

Ofgem
System Balancing,
9 Millbank,
London SW1P 3GE

15 July 2016

Dear Johannes,

Re: Consultation on a Proposed Income Adjusting Event submitted by National Grid Electricity Transmission plc in relation to the 2015-17 Electricity System Operator Incentives Scheme

About Tempus Energy

Tempus Energy Technology ('Tempus') is a technology company that has developed the technology platform for the utility of the future. Tempus Energy Supply ('TES'), a wholly owned subsidiary of Tempus, is an innovative, new electricity retail supplier that uses this technology platform. Tempus was established to make energy systems more efficient through capturing the value of under-utilised assets using demand-side flexibility technology. Tempus has developed technology to shift real-time consumption patterns to optimise trading on the electricity market within each half-hour, leading to cheaper electricity prices for the company and its customers, while also helping to balance the overall electricity system. Importantly Tempus is demonstrating that through the use of demand-flexibility in liquid, transparent and competitive wholesale markets, where prices reflect actual scarcity and network stress, we can create a market-based approach to integrating more intermittent renewable energy onto the grid and therefore combat climate change through market-based solutions.

Response to Consultation

Tempus would like to stress that against the backdrop of procuring services for NG's Balancing System Incentive Scheme ('BSIS') of which Black Start ('BS') is one element, we need to look at all these schemes holistically and ensure that they are, in the interests of the consumer, run competitively, they are in line with our environmental commitments and do not violate competition law. Government has decided to phase out coal in Great Britain by 2025, while numerous organisations, including DECC, the National Infrastructure Commission, Ofgem and industry have all called for more flexibility and an equal playing field for all technologies in energy markets. It is for this reason that it is disappointing to see that coal is still receiving generous support¹ while NG has not yet sought to diversify the portfolio of technologies it uses for services such as BS. The urgency for diversification has existed for years, but has become even stronger following Government's decision to phase out coal. By continuing to maintain schemes with rigid specifications that over-reward ageing coal fired power stations we end up

¹ In 2016/17 National Grid will pay 3 coal stations around £190m for just being available for both Supplemental Balancing Reserve and Black Start- <http://energyandcarbon.com/european-capacity-payments-keeping-ageing-coal-power-plants-alive/>

hampering innovation, at a time when the energy industry needs it more than ever, and increasing customer bills through rising BSUoS charges.

On the 24 May 2016 National Grid ('NG') sent Ofgem an application arguing that an 'event', falling under the definition of an 'Income Adjusting Event' ('IAE') in accordance with NG's Licence Conditions², had taken place. The 'event' that NG is claiming has occurred is that two coal fired power stations (Fiddler's Ferry and Drax) were due to exit the market earlier than anticipated and this event was both 'unforeseen' and its costs were beyond the reasonable control of NG. As it shall be articulated below, it is the position of Tempus that it was a well known fact that coal fired power stations have become increasingly uncompetitive due to a variety of reasons, and NG should have foreseen this development. In addition, even if one argues that an IAE did occur, evidence is provided below as to the more cost-effective alternatives on offer. If NG contends that the event is an IAE, Tempus, based on the evidence provided, submits that only a limited amount can be re-claimed by NG.

Tempus would also like to draw Ofgem's attention to NG's request for an IAE in 2013³, in relation to four separate allegedly unforeseen events⁴. Ofgem's reasoning in its decision has set precedent for the tests to be utilised when assessing whether an event is foreseeable or not and whether the subsequent costs can be judged to have been 'beyond the control of National Grid'. Of most importance is the test that must be satisfied in order to prove the existence of an IAE: there need to be **unexpected and fundamental changes in wholesale energy markets**.

Question 1: Do you believe that the event submitted by NGET as an Income Adjusting Event constitutes an Income Adjusting Event?

- Do you consider the proposed IAE to constitute force majeure as defined in the BSC or in the CUSC?
- Do you believe that the event submitted by NGET was unforeseen? Please provide evidence to support your view where possible.
- Do you believe that the proposed IAE costs were beyond the reasonable control of NGET?

