



Forecasted Contracted Capacity (FCC) Methodology Summary Report

01 April 2021

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1 Executive Summary

This document is being issued by National Grid Gas plc (“National Grid”) in its role as holder of the Gas Transporter Licence (the “Licence”) in respect of the National Transmission System (NTS).

This summary report follows the consultation document, which was produced on the 19 March 2021, and ran from the 19 March 2021 to the 30 March 2021 and sets out the Forecasted Contracted Capacity (FCC) Methodology which will be used to calculate the FCC in any future charge setting publications.

This summary report for the consultation on the FCC Methodology contains:

- Governance Procedures
- Background/Proposal
- Consultation Questions
- Responses to the Consultation Questions

2 Governance process for the FCC Methodology

The FCC Methodology has been reviewed with industry at weekly Sub Workgroups since the 28 January 2021 until 18 March 2021.

The consultation on the proposed changes to the FCC Methodology was produced on 19 March 2021, and was consulted on until 30 March 2021, and this summary report gives the details of the responses to the consultation.

The final FCC Methodology to be published not less than 40 Business Days before the Transmission Services Entry and Exit Capacity Reserve Prices are required to be published before the Annual Yearly Auction in July for the following Gas Year, as per UNC TPD Section Y 2.5.2.

Timeline of events:

Governance Process for Final FCC	When	Completed?
Issue FCC Methodology for Consultation	19 March 2021	Yes
Closing date for FCC Methodology Consultation responses	30 March 2021	Yes
Aim to publish a report on the responses plus issue the FCC Methodology	01 April 2021	Yes
Appeal Window as per UNC TPD Section Y 2.5.2	By 04 May 2021	No
Latest publication of Reserve Prices based on the approved FCC Methodology	By 06 June 2021	No

3 Background/Proposal

The proposal has been developed based on the discussion with industry parties and using the data which is available currently.

The proposal was consulted on with the industry from the 19 March 2021 to the 30 March 2021.

The FCC Methodology proposal is called Forecasted Contracted Capacity (FCC) Methodology v2 at: <https://www.nationalgrid.com/uk/gas-transmission/charging/gas-charging-discussion-gcd-papers> under the 2021 Forecasted Contracted Capacity (FCC) Methodology Consultation header or [Forecasted Contracted Capacity \(FCC\) Methodology v2.0](#)

An invitation to participate in the FCC Methodology Consultation was sent via the Joint Office on the 19 March 2021.

The output from the FCC Methodology consultation can be seen within this FCC Methodology Summary Report.

4 Summary of Responses

National Grid received 8 responses to the Forecasted Contracted Capacity (FCC) Methodology Consultation Document dated 19 March 2021, of which 0 were confidential.

Non-Confidential responses were received from the 8 respondents listed below (in alphabetical order):

- BBL Company V.O.F. (BBLC)
- Cadent Gas Limited
- EDF Energy
- ESB Generation and Trading (ESB GT)
- Gazprom Marketing & Trading
- RWE on behalf of RWE Supply and Trading GmbH, RWE Generation plc and RWE Renewables GmbH (RWE).
- South Hook Gas
- Storengy

The Non-Confidential responses can be found on the National Grid Website at <https://www.nationalgrid.com/uk/gas-transmission/charging/gas-charging-discussion-gcd-papers> under the 2021 Forecasted Contracted Capacity (FCC) Methodology Consultation header.

Key Themes:

There are a number of key themes brought out in the consultation responses we received.

The key themes, in no particular order, are as follows:

- Generally, the use of the historical flows as a basis for the FCC Methodology is an improvement on existing FCC Methodology which is in place currently.
- Support for the use of the key principles within the calculation of the FCC Methodology.
- Appreciation of the engagement process and transparency that has been followed for this review of the FCC methodology and to continue with the same engagement process with the same levels of transparency would be welcomed in other FCC Methodology reviews.
- Ensure monitoring of capacity bookings, flows and other elements to provide reporting and transparency on performance and ensure continual improvements can be accommodated into subsequent FCC Methodology updates

5 Response Quotes and NG NTS Comments

Below are the detailed responses that were received (in alphabetical order) and if required a response from NG NTS:

