enernoc
Juliet Corbett	UREGNI
Scott McGaraghan	Enernoc
Esther Sutton	Eon UK
Matthew Roberts	National Grid (Conference Call)
Alastair Martin	Flexitricity Limited (Conference Call)

Apologies

Alan Raper	National Grid
Andrew Hallet	Consumer Focus
Chris Shanley	National Grid
Claire Gibney	OGC
Gareth Davis	CIA
Eddie Blackburn	National Grid
Jerry Hutton	British Sugar
John Perkins	National Grid
Jonathon Scott	Rio Tinto
Laura Cohen	Ceramfed
Mark Linke	Centrica
Mike Thorne	National Grid
Paul Auckland	National Grid
Andrew Pearce	BP
Richard Fairholme	Eon UK
Sebastian Eyre	EDF energy
Simon Trivella	Wwutilities
Stefan Leedham	EDF energy
Steve Wilkin	Elexon
Malcom Arthur	National Grid
Dan Jerwood	GDF SUEZ

NB: All of the Presentations for DSWG can be located at:

http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=164&refer=MARKETS/WHLMKTS/CUSTANDINDUSTRY/DEMSIDEWG

1. Introductions (Antony Miller, Ofgem)

1.1. Antony Miller welcomed the attendees.

2. Agenda Item 1: Review of the minutes (Antony Miller + All)

2.1. The minutes of the previous meeting were approved by group members.

2.2. There were two actions from the previous meeting:

2.2.1. **ACTION:** Liquidity report - Antony Miller will report back to the group regarding whether Ofgem are doing any following up on barriers to entry.

2.2.2. In response to this action item, DSWG members were invited to a meeting on Liquidity matters in June. This meeting focused on the summer 2010 initial market assessment (published as a consultation document in July) and the Qualitative Feedback meant to support the assessment in order to understand whether the electricity wholesale trading conditions have been improving. Feedback was sought from a range of market participants who would benefit from the improved market access (independent suppliers, potential new entrants, independent generators and large energy users).

2.2.1 The July 2010 consultation will close on 10th of September (Ofgem welcome responses) after which Ofgem will be reviewing the suggested revisions to the assessment framework. In parallel to developing this final assessment framework, Ofgem are reviewing and developing appropriate options for regulatory intervention in order to drive required improvements in liquidity. We are planning to publish a further report around the end of 2010.

2.2.2 A decision regarding whether intervention is required, and the form it should take, could be made at this point. As part of Ofgem's assessment, Qualitative Feedback Questionnaire will be made available in late November.

2.2.3. **ACTION:** Interruptible contracts - Tom Corcut will raise with Ian Marlee, GB Markets Partner, and Giles Stevens, Head of Competition Economics for appropriate Ofgem attendees for the next meeting to discussing setting up a sub-working group. Antony Miller will report back to group members.

2.3.1 Jamie Black attended the meeting and provided Ofgem's response. See item 4 of the minutes pertaining to strategic code review.

3. Agenda Item 2: SO Incentives (Socrates Mokkas, Ofgem)

3.1. Ofgem provided a presentation on the preliminary conclusions of the 2010/11 Electricity System Operator Review (See http://www.ofgem.gov.uk/MARKETS/WHLMKTS/CUSTANDINDUSTRY/DEMSIDEWG/Documents1/Electricity%20System%20Operator%20Review.pdf)

3.2. Ofgem noted that a multi-year incentive scheme is inherently difficult

3.3. Ofgem's proposed methodology takes into account the impact of unpredictable and uncontrollable external factors by adjusting the incentive target at the end of the scheme. As a result NGET will be less exposed to windfall gains and losses.

Ofgem believes this change in methodology should allow for strengthening of the incentives on NGET.

3.4. In addition, Ofgem concluded that a number of improvements should be taken by NGET with respect to its models, i.e. Energy and Constraints models. The models and some inputs will be agreed prior to the start of the scheme, but some of the model inputs would be based on actual outturn numbers

3.5. DSWG members noted that the target should be fixed in order for NGET to decide whether resource is allocated at the best possible use.

3.5.1. Ofgem noted that the ex-ante target will move only with respect to factors/inputs that NGET cannot control and forecast, e.g. wholesale electricity prices

3.6. DSWG members noted that they would like to know which factors/inputs are to be considered ex-ante and ex-post in the proposed methodology

3.6.1. Ofgem noted that NGET will publish these inputs in the initial proposals

4. Agenda Item 3: Other work updates

4.1. ***Review Proposal 0329A*** *- a review Group has now been established. The review of DM charging arrangements has been announced by gas transporter. This could have an impact on the network charges paid by I&C customers. Nominees for membership of the Review Group should be submitted by no later than 8th September.*

4.1.1. DSWG members noted that there was a clash in relation to an Ofgem lead customer and social issues working group and the first meeting date for the 0329A Review Group.

4.1.2. **ACTION:** Antony Miller to bring the clash to the attention of Ayesha Uvais. (completed 8 September 2010)

4.2. Jamie Black (Ofgem) provided an overview of the publication of Ofgem's Open Letter Consultation: Potential Significant Code Reviews SCRs.

