



NGGT - INCREMENTAL CAPACITY REOPENER - INTERACTIONS

A report to Ofgem

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SUMMARY

Ofgem is currently developing an “Incremental Capacity Re-opener” as part of its RIIO-2 price control, to replace the current RIIO-1 revenue driver arrangements. The proposal is that NGG will need to apply for an adjustment to its allowed expenditure to fund network reinforcement required to release incremental capacity (entry or exit) that cannot be released via the substitution of baseline capacity from another point.

Ofgem has asked AFRY to undertake a high-level review of the linkages between the proposed re-opener and the related arrangements, including:

- the PARCA process;
- the NPV economic test (part of the Entry Capacity Release Methodology Statement – ‘ECRM’)); and
- User Commitment (UC).

In addition, AFRY has been asked to consider the balance of risk between parties, and the consequence of any rejection by Ofgem of NGG’s incremental capacity (revenue) request.

We find that the proposed re-opener does not directly impact on the PARCA, NPV test, ECRM or UC. Most of the information required by Ofgem during both a notification of, and an application for, a reopener is generated in a timely fashion within the PARCA process, with the possible exceptions of i) “Evidence of long-term value for money for the Consumer (including Net Zero considerations)”, and ii) contract strategy details.

In respect of risks, we find:

- Because the proposed re-opener arrangements work on a case-by-case basis, it seems likely that the difference between cost allowance and out-turn investment costs will be narrower than is currently the case with the revenue driver process. This is expected to lower the associated risk to both NGG and consumers.
- A new risk is introduced where Ofgem reject, in whole or in part, an application for funding by NGG. Assuming that NGG would continue to face the obligation to release the capacity, the proposed re-opener may increase NGG’s risk.
- Another risk is that the information that is provided by NGG under the proposed reopener is insufficient for Ofgem to understand the wider impacts of rejection. For example, rejection could mean that constraint management risk could increase to the level of the cap on the CCM incentive, exposing consumers to the risk. This risk could be mitigated through requesting additional information from NGG.



1. INTRODUCTION

In RIIO-1, where National Grid Gas (NGG) is obliged to provide incremental capacity (above baseline) additional allowed revenues are calculated in accordance with a methodology published by NGG (the Generic Revenue Driver Methodology (GRDM)). The GRDM produces an estimation of the costs of physical investment and commercial solutions that NGG would face in allocating the incremental capacity. These costs are automatically added to NGG's allowed revenues.

Ofgem is currently developing an "Incremental Capacity Re-opener" as part of its RIIO-2 price control, to replace the current RIIO-1 revenue driver arrangements. The proposal is that NGG will need to apply for an adjustment to its allowed expenditure to fund network reinforcement required to release incremental capacity (entry or exit) that cannot be released via substitution.

NGG's base revenue is determined consistent with an agreed baseline level of entry and exit capacity. During the price-control period, NGG may be requested/required to release additional capacity in the system which entails extra cost. Under RIIO-1 this additional cost has been recovered through an automatic revenue adjustment. Within RIIO-2, Ofgem is looking to replace this approach with an incremental capacity reopener because of both a low expected number of applications and because of the variability in project costs. The set of licence and contractual obligations underpinning incremental capacity release are complicated and in this report we look at how the proposed re-opener may affect these.

Ofgem has asked AFRY to undertake a high-level review of the linkages between the proposed re-opener and the related arrangements, including:

- the Planning and Advanced Reservation of Capacity Agreement (PARCA) process;
- the NPV economic test (part of the Entry Capacity Release Methodology Statement); and
- User Commitment (UC).

In addition, AFRY has been asked to consider the balance of risk between parties, and the consequence of any rejection by Ofgem of NGG's incremental capacity (revenue) request.

Structure of this report

This is a short report comprising this introductory section, section 2 which provides background regarding existing processes and section 3 which discusses the proposed re-opener.