Question 1: Do you support the use of the principles within the FCC Methodology?		
Party	Response Quote	NG NTS Response
BBLC	<p>BBLC understands and supports the need to revise the current FCC Methodology prior to using it as part of Postage Stamp tariff setting process for the 2021/2022 gas Year. BBLC hopes that by modifying the Methodology National Grid will avoid the need to introduce significant Revenue Recovery Charges again in the midst of a Gas Year.</p> <p>BBLC also understands that the current Methodology was developed prior to the introduction of the new Postage Stamp tariff regime and, from the data and analysis provided, National Grid has demonstrated that the current methodology is flawed and has resulted in an over-forecast of the amount of both and Entry and Exit Capacity that would be contracted under the revised tariff regime for the Gas Year 2020/2021. BBLC therefore agrees that changes to the Methodology are needed.</p> <p>BBLC notes the 'principles' referred to in the question and recognises that they have been developed at pace with input from industry stakeholders. However, many of these 'principles' are reliant on the availability and accuracy of the data that sits behind them and, given the limited data available to National Grid on the behavioural impacts of the new tariff regime, BBLC considers that it is too soon to determine whether application of these "principles" will lead to improvement in the accuracy of the output of the FCC Methodology.</p>	<p>The use of an updated FCC should help reduce the need for potential Revenue Recovery Charges (RRCs) but may not eliminate them.</p> <p>The updated FCC Methodology, when applied, should produce a more accurate position for capacity bookings compared to the current regime.</p> <p>As more data under the new regime is available this will improve our ability to apply the learning from the behaviours and capacity booking requirements.</p>
Cadent Gas Limited	<p>Yes, we are in agreement with the principles employed within, and are supportive of the approach and governance used to update the FCC. The use of weekly Workshops was very helpful in understanding the various elements that make up the FCC and provided sufficient time for points to be raised and suggestions to be tested.</p> <p>Also, by allowing for the addition of monthly data as it comes to light, the methodology</p>	N/A

	can be compared and tested against the previous version. Initial indications suggest that if applied, this FCC Methodology should result in an aggregate capacity value that more closely aligns to the capacity bookings to be made for Gas Year 2021/22.	
EDF Energy	We broadly agree with the principles being used in the new proposed methodology based on the information received in this short consultation. Using a combination of 5 year historical average flows that are then normalised each quarter using FES demand scenarios and then further adjusted each month using a capacity utilisation factor is a more sophisticated way of estimating how much capacity might be bought and thus the level of Revenue Recovery. This should lead to better cost targeting, less under-recovery and less cross-subsidy between different NTS users.	N/A
EDF Energy	We feel however there could be more transparency on how NTS charges will pan out using this new methodology given no example prices were produced in the models NGG issued. For example, on the Exit side we recognise this new methodology leads to FCC being 18% lower on average but it is not clear whether this translates into new prices going up by 18%? We understand that this was intentional as the review was about the methodology not outturn prices but a) Postage Stamp is in place so there would be little competitive advantage or disadvantage amongst different NTS Users having estimations at this stage, b) stating how low the FCC would be would help Shippers prepare ahead in being able to estimate the outturn prices themselves (all things being equal such as Allowed Revenue) and c) would avoid Shippers making mistakes trying to calculate prices themselves.	<p>The focus of the workshops was on the FCC Methodology development and not on the price derivation to ensure the proof of concept could be kept to the FCC values themselves and a methodology to derive them. With the methodology we can now progress to the next stage of the charge setting process and use the workshops to share the steps towards setting prices.</p> <p>The application of this FCC Methodology will be discussed in the Sub Workgroups and NTS Charging Methodology Forum (NTSCMF) in the period up to finalising the FCC for the purposes of setting the Entry and Exit Transmission Services Capacity Reserve Prices.</p>
ESB GT	<p>Within the Methodology document, the Principles are:</p> <ul style="list-style-type: none"> • The methodology will facilitate creation of an annual value for FCC for all Entry and Exit Points as an input to the Postage Stamp (PS) model • The FCC is an integral input to the PS 	N/A

