













UNC Final Modification Report		At what stage is this document in the process?
<h1>UNC 0667:</h1> <h2>Inclusion and Amendment of Entry Incremental Capacity Release NPV test in UNC</h2>		<div>01 Modification</div> <div>02 Workgroup Report</div> <div>03 Draft Modification Report</div> <div>04 Final Modification Report</div>
<p>Purpose of Modification: This Modification seeks to insert the Net Present Value test required for Non-IP Entry Incremental Capacity Release into UNC and amend the mechanics of the test to ensure that it works effectively with the current GB system.</p>		
	Panel consideration is due on 20 June 2019.	
	High Impact: Shippers	
	Medium Impact: National Grid NTS	
	Low Impact: None	

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Timetable		
Modification timetable:		
Initial Consideration by Workgroup	4 October 2018	
Workgroup Report presented to Panel	18 April 2019	
Draft Modification Report issue for consultation	18 April 2019	
Consultation close-out for representations	21 May 2019	
Final Modification Report available for Panel	24 May 2019	
Modification Panel decision	20 June 2019	
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1 Summary

What

An issue has been discovered by the Proposer with the Incremental Capacity Release NPV test that impacts any potential PARCA applicant's ability to pass the NPV test, and subsequently reserve or allocate incremental capacity.

For Incremental Capacity to be reserved and allocated as part of the Planning and Advanced Reservation of Capacity Agreement (PARCA) process, a series of net present value (NPV) tests are required to be passed (one at the end of PARCA Phase 1 using indicative prices and an additional test at the end of PARCA Phase 2 using updated prices). The intention of the NPV test is to ensure user commitment and to provide sufficient assurances that the costs of any incremental investment associated with PARCA Works are recovered. The PARCA applicant is deemed to have passed the NPV test if the test signals 50% of the Estimated Project Value.

South Hook Gas Company Ltd. ("South Hook Gas") is the applicant under an existing PARCA Phase 1 process in respect of incremental entry capacity at the Milford Haven Aggregated System Entry Point (ASEP) as an integral part of an upstream project investment. South Hook Gas understands that this PARCA application is the first to be processed in respect of incremental NTS entry capacity.

The methodology for the NPV test is currently defined in the Entry Capacity Release Methodology (ECRM) Statement rather than the UNC. South Hook Gas believes the current NPV methodology is unclear and unfit for purpose in the context of a PARCA application in respect of incremental entry capacity.

Therefore, this Modification Proposal seeks firstly to insert the NPV test into the UNC and secondly to make the changes set out in this proposed Modification to the mechanics of the test to resolve significant structural issues that could currently be reducing the number of PARCA entry capacity applications and therefore disincentivising future investment in natural gas supply projects.

Why

There is a lack of clarity over the extent of the signalling obligation under the NPV test, which creates uncertainties as to the required threshold for compliance. As noted above, this is in part attributable to the potential move from a fixed to a floating price regime and a change to the charging methodology. The prescribed process for the NPV test appears to require the PARCA applicant to signal excessive amounts of unsold capacity (as well as incremental capacity) at the relevant Entry Point, due to the unconstrained nature of the network and the resultant general reliance on short term capacity products. The required compliance threshold is so onerous that maintenance of the present approach may have the unintended consequences referenced above in respect of PARCA applications and project investment. By way of example, South Hook Gas would not be able to pass the PARCA Phase 1 NPV test without signalling incremental capacity, and any required unsold capacity, at the Milford Haven ASEP for 20 quarters. South Hook Gas believes the NPV test threshold in its current form is disproportionate to the commitment required for the PARCA Works (and therefore does not achieve the intended objectives of the test), excessively onerous and could be a disincentive for investment in GB.

The South Hook Gas PARCA application was submitted on 24 April 2018 and the Phase 1 PARCA Works are forecast to complete in October 2018. Therefore, a timely solution is required for the identified

issues, while allowing appropriate space for discussion and consultation in order to provide the certainty needed for long term investment.

If the approach currently prescribed is adopted in this case, with South Hook Gas acquiring all unsold and incremental capacity over the required period, there will be a number of consequences, for which there does not seem to be any economic or technical justification, including:

1. South Hook Gas having to signal more capacity that it can physically use (including once the incremental capacity is delivered by NGG);
2. South Hook Gas signalling capacity that would lead to revenues to NGG well in excess of the Estimated Project Value;
3. Dragon LNG not being able to purchase long term capacity in those quarters (only the 95GWh/day that is withheld for short term could be available) once capacity is allocated; and
4. A commitment to higher revenues than necessary being made because of changes to both Estimated Project Value and prices immediately prior to the second NPV test, if there is a restriction on changing the incremental capacity profile.

The current ECRM methodology is not clear on whether there is an opportunity to reprofile the incremental capacity ahead of the second NPV test (end of PARCA phase 2). Furthermore if the applicant is deemed to have failed the second NPV test (i.e. by signalling less than 50% of Estimated Project Value) then NGG can terminate the PARCA application, resulting in the PARCA termination fee having to be paid by the applicant and/or potential disruption and delay in the context of a larger project.

As noted above, this Modification Proposal seeks to insert the NPV test into the UNC. The NPV test is currently defined in the ECRM Statement, which is not subject to the UNC code governance process. Therefore, if the NPV test is not inserted into the UNC, then it cannot be modified without a full review of the methodology statements. The UNC would be the more appropriate location for the NPV test to allow for a clear statement of the NPV test as amended and the provision of a more efficient review and refinement process to address both the issues noted above and future required changes, ensuring the test remains fit for purpose.

One key objective of the PARCA framework is to provide certainty for investment by allowing both the PARCA applicant and NGG to progress their projects in parallel. However, allowing the estimated project cost (currently Estimated Project Value from the LRMC methodology) to change unpredictably between the two NPV tests could undermine this objective by significantly changing the revenue required from the applicant.

How

This Modification Proposal 0667 seeks to insert the NPV test into the UNC TPD, Section B to allow it to be modified via the UNC governance process, and subsequently change the mechanics to allow for:

- An “Incremental Capacity Premium” to be applied should the estimated reference price not generate sufficient revenues for a positive NPV test outcome. This concept is based on the IP Mandatory Minimum Premium that is part of the Incremental Capacity Release at Interconnection Points within UNC, European Interconnection Document, Section E. The Incremental Capacity Premium is an additional quantity that is added to the applicable payable price, calculated to be the minimum value required to allow the NPV test to be passed in the case where the allocation of all offered incremental

capacity at the estimated reference price would not generate sufficient revenues for a positive NPV test outcome.

