

Philippa Pickford
Associate Partner
Wholesales Market
The Office of Gas and Electricity Markets Authority
9 Millbank
London SW1P 3GE

27 May 2016

Dear Ms Pickford,

RE: Open Energi's response to Statutory consultation on amendments to the Capacity Market Rules

Open Energi welcomes the opportunity to respond to the '*Statutory consultation on amendments to the Capacity Market Rules*' published on 29 April 2016 in advance of Ofgem's final decision making. Open Energi is a UK company providing dynamic Firm Frequency response (FFR), a demand response service classified as a relevant balancing service eligible to participate in the Capacity Market. However, a demand side dynamic FFR provider cannot carry out the DSR test as it is currently stipulated in the rules and regulations, and therefore technically unable to participate in prequalification for a Capacity Market auction.

To rectify this and allow the participation of FFR in future Capacity Market auctions, Open Energi submitted a response to the Ofgem consultation on *amendments to the Capacity Market Rules* on January 15 2016. Ofgem's proposed decision tables this proposal under the category '*Proposals we want to consider further*' and states that Ofgem is '*eager to facilitate the inclusion of dynamic FFR*'.

In responding to the Statutory consultation on amendments to the Capacity Market Rules herein, Open Energi is contesting the proposed decision in addition to proposing alternative and workable methods for consideration.

Context

Frequency response is a real-time balancing service, reacting to the second by second balance between demand and supply of electricity. If demand is greater than generation, the frequency falls while if generation is greater than demand, the frequency rises. It must be controlled to within very tight tolerances ($\pm 1\%$) and so sufficient generation is held to respond to 'frequency events'. This balancing service is not only critical to security of supply itself, but it requires that a number of conventional generators are held at low outputs to provide this flexibility. New entrants to the market including demand response and battery storage offer three main benefits: (1) flexibility; (2) additional capacity to the system; and (3) security of supply.

In the Capacity Market Rules, Dynamic Frequency Response is already accounted for in two places.

1. Under Schedule 4: Relevant Balancing Services providers capacity is defined as the sum of Max (Primary Response, Secondary response) [Low Frequency Response] and High Frequency Response.

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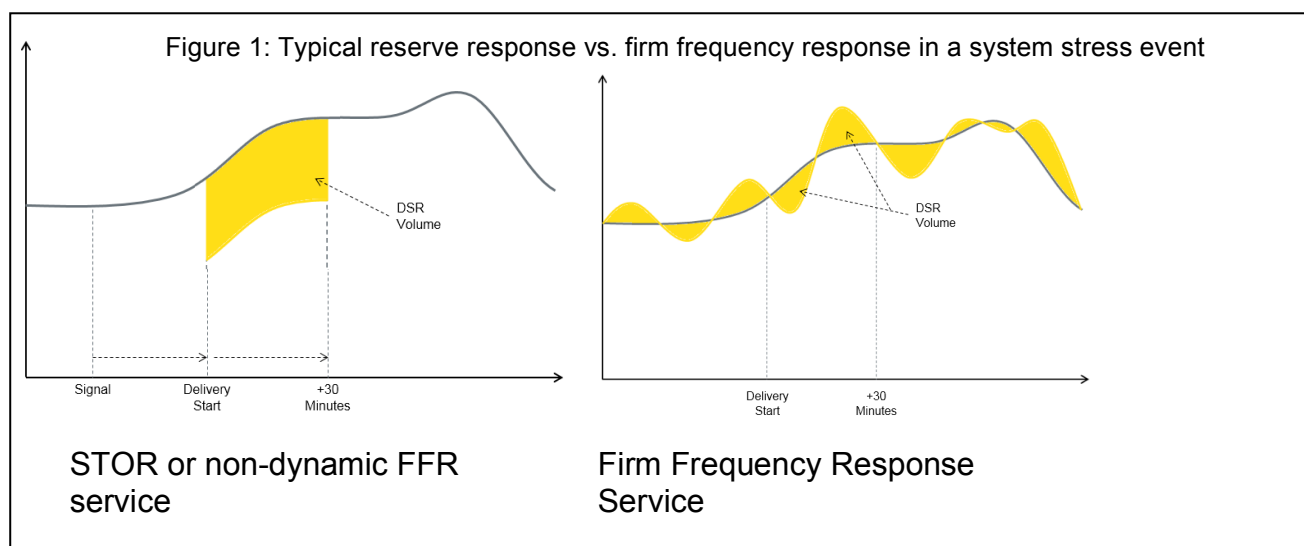
Company number 03838585

2. In Chapter 8: Obligations of Capacity Providers and System Stress Events, volume of Primary, Secondary and High Frequency Response are taken into account when determining a provider's capacity obligation.

However, prequalification requires passing a DSR test that does not account for Dynamic Frequency Response. A provider must identify three separate settlement periods which demonstrate:

- A measurable baseline demand and,
- A positive DSR volume over each settlement period.