Tempus does not believe that the event submitted by NG constitutes an IAE. For an event to constitute an IAE it must either be caused by a force majeure event (as per the BSC or CUSC), a 'Security Period' (as per the Fuel Security Code) or an unforeseen event or circumstance other than those listed above which leads to consequences beyond the reasonable control of the licensee which is, in the opinion of the Authority, an income adjusting event and is approved by it as such in accordance with Part E2 of this condition⁵. NG is claiming that an unforeseen event leading to consequences beyond its reasonable control has occurred. For NG to prove that an

² Condition 4C.13, NGET Plc Electricity transmission Licence, Special Conditions

³ Electricity System Operator Incentives 2011-13: Income Adjusting Events Determination

⁴ In its determination, Ofgem rejected two out of the four requests for an IAE, and provides the tests to be used to determine whether an IAE has occurred

⁵ Electricity System Operator Incentives 2011-13: Income Adjusting Events Determination

IAE has occurred, they need to demonstrate that both an unforeseen event has occurred and that it was beyond its reasonable control. The test to be used here is that there need to have been unexpected and *fundamental* changes in wholesale energy markets. It is Tempus' position that neither of these two criteria have been met.

Unforeseen Event

For NG to be able to rely on the fact that this event was unforeseen they need to demonstrate that the reason that market changes occurred, in relation to the exiting of coal fired power stations from the market, was completely unexpected and caused by fundamental changes in wholesale markets. As Ofgem stated in its 2013 IAE Decision, "*We [Ofgem] would normally only expect NGET to raise an IAE in the case that there are unexpected and fundamental changes in wholesale energy markets*⁶." Tempus believes that these market changes were completely foreseeable to the reasonable market analyst based on Energy Futures Scenarios, electricity market activity (including purported financial difficulty faced by all coal fired power stations⁷), lower oil and gas prices and Government's commitment to phase out coal from the GB energy system by 2025⁸. Based on all these elements, NG cannot reasonably claim that the fact that two ageing *coal*⁹ fired power plants decided to exit the market was an 'unforeseen event'.

In 2012, NG, when outlining its approach for procurement of BS capability¹⁰, was already warning of changes in GB's generation mix and how this will impact on traditional BS procurement. NG unequivocally stated that there would be station closures and that action needed to be taken to bring on new stations, particularly non-coal technologies such as CCGTs. Specifically, NG stated "*Whilst it is generally not possible to accurately predict specific station closures in 5-20 years time, certain legislation changes can provide a degree of certainty about closures dates. The LCPD legislation for example has made it relatively certain that particular stations will close by 2016, although it is not clear as to whether specific stations will cease to operate before this date*¹¹."

When negotiating the conditions and budget for the 2015-2017 period a risk sharing factor was included as well as a mid-period budget review to give extra stability to NG in what was considered at the time to be an unstable period. However this instability was covered by both the above tools and any risks, such as the obvious risk of coal stations exiting the market, should have been accounted for in NG's budget. It is thus surprising that in NG's response to Ofgem's IAE information request on 21/06/2016¹², NG attempts to claim that the "tight timescales" meant that it would not be possible to search for new providers. The point is that NG when

⁶ Ibid, paragraph 1.9

⁷ <http://www.businessgreen.com/bg/news/2424335/eggborough-coal-power-plant-may-close-next-year>
<http://www.bbc.co.uk/news/uk-england-york-north-yorkshire-35527220>

⁸ <http://www.bbc.co.uk/news/business-34851718>

⁹ Fiddlers Ferry was constructed in 1971 and Drax Yorkshire in 1986

¹⁰ National Grid Electricity Transmission's approach to determining and procuring an economic and efficient level of Black Start service provision on an ongoing basis

¹¹ Ibid, para 5.2

¹² 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

negotiating the 2015-2017 budget should have put aside a specific budget for ensuring new providers were able to provide BS capability in the scenario that a traditional provider was no longer able to do so.

