

Flexibility and Capacity Working Group

Summary of the second Flexibility and Capacity Working Group meeting	From Date and time of Meeting Location	Ofgem 16 April 2012 Ofgem, 9 Millbank, SW1P 3GE
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1. Present

- Anna Rossington, Ofgem
- Dora Guzeleva, Ofgem
- Nicola Meheran, Ofgem
- Rachel Hay, Ofgem
- Gareth Shields, SSE
- John Blyth, SSE
- Stephen Murray, SP Power Systems
- Iain Miller, Northern Powergrid
- Nigel Turvey, Western Power Distribution
- Keith Hutton, UK Power Networks
- Paul Bircham, ENWL
- Tim Rotheray, CHPA
- Zoltan Zavody, RenewableUK
- Alice Etheridge, DECC
- Duncan Carter, Consumer Focus
- Fruzsina Kemenes, RWE Npower

2. Review of Terms of Reference

- 2.1. Attendees were broadly happy with the draft ToR, but asked for clarification that the group is looking at new and existing connections, and that that greater emphasis be placed on consideration of how to deal with the capacity requirements for existing connections.
- 2.2. Some attendees felt that it would be valuable to clarify what is meant by 'low carbon technologies', and pointed out that many of the technologies we are considering as not low carbon in and of themselves, but because they facilitate the move to electrification which can be powered from renewable sources. Generally attendees felt that the term should be used as internal shorthand to refer to any technologies which can facilitate the move to a low carbon economy.

Action

Ofgem to update the Terms of Reference for the FCWG to place more emphasis on capacity requirements for existing connections.

Person – By

Ofgem – 9/5/12

3. Recap of last meeting

- 3.1. Ofgem summarised discussions from the first Flexibility and Capacity working group meeting (FCWG). The minutes from this meeting may be found here: <http://www.ofgem.gov.uk/Networks/ElecDist/PriceCtrls/riio-ed1/working-groups/Pages/index.aspx>.

4. Overview of FCWG work streams and interaction with other groups

- 4.1. Ofgem presented slides¹ setting out three main FCWG work streams; development of preferences for the DNO approach to developing business plans, including use of demand scenarios and nature of investment justification; development of appropriate outputs, incentives and uncertainty mechanisms; and consideration of barriers to timely and cost effective connections, especially the use of non-conventional approaches.
- 4.2. To provide context to the discussions around technology growth and its implications for the distribution network, Ofgem presented a slide comparing the electricity usage of different domestic appliances/technologies.
- 4.3. In addition to some specific comments about individual estimates, a range of general comments were made about important factors in comparing the different demands. The point was made that whilst we can consider the demand associated with each technology individually, it is also important to consider where technologies have coincidental timing, and that this should be built into the table. For example, since EVs will take a long time to charge, there is a high probability of multiple EVs being charged at the same time on a local network. It was noted that different technologies can cause different types of problems on the network, e.g. voltage problems and harmonics. One attendee noted that the system can often sustain short duration thermal overload (eg cooking) but EVs and heat pumps will be in use for longer.
- 4.4. Attendees emphasised that these technologies would also have different impacts on different parts of the network, for instance with DNOs in different areas aiming for slightly different voltage levels above the regulatory minimum.
- 4.5. It was noted that there is ongoing work to form a better picture of future demand profiles. Work stream 3 of the Smart Grids Forum is looking at current demand against predicted demand with technology growth. Imperial College is also looking at the demand arising from heat pumps, which suggests that levels of coincidence are much lower than might be expected. It was noted that although some demands may not normally coincide, the network would need to be designed for peak load – ie the coldest day when everyone is using a heat pump.
- 4.6. Ofgem summarised the areas of interaction between the FCWG and the other RIIO-ED1 working groups. One attendee questioned why there was no link to environmental issues. Ofgem explained that this term is now being used to refer to issues such as business carbon footprint, fluid filled cables and undergrounding, which will be taken forward by the Environment working group. Attendees briefly discussed how interactions and areas of overlap between groups would be managed. Ofgem explained that overlapping issues are being flagged by all groups and discussed in Ofgem internally among heads of departments.
- 4.7. Ofgem also described FCWG interactions with the Smart Grids Forum (SGF). The group noted that there would need to be two-way interactions between the FCWG and SCF. Discussion focused on the interaction between the work of SGF work stream 3 and the FCWG.
- 4.8. Attendees felt that the scope of work stream 3 may need to be extended, to provide a tool box which is helpful for developing business strategies. Attendees highlighted that this would need to be informed by greater clarity on what a well justified business plan should look like. It was also felt the model should consider investment

¹ All slides presented at the meeting are published as an associated document to this summary.

ahead of need as well as demand side response. Attendees were mindful that the outputs of the forum will be released in late May/ early June.

- 4.9. Ofgem summarised the range of potential barriers and constraints identified so far to facilitating flexibility and capacity on the distribution networks.
- 4.10. Regarding specific issues, attendees discussed how best to make the current framework conducive to demand side response. P2/6 was something it was felt to be important to address for consistency. Some attendees suggested that a larger barrier is the inability of DNOs to compete for DSR capabilities against others able to offer higher prices, e.g. suppliers. It was felt that there may be a need for DNOs to have greater dialogue with customers over these issues.
- 4.11. Attendees also highlighted that a range of potential barriers are coming from Europe in the form of EU standards on voltage, EU thresholds on the process of grid studies for DG connection, and demand connection standards which are currently out for consultation. Attendees explained that they are responding to consultations on these issues, but asked that Ofgem play a greater role in lobbying for appropriate outcomes. Attendees were concerned that their views would carry less weight than that afforded to national regulators.
- 4.12. The group discussed the problem of long lead times for connection and speculative connection requests that sterilise capacity. It was noted that these requests are using up significant amounts of DNO resource and an appropriate resolution to the problem would be important for freeing up this resource to address other challenges over ED1. It was acknowledged that DNOs are in conversations with DECC over changing the law to allow DNOs to charge for connection assessment and design, but Ofgem emphasised that DNOs should be working together to look at a range of alternative/supplementary solutions, and feed this thinking into the Connections group. It was also acknowledged that there may be a role for some industry codes of good practice around applications.
- 4.13. Finally, one attendee asked to what extent we are considering the role of DNOs not just in responding to the world around them, but in controlling and leading development in their areas. Attendees suggested that the role of DNOs may well change in ED1, and many of the FCWG discussions impact on this, it was suggested that the issue would be best discussed at Smart Grid Forum level.