	<p>model</p> <ul style="list-style-type: none"> The methodology statement contains the steps used to calculate the FCC <p>ESB GT supports the use of a clear and transparent methodology for calculation of the annual FCC.</p>	
ESB GT	<p>Within the consultation document, the principles outlined are the core elements of the calculation method proposed. These are:</p> <ul style="list-style-type: none"> Use of historical flow data, normalised to reflect FES forecasts for the year Y Use of capacity utilisation factors appropriate to the regime Taking inputs into account rather than taking a straight maximum Monthly granularity for Entry points, reflecting usage of existing contracts Requirement for transparency on use of exceptions to the methodology in order to derive FCC values at specific points <p>ESB GT also supports these key principles.</p>	N/A
ESB GT	<p>Exceptions</p> <p>We note that on the use of exceptions, the Methodology document states at paragraph 22:</p> <p>“Where an approach other than that given in Chapter 3 is used, National Grid will outline along with publication of charges where this has been carried out.”</p> <p>ESB GT would prefer the transparency on exceptions to include information provision to the NTSCMF by NGG ahead of publication, while the FCC is at an early calculation stage. This should include the intention to utilise an exception, the grounds for its use and the proposed exceptional calculation method. This would allow NGG to increase transparency, to test its proposals with market participants and to gain useful insight. The FCC methodology review process in recent weeks has demonstrated the value of inputs from interested parties outside NGG, and also of taking a collaborative approach to arrive at an outcome that has a greater degree of shared ownership. ESB GT believes the FCC method and outcomes, and therefore the quality of charging outputs, will benefit</p>	<p>Updated the wording in the FCC Methodology to state:</p> <p>Where an approach other than that given in Chapter 3 is used, National Grid will outline along with publication of charges where and how this has been carried out</p>

	<p>from a continuation of this approach. If exceptions are to be published only with the charges, we request the insertion of “how” in addition to “where” into paragraph 22 for increased transparency.</p>	
ESB GT	<p>Governance We also note on governance (Chapter 2), there are discrepancies between the consultation document and draft methodology proposal. The consultation suggests that review is open to NTSCMF participants to raise grounds, while the methodology states that review is at NGG’s discretion alone, followed by stakeholder consultation: “The FCC will be discussed at NTSMCF [sic] on an ongoing basis and if the [sic] anyone feels a review of the FCC Methodology could be required before the production of the next Gas Years Transmission Services Reserve Prices, this can be reviewed.” (Consultation document, p. 10) “9. Where National Grid believes it necessary to review or update the FCC Methodology, it will consult with Stakeholders. Following the consultation, if the FCC Methodology is revised, National Grid will notify industry of any revisions as part of the publication of charges. Any such consultation would be concluded in advance of setting the tariffs for the forthcoming Gas Year.” (Methodology, p. 7)</p>	<p>Within NTSCMF there is the opportunity to request a review of the FCC Methodology and we would encourage any Parties which feel it needs a review at any time to raise it here with the reasons why the review needs to take place.</p> <p>Within the FCC Methodology the governance is that National Grid NTS can update the FCC methodology as per UNC TPD Section Y 2.5.2, this does not stop anyone suggesting that a review is necessary and requesting that National Grid undertake that review.</p>
ESB GT	<p>The consultation also states that NGG will monitor the FCC against actual flow and capacity data.</p>	<p>The monitoring will be presented through the NTSCMF.</p>
ESB GT	<p>ESB GT believes the methodology statement should be clear on continued monitoring and that stakeholder inputs will be considered in contribution to NGG’s decision to review, as well as to the consultation, if stakeholders are not explicitly able to request review. This could be addressed in paragraph 9 of the methodology statement. We appreciate similar points were raised previously during UNC0621 and UNC0678 workgroups. The events of recent months show the benefits of transparent monitoring and stakeholder discussion in making improvements to the FCC, and formalising their inclusion will be</p>	<p>Within NTSCMF there is the opportunity to request a review of the FCC Methodology and we would encourage any Parties which feel it needs a review at any time to raise it at NTSCMF with the reasons why the review needs to take place.</p>