- For example, if capacity totalling £50m on a NPV basis is required to be signalled but only £30m of Incremental Capacity sales are available using the estimated reserve price, then the additional £20m required would be divided by the Incremental Capacity denominator to create the Incremental Capacity Premium in p/kWh/d, which is then applied on top of the reserve price.
- Incremental Capacity must be signalled in a minimum of 4 separate years over the 8 year PARCA period. This is to guarantee there is a sustained incremental signal to ensure efficient investment in the system and is aligned with the principles for Exit Incremental Capacity Release and IP Incremental Capacity Release. For the avoidance of doubt this can be a minimum of 1 quarter in each of the 4 separate years.
- Submission of an incremental capacity profile ahead of the second NPV test at the end of PARCA Phase 2 as per Phase 1 NPV test, to either avoid unnecessary termination of the PARCA application or excessive revenue being collected. This also provides an opportunity for the Incremental Capacity Premium to be recalculated. The Incremental Capacity Premium is fixed at this point and paid in addition to any capacity charges as they become due.
- The estimated project cost to be initially set at the first NPV test (prior to reservation at the end of PARCA Phase 1). At the time of the second NPV Test (prior to allocation at the end of PARCA Phase 2) the estimated project cost will be adjusted in line with the Retail Price Index (RPI). This is in line with NGG Gas Transporter Licence which currently uses RPI.

2 Governance

Justification for Authority Direction

Panel determined that this Modification is likely to have a material effect as it seeks to change the User Commitment rules associated with the release of Entry Incremental Capacity, and therefore could have an impact on the commercial activities relating to investment in the NTS.

Modification 0667 will therefore follow Authority Direction procedures.

Requested Next Steps

This Modification Proposal should:

- be considered a material change and not subject to self-governance; and
- be issued to consultation

The Workgroup agreed with the Panel determination on Authority Direction for the reasons set out above and agree this Modification is sufficiently developed to be issued to consultation.

3 Why Change?

Background to Incremental Capacity NPV Test

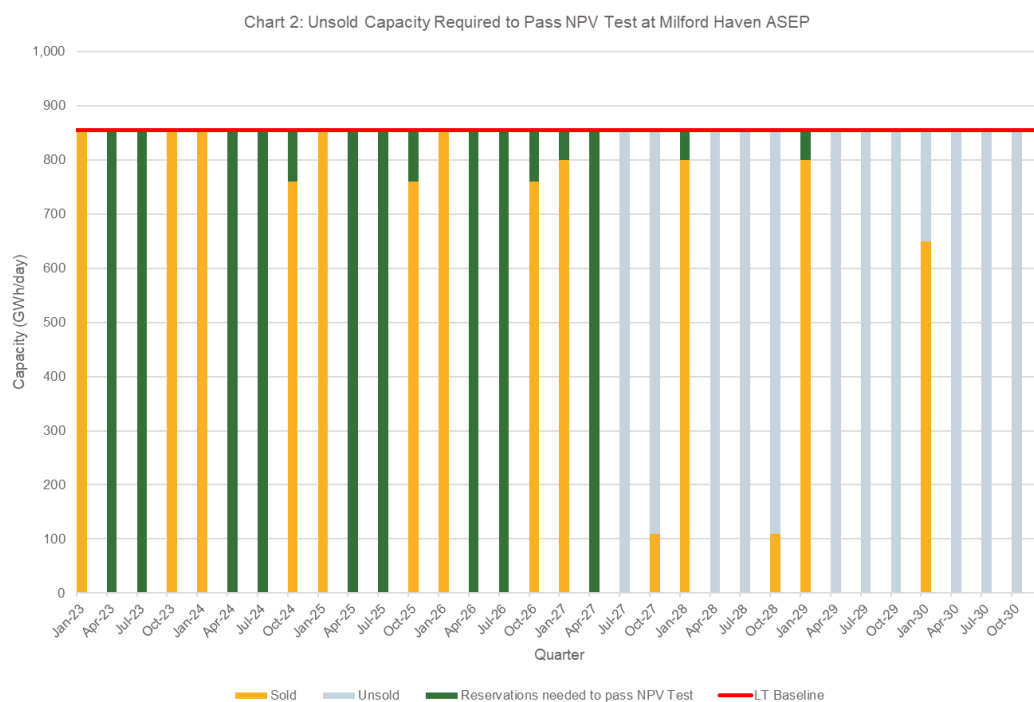
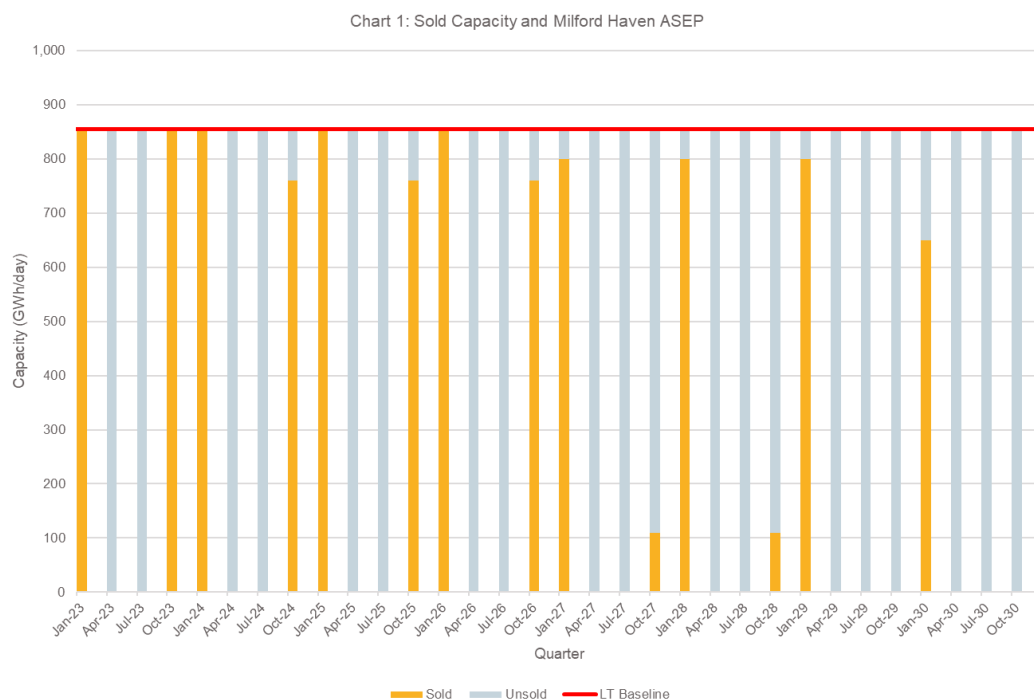
Incremental Capacity is additional capacity that is made available above the prevailing level of Obligated Entry Capacity. For the Incremental Capacity to be reserved and subsequently allocated, a NPV test needs to be passed to ensure user commitment and provide sufficient assurances that the costs of any incremental investment associated with PARCA Works are recovered. The revenues required to be recovered are from the Estimated Project Costs, which are calculated through the Long Run Marginal Cost methodology, and 50% of this must be collected for the NPV test to be passed. The mechanics of the NPV test are included within the ECRM statement¹.