2. BACKGROUND – EXISTING PROCESS

This section includes a brief introduction to the current processes. We discuss the underlying commercial arrangements for the procurement of capacity by NTS Users, and the PARCA process. Both of these rely on a series of methodology statements which are published by NGG under the terms of its Licence, so we also briefly describe the existing mechanism for increasing NGG's allowed revenue and the mechanisms used for determining if and how capacity is released.

2.1 Commercial arrangements for capacity

NGG are legally constrained to selling capacity – the right to flow gas into or out of the NTS – to **NTS Users**¹. NGG's Licence obliges them to offer for sale defined amounts of capacity (baselines) at specific points on the network. The capacity is referred to as **obligated capacity**. Where NGG is unable, practically, to provide sold levels of capacity, they are required to buy the capacity back from the market, and are exposed² to the costs of doing so.

Where Users require capacity in excess of baselines, NGG is only obliged to complete the sale of this where the associated impact is considered economic³ – this is referred to as **incremental obligated capacity**. The impact might comprise providing the capacity by reducing a baseline elsewhere on the network – substitution – or via investment which requires additional funding. Capacity provided by investment that requires additional funding is referred to as **funded incremental obligated capacity**. NGG are obliged under the Licence to notify Ofgem that they have received a request to release incremental obligated capacity.

NGG may also elect to release **non-obligated incremental capacity**, but in doing so may expose themselves to additional commercial risk: it isn't added to revenue allowances in the same way as funded incremental obligated capacity and therefore any costs of associated investment may not be recovered (or would earn a lower return).

Capacity must be procured by an NTS User – it cannot be sold directly to a third-party (for example, a power station developer). This presents a difficulty to a third-party who wishes to ensure that a specific level of capacity will be made available to their development at some point in the future. Whilst in some cases, capacity above the prevailing baseline can be made available in relatively short-timescales by the substitution of baseline capacity from elsewhere in the NTS, in other cases it is necessary for NGG to undertake investment to make the capacity available. This might take several years and

¹ Shippers and Gas Distribution Networks

² Strictly, they are partially exposed to these costs via the Constraint Cost Management incentive.

³ The relevant test is set out in the Entry Capacity Release Methodology Statement (ECRM) and the Exit Capacity Release Methodology Statement (ExCRM), and comprises financial and capacity commitments.



requires coordination for the purposes of achieving planning permission. This has led to the development of the PARCA process, to allow a third party – as well as an NTS User – the ability to ensure that incremental capacity can be built.

2.2 Capacity Release Methodology Statements

The ECRM and Exit Capacity Release Methodology (ExCRM) documents set out the processes and mechanisms by which NGG will allocate capacity to NTS Users. This includes the release/allocation of capacity across all temporal horizons and product definitions, including capacity below baseline, capacity provided via substitution, and capacity that requires⁴ underlying network reinforcement. The methodologies are closely linked with the PARCA process, defining some of the underlying mechanics of it.

A key component of the ECRM and ExCRM documents is the definition of the UC obligations that accompany the release of incremental capacity. For Exit capacity, these are simply defined as being a four-year commitment to hold the capacity, thereby discharging the underlying financial commitment that this represents⁵. For entry capacity, the commitment is defined by the recovery of at least 50% of an estimated project cost, in net-present value terms, from the relevant auction bids, over a period of at least 4 years (16 quarters). This is often referred to in the industry as the “NPV test”.

2.3 PARCA process

The PARCA contract allows the counterparty to “reserve” capacity; it is reserved so that it can be purchased (allocated) by an NTS User at some point in the future. The PARCA process is the only mechanism by which a party can secure release of incremental obligated capacity in the future.

