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Our Reference MR/Ofgem/40/11

Dear Hannah,

"Setting new revenue drivers, updating existing revenue drivers and adding new exit points to the Gas Transporter Licence" Ofgem Consultation Letter 22nd March 2011

Thank you for the opportunity to comment on your open letter concerning "setting new revenue drivers, updating existing revenue drivers and adding new exit points to the Gas Transporter Licence". It is expected that Notice under section 23 of the Gas Act 1986 will follow the consultation as necessary to make any changes to Special Condition C8E of the National Grid Gas plc ("National Grid") Gas Transporter Licence in respect of the National Transmission System (the "NTS licence"). This response is made on behalf of National Grid as NTS licensee.

The consultation considers three specific changes to the NTS Licence:

1. Revenue driver setting for Tonna (Baglan Bay) and Pembroke
2. Revision of revenue driver triggers at Marchwood and Pembroke (Phase1)
3. The addition of new exit points to the Licence

In regards to changes 2 and 3, National Grid agrees with Ofgem's preferred approach, that is;

- Option 2b,which is to revise the revenue driver project description in the Licence
    i. for Pembroke (Phase 1) to 103.2 GWh/day, and
    ii. for Marchwood to 39.84 GWh/day to reflect the amounts agreed in the respective ARCAs, and
- to add the five new exit points[1] to the Licence.

National Grid has concerns regarding Ofgem's preferred approach in regard to the first change; that of exit capacity revenue driver setting for Tonna (Baglan Bay) in relation to Abernedd Power Station and for Pembroke (Phase 2).
The key issue is the assumption to be made in regard to minimum supply flow at Milford Haven. The assumption made in this respect has a significant impact on the likely investments or suitable alternative commercial solutions arising from the analysis. National

[1] The new exit points would be Deborah Storage (Bacton), Tilbury Power Station, Willington Power Station and Saltfleetby Storage (Theddlethorpe)

Grid is concerned that the statistical analysis of Milford Haven flow levels, supporting Ofgem's preferred option, may not be appropriate. National Grid also notes the high level of uncertainty surrounding LNG cargoes and hence flow levels at Milford Haven.
National Grid is concerned that it should receive appropriate revenue driver income to fund economic and efficient investment (or suitable alternatives to) to meet its 1 in 20 Licence obligation and the Ofgem preferred approach may not be consistent with this requirement. National Grid's preferred approach is based on an assumption of a minimum Milford Haven flow of 166 GWh/day at high demand levels and this approach is consistent with previous exit revenue driver setting in the locality of Milford Haven.
Detailed answers in relation to the specific questions raised by Ofgem in its consultation letter are included in the attached addendum.

Please do not hesitate to contact Eddie Blackburn (eddie.j.blackburn@uk.ngrid.com) or me if you wish to further discuss any aspect of this response.

Yours sincerely,

Mark Ripley
Regulatory Frameworks Manager

Q1 Do you agree with our provisionally preferred approach to assume flows of 300GWh/day at Milford haven for the modelling to identify the reinforcement work needed to accommodate the incremental flows, ie Option 1d?

National Grid does not agree with Ofgem's preferred approach to assume flows of 300GWh/day at Milford Haven for the modelling to identify reinforcement works needed to accommodate the incremental flows. The reasons for this view are detailed below:

1. National Grid does not agree with Ofgem's confidence that *'flows of 383 GWh/day or above would be likely on 95 percent of such high demand days'*. National Grid has stated that there have been insufficient days to support this assumption.

A reference is made to 'forecast minimum deliverability of 313 GWh/day flows at Milford Haven in 2013/14' included in the National Grid Financial Business Plan Questionnaire (FBPQ)[2] submitted to Ofgem as part of the TPCR4 roll-over. The data that National Grid provided was constructed to provide a base view of the peak flow level (i.e. the maximum flow level that might be experienced) and a forecast range for that peak flow, where minimum reflects the lowest peak flow, and maximum reflects the highest peak flow. The data provided in the FBPQ reflected a range of potential peak flows rather than a view of what the minimum flow might be.

The reported Milford Haven minimum peak flow is subjective and was calculated based on limited operational experience to date. In reality, actual minimum Milford Haven flows could be appreciably lower. Whilst Milford Haven flows have been very noticeable over the past twelve months there are numerous reasons that could result in reduced flows of LNG through the terminal:

- LNG supply problems to the terminal
    - Production loss / outages / maintenance
    - Shipping problems
- LNG cargoes may be delivered to alternative markets as LNG destined for the UK is in most instances not contractually dedicated to just the UK market, for example:
    - Far East markets with very high import dependency may contract for additional LNG, as occurred a few years ago in Japan
    - Growth of gas consumption (imports) in China and India
    - US switch to LNG imports through higher gas prices compared with the UK market.
- LNG regasification plant problems through:
    - Power failure
    - Gas quality

[2] Regulatory reporting table 5.11

2. Statistical analysis

National Grid has the following comments to make regarding the statistical analysis conducted by Ofgem:

- National Grid does not believe that it is correct to simply scale up all the flow data by 950/750 to attempt to take into account the impact of the Force Majeure and perform modelling on this basis.
- Whilst it may be appropriate to make some adjustment when flows have been above a figure of say 650 GWh/d to allow for the potential impact of the constrained capacity level having an impact on flow levels, it is not appropriate to do so for lower flow levels as the Force Majeure capacity restriction would not have had an impact at these lower flow levels. National Grid believes that the analysis on capacity utilisation is, therefore, not appropriate.