Action	Person – By
Attendees to feed back to Ofgem any suggested amendments to the 'Comparison of demands' table, including the different impacts (ie voltage vs thermal)	Attendees – 9/5/12
Ofgem to update the 'FCWG interactions' diagram to reflect two way information flow.	Ofgem – 9/5/12
Terms of Reference of work stream three to be updated and extended.	Ofgem – 27/5/12
DNOs to develop a proposal for the connections group on addressing speculative requests for capacity.	Paul Bircham

5. Upstream reinforcement survey

- 5.1. Ofgem presented the findings of the informal survey of DNOs' procedures for notification and charging for upstream reinforcement required as a result of domestic installations which increase or alter load on existing connections.
- 5.2. Attendees agreed that greater clarity on policy would be welcome. The group acknowledged a range of pros and cons around different policy solutions. Regarding charging, some attendees felt that it would be unfair to charge customers for

installing technology such as heat pumps, without those customers having been informed about the potential network reinforcement costs associated prior to installation. Attendees discussed the importance of avoiding undue discrimination between customer types, and some were in support of greater socialisation of these costs. Attendees acknowledged however that socialisation can reduce incentives for efficiency and that it would be important to maintain efficient spending. It was agreed that any policy must be cognisant of DNO needs. Attendees agreed that practical policy would need to be developed to address the lack of consumers notifying DNOs of increased demand. This lack of notification was identified as a barrier to DSR being offered as an alternative to reinforcement.

- 5.3. Some potential solutions were suggested, including DNO driven education for developers and other customers. Greater regulatory clarity was felt to be necessary to support this. Generally it was felt that there should be a standard approach to charging and notification across all DNOs, but it was also acknowledged that networks can be very different depending on the area.

6. F&C incentives – straw man

- 6.1. Ofgem presented current thinking on the objectives of facilitating timely and cost efficient connections over ED1 and the following potential principles to underlie any incentive design.
- 6.2. Attendees felt that these principles would benefit from being phrased more positively. Attendees suggested that the first principle be reworked to recognise the full role that networks must play in the development of low carbon. Attendees agreed that we should not develop an incentive that favours a particular type of low carbon technology and suggested that the principle focus on the need to create a level playing field for low carbon generation.
- 6.3. Attendees pointed out that low carbon technologies may often, by their physical nature, demand different arrangements from other technology. Ofgem clarified that this principle was intended to refer to common regulatory and commercial arrangements for all technology and connections. However some attendees still felt that uniform commercial and regulatory frameworks would lead to low carbon technology being disadvantaged. More generally it was suggested that the latter two principles be phrased to reflect what we do want, rather than what we don't want.
- 6.4. Ofgem presented a straw man incentive design. The timing element of the proposal consists of service delivery targets for DNOs above the Guaranteed Standard minimum levels. The cost element consists of a measure of network utilisation (to avoid "white elephants"), and the acceptability of the cost of individual connections to customers. A reward or penalty would then be awarded to companies according to scores achieved across all three of these metrics.
- 6.5. Attendees raised a number of specific concerns. The straw man is designed for new connections, whilst in reality most of the challenge is likely to arise from increased demand on existing connections. Some attendees were concerned about using measures like quote acceptance rates to determine acceptability of the cost of individual connections. It was noted that this could be affected by factors such as speculative applications. Ofgem felt that this would be a reason to use quote acceptance rates, since it would encourage DNOs to find ways of minimising speculative applications, eg through an industry process or greater education. However it was acknowledged that external factors such as feed-in tariffs could also have an effect. DNOs also highlighted that the incentive should take into account the current status of the networks in different areas. It was asked that the incentive cover the full process including requesting and negotiating a quote.

- 6.6. Attendees raised a number of questions for further consideration in relation to incentive design. Firstly it was asked whether the incentive would aim to build upon or maintain current levels of service. Ofgem clarified that there are clearly a number of areas, eg Distributed Generation, where current service levels are not acceptable. It was felt these problems would be multiplied in the low carbon context. One attendee asked how powerful the incentive is planned to be. Ofgem explained that the incentive would have to be on a par with the IIS, and would have to be powerful enough and balanced sufficiently to ensure the right decisions are taken. Attendees also asked that Ofgem consider removal of other potentially less effective mechanisms, if bringing new incentives in place. One attendee felt there should be further consideration of which customers would be expected to pay for rewards or receive penalties.
- 6.7. Generally it was suggested that it would be necessary to identify whether the appropriate solution would fall within a narrow space, or whether there might be a range of acceptable solutions in a wide space. If they former it was suggested that incentives may not be appropriate and may have unintended consequences.

Action

Attendees to feed any further thinking on incentive design back to Ofgem.
Ofgem to develop incentive design, to include appropriate incentives for addressing increased demand on existing connections.

Person – By

Attendees –
30/4/12
Ofgem – 9/5/12