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21 June 2016

CC via email: Johannes.Pelkonen@ofgem.gov.uk and Leonardo.Costa@ofgem.gov.uk

Response to: Notice requiring the production of specified information under Special Licence Condition 4C.18 in relation to the Income Adjusting Event notice dated 24 May 2016

Dear Emma,

This letter and its appendices form National Grid's first response to your formal notice dated 14 June 2016 requiring National Grid to produce specific information in relation to the income adjusting event notice submitted by National Grid. The document contains response required by the 21 June 2016 a further response will be submitted on the 28 June with the remaining responses.

There are a number of questions that National Grid is not able to respond to by the 21 June 2016 as requested due to the unavailability of the people required to provide that information. We have indicated in the appendices the questions that we are unable to respond to at this time and request an extension to the provision of this information to 28 June 2016.

Your letter noted that there may be circumstances where the disclosure of the information provided may be required and we would ask that if these circumstances occur the commercial confidentiality of the information provided to us by third parties and the confidentiality of the specific stations contracted for Black Start be considered.

If you have any questions regarding this response please contact: Audrey Ramsay (audrey.ramsay@nationalgrid.com) or Andrew Ford (andrew.J.ford@nationalgrid.com).

Yours sincerely,

Audrey Ramsay

Commercial Strategy Manager, System Operator

Appendix 1 – National Grids Response Part One

1. Please provide **by 21/6/2016** the following information on the past five years of the Future Energy Scenarios (FES) and any updated modelling based on the FES (such as updates made for Supplemental Balancing Reserve and Demand Side Balancing Reserve procurement and the Electricity Capacity Report for EMR) used by NGET as GBSO to assess the availability of power stations:

- a. Forecast available capacity for each coal generator for the period 2012-2030;
- b. Explanation of rationale for forecast availability including description of all changes in expectation;
- c. Evidence (including excerpts of consultation responses) that supported NGET's view on the expected availability of generation;
- d. Any other market data (including current and forecast spark and dark spreads) that would support the changes in the forecasts.

Response

- a. The Future Energy Scenarios provide a long term view of the potential sources of electricity generation. The scenarios consider electricity security of supply in their development, identifying the amount of generation that will be required to maintain the Security of Supply standard.

The FES data provides the underlying data for network and system operability analysis, the outcomes of which are explained in NGET's Electricity Ten Year Statement¹² and System Operability Frameworks documents³.

Spreadsheet assessment – capacity for each coal-fired power station as projected in the 2011 FES to 2016 FES (inclusive).

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The spreadsheet also contains:

- i. transmission peak demand projections for each scenarios;
- ii. electricity security of supply assessment used;
- iii. de-rating factors for coal and wind; and
- iv. interconnector assumptions at winter peak for each of scenarios.

Supplemental Balancing Reserve and Demand Side Balancing Reserve Procurement

¹ Electricity Ten Year Statement: <http://www2.nationalgrid.com/UK/Industry-information/Future-of-Energy/Electricity-Ten-Year-Statement/>

² Seven Year Statement (ETYS' predecessor): <http://www2.nationalgrid.com/UK/Industry-information/Future-of-Energy/Electricity-ten-year-statement/SYS-Archive/>

³ System Operability Framework: <http://www2.nationalgrid.com/UK/Industry-information/Future-of-Energy/System-Operability-Framework/>

The following outlines any differences in assumptions made for Supplemental Balancing Reserve procurement.

- 2014/15 DSBP Procurement (Summer 2014)
Analysis based on FES 2014 assumptions with no requirement to identify any differences.
- 2014/15 SBR Procurement (October 2014)
The changes (compared to FES 2014) on coal assumptions (shown in attached Excel file) are as follows:
 - Ferrybridge C was damaged by fire. SSE press release on 31/7/14 stated unit 4 would not be available for winter 2014/15 (unit 3 would be available).
 - Eggborough announced via REMIT on 17/7/14 that unit 2 would return from outage in November 2016 and be available for winter 2014/15. FES 2014 assumed this unit would not be available
 - Ironbridge unit 1 (biomass conversion) was damaged by fire in February 2014. EON press release on 23/5/14 stated Unit 1 would not be returned to service (unit 2 would be available).

Spreadsheet attachment – Coal Assumptions for 2014-15 SBR Tender

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- 2015/16 DSBP & SBR Round 1 Procurement (December 2014)
The further change (compared to FES 2014) in addition to the above is as follows (see also attached Excel file):
 - Eggborough (all units) assumed to be available in winter 2015/16 following purchase by EPH.