The ECRM was first issued in 2002 and included the current NPV test. Since then there has not been a comprehensive review of the NPV test² (other than project costs and price steps which have been changed alongside charging methodology developments). The NPV test was implemented when there was an expectation that capacity would be acquired on a long-term basis, via the QSEC auctions, allowing for incremental capacity to be signalled. Since 2002, capacity booking behaviour has moved almost entirely towards the purchase of short term products which are discounted (up to 100% for within day and interruptible products). This has caused difficulties for incremental capacity to be signalled within the current methodology.

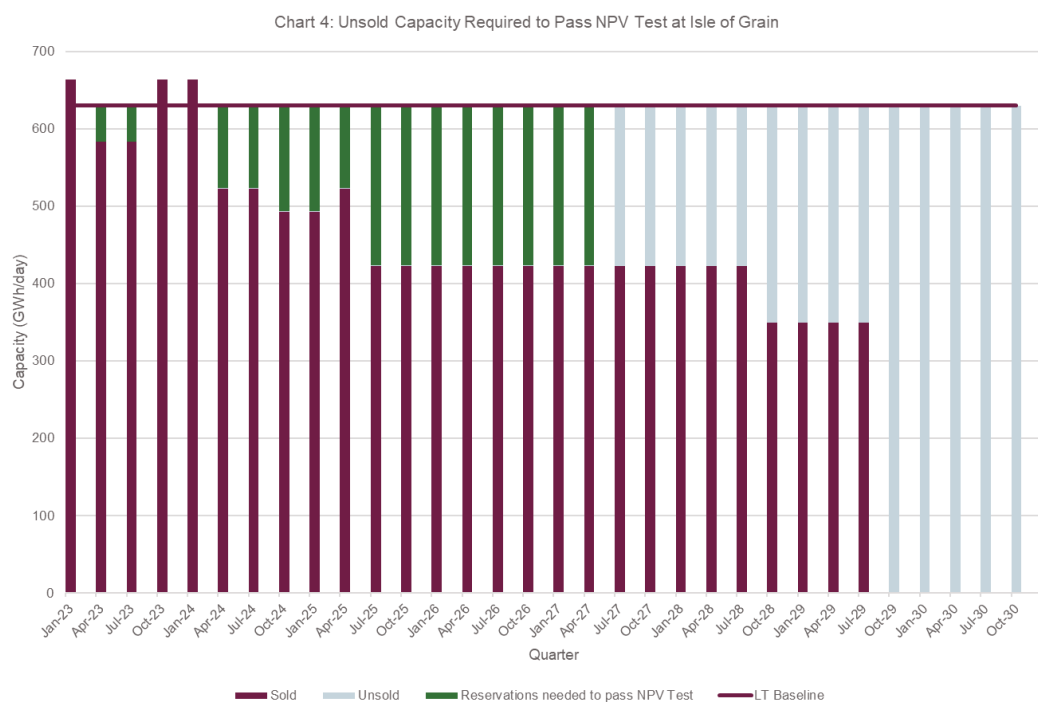
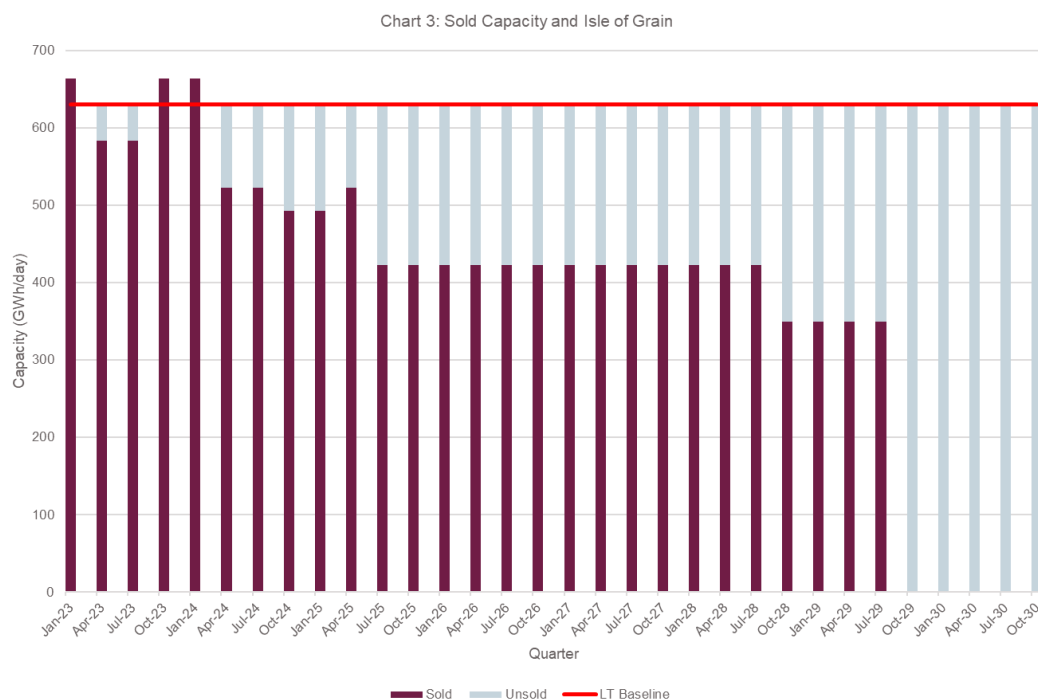
Chart 1 below shows the amount of sold and unsold capacity that is available at Milford Haven within the Long Term auctions at the current time and incremental capacity would only be available without purchasing any unsold capacity in 5 of the 32 quarters (i.e. where sold amounts are equal to LT baselines). Chart 2 further below indicates, in green, the amount of unsold capacity that would need to be signalled for incremental capacity to be signalled using the Price Step 7 Estimated Project Value of £140m. At the highest current price step for Milford Haven (which would be required in this example) the unsold capacity would cost £211m with the £70m cost of incremental capacity on top of this. Unsold capacity that is purchased does not contribute to the NPV test despite being priced as such (noting that this capacity would also be subject to the same price step as incremental capacity). This would result in total costs of £281m which is significantly higher than the required incremental revenue signal (NPV test) of £70m, and even the total Estimated Project Value of £140m. In addition, it would also result in one of the parties at the ASEP holding all the Long-Term capacity rights at the ASEP for the single purpose of passing the NPV test meaning other participants would be unable to purchase Long-Term products at the ASEP. It is also worth noting that 855GWh/day unsold capacity required to be purchased is more technical capacity than either of the current individual Milford Haven Entry Terminals can utilise, even when the Incremental Capacity is brought on-line.