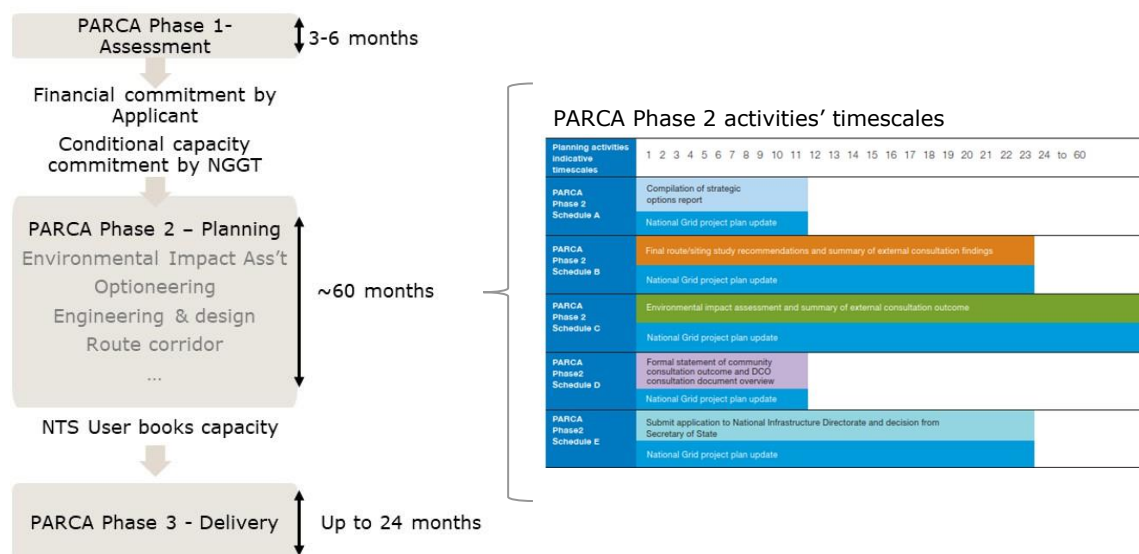
The PARCA contractually binds NGG and the counterparty together in a way that enables NGG to recover the costs of development/investment from the counterparty in the event that the reserved capacity is not subsequently allocated to an NTS User. Subject to the requirements of the PARCA, NGG becomes obliged to allocate the capacity to the relevant NTS User(s). Where the capacity is allocated to an NTS User, the NTS User will have provided a financial commitment in respect of the capacity which is deemed sufficient to demonstrate that the underlying investment costs are efficiently incurred. This, in turn, triggers the ability for NGG to recover the costs of the investment from their allowable revenues. The requirements for financial commitment are set out in NGG’s ECRM and ExCRM documents.

⁴ Noting that NGG can elect to provide incremental capacity via non-physical, contractual solutions.

⁵ The user commitment can be discharged earlier where prevailing prices have increased



Figure 1 - PARCA process outline timescales



Where investment is required, the timescales involved in moving from initial enquiry and contract to flow of gas against a firm capacity holding are potentially over seven years – as highlighted in Figure 1. To ascertain whether investment is needed requires initial analysis to be undertaken by NGG (which amongst other things identifies opportunities for substitution), which requires the counterparty to contract with NGG (which is done via a PARCA). A PARCA contract is therefore the first element involved in securing incremental capacity, and so the PARCA process dominates the commercial proceedings.

If planning permission is ultimately declined, the costs incurred by NGG are recovered from the interested party via the PARCA, isolating consumers from this risk. Where planning permission is granted, the totality of NGG's efficiently incurred investment costs are expected to be recoverable from the generality of transportation revenues (which includes the recovery, indirectly via UC, of a significant proportion of the investment costs from the interested party.)

2.4 Revenue drivers

Under current arrangements NGG are allowed to recover additional revenues where the hurdles set out in the ECRM/ExCRM (i.e. financial and capacity commitments) have been met. The additional revenues represent the costs of incremental capacity provision, whether by way of commercial solutions or investment.

The mechanism for determining the allowed revenues is set out in the Generic Revenue Driver Methodology Statement ("GRDM"). The method involves a predefined process of hydraulic network analysis to identify a set of potential network reinforcements (pipelines, compressors, etc.) which are then converted into a level of costs using a unit cost library specified by Ofgem.



