Tim Yeo MP, Chairman
Energy and Climate Change Committee
Committee Office
House of Commons
14 Tothill Street
London
SW1H 9NB

Our Ref: 13 May 2014 EBS letter
Direct Dial: 020 7901 7357
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Date: 10 June 2014

Dear Mr Yeo,

Response to the Energy and Climate Change Committee’s request for information about Electricity Balancing Services

On 15 May, I received the aforementioned request which the Energy and Climate Change Committee has asked both ourselves and National Grid to respond to. The questions follow a briefing sent to your Committee by the National Audit Office. This briefing identified a number of questions which we have responded to in the subsequent Annex.

We trust the attached answers your questions, but if there are any areas below where you require additional information, please contact Sarah Roberts (sarah.roberts@ofgem.gov.uk or 020 3263 2762) in our External Relations team.

Yours sincerely

Dermot Nolan
Chief Executive
APPENDIX

Q.1 How can Ofgem ensure that sharper Cash Out incentives from the Significant Code Review:

Encourage generators and suppliers to balance their own positions before gate closure, thus reducing the call on National Grid to perform balancing activity after gate closure;

The total cost of balancing the energy on the system – by both the Systems Operator (SO) and the market – is ultimately borne by the consumer. The Electricity Balancing Significant Code Review (EBSCR) (final decision was published on 15 May 2014), incentivises generators and suppliers to exhaust all opportunities to balance their own positions before gate closure when it is cheaper for them to do so than to leave the imbalance for the SO to resolve. This strengthens incentives to balance positions before gate closure in particular during times of system stress, thus supporting efficiency in balancing and security of supply.

Minimise the level of payments required under the capacity market; and

The total costs of delivering any given level of security of supply are reflected in monies earned in the Capacity Market, wholesale market and National Grid’s balancing services. Ultimately all are borne by the consumer.

Cash-out reform allows cash-out prices efficiently to reflect costs and therefore for cash-out prices and spot prices to rise when the system is tight. Responsive spot prices signal to the market when there is high demand for electricity, and reward flexible capacity – that can respond quickly to ensure supply meets demand, such as gas-fired power stations, demand response services, storage, and interconnector flows – with greater earnings in the spot market. This reduces the payments required by flexible plant to cover their costs in the Capacity Market, thereby reducing its cost.

Cash-out reforms furthermore help to ensure the Capacity Market brings forward the flexible and reliable capacity required to accommodate growing intermittency on the system.

Do not restrict market participation to major utilities?

Our reforms ensure market arrangements serve consumers by presenting parties (whether small or major), with efficient incentives to provide flexible balancing solutions and by underpinning effective competition.

While our reforms leave it for market participants to determine the optimal response to efficiently designed incentives, we expect reforms to support net entry of flexible balancing solutions required in the face of growing intermittency capacity.

We also expect reforms to have a positive impact on smaller parties. This is attributable to the move to a single cash-out price system (currently complex dual pricing arrangements provide different prices for parties with imbalances in the same/opposite direction to the system). The single price reform simplifies arrangements and reduces imbalance costs (and risk), in particular for smaller parties – most disadvantaged by the current dual price system.
Q.2 To what extent can National Grid’s use of the two new balancing services tackle the risks to security of supply identified in Ofgem’s 2013 capacity assessment?

We have given National Grid the tools to procure these services, as well as the flexibility to deal with unforeseen changes in volume requirement during the mid-decade period. This is therefore an interim framework ahead of the introduction of the Capacity Market. Under this framework, we will require National Grid to be open and transparent in terms of their determination of the volume requirement, procurement processes, and utilisation of these services.

National Grid has designed these services to allow it to balance the system in the face of tightening margins. Industry views have been incorporated into the design of these services through a consultation run by National Grid.

These tools will give National Grid the ability to cope with the tighter margins and to reduce the risk of interruptions to customers’ supplies. While no system can ever give a 100 per cent guarantee, the new balancing services are designed to give National Grid the right levers to help keep the lights on. However there can never be any room for complacency. National Grid and the energy industry will need to continue to be vigilant to security of supply risks at all times.

Q.3 To what extent can implementation of the EU third package and the Target Model reduce balancing costs and mitigate risks to security of supply?