¹ www.nationalgrid.com/uk/gas/charging-and-methodologies/methodologies

² Entry Capacity Release Methodology v4, See Document Revision History Section on p.2
www.nationalgrid.com/sites/default/files/documents/Entry%20Capacity%20Release%20Methodology%20Statement%20%28Approved%29%20v4.0%20-%20Effective%2031%20July%202017.pdf



The issue is not exclusive to the Milford Haven ASEP and occurs across many of the Entry Points on the network. Chart 3 and Chart 4 show similar issues for the Isle of Grain Entry Point. Using the same scenarios (Estimated Project Value from Price Step 7 and using the highest price step for Isle of Grain) the combined cost of unsold capacity (£21.8m) and incremental capacity (£17.5m) is greater than the total Estimated Project Value (£33.5m).



Both LNG terminals are in the top five Entry Points in terms of Long Term bookings vs total baseline available³, which can be seen in Table 1 below. Given the difficulties to pass the test at both LNG Entry Points it is fair to assume that most of other Entry Points on the network would face the same issue if attempting to signal Incremental Entry Capacity.

³ From 01 January 2023 to 31 December 2030.

Table 1: Long Term bookings vs total baseline available (01 January 2023 to 31 December 2030)

Entry Point	Sold Capacity (Gwh/day)	Total Available (GWh/day)	Percentage Purchased
Cheshire	16,886	17,366	97%
Hole House Farm	5,673	9,491	60%
Isle of Grain	12,605	22,390	56%
Milford Haven	8,970	30,400	30%
Caythorpe	810	2,880	28%
Easington	8,927	45,029	20%
Bacton	2,986	15,539	19%
Fleetwood	3,107	20,800	15%
Teesside	1,178	14,243	8%
Garton	980	13,440	7%
Hatfield Moor (Storage)	44	810	5%
Hornsea	206	7,459	3%
Barrow	128	10,880	1%
St. Fergus	151	53,462	0%
Theddlethorpe	0	19,542	0%
Glenmavis	0	3,168	0%
Partington	0	6,880	0%
Avonmouth	0	5,738	0%
Dynevor Arms	0	1,568	0%
Hatfield Moor (Onshore)	0	810	0%
Wytch Farm	0	106	0%
Burton Point	0	2,352	0%
Barton Stacey	0	5,523	0%
Canonbie	0	6,400	0%

Why the NPV test should be put into UNC

The NPV test is currently defined in the ECRM, which is not subject to the UNC governance process. Therefore, if the NPV test is not inserted into the UNC, it cannot be modified without a full review of the methodology statements. The UNC would be the more appropriate location for the NPV test to allow for a clear statement of the NPV test as amended and the provision of a more efficient review and refinement process to address both the issues noted above and any future required changes, ensuring the test remains fit for purpose. Given the current review of the charging regime (UNC Modification 0621) and the requirement for future methodologies to be consulted at least every 5 years (as per EU TAR)⁴, this would also allow for more timely updates. The insertion of the NPV test into the UNC is consistent with the charging methodology which has been previously inserted into code (UNC Section Y), along with other charging topics (such as the Optional Commodity Charge)⁵.

⁴ Article 27, Paragraph 5.

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R0460&from=EN>

⁵ This is explained further in South Hook's presentation dated 06 December 2018 to Transmission Workgroup (see slide 3): <http://www.gasgovernance.co.uk/0667/061218>

The user commitment test associated with the release of Non-Incremental Capacity (i.e. a PARCA met through existing capacity or substitution) is already contained within UNC TPD Section B. Therefore, the inclusion of the NPV test into UNC is consistent with the other Entry User Commitment tests and allows for changes that are applicable across the tests to be made consistently and timely in the future.

Impacts

South Hook Gas believes that this Modification is relatively simple and builds on principles that have been previously used. For example, previous methodologies (e.g. capacity charging and the optional commodity charge) have been inserted into UNC to allow for amendments via the Code Governance Process, which is a robust process allowing for development and implementation of code modifications.

The Incremental Capacity Premium is based on the Mandatory Minimum Premium which is a concept which is set out in EU TAR and is used for Interconnection Point Incremental Capacity Release in GB.

There are no resultant impacts on other users' charges as these alterations only ensure that the Incremental Revenue signal can be achieved as efficiently as possible based on the current usage of the NTS, as was initially intended by the test. The Incremental Capacity Premium also provides the industry with a greater degree of certainty that the PARCA Applicant is able to provide the required commitment to the project, given that the Incremental Capacity Premium will be fixed and applied in addition to the reserve price for any Incremental Capacity allocated.

If the changes are not implemented, South Hook Gas believes the impacts resulting from the current methodology may unintentionally disincentivise investment in the NTS and could restrict future gas supply projects.