This is the approach and reasoning used by Ofgem when assessing NG's IAE request in relation to the loss of 'Alcan' (a large frequency response provider) in the 2011-13 period, where the Authority found that NG should have foreseen the loss of providers and should have had more robust alternative options. In the *Alcan* scenario, it was known up to two years before the scheme in question that some providers (in the aluminium sector) were facing financial difficulties due to rising energy costs. This is a direct parallel with the current situation of coal plants providing BS capability. It is (and was acknowledged by NG since at least 2012) a well known fact that coal stations are facing financial difficulty and thus NG should have been prepared for such a consequence.

From the above it is clear that at least from 2012 NG foresaw changes to both the grid mix and its natural impact on procuring BS capability, which historically has only been from coal fired power stations. Not only was it clear to NG that these events would take place in the immediate future, but NG even specifically predicted that some stations would close by 2016. In NG's request for an IAE due to unforeseen Transmission losses in 2013¹³, Ofgem responded that as NG knew of potential market changes three months before signing the two-year scheme it could not then claim unforeseen events had occurred. In the present case, NG's report was published *four years* before the alleged 'event' and can in no way be considered an unforeseen event. Building on this point, oil and gas prices have been declining steadily for the past two years¹⁴, increasing the competitiveness of gas generators at the expense of already (environmentally) burdened coal plant. If we consider the market conditions as well as Ofgem's own reasoning in its 2013 IAE decision, it is impossible to find that there was an 'unforeseen' event for the purposes of Special Licence Condition 4C.

Beyond Reasonable Control

In order to qualify for an IAE, NG must not only prove that there were unforeseen events, but that the costs of these events were beyond the reasonable control of NG. It is Tempus's position that the costs incurred by NG to obtain the services of Fiddler's Ferry and Drax were not beyond its reasonable control. In fact, the majority of these costs were caused by NG's inaction in not reasonably foreseeing market changes (as noted above) over the last few years. NG did not proactively address the market changes that it, itself, recognised, and failed to procure BS capability from other technologies. As in the similar Transmission Losses IAE in 2013¹⁵ NG was in this situation best placed to forecast and control the impact of events that occurred during the 2015-2017 period.

¹³ National Grid Electricity Transmission's approach to determining and procuring an economic and efficient level of Black Start service provision on an ongoing basis

¹⁴ Oil and gas prices have been falling dramatically since mid 2014. By the time NG had signed up to the 2015-2017 scheme WTI was under \$60/barrel with a negative outlook

¹⁵ National Grid Electricity Transmission's approach to determining and procuring an economic and efficient level of Black Start service provision on an ongoing basis

In NG's response to Ofgem's request for further information on 21 June 2016¹⁶, NG tries to argue that that due to the tight timescales, it determined that only limited providers were able to contribute and that new black start providers would take a while to be fully tested and ready. While this may be true, the essence of the argument is that NG was not adequately prepared to deal with changes (that were not totally unforeseeable and fundamental) and once it was too late would not be able to call on new providers.

NG's prolonged inaction and overreliance on only one technology for BS capability resulted in awarding existing BS providers with an immensely powerful bargaining position over NG. Due to the fact that the two BS providers in question knew that NG has historically only procured from a small group of providers (including those two providers), that BS specifications are still arbitrarily rigid and that other technologies are put off by the unpredictability in prices, these two providers would naturally aim to pass on all their costs to NG and extract the highest possible price they could obtain. In the comparable 'Alcan' case where NG claimed an IAE event had occurred, Ofgem stated that "*NGET could have diversified its balancing services profile through contracting with other plant ahead of time, which could be considered appropriate given the cost impact of the risk of the smelter's closure materialising*¹⁷." As mentioned above, NG had the obligation to diversify in order to reduce the obvious risk that its traditional portfolio of providers was from a technology group that was being phased out of the market.

This bargaining power is manifestly obvious by simply looking at the price NG paid to two generators for a one-year contract, an amount that is over 500% of the original 2015-2017 budget. Considering that the average power station is paid less than £3m for a two-year contract¹⁸, these two contracts of over £50m each for just one year look like a terrible deal for energy customers. Tempus understands that NG is basing their cost recovery argumentation on a VOLL analysis that aims to show that these two contracts provide £2.4bn in value to customers. However, Tempus would like to point out that NG's cost benefit analysis is flawed and inaccurate. The £67,000 figure used by NG already factors in the use over four hours and it is wrong to multiply the figure again by four. The combined figures should thus only be a combined £595m. In any case, had NG diversified its pool of resources, it would have procured these contracts at a lower price (see next section) with the same VOLL benefit to customers.