4.2.1. Ofgem noted that the SCRs process has been designed to provide a holistic approach to developing and making changes to areas of the code considered to be significant. Ofgem has proposed SCRs covering electricity cash out, gas security of supply, and smart metering impact on industry processes.

4.2.2. Ofgem suggested that the consultation process surrounding a SCR considering gas security of supply would be a good forum for consumers and their representatives to develop and put forward their views on changes required to the compensation arrangements as an alternative to forming the subgroup as suggested at the previous DSWG.

4.2.3. Ofgem currently see the compensation arrangements as a key aspect for reform as part of a SCR but that the topics and scope of potential SCRs are subject to consultation. DSWG members were encouraged to respond to the open letter consultation on SCRs setting out their views.

4.3. Gas Storage - Ofgem produced its preliminary views on nTPA arrangements for Gas storage facilities in May 2010. A follow-up consultation document will be provided in the coming month. Ofgem is interested in the views of large users regarding gas storage and would welcome any feedback on the open letter and impending consultation document.

5. Agenda Item 4: Demand Side Response

5.1. **Juliet Corbett (Utility Regulator of Northern Ireland) and Mike Wilks (Poyry) presented on SEM Review of Demand Side Management** (see: http://www.ofgem.gov.uk/MARKETS/WHLMKTS/CUSTANDINDUSTRY/DEMSIDEWG/Documents1/SEM%20Review%20of%20Demand%20Side%20Management.pdf)

5.1.1. The presenters provided an overview of the Irish electricity market, an overview of Irish Regulatory Authorities' 2020 DSM Vision project, and discussed the implication of wind power for DSM in Ireland and GB.

5.1.2. Ireland has implemented an all-island wholesale electricity market, the Single Electricity Market (SEM). The SEM is a centralised or gross pool market. Electricity will be bought and sold through the pool under a market clearing mechanism. Generators receive the System Marginal Price (SMP) for their scheduled dispatch quantities, capacity payments for their actual availability, and constraint payments for changes in the market schedule due to system constraints. Suppliers purchasing energy from the pool will pay the SMP for each trading period, capacity costs and system charges. Under this model, peak tariffs are very high, which has resulted in many companies having back-up generation (diesel).

5.1.3. It was noted that DSR could provide benefits via overall reduction in demand, changes to the demand profile to reduce demand at peak times (static peak reductions), via shifting demand to different times. International experience suggests that there is scope for significant energy savings.

5.1.4. The regulatory authorities have undertaken a programme of work to develop a Strategic Demand Response Programme for the Island of Ireland (2020 Demand Side Vision). The consultation paper was published on 17th August 2010 (see http://www.uregni.gov.uk/uploads/publications/100813_Demand_Side_Vision_for_2020_Consultation_Paper_-_AIP_SEM_10_052.pdf)

5.1.5. The paper provides a range of policy responses which are rated in relation to a range of factors including impacts on competition, security of supply, sustainability, market metrics and cost. The policy measures considered to have the greatest benefit in the short to medium term include smart metering and improving price signals for SEMs.

5.1.6. DSWG members were strongly encouraged to respond to the consultation document.

5.1.7. Mike Wilks also provided some views about the impact of wind generation on DSR. It was noted that wind power is likely to have a much greater impact in Ireland than the UK. However, in both markets, wind generation will have an impact on the relationship between peak generation and peak demand, with the correlation between the two being reduced, (i.e. wind does not necessarily blow when demand is high (early evenings).

5.1.8. In the discussion it was noted that the wind power generation was going to have significant impacts on balancing supply and demand and that a great deal of investment in DSR related technologies may be required (both in the network, and in private technologies – such as smart appliances – etc).

5.1.9. DSWG member also commented that the increasing interconnection of European energy markets (e.g. increased use of interconnectors) and current

variations in regulatory regimes and settlement arrangements could create additional challenges for improving the market signals that should drive demand side.

5.2. **Sabreena Juneja and Jamie Black (Ofgem) presented on Ofgem's Demand Side Response discussion paper** (see http://www.Ofgem.gov.uk/Markets/WhlMkts/CustandIndustry/DemSideWG/Documents1/Demand%20Side%20Response%20Discussion%20Paper%20Review.pdf)

5.2.1. The discussion paper can be found at: http://www.Ofgem.gov.uk/Sustainability/Documents1/DSR%20150710.pdf

5.2.2. The presentation provided an overview of the potential areas for ongoing work to facilitate DSR. To this end, Ofgem will also be hosting a DSR workshop in November.

5.2.3. In addition, Ofgem sought stakeholder views regarding our initial estimates for the potential benefits and costs of demand side response. It was noted that the assumptions open to question and that DSWG members views would be appreciated.

5.2.4. Delegates suggested that current energy aggregators may be able to provide useful insights to the potential magnitude of energy use that could be shifted or reduced during periods of peak demand.