4 Code Specific Matters

Reference Documents

Entry Capacity Release Methodology Statement –

<https://www.nationalgrid.com/sites/default/files/documents/Entry%20Capacity%20Release%20Methodology%20Statement%20%28Approved%29%20v4.0%20-%20Effective%2031%20July%202017.pdf>

Rules for Release of Incremental Capacity at Interconnection Points –

<https://www.gasgovernance.co.uk/sites/default/files/ggf/page/2017-08/EID%20Section%20E%20-%20Rules%20for%20the%20Release%20of%20Incremental%20Capacity%20at%20Interconnection%20Points.pdf>

5 Solution

Insert the NPV test from Entry Capacity Release Methodology Statement, Chapter 6 into UNC TPD Section B – System Use and Capacity. For the avoidance of doubt the NPV test is deemed to have been passed if:

$$\frac{NPV}{PC} \geq 0.5$$

where:

<i>NPV</i>	means the output from the NPV test which is estimated present value of the revenue signals
<i>PC</i>	is the estimated NTS project cost (currently Estimated Project Value as per UNC TPD Section Y Part A1)

The NPV test is only required to be passed when Funded Incremental Obligated Entry Capacity is required to be released as part of the PARCA process. For the avoidance of doubt, where a PARCA solution does not require Funded Incremental Obligated Entry Capacity then the user commitment in UNC TPD Section B 1.17.7 (c) is applicable.

The NPV test then needs to be amended to allow for;

- 1) an “Incremental Capacity Premium” to be applied should the NPV test fail (i.e. revenues from the sale of incremental capacity will not achieve 50% of Estimated Project Value).

$$\frac{NPV}{PC} < 0.5$$

The Incremental Capacity Premium is initially calculated using the following formula:

$$ICP = \frac{RC}{Cap_{total}}$$

where:

<i>RC</i>	is the residual cost to be achieved from the Incremental Capacity Premium
<i>Cap_{total}</i>	is the total quantity of capacity signalled within the NPV test (including any unsold), expressed in kWh

As the Incremental Capacity Premium contributes towards the NPV test it will need to be discounted (in line with the revenue signals). The Incremental Capacity Premium will then be adjusted until the NPV test is passed (i.e. using a “Goal Seek” function).

For the avoidance of doubt;

- the Incremental Capacity Premium is an additional rate that is added to the applicable payable price, calculated to be the minimum value required to allow the NPV test to be passed, in the case where the allocation of all offered incremental capacity at the estimated reference price would not generate sufficient revenues for a positive NPV test outcome, and;
 - All revenues associated with the Incremental Capacity Premium (including any current unsold baseline it is applied to) contribute towards NPV test. For current unsold capacity the difference between the applicable payable price and reserve price will be used for the NPV calculation.
- 2) A minimum requirement of Incremental Capacity to be signalled in 4 separate years over the 8 year PARCA period.

For the avoidance of doubt;

- this can mean a minimum signal of 1 quarter in each of the 4 separate years and they are not required to be consecutive years
- The Incremental Capacity signalled in the 4 separate quarters is required to be for the full requested Incremental Capacity amount
- The PARCA period is 8 years (i.e. a rolling 12 month years) beginning in the month the capacity is released and does not have to align to Gas or Calendar Years

- 3) Clarification that the Incremental Capacity can be reprofiled ahead of the second NPV test prior to capacity allocation (at the end of PARCA Phase 2). This includes the recalculation of the Incremental Capacity Premium, if applicable.

For the avoidance of doubt this needs to be in line with the rules stated within the PARCA agreement

- 4) The estimated project cost to be initially set at the value used for the first NPV test (prior to reservation at the end of PARCA Phase 1). Then at the time of the second NPV Test (prior to allocation at the end of PARCA Phase 2) the project value will be adjusted in line with the Retail Price Index (RPI)⁶.

The following formula sets out the adjusted project cost (PC_{adj});

$$PC_{adj} = PC_{Phase\ 1} \times RPI_{adj}$$

where:

$PC_{Phase\ 1}$ is the estimated project cost which was fixed at the time of the first NPV test

RPI_{adj} means the index used for adjustment. It is calculated using the following formula:

$$RPI_{adj} = \frac{RPI_{Phase\ 2}}{RPI_{Phase\ 1}}$$

where:

$RPI_{Phase\ 1}$ is the arithmetic average of the Retail Price Index published for the 12 months prior to the first NPV test being passed

$RPI_{Phase\ 2}$ means the arithmetic average of the Retail Price Index published for the 12 months prior to the second NPV test being completed

For the avoidance of doubt the estimated project cost is currently the Estimated Project Value, inline with the Gas Transmission Charging Methodology (UNC TPD Section Y Part A1).

⁶ <https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/chaw/mm23>

6 Impacts & Other Considerations

Does this modification impact a Significant Code Review (SCR) or other significant industry change projects, if so, how?

None

Consumer Impacts

According to the Proposer, if implemented this Modification proposal should reduce barriers to entry for investment in the GB network, having a positive impact on security of supply. There are no negative impacts to consumers as this Modification proposal alters the arrangements between Shippers and National Grid NTS only.

Consumer Impact Assessment	
Criteria	Extent of Impact
Which Consumer groups are affected?	<ul style="list-style-type: none"> None directly impacted.
What costs or benefits will pass through to them?	<ul style="list-style-type: none"> Since User Commitment is exactly the same as current arrangements, there is likely to be no change to the current situation. It is likely that this Modification will facilitate new investment which is in turn likely to be beneficial to the market overall and therefore indirectly benefit consumers. The stranded asset risk remains the same as it currently is.
When will these costs/benefits impact upon consumers?	<ul style="list-style-type: none"> The Modification is envisaged to be implemented as soon as possible. The potential benefits may accrue once the capacity is purchased and gas is flowed against it.
Are there any other Consumer Impacts?	<ul style="list-style-type: none"> None identified.

Cross Code Impacts

None.

EU Code Impacts

There is no impact on EU Codes. The proposed Modification is compliant with current EU Codes.

Central Systems Impacts

It is not anticipated that this Modification Proposal has any Central System Impacts.

Workgroup Impact Assessment

The Workgroup concluded that the Modification is likely to be an improvement to the current UNC in facilitating improved competition - Relevant Objective d).

Workgroup noted that the National Grid consultation on Capacity Methodology Statements had recently (12 April 2019) been published on its website⁷. Workgroup noted that National Grid has included an alternative way of addressing this issue within its proposed Statement which is currently out for consultation (the consultation closes 10 May 2019).

Workgroup noted National Grid had submitted comments regarding Consumer Impact

National Grid has identified scenarios under UNC proposal 0667 whereby the user commitment requirements for existing capacity or substitution solutions, is higher than the user commitment requirements for funded incremental capacity. The practical effect of this is that PARCA applicants could be incentivised to connect to constrained parts of the network resulting in uneconomic outcomes for consumers.

Workgroup noted the Proposer of 0667 had responded as follows:

The funded incremental user commitment test proposed under 0667 results in a test that is economic and efficient by ensuring PARCA Applicants make the financial commitments required for any NTS investment. Any consumers impact and incorrect investment decisions are a result of the user commitment test for substitution and existing capacity which could result in financial commitments disproportionality high compared to funded incremental capacity.