The evidence that the £113m costs were not in fact beyond NG's reasonable control can again be found from clear changing market conditions (which as highlighted above were obvious to NG at least from 2012) and from the fact that NG has not pro-actively diversified its provider base. NG should have, after publishing its 2012 approach, immediately run trials and supported upgrades to interconnectors¹⁹, CCGTs and CHP units to ensure they were ready for the predictable exit of several coal plants from the market. In both the NW and NE of England (where BS capability was procured in March) there are 27 CHPs, six CCGTs and an

¹⁶ 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

¹⁷ Ibid

¹⁸ NG have stated that they tend to procure 3 power stations from each region (6 regions in total) in GB, meaning that there are up to 18 BS providers. Based on the original £22m budget, the average contract would be under £3m.

¹⁹ Interconnectors can provide BS capability following an upgrade. For example they are used extensively for this purpose in Denmark- please see Annex 2.

interconnector to Ireland (NW England only). Instead of acting in the above prudent manner, the only thing NG did was to commission two reports in 2015²⁰, looking into the potential for other technologies to provide BS capability (the reports confirmed that this was indeed possible).

To conclude, the proposed IAE costs were not beyond the reasonable control of NG as NG knew of the imminent market changes and their impact on its existing BS procurement strategy, which has unfortunately awarded undue bargaining power to a select few power stations. To conclude the contrary, would be akin to a doctor who neglects the symptoms of a disease, and finds herself to be incapable of exercising reasonable control over the disease once it becomes terminal. NG knew of these changes and should have proactively sought to meet BS capability through a diversified set of technology providers, ideally through a competitive process, thus lowering costs to its customers. Therefore, it is Tempus's position that not only was the purported event not unforeseen but nor were the costs beyond the reasonable control of NG. On the basis of this conclusion Ofgem should reject the application for an IAE.

Question 2: Assuming the event is an IAE, do you consider that any or all of the costs set out in NGET's notice were caused by the relevant IAE?

- **Are there any additional interactions between costs incurred that need to be taken into account**
- **Do you consider that NGET acted economically and efficiently in procuring Black Start in this event?**

As highlighted above, Tempus does not believe that the event in question is an IAE. However, were it to be considered one, Tempus would argue that the majority of the costs cannot be considered as part of the alleged IAE. This is because there was in fact additional interaction between the costs incurred that need to be taken into account (notably the fact that BS payments in this instance resemble payments for capacity), as well as the fact that NG did not act economically and efficiently in procuring BS capability. Tempus is also concerned that these costs will impact competition on the market, both in relation to the wholesale market and in relation to the Capacity Market.

It is unfortunate that Ofgem has decided to redact much of the information that would allow the public to scrutinise whether NG acted economically and efficiently in procuring BS capability, especially in relation to contract terms and bids from other parties. It is also unfortunate that NG has claimed that the assessment of the contracts should be made on their own merits and not in comparison with previous contracts. NG is therefore avoiding scrutiny from the public and market by not allowing the current terms to be seen nor accepting that previous contracts can be used as a benchmark for comparison.

²⁰ Black Start Alternative Approaches An NIA study for National Grid Electricity Transmission plc- DNV GL 2015; Black Start Alternative Approaches An NIA study for National Grid Electricity Transmission plc- Mott MacDonald 2015

Nevertheless it is Tempus's assertion that based on the fact that NG has known the changing market conditions for years and yet has not acted to diversify BS provider capability has placed itself in a position of extremely weak bargaining power where power stations can claim they will exit the market²¹ unless they receive a specified sum, which ends up being more of a capacity payment rather than a BS payment. In addition to that, the fact that these two contracts collectively amount to more than 500% of the original 2015-2017 budget²² (which was split over two years between around 18 providers- see footnote 13) and around 350% of the 2013-2015 budget²³ is a clear indication that the procurement of these contracts was not carried out in an efficient and economical manner.