The methodology also considers the extent to which non-investment solutions (e.g. constraint management costs) could be used to provide the capacity. Where NGG determine that the non-investment solutions are a more “economic and efficient”⁶ means to deliver the incremental capacity or part thereof, 80% of the replaced investment costs are taken into the revenue driver. Such costs are subject to the Constraint Cost Management (CCM) Incentive, and NGG may also apply to have the CCM Incentive parameters adjusted, pursuant to their Licence⁷.

The investment-based element of the revenue driver is independent of the actual Capex costs, which may out-turn to be lower due to efficiencies or higher due to inefficiencies. The costs or benefits of these are shared with consumers through the Totex Incentive Mechanism (TIM).

We note that the investment cost determined by the revenue driver methodology (prior to the consideration of commercial options) is independent of the amount of investment assumed in calculating UC amounts.

⁶ The GRDM does not specify how NGG determine this

⁷ Special Condition 3B



3. PROPOSED RE-OPENER

The proposed re-opener is that NGG will need to apply for an adjustment to its allowed expenditure to fund network reinforcement required to release incremental capacity (entry or exit) that cannot be released via substitution. This will replace the current revenue driver mechanism.

The proposed re-opener requires NGG to provide a set of information to Ofgem in the formal application to increase the allowed revenue. As the consequence of approval of the application by Ofgem is to increase allowed revenue, the proposal requires that the formal application is submitted only after planning permission is granted for the investment⁸. A resultant approval will lead to a direction from Ofgem to deliver the specified projects, and to use a specified value within the TIM that drives additional allowed revenues. The proposed re-opener also requires that NGG provide notification of the intent to apply at least 12 months in advance of the application.

In this section we consider the possible impacts of the proposed re-opener and the interaction with elements of the existing arrangements.

3.1 Impact on other industry arrangements

3.1.1 Impact on PARCA

The proposed re-opener does not have a direct impact on the PARCA process. The PARCA process will provide a significant volume of the information required by an application under the proposed re-opener, which we detail in section 3.2 below.

3.1.2 Impact on ECRM and ExCRM

The proposed re-opener includes an obligation to release the associated capacity. As the current arrangements provide for the release of capacity there should be little, if any, direct impact on the ECRM and ExCRM.

3.1.3 CCM incentive

The GRDM considers that capacity may be delivered, in whole or in part, by commercial solutions if NGG wish to do so. In doing so, NGG receive a revenue driver at a lower rate than an investment-based solution.

In practical terms, the decision to investigate/progress an investment-based solution would be taken several years before any re-opener application. The decision to progress a purely commercial-based decision can be taken closer to the time of the application.

If a decision is taken to rely on a commercial solution, it is expected that this will increase the risk of increased constraint management costs. However,

⁸ If planning permission was not granted, the costs associated with developing the project that far are recoverable from the PARCA counterparty



understanding the level of future constraint risk or how it might be impacted by decisions to rely on commercial solutions is very challenging.

3.1.4 *Interaction with Enhanced Obligations*

Enhanced obligations (EOs) have been proposed in the Draft Determination as a replacement for the NTS Exit Capacity Incentive that applied to gas distribution networks (GDNs) in RIIIO-1. EOs have yet to be precisely defined. They are designed to encourage GDNs to make efficient bookings of NTS capacity products and Assured Offtake Pressures. As they provide the mechanism for ensuring that the bookings made by GDNs are efficient, the requirement for GDNs to provide UC to demonstrate efficiency may become obsolete. If UC for GDNs is removed from the relevant commercial arrangements (UNC, ExCRM, PARCA), then information regarding UC will not be available in a re-opener application for exit capacity.

3.2 Interaction with PARCA process

3.2.1 *Requirements of the PARCA process*

As the investment assumptions that drive UC in the PARCA process are independent of the revenue driver methodology, the proposed re-opener does not impose changes to the PARCA process. In other words, the current PARCA process operates independently of the GRDM and should therefore continue to operate independently of the re-opener.

3.2.2 *Requirements of the re-opener*

The requirements of the re-opener are set out in the draft Licence condition 3K, shown in Table 1 below. Our analysis suggests that most of the requirements can be met from the information created during the PARCA process. It is not clear that the requirement for "Evidence of long-term value for money for the Consumer (including Net Zero considerations)" will be fully met by the information produced under the PARCA process.