The Third Package aims to facilitate greater cross-border electricity trade to improve the efficiency of wholesale markets in Europe, through greater market integration and a common set of market rules. There are ten electricity codes currently under development. Three codes relate to connections, four to system operation and three set out a common set of market rules for the long term (before day ahead), short term (day ahead and intraday) and balancing (post gate closure) timeframes. Some aspects of the Network Codes, in particular the balancing network code and the technical system operation network codes, relate to the balancing services procured and activated by national system operators.

**Impact on balancing costs**

These codes will encourage cross border exchange and sharing of balancing services through the development of common balancing services products and legal requirements to establish provisions for exchanging and sharing services across interconnectors, with the possibility of a common pan European balancing services merit order. The opportunities for system operators to draw upon a wider – and potentially cheaper – pool of balancing services from neighbouring markets and to reduce the total volume of reserve procurement through sharing resources with other system operators should help to improve efficiency and reduce the costs of system operation.

**Impact on security of supply**

The Capacity Allocation and Congestion Management (CACM) network code is a common set of market rules for European cross-border trade in the day ahead and intraday timeframe. These market coupling rules will encourage greater price reflectivity of electricity flows across interconnectors. This should help to ensure that interconnector flows reflect the level of system stress and value that consumers place on secure supplies. Price differentials between bidding zones also send a clear signal for investment in new interconnectors, which in turn support security of supply.
Other network codes may also support security of supply. The Operational Security and Emergency Restoration network codes contain requirements for system resilience and emergency restoration.

Q.4 To what extent will the 2013-21 regulatory settlements for Transmission Owners (RIIO-T1) address constraints on the movement of electricity around Great Britain?

The transmission investment programme from 2013 to 2021 is expected to significantly reduce network constraints by the end of the period. Under the transmission owners’ business plans submitted as part of the development of the price control, each needed to justify its expected transmission network development programmes for the eight year period. An important part of our assessment of the needs case (ie whether the project needs to happen), for these network development programmes was the expected impact that they would have on network constraints.

In addition to the network development programmes submitted as part of the transmission owners’ business plans, the transmission owners are able to submit funding proposals for large scale investment projects during the price control period. This ensures that network investment projects can be brought forward in a timely manner, when evidence of their need and efficient cost is known, without needing to wait for the end of the price control period.

The RIIO-T1 business plans included significant investment in new capacity. The work to build this will include planned outages that might increase constraint costs in the short – medium term. We incentivise the SO to minimise the impact that network upgrade work has on the costs of managing system constraints.

The settlement also included reforms built on existing arrangements to encourage the Scottish Transmission Owners to work effectively and efficiently with National Grid as system operator for the whole of the Great Britain system. These arrangements involve regular communication and joined up planning between the different parties in a way that should improve the management of constraints.

Q.5 Is public information about constraint costs adequate, in light of recent media publicity surrounding the scale of constraint cost payments to wind farms?

As with all aspects of the energy industry, we highly value transparency of constraint management costs and have worked with National Grid to improve the openness and reporting of this information. National Grid publishes a range of information in relation to constraint costs. This includes:

- Monthly break-downs of the constraint costs and actions it has taken in the previous month.
- Year ahead constraint forecasts as part of our balancing services incentive scheme.
- National Grid engages with the industry regarding forward looking constraint management requirements as part of its operational fora.
- Regular reports on costs of the Government’s Connect and Manage (C&M) regime. This includes information on the levels of C&M generation connected, constraint costs as a result of C&M, and estimated levels of carbon abatement achieved.
Q.6 How do you ensure that “Connect and Manage” is achieving its objectives without adding disproportionately to constraint costs?

The Connect and Manage (C&M) regime was introduced by Government to accelerate the connection of new generation, largely to reduce the generation connection queue for renewable generation. At the time of introduction it was accepted that the C&M regime could have an impact on constraint costs during the time before wider network reinforcements, to accommodate the new generation are delivered.

To monitor the costs and benefits of the C&M regime, National Grid’s reports to us include information on constraint costs, estimated levels of carbon abatement resulting from the C&M and information on the drivers behind the constraint costs identified.

It is only relatively recently that the C&M regime has started to have a noticeable impact on the level of constraint costs. These are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>C&amp;M costs £m</th>
<th>National Constraint Costs £m</th>
<th>% of overall constraint costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011 - 12</td>
<td>2.43</td>
<td>325.5</td>
<td>1</td>
</tr>
<tr>
<td>2012 - 13</td>
<td>5.65</td>
<td>169.6</td>
<td>3</td>
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<tr>
<td>2013 - 14</td>
<td>71.8</td>
<td>339.8</td>
<td>21</td>
</tr>
</tbody>
</table>

Q.7 How do you ensure that the approach to regulating balancing costs gives strong incentives for efficiency, while eliminating costs considered to be outside of National Grid’s control?