To prove that NG did not act economically and efficiently in procuring BS in this event, Tempus has identified the alternative resources in both these locations (NW and NE England) that could have provided BS capability had NG proactively encouraged different technologies and had altered its arbitrary specifications (such as the 50MW threshold). It appears that in both the NW and NE there are three CCGTs of varying size that in aggregate could provide BS capability. Additionally, both the NW and NE of England are regions with many large industrial customers, many of which own and operate CHP units. Tempus, through the Association of Decentralised Energy's database has identified 19 industrial CHP units in the NW (combined capacity of 768 MWe) and 8 industrial CHP units in the NE (combined capacity of 754 MWe).

Tempus has spoken to CHP owners about the price they would have bid in had NG invited them and allowed them²⁴ to participate. These CHP owners have informed us that the price they would have bid at (even when aggregated with several providers to reach the minimum threshold) would have been much lower than the price NG paid SSE and Drax. We are aware that these companies are sending Ofgem their exact figures separately in a confidential annex. For CHPs, as the two reports NG commissioned state, they can be aggregated to provide the 50 MW needed. In addition, CHPs have the additional benefit of being within the same premise as a large volume of demand.

As you can see from Annex 1 a BS upgrade for a CCGT plant would cost around £6m. This upgrade would be amortised over a period of 10 years, meaning that the cost per annum to a CCGT would only be around £600,000. Based on these numbers it is very hard to see how the £113m figure can be justified.

NG may argue that the above stations are not capable of providing BS capability based on current specifications. However, as the expert reports they commissioned in 2015²⁵ and international examples suggest, both CCGTs and CHP can provide BS capability. What NG failed to do back in 2012 was to encourage other technologies, perhaps initially through trials, to engage in the BS process and establish the technical capabilities for doing so.

²¹ <https://www.theguardian.com/environment/2016/feb/04/sse-set-to-close-most-of-major-coal-power-plant>

²² The original budget as set out in the 2015-2017 scheme was £22m, which subsequently rose to £34 following a mid-period budget review request in December 2015

²³ The 2013-2015 budget was set at £42.5m

²⁴ Please see on page 7 on how a CHP provider was told not to bid by NG

²⁵ Black Start Alternative Approaches An NIA study for National Grid Electricity Transmission plc- DNV GL 2015; Black Start Alternative Approaches An NIA study for National Grid Electricity Transmission plc- Mott MacDonald 2015

In addition, NG also failed to be open and transparent about the financial size of the contracts on offer for BS capability as no doubt many providers that historically thought payments were too low to justify BS upgrades would have been enticed with higher payments. NG also did not carry out an open and transparent process for procuring BS capability which naturally resulted in a limited pool of providers. NG's own Procurement Guidelines provide that procurement must not be carried out in a "non-discriminatory manner". Tempus has obtained anecdotal evidence from a large generator who was discouraged from tendering by NG. It is most unfortunate that competition and transparency has not been a key principle in Balancing Services tenders. This would have resulted in a more competitive process that would have brought the overall cost down way below the £113m figure, thus saving customers millions of pounds.

Conclusion

It is the position of Tempus that the event submitted by NG does not constitute an IAE for the reasons articulated in the answer to the first question. Tempus would like to reiterate what Ofgem stated in response to NG's 2013 IAE application in relation to Transmission Losses, namely that "NGET identified a level of potential return within the overall scheme which was sufficient to accept this risk. Therefore, we do not consider that the scheme should be amended on an ex post, retrospective basis because an identified risk has materialised²⁶." However, even if we assume that there was an IAE, based on the interest from other able technologies, Tempus strongly believes that NG did not act economically and efficiently in procuring BS in this event. NG, despite the clear market signals and its own 2012 predictions, has not sought to diversify its BS portfolio (despite the existence of numerous alternative generating units in both the NW and NE) and thus placed itself in a heavily weakened bargaining position.

Tempus welcomes Ofgem's scrutiny of the above matters would be happy to discuss further. Please do not hesitate to contact me if we can be of any further assistance to you.

²⁶ National Grid Electricity Transmission's approach to determining and procuring an economic and efficient level of Black Start service provision on an ongoing basis