Table 1 – 3K needs case requirements

Licence condition 3K requirement	PARCA
Technical requirement and scope of proposed reinforcement	Phase 1
Evidence of options considered and preferred solution and justification	Phase 2 Schedule A
Evidence of stakeholder engagement	Phase 2 Schedule B, C, D
Evidence of long-term value for money for the Consumer (including Net Zero considerations)	Not met by PARCA information
Evidence of optimal timing of the reinforcement	Phase 2 Schedule E
Project timelines and the delivery strategy	Phase 2 Schedule E
The rationale and justification for why NGGT considers that firm capacity should be released	Phase 1
How NGGT has determined the amount of firm capacity that should be incremental obligated capacity	Phase 1
The relevant NTS Entry Point(s)	Phase 1
The volume of incremental obligated capacity that should be funded and any non-incremental capacity substituted	Phase 1
The volume of unsold non-incremental Obligated capacity that has been substituted	Phase 1
The starting month which the new incremental volume will be provided	Phase 2 Schedule E
The date in which NGGT's offer for sale the volume of incremental Obligated Capacity and the date in which the substitution of non-incremental capacity would cease	Phase 2 Schedule E
NOTE: AFRY has not confirmed these assumptions with NGG	



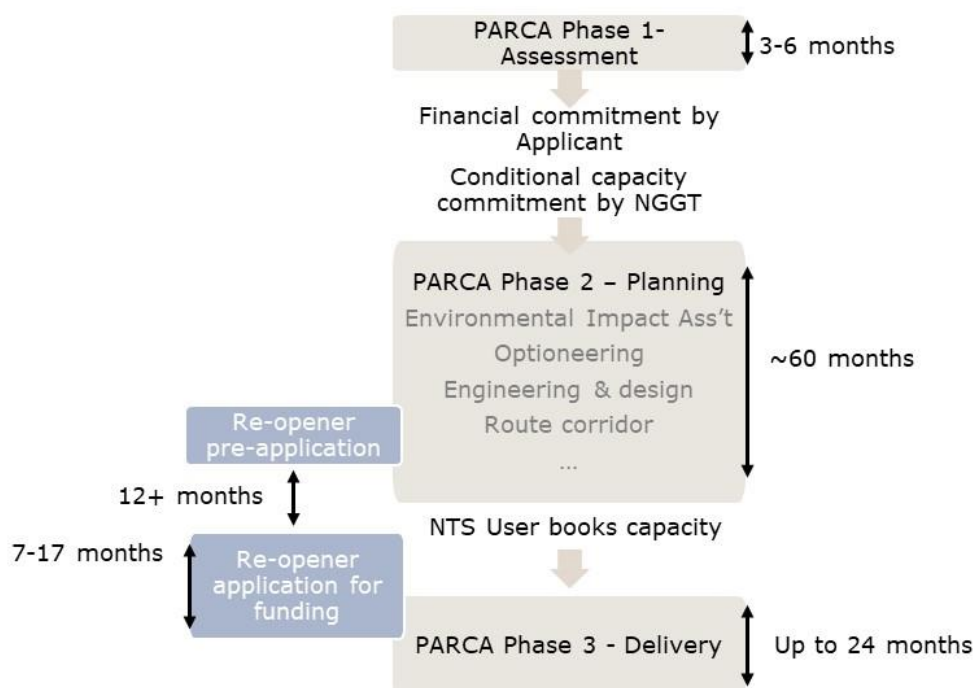
Table 2 – 3K assessment requirements

Licence condition 3K requirement	PARCA
A submission narrative	Phase 2 Schedule A may provide some of this information
Completed cost templates	Phase 2 is expected to produce this information
Technical summary	Phase 1 output report
Procurement processes followed & tenders	
Delivery strategy and risk management	Some of this information is produced within Phase 3
Role of 3rd parties in successfully delivering the project	
Associated evidence	
NOTE: AFRY has not confirmed these assumptions with NGG	

3.2.3 Timing

Our initial view is that the proposed re-opener timings are compatible with the PARCA process, however the formal re-opener application may be dependent on information produced in Phase 3 of the PARCA process and it is not clear from the available documentation when the information would be produced.