5.2.5. Delegates questioned whether time of use tariffs with more 'penal' charging in peak periods would put strain on energy intensive users driving them to move away from the UK. In response to the proposition that more DSR could be delivered from interruptible I&C than is currently seen, delegates drew attention to the 2GW of demand that does not come off the system in triad periods despite the high costs associated. They questioned how more DSR was possible from this sector given the lack of response to these strong incentives.

5.2.6. Ofgem reaffirmed that they had not assumed any additional interruptible I&C DSR as part of the modelling however they suggested new technologies and approaches may make this possible and drew attention to the presentation given by Enernoc. Delegates also drew attention to the existing load flattening that large consumers with AMR already give. Delegates mentioned that negative reserve may provide an additional benefit which may become increasingly important with further wind penetration.

5.3. **Scott McGaraghan, Enernoc: Building healthy demand response markets** (see: http://www.Ofgem.gov.uk/Markets/WhlMkts/CustandIndustry/DemSideWG/Documents1/US%20Experience%20and%20challenges%20in%20UK%20Market.pdf)

5.3.1. Enernoc is the largest I&C demand response provider in the world. The level of energy they manage as well as the number of sites has been steadily growing over the past five four years.

5.3.2. There are some generic challenges in growing DR in any market. In particular, it can be difficult to get businesses interested given the value of the benefits may not be particularly significant, understanding may be limited if energy buying and selling is not a core part of the business; there can also be challenges in determining when energy supplies can be reduced.

5.3.3. Requirements for a healthy DR market include:

- Transparency: energy users need a clear view of the market, and how the DR will impact on their activities.

- Reliable baseline calculations: It also needs to be possible for the customer (aggregator) to determine an appropriate baseline level of energy use for the business (calculating this can be a significant challenge for many business);

- Reasonable financial benefits: the payback need to be reasonable (but it is generally not the sole driver for investing in DR);

- Flexibility: DR can't be viewed as generation, as the customer's ability to respond changes over time

5.3.4. In relation to the GB market, Enernoc noted that they are working with National Grid to improve its short term operating reserve (STOR) arrangements.

5.4. **Linda Hull, EA Technology Consulting, Task XIX 'Micro Demand Response & Energy Saving'** (see: http://www.Ofgem.gov.uk/Markets/WhlMkts/CustandIndustry/DemSideWG/Documents1/Micro%20Demand%20Response%20and%20Energy%20Saving.pdf)

5.4.1. Task XIX was established as part of the International Energy Agency Implementing Agreement on Demand Side Management. The objective of Task XIX is to define and evaluate the business case for delivering Energy Savings and Demand Response products in order to ensure that the potential benefits of demand flexibility within the residential / SME sectors can be realised.

5.4.2. This work considered opportunities for reductions in the load level and in the load shape for the residential and SME customers. The study has considered opportunities for demand side response in different countries. France and Finland provided the greatest scope for demand side response due to the large amount of electricity used for heating. In contrast, scope for DSR in the GB residential sector is far more limited due to the extent to which electricity use is spread across different activities and with a large proportion used for consumer electronics.

5.4.3. It was noted that there is a great deal of difficulty in getting reliable estimates of electricity usage in the residential market, and these challenges are even greater in the SME sector. The main challenge for the SME sector is trying to understand when and where the electricity is used.

5.4.4. In relation to SME energy usage in the GB market, EATC has done some estimates on the potential benefits of introducing direct load air conditioning. The results suggest that upfront and ongoing costs for introducing the direct air conditioning technology need to be low to ensure positive returns on the investment.

5.4.5. Much like the challenges noted by Enernoc for large customers, demand side response in the residential and SME sector faces a number of challenges in relation to getting a clear understanding of usages of electricity that have the greatest scope for shifting; getting customers to engage with new technologies; and ensuring the price signals feed through to impact on customer behaviour.

5.5.Summary of Discussion and presentation

5.5.1. There are a number of challenges facing both governments and customers in terms of implementing demand side response measures.

5.5.2. For both the government (regulators) and energy users, there can be a number of challenges in getting reliable information that can be used to quantify the extent of the benefits.

- For large users, this can be a particularly strong barrier given the costs associated with investing in technological changes (or business activity changes – e.g. work-shift patterns/scheduling) that can take pressure off peak demand.

- In addition, it is important to recognise both the shared challenges as well as the fundamental difference between different types of users and in different market sectors. DSR measures cannot be viewed as a one size fits all approach.

5.5.3. There are potentially a number of technological hurdles that need to be addressed both in the short and medium term if DSR is to deliver real benefits. In particular, there are issues about investment in the network (including the role out of smart metering) to allow it to better respond to both changing patterns of peak generation and peak demand.

In addition, attention needs to given to the implications of the internationalisation of electricity markets, and how the difference of regulation across borders could have implications for the sharpness of price signals in a regional energy market. This challenge means that regulators need to act in a coordinated manner when considering DSR measures.

6. Date of next meeting

6.1. The next DSWG meeting is scheduled for Thursday 9th December 2010 (TBC: 10am-12pm).