Workgroup briefly reviewed these comments.

Workgroup noted that Modification 0678 and its Alternatives may exacerbate the situation regarding the charges and costs of incremental capacity.

Workgroup noted that a Review group around this issue of User Commitment may be required.

Workgroup noted that the Ofgem's RIIO2 Sector Specific methodology consultation document⁸ has acknowledged that this is an issue.

Rough Order of Magnitude (ROM) Assessment

A ROM has not been requested as this Modification is unlikely to impact Central Systems.

⁷ National Grid Gas's Formal Consultation on Capacity Methodologies and Statements:

<https://www.nationalgridgas.com/capacity/capacity-methodology-statements#tab-2>

⁸ Ofgem's RIIO2 Sector Specific methodology consultation document:

<https://www.ofgem.gov.uk/publications-and-updates/riio-2-sector-specific-methodology-consultation>

7 Relevant Objectives

Impact of the modification on the Relevant Objectives according to the Proposer:

Relevant Objective	Identified impact
a) Efficient and economic operation of the pipe-line system.	Positive
b) Coordinated, efficient and economic operation of (i) the combined pipe-line system, and/ or (ii) the pipe-line system of one or more other relevant gas transporters.	None
c) Efficient discharge of the licensee's obligations.	None
d) Securing of effective competition: (i) between relevant shippers; (ii) between relevant suppliers; and/or (iii) between DN operators (who have entered into transportation arrangements with other relevant gas transporters) and relevant shippers.	Positive
e) Provision of reasonable economic incentives for relevant suppliers to secure that the domestic customer supply security standards... are satisfied as respects the availability of gas to their domestic customers.	None
f) Promotion of efficiency in the implementation and administration of the Code.	None
g) Compliance with the Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.	None

According to the Proposer, the Modification furthers Relevant Objective a) as follows:

- a) This proposal furthers Relevant Objective (a) as it reduces potential barriers to entry for gas market investment in GB, therefore reducing the incentive for users to pursue private investment options bypassing the NTS and providing greater assurances in respect of GB security of gas supply.

This investment in private pipelines could have a negative effect on the operation of the pipeline given the levels gas now bypassing the NTS could be greater than the incremental amount requested, which could have knock on effects to the configuration of the network.

- d) This proposal further relevant objective (d) by:
 - i. Making the incremental capacity NPV test consistent with the current market environment which does not incentivise long term capacity bookings;

- ii. Minimising the requirement for shippers to book capacity in excess of their ability to flow when signalling incremental capacity, thereby minimising inefficient and uneconomic bookings;
- iii. Not artificially limiting access to entry capacity for other shippers; and
- iv. Reducing barriers to entry for gas market investment in GB

Workgroup discussed the above and debated whether **Relevant Objective a)** is positively impacted. The Workgroup's conclusion was that the effect is likely to be marginally positively impacted and that the focus for this Modification should be on **Relevant Objective d)**.

In discussion with the Proposer, Workgroup noted that the Modification furthers **Relevant Objective d)** as follows:

The allocation of capacity to a shipper via a strict interpretation of the current NPV test (which, as noted above, does not seem to be aligned with the intended purpose) is detrimental to competition by artificially limiting access to entry capacity for other shippers.

Workgroup focussed discussion on whether **Relevant Objective d)** is positively impacted and concluded that the modification is likely to bring additional gas to the market at relevant entry points and therefore competition is likely to be positively impacted.

Some Workgroup participants noted that the socialised cost of the (at most) 50% remains, as has been the case for some time.

Discussion regarding Relevant Objective c) efficient discharge of the Licensee's obligations.

National Grid expressed the following view:

Currently the Licence and the methodology statements address rules for determining obligated and incremental release quantities. This seems appropriate given that the level of release quantity is set by the Licence and incremental release may affect National Grid's allowed revenue. As National Grid has a Licence obligation to determine Incremental release quantities within a methodology statement, then the discharge of this objective will arguably be less efficient if the incremental release rules also moved into the UNC thereby subjecting them to dual governance arrangements. (A Licence change could negate this point).

The Proposer of 0667 offered the following commentary to this point:

Regarding Licensee obligations, the solution under 0667 does not remove the need for a methodology statement and only seeks to move a section of the methodology statement into UNC, which can be referenced in the methodology statement. This is consistent with other areas of the capacity methodology statements, most notably the substitution user commitment which is in UNC despite the rules for substitution being prescribed in the licence and methodology statements. This is contradictory and results in differing treatment for the user commitment tests.

Workgroup explored what Licence change would be required if a Licence change route were chosen. The licence change would have the Licence point to the Methodology in the UNC.

Ofgem clarified for Workgroup that in its view, Modification 0667 requires a Licence change. The Licence obliges NG to release capacity, acting in line with the Capacity Release Methodology and as a

minimum the Licence would have to be changed to say that National Grid should release capacity in line with the Methodology and the UNC. There are potentially other areas which would need review.

Workgroup noted that the Proposer's view was that this was inconsistent with the Substitution User Commitment test, which is in UNC Section B 1.17.7 c) ii. In addition, the Proposer clarified for Workgroup that, on the basis that Ofgem believes the situation highlighted in this Modification requires a Licence change, there are currently other areas⁹ which would also necessitate a Licence change. The Proposer, therefore, was of the view that the Licence change is required with or without this Modification and thus it should not impact the timings of this Modification 0667.

Workgroup noted the timing impact of the Authority's Licence change consultation, which Ofgem estimated to take around 6 months. This adds uncertainty to the latter stages of the Modification process for the Proposer of 0667 and any other party who is in a similar situation. The Incremental User Commitment Test is used to signal potential investment so the uncertainty in this process could impact investment into the GB market with a number of potential consequences for the GB market and GB consumers.

Some Workgroup Participants noted an alternative way of tackling the need for Licence change was to change the Methodology Statement so that the Methodology Statement identified the relevant part of the UNC which applies to the NPV Test. As an example, one can consider the requirement for the Transporters to develop a Network Code, to satisfy this the Network Code points to the UNC.

An alternative solution which would address the dual governance point would be for the Methodology Statement to point to the UNC.

Workgroup noted that Ofgem make its final decide as to whether or not a Licence change is required in order to implement this Modification after receiving the Final Modification Report. National Grid expressed its clear preference for the Licence change but noted for Workgroup that it recognised that the outcome could be achieved via an alternative method.