In addition, and perhaps more importantly, the analysis that Ofgem has presented is based on an assumption that the data is normally distributed in order to derive the relevant confidence intervals. Analysis of the individual period data shows that this assumption is not valid. If the whole period (winter 2009/10, summer 2010 and winter 2010/11) is considered in full, rather than just the summer, the data more closely resembles a normal distribution with a mean of 388.35 GWh/day and a standard deviation of 123.70 GWh/day).

Given that we are only concerned with flows below a critical level, National Grid believes that a more appropriate statistical test to analyse the data, using the approach outlined in Ofgem's consultation document, is a one sided test, rather than a two tailed test. Applying this test to the above distribution would mean that 5% of the time expected flows would be less than 185 GWh/day; (i.e. mean - 1.645 * standard deviation ~ 388.35 - 1.645 * 123.7 = 185). Using the same analysis technique, the probability of flows less than the 300 GWh/day flow level, underpinning Ofgem's preferred option, would be 24%.

It might be inferred, if the system were planned on the 5% level, that on high demand days the system would be expected to fail to meet demand requirements 5% of the time. This equates to a 5% risk of failure in any given year but this equates to a probability in excess of 5%[3] of more than one failure over a 20 year period. This is not necessarily consistent with the 1 in 20 Licence obligation[4] which states that *"the pipe-line system to which this licence relates (taking account of such operational measures as are available to the licensee including, in particular, the making available of stored gas) meets the peak aggregate daily demand, … is likely to be exceeded (whether on one or more days) only in 1 year out of 20 years".*
For these reasons, National Grid considers that Option 1a is more appropriate than Option 1d.

Q2. Are there any other factors we should consider?

National Grid has carried out the revenue driver analysis, in regard to Tonna (Baglan Bay) and Pembroke, in a manner entirely consistent with the derivation of other revenue drivers under the TPCR4 incentive scheme. National Grid believes that if deviation from this

[3] The probability of more than one failure in a 20 year period is 26.42% if the probability of failure in a year is 5%. A 5% probability of more than one failure in a 20 year period equates to a probability of failure in any year of 1.81%.

[4] "Standard Special Condition A9. Pipe-Line System Security Standards".

methodology is accepted, namely in terms of supply assumptions, then all aspects of the revenue driver calculation process should be considered for review, including unit costs.
National Grid believes that Ofgem's preferred Option 1d would pose a risk to National Grid in meeting its 1 in 20 Licence obligations. The allowance under Option 1d in effect covers off the risk only above 300GWh/day. National Grid believes that it would be insufficiently funded for any risk below this expected flow level and since its own analysis is that flows above 166GWh/day are subject to significant uncertainty then additional costs would potentially be incurred in putting alternatives measures (e.g. a commercial solution) in place to cover flows between 166GWh/day and 300GWh/day. This should be factored into any decision regarding the appropriate revenue driver.

Q3. Do you agree with our provisionally preferred approach to revise the project descriptions in the licence to reflect the amounts signed in the ARCA, ie Option 2b?
National Grid agrees with Ofgem's provisionally preferred approach to replace the project description values in the Licence with the amounts of capacity agreed in the ARCAs for Marchwood and Pembroke (Phase1) i.e. Option 2b. There is a mismatch in the amounts of capacity committed to through the ARCA process and the trigger for the Licence revenue allowances. The proposed Licence change is necessary to avoid any ambiguity in the revenue allowance that National Grid receives in respect of these particular projects. The investment options identified in respect of these projects at TPCR4 are still relevant. There will be no change in the SO allowed revenues for these projects and so there will be no impact on SO commodity charges from Option 2b.

Q4. Are there any other factors we should consider?
National Grid believes this to be a straightforward Licence amendment to avoid ambiguity and does not think there are any other factors to consider.

Q5. Do you agree with our provisionally preferred approach to add the five new exit points to the Licence?
National Grid agrees with Ofgem's preferred approach to include the suggested exit points to the Licence. This would allow a shipper to provide a signal for incremental exit capacity at a new exit point where no revenue driver is required or alternatively would enable users to request exit capacity via shorter term mechanisms. National Grid notes that where National Grid identifies that investment will be required at any of these exit points, a revenue driver would be required prior to long term NTS Exit Capacity being allocated. National Grid anticipates that a consultation on any revenue drivers, identified as being necessary, would follow in due course, followed by the consequential section 23 notice.