We use target based financial incentive schemes to ensure that National Grid has an incentive to keep the costs of carrying out its balancing responsibilities as low as possible. We set a target for the costs that the system operator should incur in carrying out its energy and system balancing requirements, and allow the system operator to retain a share (25%) of any underspends or overspends against this target. The remainder of the underspends or overspends are passed through to users of the transmission system, and ultimately consumers, allowing them to make savings as a result of efficiency improvements which the system operator is incentivised to make.

We have developed increasingly sophisticated incentive schemes to reflect the progressive challenges to National Grid of operating the system. We have developed an approach to target setting which is based on the use of models. A key benefit of this approach is that we are able to identify and remove variables which are outside of National Grid’s control from its target.

We consult on our approach towards setting the target and on the variables which should be considered to be outside of National Grid’s control. We then assess and approve a modelling methodology which is designed to eliminate external factors from the target. This approach sharpened incentives on National Grid as the target generated by the model rewards or penalises the system operator for its performance against variables which are within its control, rather than allowing it to profit or make a loss as a result of luck.
Q.8 Are current arrangements for balancing services as a whole fit for purpose in the light of current and future developments (including the growth of intermittent and embedded generation)?

It is ultimately for National Grid to determine the arrangements for balancing services and ensure that they remain fit for purpose. National Grid has the resource and expertise to identify the most appropriate mix and design of services to ensure that the system remains balanced.

However, we do have an important role to play here. National Grid is able to procure services that are within the definitions of its Procurement Guidelines. Where National Grid wants to make a change to these Procurement Guidelines it must consult before submitting to us for approval. We will consider the need for these changes and the overall impact on the ability of the system operator to carry out its duties efficiently before approving changes. For example, we recently approved changes to the Procurement Guidelines to allow National Grid to procure two new balancing services – the supplemental balancing reserve and the demand side balancing reserve. We approved changes to the Procurement Guidelines to allow National Grid to procure these services to mitigate risks to its ability to balance the system in the mid decade period.

We also incentivise National Grid to minimise the costs of carrying out these balancing responsibilities. This should, in turn, ensure that National Grid is reviewing the arrangements that it has in place and identify requirements and opportunities which could allow it to carry out this role more effectively.

We can also consider leading work on future service requirements where we see fit. For example, we consulted with industry on the need for a workstream to consider ancillary services requirements as part of our Future Trading Arrangements initiative. We are considering timing for taking this work forwards in light of stakeholder feedback on the scope and timing of the initiative.

Q.9 How is Ofgem proposing to take forward the various workstreams, other than locational pricing, identified by the Future Trading Arrangements initiative?

In May 2013, we launched the Future Trading Arrangements (FTA) project to consider the interactions between the multiple drivers of change in the GB electricity market. The overall objective of the project is to ensure that GB trading arrangements deliver: efficient operation of existing assets; appropriate incentives to maintain existing assets and invest in new capability; and effective and efficient integration with European markets to the benefit of GB consumers.

As part of the project we established the FTA Forum to bring together informed and influential industry players (and DECC), to look across trading arrangements issues. Through it we seek to provide a focal point for all matters relating to the electricity trading arrangements, build consensus on the direction of travel for the electricity wholesale market and provide greater certainty for industry stakeholders.

Feedback from stakeholders has been positive but concerns were raised about the current very high levels of industry input to energy policy development (eg, Electricity Market Reform (EMR), Retail Market Review (RMR), European Network Code development and implementation).
We proposed to hold the next meeting of the Forum in summer 2014 to allow the industry to focus on these other policy areas in the first half of the year. In the meantime, Ofgem commenced internal work on the top priority workstream identified by the Forum (bidding zones configuration), and we are giving more consideration to the scope of other work for inclusion in the FTA Programme. We are keen to maintain the strong industry engagement with the FTA work. When we meet with the Forum in the summer we will share our internal work on bidding zones and discuss how, when and in what manner the other workstreams should be taken forward.

Summary of the priorities identified by the Forum and potential FTA workstreams:

1. Bidding zones configuration
2. Balancing and ancillary services
3. Managing intermittency
4. Long term market arrangements