	helpful.	
Gazprom Marketing & Trading	We support the improvements that have been made to the principles in comparison to the status quo, however we think that these could be enhanced further by incorporating more market demand signals (ie the NBP forward curve) at the time of setting the FCC. We understand that historical data is critical component to any forecasting methodology but feel that for the purposes of forecasting the FCC market price data can provide crucial information on the latest demand projections.	Updated the next steps section of this doc to capture this example that could be something to consider in the future
RWE	We agree with the principle that where historic data is used, a larger historical dataset, with normalisation and removal of outliers, is likely to result in a more accurate forecast.	N/A
RWE	<p>However, we believe the accuracy of the methodology might be improved with more analysis and insight into the Capacity Utilisation Factors (CUFs) in order to make more appropriate adjustments. An understanding of the reasons for variability in the CUFs, rather than an attempt simply to derive a forecast that appears relatively sensible, would give much more confidence in the FCC.</p> <p>We recognise that there is limited actual historic data under the new “postage stamp” regime. However, the utilisation factors derived from data collected over the last few months will have a substantial impact on the FCC. We would have liked to have seen some analysis to identify drivers that influence the CUFs for each entry and exit point type, and an attempt to show how and why booking behaviour has changed under the new regime and from month to month. This would have helped to provide insight as to whether the CUFs over this gas charging year to date are likely to be reflective or not of future bookings and if any further adjustments to the CUF might be appropriate.</p>	As mentioned in the Sub Workgroups and the FCC Methodology consultation document until there is a full Gas Years would of data, the predication on the utilisation of capacity is worked out based on the capacity data available at the time of producing the FCC. National Grid appreciate this could have an impact on the FCC but there is no Summer data available under the current regime to input into this calculation.
RWE	For each entry and exit point, where there has been very low levels of flow during this gas charging year, but a much higher flow is forecast for next year, we agree it is not appropriate to use the CUFs from this charging year. However, overwriting the CUF	Within the Sub Workgroups which have taken place over the last few months, we have showed what the values would have been without the 2x utilisation factor correction and

	<p>with the industry average for all sites where the values are 2x or greater appears to be a very arbitrary correction. It may be appropriate to counter each correction by making an adjustment to increase all of the other CUFs of the same entry or exit point type, to reflect the fact that there will almost certainly be some entry or exit points with capacity bookings but very low flows. We would like to see an illustration or correction in the methodology to show that the overall industry average is not impacted by these adjustments.</p>	<p>it showed that the aggregate values were aligned to the values in 2020/21 which agreed by the industry that these were too high and did not reflect the actual usage on the system and would have resulted in an FCC higher than that used in GY2020/21 which would be undesirable and not likely representative.</p> <p>Over the course of the Sub Workgroups any illustrations which will help with the impact of the changes can be assessed and presented to the Sub Workgroups.</p>
South Hook Gas	<p>SHG is supportive of the use of these principles for the revisions made to the methodology for Entry Points. SHG has no comment on the revisions made to the Exit methodology.</p>	N/A
Storengy	<p>Storengy supports use of historic flows and capacity utilisation as the main inputs to the FCC calculations, and the change to forecasting by month to provide greater granularity and better reflect the seasonal nature of flows (and capacity bookings) at different NTS points.</p> <p>In calculating historic flows we believe that an average of historic bookings should provide a good estimation of future flows for most NTS points, and so welcome the approach to using a five year average. However, we feel that the period over which the average is taken and the number of years that flows are averaged over should be reviewed on a regular basis, as further data is gathered on the change in flows and booking behaviours under the charging regime. We would also encourage further flexibility in this approach based on flow trends from year to year and known expected changes to flows, such as the development of our site at Stublach where site development was completed a year ago, and so flows are currently expected to be far higher than those in previous years when site gas storage capacity was far lower. Although we agree that some normalisation of flows may be required in the FCC</p>	<p>Within the next block of Sub Workgroups there will be some work done on the sensitivities of the FCC data and what the impact would be.</p> <p>In terms of accommodating specific points, the greater data set we will gain across the summer to provide a years' worth of data to assess under the new regime and this includes across the NTS points and by category (Storage, Power Station, etc).</p> <p>For any inputs National Grid can be contacted at any point to share views on any thinking in addition to development workshops or NTSCMF.</p> <p>There will be further iterations over time. When considering the post-alised regime, ultimately the aggregate FCC sets the prices. Any degree of site-specific assessment should</p>