Some Workgroup participants noted that in terms of Relevant Objective c), facilitating access via a more fit for purpose process positively impacts this Relevant Objective c).

Other Workgroup participants noted that this raises wider issues regarding whether a consistent approach is required for these and other similar licence issues and where such provisions should best sit.

⁹ The Proposer stated that within Capacity Release Methodology (ECRM Chapter 6), which currently contains the rules for the NPV test, there are already five instances where there are links to processes and calculations which are contained within UNC TPD Section B and TPD Section Y. These include Incremental Capacity signalled in accordance with UNC TPD Section B2 and Calculation of Estimated Project Values as detailed in UNC TPD Section Y A1.

8 Implementation

No implementation timescales are proposed. However, given the current PARCA timescales South Hook Gas is subject to as part of its application, implementation is needed as soon as reasonably possible after a decision to provide certainty on the process.

No implementation costs are anticipated.

9 Legal Text

Legal Text has been provided by National Grid and is published alongside this report here:

<http://www.gasgovernance.co.uk/0667> .

For the avoidance of doubt, the Workgroup discussed whether the Text is adequately clear that the Incremental Release Quantity is driven by the PARCA application rather than the NPV Test (TPD Section B paragraph 1.17.9). Workgroup concluded that this was the case.

Workgroup noted a couple of typographical changes and unintended formatting changes which needed to be corrected before the Modification goes out to consultation. National Grid agreed to provide these changes on the same day as the Workgroup met to facilitate the Workgroup Report being finalised and ready for consultation, should Panel so decide on 18 April. These were provided on 16 April 2019 and published by the Joint Office here: <http://www.gasgovernance.co.uk/0667> .

The Workgroup has considered the Legal Text on 15 April 2019 and, notwithstanding the very minor typographical changes required, is satisfied that it meets the intent of the Solution.

National Grid and the Proposer confirmed on 16 April 2019 that the Legal Text published meets the requirements of the Modification.

Text Commentary

Legal Text Commentary is published alongside this report here:

<http://www.gasgovernance.co.uk/0667> .

10 Consultation

Panel invited representations from interested parties on 18 April 2019. The summaries in the following table are provided for reference on a reasonable endeavours basis only. We recommend that all representations are read in full when considering this Report. Representations are published alongside this Final Modification Report.

Of the 5 representations received 4 supported implementation and 1 was not in support.

Representations were received from the following parties:			
Organisation	Response	Relevant Objectives	Key Points
Centrica	Support	a) None d) Positive	<ul style="list-style-type: none"> Centrica note that the current Net Present Value (NPV) test for the release of funded incremental

			<p>capacity is not fit for purpose when applied to existing entry points as it results in disproportionately high user commitments. If allowed to continue, this will delay or discourage additional entry capacity from being released and therefore will have an adverse impact on attracting additional gas supplies to the GB market.</p> <ul style="list-style-type: none"> • Implementation of this Modification will provide a more proportionate user commitment solution and can be expected to positively impact competition in supply by supporting a more liquid and accessible market. • This Modification has highlighted the tension between change governance of the UNC and the Entry Capacity Release Methodology Statement (ECR) where the current NPV test resides. If the Modification is implemented, then the ECR should be subsequently modified to reference the NPV test incorporated in the UNC. • Implementation should be as soon as reasonably practicable and not be contingent on any changes required to the ECR.
ExxonMobil	Support	<p>a) None d) Positive</p>	<ul style="list-style-type: none"> • ExxonMobil highlight that the main issue behind this modification, is the requirement for a PARCA applicant to signal capacity in excess of their actual requirement, at a cost that significantly exceeds the financial commitment under the NPV test. This issue was neither envisaged nor intended when the PARCA process was developed and represents a significant departure from the established NPV test that preceded PARCA. This modification has been extensively developed and puts forward a pragmatic solution to the current, deficient NPV test process contained within PARCA. • In addition to the positive impacts against the relevant objectives, ExxonMobil believe that there is a further pro-competition benefit. Where a shipper is required to pay excessive charges for unwanted and unused capacity, this over-payment will cross-subsidise other system users. Modification 0667 would correct this effect.

			<ul style="list-style-type: none"> • Agree with the proposal to include a revised NPV test within the UNC, which could facilitate a more agile change process. • Agreed that Authority Direction is appropriate. • Expect implementation to bring about significant future cost reductions, both under a PARCA contract and in the administration of the overall PARCA process. • Implementation would impose no additional cost on any parties, whether directly engaged with the PARCA process or not.
National Grid NTS	Oppose	a) None c) Negative d) Comments	<ul style="list-style-type: none"> • National Grid note that the NPV test has no meaningful impact upon efficient operation of the pipeline. • As the NPV test currently sits in the Entry Capacity Release Methodology Statement (ECR), this modification would subject the NPV test to dual governance arrangements, which is an unsatisfactory arrangement that creates legal and regulatory uncertainty. • Recognised that the modification removes some unnecessary barriers in the current NPV test, however the overall framework is sub-optimal. • Preference would be for the rules proposed under the review of the Entry Capacity Methodology Statement (ECR) to be taken forward, which would be a more considered and optimal approach. • If this modification proposal were to be approved, National Grid would like to see clarity brought to the regulatory framework via a Licence amendment before implementation. • A number of observations were made on the legal text and the potential impacts to text changes in relation to Modification 0678. • Acknowledged a number of concerns regarding the current NPV test and agree that the current test can be improved upon and currently is too onerous for PARCA applicants e.g. the current NPV test requires a capacity commitment beyond what could be considered reasonable. However, they do not support moving the test into the UNC.