Spreadsheet attachment – Coal Assumptions for 2015-16 SBR and DSBP Tender

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- 2015/16 SBR Round 2 Procurement (Summer 2015)
Analysis based on FES 2015 with no requirement to identify any changes.
- 2016/17 SBR Tender December 2015 - Coal Assumptions
Please find attached the coal assumptions on a plant-by-plant basis assumed for the 2016/17 SBR procurement for each scenario. The main changes (highlighted in yellow in the spreadsheet) were:
 - Eggborough – all units assumed 0 MW from 16/17 onwards based on September 2015 TEC change
 - Fiddlers Ferry – 1 unit assumed 0 MW for 16/17 and 17/18 based on September 2015 TEC change (we assumed it returned in 18/19 to fulfil CM agreement)
 - Ferrybridge – unit 3 assumed 0 from 16/17 onwards (actually announced in May 2015 but FES backgrounds already finalised)
 - Longannet – 2 units in CP assumed 0 from 16/17 onwards (already closed in other scenarios)

Spreadsheet attachment – Coal Assumptions for 2016-17 SBR Tender

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Electricity Capacity Report

Our analysis for the Electricity Capacity Report (ECR) in 2014, 2015 and 2016 has used National Grid's Future Energy Scenarios (FES) produced in those years to cover uncertainty in annual and peak demand, Demand Side Response (DSR), interconnection and generation (including coal). In addition the 2016 ECR included a Base Case consistent with the demand forecast produced for the new Demand Forecasting Accuracy incentive.

Sensitivities around the FES or Base Case were also modelled to cover uncertainty in single variables such as CCGT and nuclear peak availabilities, winter weather, wind output at times of high demand, peak demand forecast performance and non-delivery of contracted coal capacity (2016 ECR only). For clarification: in the non-delivery sensitivities modelled in the 2016 ECR we did not make assumptions on which contracted coal plants would not honour their CM contracts – these sensitivities were modelled by reducing the “outside CM” capacity after the DDM runs using a range of reduction levels determined in consultation with DECC, its Panel of Technical Experts and Ofgem.

For the purposes of modelling scenarios for the Capacity Market (CM), DECC's DDM model has been used. In the DDM, the non-CM technologies (e.g. renewables) were fixed to the levels assumed in each of the FES scenarios in all years modelled. For the CM-eligible technologies (including coal), the existing capacity (including under construction plants) was aligned to the FES, but the DDM determined the precise level of CM-eligible capacity required to meet the 3 hours LOLE Reliability Standard over the CM years which may be different to the levels assumed in the FES in those years. Hence capacities of CM-eligible technologies (including coal) in the DDM output files may diverge from those in the original FES scenarios over the CM period.

However we do not make note of any differences in the technology mix in the DDM outputs compared to the FES as the ECR analysis is only concerned with the total de-rated capacity required to meet the Reliability Standard, a quantity that is not technology-specific. The outturn CM-eligible generation mix in the CM years will be largely determined by the CM auctions for those years.

b. Explanation of rationale for forecast availability including description of all changes in expectation:

Each FES scenario is in keeping with its associated narrative. The scenarios also consider the latest market intelligence and government energy policy available at the time of development. This includes:

- i. recent Transmission entry Capacity (TEC) changes available at the beginning of April each year;
- ii. applicable environmental legislation e.g. Large Combustion Plant Directive (LCPD) and Industrial Emissions Directive (IED);
- iii. Capacity Market results;
- iv. Contract for Difference results; and
- v. Security of Supply standards.

c. Evidence (including excerpts of consultation responses) that supported NGET's view on the expected availability of generation:

Please find attached links to relevant information which support NGET's view on the expected availability of generation:

- NGET TEC and Interconnector Registers:

<http://www2.nationalgrid.com/UK/Services/Electricity-connections/Industry-products/TEC-Register/>

- Capacity Mechanism Award 2018/19:
<https://www.emrdeliverybody.com/Capacity%20Markets%20Document%20Library/T-4%202014%20Final%20Auction%20Results%20Report.pdf>
- Capacity Mechanism Award 2019/20:
<https://www.emrdeliverybody.com/Capacity%20Markets%20Document%20Library/T-4%20Final%20Results%202015.pdf>
- Contract for Difference Awards:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/407059/Contracts_for_Difference_-_Auction_Results_-_Official_Statistics.pdf
- Industrial Emissions Directive – Limited Life Derogations:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/489554/industrial-emissions-lcp-limited-life-derogations-list.pdf
- Industrial Emissions Directive – Transitional National Plan:
http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1450441960822&uri=OJ:JOC_2015_425_R_0012