	<p>calculations, and that normalisation to the Future Energy Scenarios (FES) may provide a suitable initial approach, again we would welcome regular review of this approach to ensure that it provides reliable estimates of future flows.</p> <p>In future reviews of the FCC we would encourage National Grid to carry out sensitivity analysis of the key principles at varying NTS points to better understand the impacts of slight fluctuations in the factors on the final calculations, and help in formulating FCCs for future years.</p>	<p>always be balanced against the potential FCC impact it could have.</p> <p>When these discussions take place if there are other sensitivities that would be helpful then we welcome stakeholders raising them to enable their consideration.</p>
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Question 2: Do you agree that this FCC Methodology is an improvement on existing FCC Methodology which is in place currently?

Party	Response Quote	NG NTS Response
BBLC	<p>As described above, BBLC consider that it is not possible at this time to judge whether the proposed revised Methodology is an improvement over the current Methodology. Nevertheless, BBLC does recognise the need for change and supports National Grid's efforts to this effect.</p>	N/A
Cadent Gas Limited	<p>Yes, we agree that the proposed FCC Methodology is an improvement on the existing version.</p> <p>The introduction of the Exit Capacity Planning Guidance (ECPG) document under RII02, which forms part of new License condition A57: Exit Capacity Planning, will see Gas Distribution Networks (GDN) more closely align their capacity bookings to the Peak 1-in-20 Demand Forecast. It follows therefore, that the use of the 1-in-20 forecast within the FCC should result in a more accurate aggregate capacity value.</p>	N/A
EDF Energy	<p>Based on the limited data we have had to work with in the 5 months since the beginning of Oct.2020 and supporting this new FCC methodology being proposed we broadly agree it represents a better, more accurate reflection of the actual capacity bookings/ revenue collection that might take place and should correct the large level of under-recovery currently being experienced.</p> <p>We understand this is an iterative process and NGG is working with the actual data they have received and there are still the summer</p>	<p>The application of this FCC Methodology will be discussed in the Sub Workgroups and NTSCMF in the period up to finalising the FCC for the purposes of setting the Entry and Exit Transmission Services Capacity Reserve Prices.</p>

	<p>months to go in order to understand how the FCC denominator might reflect actual bookings. However these proposals seem an improvement and we look forward to further analysis from NGG to present any further analysis and learnings as they become available. In the meantime it would be helpful to have an estimation of the new NTS Entry and Exit charges this methodology might produce as soon as possible, possibly at the April or May NTSCMF meetings at the latest.</p>	
ESB GT	<p>ESB GT believes that the revised FCC methodology is an improvement on the current methodology. We agree that it should result in an aggregate capacity value closer to actual capacity bookings. This is due to aiming to take closer consideration of different sectors and Shipper actions, and aligning to behaviours observed thus far under the Oct 2020 charging regime.</p>	N/A
ESB GT	<p>In terms of the detail of the changes, we suggest that the methodology statement could be further improved by inclusion of:</p> <ul style="list-style-type: none"> • A definition of the sectors which are referenced for averaging at 18 (c) ii for Entry and footnote 12 for Exit: this clarifies the method application. • A definition of normalisation or improved description of this element's derivation and purpose, potentially as a footnote: normalisation can be used in many ways to adjust figures, therefore as a methodology statement it will be helpful to define the intention and method for adjustment in this case. • Consistent use of "historical" as opposed to "historic": usually a point of pedantry, but in this it is case material as historic signifies exceptional or momentous data (e.g. historic peak demand), whereas the methodology is seeking to use all data from the past (e.g. historical flows). 	<p>For Entry and Exit have added in the examples of what a Sector is within a footnote.</p> <p>Added in a footnote on Normalisation Value which states: Normalisation value is the relationship between actual historical flow and forecast demand.</p> <p>Amended historic to historical where needed throughout the document.</p>
Gazprom Marketing & Trading	<p>We recognise that the revised methodology is an improvement on the current FCC methodology, that said we believe there's room for further development as highlighted</p>	N/A