			<ul style="list-style-type: none"> • National Grid raised concerns within the workgroup regarding the comparative difference between the user commitment rules for existing capacity solutions (including substitution), compared to funded incremental solutions. They believe there is a principle that for any capacity request, the cost of existing capacity solutions, should not exceed the cost of funded incremental solutions and it is not right that applicants utilising existing network capacity are subject to more onerous user commitment requirements than applicants requiring incremental capacity. They have identified credible scenarios under this modification where that principle would not be upheld. Such a framework can incentivise PARCA applicants to connect to constrained parts of the network over unconstrained parts of the network. This would adversely impact upon consumers, and arguably such a framework is at odds with the obligation to develop the network in an economic and efficient manner. • Also note that no change to the way that the estimated project value is determined have been included within this proposal. Given that the project values are an integrated part of the LRMC methodology, then this modification requires the retention of LRMC at the same time as the charging review is proposing to replace it. The net result, if both Modification 0667 and 0678 are implemented, is section Y would contain 2 methods of producing charges. Believe a further Modification to 0667 would be needed to create an enduring solution for the estimated project cost and removes the LRMC charging calculation from the charging methodology. • National Grid NTS supports amending the NPV test via the proposals produced under their review of the Entry Capacity Release Methodology statement. These proposals support all outcomes of the Charging Review, including a revised method for determining the estimated project cost.
Shell Energy Europe Ltd	Support	a) Positive d) Positive	<ul style="list-style-type: none"> • Shell believe this proposal has brought attention to some significant shortcomings embedded in the current PARCA process. The current process leads to a disproportionately high user commitment to signal incremental entry capacity, to the extent that

			<p>the User requesting the capacity could have to incur costs, which far exceed the Estimated Project Value. This could act as a barrier to entry and disincentivise new sources of supply and undermine the efficient and economic operation of the pipeline system.</p> <ul style="list-style-type: none"> • In addition, the current NPV test could require the shipper wishing to trigger incremental capacity to book more capacity than it can physically use. This risks stranding existing assets by preventing shippers at the same entry point from being able to access sufficient transportation capacity to meet their needs undermining existing investments and exposing captive customers to the risk of investment in incremental capacity. This would have a detrimental impact on securing effective competition between relevant shippers. • Once the NC TAR is implemented and the UK moves from a fixed to a floating capacity tariff regime, meeting the NPV test will be subject to further uncertainty. Moreover, there is a lack of clarity with respect to the impact on existing Users of moving to reference prices set on the basis of Forecasted Contracted Capacity (FCC) instead of the LRMC and the consequential exposure to Users booking capacity at the same entry point, should the FCC increase to reflect investment in incremental capacity. • Incorporating the NPV test in the UNC will ensure sufficient flexibility to enable Network Users to amend the NPV test as appropriate in a rapidly evolving regulatory framework. Should there be any unintended consequences resulting from, for example, implementation of the NC TAR, including the NPV test in the UNC will facilitate a timely resolution to ensure existing Network Users are not unduly discriminated against by requests for incremental capacity. • To ensure the risks identified are resolved as soon as practicable, they support timely implementation of this proposal. Should further limitations of the current NPV test be identified, using the existing code governance process to facilitate changes to the NPV test as part of the UNC will ensure proposals can be put forward in a transparent and timely manner.
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			<ul style="list-style-type: none"> • They do not consider a Licence change is required to implement this proposal. • Should the current NPV test lead to artificially constraining capacity availability at a given network point, this could result in a substantial impact on existing Network Users as access to capacity could be severely limited. This could undermine existing investment decisions and have a consequential impact on security of supply during peak periods by artificially constraining access to the gas network. They recognise that the capacity could be made available in the short-term but the lead times may not be sufficient to enable this.
South Hook Gas Company Ltd	Support	a) Positive d) Positive	<ul style="list-style-type: none"> • South Hook Gas have identified issues with the NPV test associated with the release of funded incremental capacity (the “NPV test”) where the current methodology requires excessive amounts of capacity to be signalled due to the unconstrained nature of the NTS and low levels of long-term bookings. This results in an uneconomic and inefficient methodology and potentially disincentivises investment into Great Britain. Considering these concerns South Hook Gas has proposed to move the NPV test into the UNC, as it currently sits in the Entry Capacity Release Methodology, and then amend the test to ensure it is fit for purpose going forward. • This modification fixes an acknowledged issue that requires PARCA applicants to signal excessive quantities of capacity in order to pass the NPV test, far in excess of any required financial commitment. • The NPV test is currently defined within the Entry Capacity Release Methodology which is not subject to the UNC governance process and therefore restricts the ability of Users to propose amendments and cannot be modified without a full review of the methodology statements. • Do not believe this Modification would require a change to National Grid’s licence, as this Modification would have no adverse impact upon National Grid’s ability to discharge its relevant licence objectives. • Moving the NPV test into UNC would only require a cross-reference to be added to the methodology

			<p>statement which is consistent with the approach taken for other Modifications.</p> <ul style="list-style-type: none"> • This Modification should be implemented as soon as reasonably possible and should not be contingent on the implementation of any changes required to the Entry Capacity Release Methodology such as the cross-references noted. • If the changes prescribed within this Modification are not implemented, South Hook Gas believes the current methodology may unintentionally disincentivise investment in the NTS and could restrict future gas supply projects. • The implementation of this Modification has no consequential impacts on other users' charges as the alterations only ensure that the incremental revenue signal can be achieved as efficient as possible, based on the current usage of the NTS. • South Hook Gas note that in parallel to the development of this Modification, National Grid have raised a review of its Entry Capacity Release Methodology. South Hook Gas sets out their concerns on the above and highlight why this Modification was initially raised and continued to be proposed.
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Please note that late submitted representations will not be included or referred to in this Final Modification Report. However, all representations received in response to this consultation (including late submissions) are published in full alongside this Report and will be taken into account when the UNC Modification Panel makes its assessment and recommendation.

11 Panel Discussions

12 Recommendations

Panel Recommendation

Members recommended that Modification 0677 **should [not]** be implemented

13 Appendix 1 - Incremental Capacity Premium Calculation

Example

- A user wants to signal 100GWh/day of capacity incremental capacity over 10 quarters
- The Estimated Project Value is £100m and therefore £50m signal is required to pass the NPV test
- The highest price step they can use is 0.0350 p/kWh/day

Calculations¹⁰

- *Incremental Revenue = Incremental Capacity × Price × Total days in period*
 $(100,000,000 \times 0.0350) \times 900 = £31,500,00$
- *Incremental Capacity Premium Revenue = Signal Required – Incremental Revenue Signalled*
 $£50,000,000 - £31,500,000 = £18,500,000$
- *Incremental Capacity Premium Price =*
Incremental Capacity Premium revenue / (Sum of Capacity × Total days in period)
 $£18,500,000 / (100,000,000 \times 900) = 0.0206 \text{ p/kWh/day}$
- The 0.0206 p/kWh/day Incremental Capacity Premium would be added to the 0.0350 p/kWh/day reserve price to for all Incremental Capacity.

¹⁰ For simplicity the calculation uses the following assumptions:

- There are 90 days in a quarter and therefore the total duration is 900 days.
- There is no discount factor applied.