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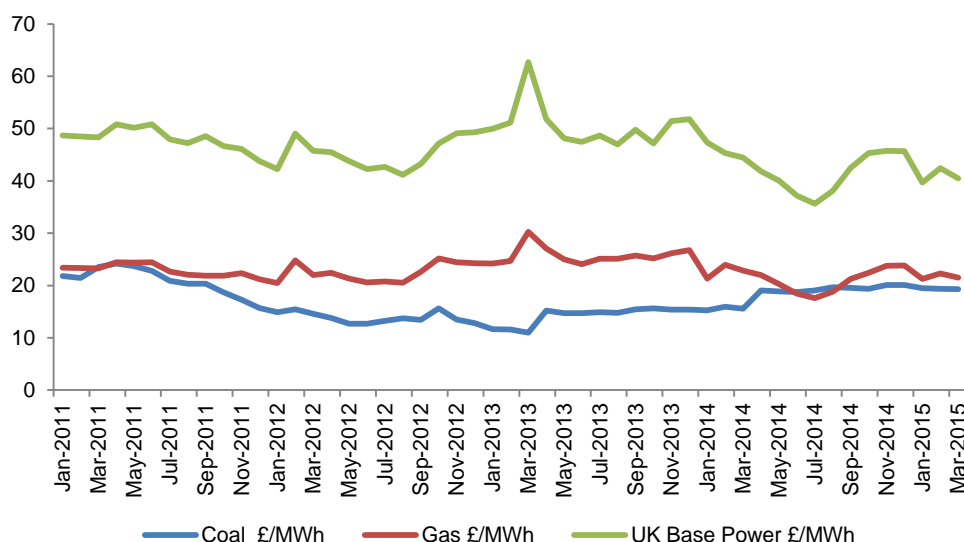


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d. Any other market data (including current and forecast spark and dark spreads) that would support the changes in the forecasts:

The chart shows the switch between gas and coal and the downward trend in UK base power prices from January 2011 to March 2015

Gas, Coal and UK Base Power Prices (January 2011 to March 2015)



2. Please provide by 21/6/2016 the following information in regards to the closure or mothballing of Drax, Fiddler's Ferry, and Rugeley:

a. The date when NGET's monitoring started to indicate that each of these power stations could become unavailable for Black Start provision, close or mothball in the short term (2016-19), including a description and supporting evidence of the assessment made. This should include observations on the running patterns and increased need for warming;

b. The date that NGET was first contacted by these power stations on their consideration to become unavailable for Black Start provision, close or mothball, including a description of the format and content of communications;

c. The date, if any, that NGET became aware that these power stations would take a decision to become unavailable for Black Start provision, close or mothball to their boards, including a description of the format and content of communications;

d. The date when NGET was formally informed of the closure or mothballing decision of each of these power stations, including a description of the format and content of communications;

e. The contingency actions or plans NGET made, reviewed or amended to ensure Black Start availability after each stage in subsections a-d above.

Response

- a. National Grid monitoring of these coal plants, through Future Energy Scenario creation, indicated the following closure dates:

- Drax []
- Fiddlers Ferry 2026
- Rugeley 2017

Supporting evidence for these dates can be found in the response to question 1a.

An increasing need for warming was recognised by National due to an expectation of reduced running in 2017/17 which resulted in a Black Start Mid Scheme Review submission to Ofgem. Our analysis supported the stations remaining open but with reduced operations across the summer period. Further information and analysis is included in the attached documents.

[] []

- b. We are unable to respond to this question at this time due to the unavailability of the person(s) required to provide this answer and request an extension to 28 June 2016.
- c. We are unable to respond to this question at this time due to the unavailability of the person(s) required to provide this answer and request an extension to 28 June 2016.
- d. We are unable to respond to this question at this time due to the unavailability of the person(s) required to provide this answer and request an extension to 28 June 2016.
- e. The contingency actions taken after notification of key plants intention to mothball or close were:
- Full impact assessment of restoration impact including development of draft contingency restoration routes and simulation under different scenarios.
 - Bilateral negotiations with the parties who submitted proposals followed by the Expressions of interest letter published on 25th Feb 15.
 - The acceleration of contracting process with []securing additional service in the []ahead of 1/4/16
 - Delivering testing for a partial service from []on 1 April 2016 followed by service start on 4 May 2016. The partial service was developed to support restoration ahead of a full service []expected to be delivered in autumn 2016 following the completion of the required full feasibility testing.

3. Please provide **by 21/6/2016** the following information on the procurement process for Black Start services applied by NGET in relation to the proposed Black Start Income Adjusting Event:

- a. The date and rationale for NGET's decision to pursue an Expression of Interest (EOI) exercise, including the objectives of the EOI and any additional parties it sought to attract;
- b. Description of any consideration on running a tender for Black Start service at this time and rationale for not pursuing a tender approach;
- c. Description on how the process followed is consistent with NGET's licence obligations, including Standard Condition C16 and its statements.