These two forms of evidence are not possible in the provision of FFR which responds to frequency and is thus dynamic. This distinction is detailed in Figure 1 below:



In Figure 1, the reserve service is responding to a signal for at least 30 minutes in duration. In contrast, frequency 'events' in dynamic FFR react within 2 seconds and are not 30 minutes in duration. Instead the length of response is defined by the length of a frequency 'event' which can be seconds in duration. In addition, typical reserve is 'off only', meaning assets are switched off to make capacity available. Dynamic frequency response calls for 'up' as well as 'down' regulation. Over a half hour period, the service may call for demand to be increased and this is detailed in Schedule 4 as 'declared availability' for Dynamic Frequency Response.

In the proposal of January 15 2016, Open Energi proposed to add an alternative category of evidence to the prescription for the DSR test in 13.2.6. This would use contracted output as evidence of service delivery, consistent with the capacity obligation as defined in Chapter 8 as 'Adjusted Load Following Capacity Obligation' (ALFCO). At present, there are two categories of evidence prescribed. The addition of this alternative methodology to Section 13.2.6 (a) would read as follows; "Non-zero Contracted Output can be calculated for each DSR CMU Component of the DSR CMU to show a positive DSR volume".

Ofgem's response of 29 April 2016;

- **Confirmed the barriers to the participation of Dynamic FFR;** *'FFR is specified as a relevant balancing service in Schedule 4, but these proposals suggest that providers are incapable of passing the current DSR Test requirements. As a result, despite the explicit inclusion of FFR as a relevant service, providers are excluded from participating because they are unable to successfully pre-qualify.'*
- **The proposal was tabled for further consideration given the stated concern that 'the use of non-zero contracted output as the volume of DSR could reward providers for increasing demand during a stress event, which would allocate payments inefficiently in the CM and undermine its objectives in terms of security of supply for consumers. We believe any formula would have to consider only reductions in demand ("positive DSR volume").'**
- **Ofgem has encouraged a response before a final decision is made;** *'There is inherent value in extending participation in the CM to the largest possible number of capacity providers. As a result, we are eager to facilitate the inclusion of dynamic FFR without compromising the integrity and objectives of the CM. We are therefore seeking further proposals on how to reformulate the DSR test and volume calculation in a way to allow for the participation of FFR and other dynamic DSR services.'*

Question 8 - CP98 and CP148: Do you agree with the solution put forward in these proposals to ensure the participation of dynamic FFR in the CM? If not, what changes to the DSR test and volume calculation are necessary to achieve this?

- Open Energi contests Ofgem's response to CP98 and CP148 on the grounds that the proposed solution would apply *only* to the DSR test (in 13.2.6) and not have any bearing on a live stress event, or the allocation of payments in the CM. Open Energi contests the objection that the proposal would incentivize increasing demand during a stress event as dynamic response is accounted for in the live situation, under ALFCO. A power station providing dynamic frequency response might well be required to drop its output during a stress event if the grid frequency raised to high, and this would be the correct given managing grid frequency is the highest priority in maintain security of supply. Given DECC's anticipated timeline for accepting rule changes, approving the solution put forward would allow for the participation of Dynamic FFR in Capacity Market auctions of 2016.

Open Energi maintains that the proposed solution corrects a misalignment within the rules and regulations, between Chapter 8; which accounts for the ability of dynamic FFR to meet the capacity obligation in the case of a live system stress event, and Chapter 13; which tests for the capability to meet this obligation.

- If however, the solution is not feasible for approval, Open Energi is eager to explore alternative changes to the DSR test and volume calculation. We propose that any such alternative should consider the following;

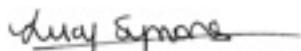
1. Under Schedule 4: Relevant Balancing Services providers declared availability is

- the sum of Max (Primary Response, Secondary response) [Low Frequency Response] and High Frequency Response;
2. The current methodology for DSR testing results in only either Low Frequency Response or High Frequency Response being 'counted';
 3. Dynamic Frequency Response is a product to balance demand on a second-by-second basis, although at times it will be increasing system demand for short durations overall it will be 'off-setting' capacity;
 4. DSR Dynamic Frequency response providers provide a service that would otherwise be provided by more conventional types of generation. When providing this service there would effectively be unavailable capacity. Hence, using Dynamic FFR from DSR would in effect create a larger amount of capacity from the current capacity fleet;
 5. Hence an FFR unit is providing capacity when providing High and Low Frequency Response and the tests of capacity should be reflective of this.

Next steps

We understand that you intend to publish your final decision and the final amendments to the Rules over the summer before the next prequalification round opens. During this time, we would be very keen to convene a meeting with your team and our CEO to ensure a level playing field for dynamic FFR providers.

Yours sincerely,



Lucy Symons
Policy Manager
Open Energi