	in our response above.	
RWE	We agree that this FCC Methodology is an improvement on existing FCC Methodology which is in place currently, due to the fact that it takes more historic flow data into account, and derives CUFs from the latest charging regime.	N/A
South Hook Gas	<p>SHG agrees that this revised FCC Methodology is an improvement on the existing FCC Methodology (in respect of Entry Points) for the reasons set out below.</p> <p>Notably, the normalisation of the historical flows to the forecast demand for the applicable Gas Year is likely to have a significant impact on improving the FCC. National Grid have been using FES demand data to forecast flows and calculate commodity charges prior to the implementation of UNC 0678A. Using the FES demand data to normalise historic flows is likely to result in more accurate FCC figures that better represent how Entry Capacity is going to be booked for the applicable gas year, given capacity bookings are now expected to be closer to a user's respective flows. The addition of a utilisation factor and Entry data being reviewed at a monthly granularity will further improve the accuracy of the FCC methodology.</p>	N/A
Storengy	Yes, Storengy welcomes the proposed changes in methodology. As expected, under the new charging regime capacity bookings have become much more closely aligned to flows, as network users look to rationalise their bookings to minimise capacity costs, and therefore minimise capacity over-booking. We expect this trend to continue as businesses continue to develop more efficient booking practices, and try to minimise excess capacity costs.	N/A

Other Comments Made in the FCC Methodology Consultation:

Party	Response Quote	NG NTS Response
Cadent Gas Limited	We appreciate the engagement to date, and hope that our feedback adds value to future discussions on this matter.	National Grid has welcomed all participation and contributions from those able to do so. This has helped shape this step change in the FCC methodology and we will continue to seek

		inputs and maintain transparency on further development and take learning from this activity in updating the FCC Methodology.
RWE	RWE supports the use of the updated methodology for next Gas Year since the existing approach would be expected to result in a highly inaccurate forecast given that it uses unadjusted capacity booking levels from the previous charging regime. However, we would have liked to have seen some more indepth analysis into the capacity utilisation to develop a more informed methodology with more appropriate adjustments.	As mentioned in the Sub Workgroups and the FCC Methodology consultation document until there is a full Gas Years would of data, the predication on the utilisation of capacity is worked out based on the capacity data available at the time of producing the FCC. National Grid appreciate this could have an impact on the FCC but there is no Summer data available under the current regime to input into this calculation.
South Hook Gas	SHG appreciates the engagement process and transparency that has been followed for this review of the FCC methodology. Given further reviews will be necessary as more data becomes available and the GB charging regime develops, the same engagement process with the same levels of transparency would be welcomed.	National Grid has welcomed all participation and contributions from those able to do so. This has helped shape this step change in the FCC methodology and we will continue to seek inputs and maintain transparency on further development and take learning from this activity in updating the FCC Methodology.

6 Next Steps

The Sub Workgroups that we have used to support the development of the FCC Methodology will continue, the application of this FCC Methodology will be discussed in the period up to finalising the FCC for the purposes of setting the Entry and Exit Transmission Services Capacity Reserve Prices.

Within the Sub Workgroups and consultation responses there were some discussion areas which related to the FCC Methodology which will be monitored over the current and future Gas Years and discussed within NTSCMF when applicable:

- Utilisation – currently only have Winter capacity booking data under the current Charging Regime which was implemented by MOD0678A¹ on 01 October 2020, this means at the moment will need to estimate Summer months. When have a full Gas Years would of data this could influence the utilisation for different months of the year but until have this data the predication on the utilisation of capacity is worked out based on the capacity data available at the time of producing the FCC.
- National Grid will continue to monitor the FCC as set via the FCC Methodology against the flow and actual capacity booking data which is seen in the applicable Gas Year.
- The FCC will be discussed at NTSCMF on an ongoing basis and if the anyone feels a review of the FCC Methodology could be required before the production of the next Gas Years Transmission Services Reserve Prices, this can be reviewed.
- Gas Distribution Network (GDN) values are currently 1 in 20 Peak, when the new Exit Capacity Planning Guidance (ECPG) is embedded this will be assessed to see whether this could be used as an input into the FCC in future Gas Years.
- Any other elements that could be considered as inputs into the FCC Methodology in future iterations of the FCC Methodology review, for example market demand signals.

¹ <https://www.gasgovernance.co.uk/0678>