Response

3a

- We are unable to respond to the first part of this question at this time due to the unavailability of the person(s) required to provide this answer and request an extension to 28 June 2016.
- Due to the tight timescales, NGET determined that only a provider already capable of providing black start in the relevant zones would be able to submit a proposal. NGET have experience working with new black start providers and know that the process of building capability, testing and contracting for Black Start would not be realistic with the time frame of February and March. NGET therefore approached all potential providers who were known to meet the requirements to discuss Black Start Services.
- Despite the limited number of potential providers, in the interests of transparency, fairness and to ensure all providers were working with consistent information and to consistent timescales, NGET chose to advertise the opportunity on its website in the form of the EOI letter on 25th February. This approach had the added benefit of ensuring any party unknown to NGET that were capable of meeting the requirement were also made aware of the opportunity, and would therefore have been able to submit a proposal.

3b

- Black Start is a locational service with a limited number of potential providers, due to these constraints the service can be procured bi-laterally rather than pursuant to a tender exercise. Where ever possible NGET will tender for services, however in the case the limited number of providers would not have yielded a liquid tender response. That being said, recognising the need for transparency and consistency the EOI process was deemed to be the most appropriate approach.

3c

- LC16 of the transmission licence requires NGET to procure balancing services in accordance with the Procurement Guidelines. Under the Procurement Guidelines Black Start, being a

locational service with a limited number of potential providers, can be procured bi-laterally rather than pursuant to a tender exercise.

- In the case of locational services, the Procurement Guidelines permit NGET to approach potential providers known to be capable of providing the service although, as noted above, NGET did advertise the opportunity on its website in any event.
- NGET has general duties of transparency and fairness and conducted the procurement in accordance with those duties.

4. Please describe by 21/6/2016 [] alternative service providers [] available in the North East or North West zones to contract with NGET to replace the power stations that became unavailable for Black Start provision, including a description of the suitability of parties contracted or in advance negotiations to be borrowed to either the North West or North East zone.

Response

Scotland	North East	North West	Midlands	South East	South West
[]	[]	[]	[]	[]	[]
[]	[]	[]	[]	[]	[]

The contracted positions for zones without Drax, Fiddlers Ferry [] is shown above. Clearly the unavailability or closure of these units will have a [] impact on Black Start availability on the North East and North West zones. The table submitted with the IAE (included below) details the state of new Black Start provider procurement for both replacement and development of new Black Start availability.

[]The full service for [], currently undergoing feasibility studies, is due to be available (subject to successful studies and contractual negotiations) in early 2017.

In the North East zone alternative providers were considered, of these []was contracted for 1st April 16 []. []

	Scotland	North East	North West	Midlands	South East	South West
Ongoing discussions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feasibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contracting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Please provide by 21/6/2016 a summary of any verbal or written communication, in any form or format¹ between NGET and SSE, as well as NGET and Drax relating to the Black Start contracts with these providers following NGET's submission of the Income Adjusting event, excluding any communication from the control room on operational matters.

Response

National grid has engaged with Drax following the NGETS's submission of the Income Adjusting Event with regard to contracting ☐ for Black Start provision in the future.

☐

In addition to this communications have taken place to agree their local Joint Restoration Plans.

Further communications may have taken place, however, we are unable to fully respond to this question at this time due to the unavailability of the person(s) required to provide this answer and request an extension to 28 June 2016.

6. Please provide **by 21/6/2016** a copy of the contracts signed with Drax and Fiddler's Ferry for the provision of Black start for the period 1 April 2016 and 31 March 2017 and any previous contract in place since 1 April 2011.

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7. Please provide **by 21/6/2016** prices for every option considered in Appendix 2 of the notice.

Response

Please note, prices below are for every option considered in appendix B of National Grid's notice (not Appendix 2 as requested in the notice).

Please let us know if this is not what is being asked for.

Offers received from the Expressions of interest process are attached.

These offers were assessed and scored by National Grid for technical benefit to the restoration process and then grouped into possible options equating to a possible 28 combinations and provided as Appendix B of the Income Adjusting Event. These process provided in the offers were then appended to each technical combination as shown in the table below.

Number	Combination	Contract1	Contract2	Total
		£m	£m	£m
1	[]	[]	[]	[]
2	[]	[]	[]	[]
3	[]	[]	[]	[]
4	[]	[]	[]	[]
5	[]	[]	[]	[]
6	[]	[]	[]	[]
7	[]	[]	[]	[]
8	[]	[]	[]	[]
9	[]	[]	[]	[]
10	[]	[]	[]	[]
11	[]	[]	[]	[]
12	[]	[]	[]	[]
13	[]	[]	[]	[]
14	[]	[]	[]	[]
15	[]	[]	[]	[]
16	[]	[]	[]	[]
17	[]	[]	[]	[]
18	[]	[]	[]	[]
19	[]	[]	[]	[]
20	[]	[]	[]	[]

21	□	□	□	□
22	□	□	□	□
23	□	□	□	□
24	□	□	□	□
25	□	□	□	□
26	□	□	□	□
27	□	□	□	□
28	□	□	□	□

[]