Figure 2 – Timing





3.3 Impact on stakeholders' risks

3.3.1 PARCA counterparties and NTS Users

As the PARCA process currently operates independently of the GRDM and is expected to operate independently of the re-opener, there are no direct impacts on the risks to a PARCA counterparty or the corresponding NTS User.

3.3.2 Consumers and NGG

3.3.2.1 Reduced risk of inaccurate allowance

The current arrangements lead to an identification of deemed costs from a generic process. Where the investment-related portion of these costs is different to the out-turn investment costs, the differences are shared with consumers via the TIM. So, whilst there are risks to consumers these risks are, to an extent, shared with NGG. However, there is no safeguard against a risk that the output level of reinforcement (distance of pipeline, power requirements for compression, etc.) identified by the GRDM is inefficient. It is also not clear from the published methodology how NGG would choose between physical investment or commercial solutions, nor what the actual costs of the commercial solutions would be.

Because the proposed re-opener arrangements work on a case-by-case basis, it seems likely that the difference between cost allowance and out-turn investment costs will be narrower, which lowers the associated risk to both consumers and NGG.

3.3.2.2 New risks arising from rejection

A new risk is introduced where Ofgem reject, in whole or in part, an application for funding by NGG. Assuming that NGG would continue to face the obligation to release the capacity the proposed re-opener may therefore increase NGG's risk.

Where NGG elect to provide the capacity with the proposed investment, the TIM would imply that they would be exposed to part of the difference between the allowance and the investment. Where NGG elect to invest only up to the level of the allowance by Ofgem, they would face an increase in their constraint cost management risk.

It is not clear why Ofgem would seek to reject an application either in whole or in part. We would expect that the reason for a rejection stems from Ofgem determining that the proposed investment imposes costs on consumers that do not deliver value. We note, however, that one intent of the UC arrangements is to mitigate such risks, by placing a suitable burden on the benefactor of the incremental capacity.

We see the risk of full rejection being low, but the main risk might be around a view on the appropriate balance of investment and commercial actions to meet the incremental capacity.



Where Ofgem direct delivery of the reinforcement but allow only a smaller level of capex, it might be relevant to reduce the associated UC levels if appropriate. However, as the UC levels remain reliant on an independent calculation and that level of UC is not a barrier to entry, modifying the UC amount merely shifts risks to consumers.

3.3.3 Ofgem

There is a risk that the information that is provided by NGG under the proposed reopener is insufficient for Ofgem to understand the wider impacts of rejection. For example constraint cost management risk could increase to the level of the cap on the CCM incentive, exposing consumers to the risk. This risk could be mitigated through requesting additional information from NGG.

3.4 Potential changes arising from identified risks

3.4.1 Modification of PARCA

Whilst the PARCA contract imposes a commercial commitment on NGG to release the capacity, it is not clear whether there is a licence requirement that also obliges the release of the capacity. Under the proposed licence drafting, the rejection of an application might present a situation where the release of the capacity is not obliged. Without a licence obligation to release, even in circumstances where there has been a partial rejection, NGG may seek to frustrate the release of capacity, for example by redefining the generic PARCA and/or renegotiating a specific PARCA. This may result in a barrier to entry.

We anticipate that this risk could be closed by including the obligation to release capacity within the re-opener. It might also be mitigated by ensuring that any investment cost to be borne by consumers is always adequately supported by UC.

3.4.2 Recovery of development costs

Rejection could also lead to NGG needing to write-off the corresponding development costs. The situation is not contemplated at the moment because revenues are automatic. This may drive NGG to also seek to mitigate this risk in the PARCA terms – in addition to frustrating the release of capacity – by seeking to recover such development costs from the party. Again, this might constitute a barrier to entry.

3.4.3 Recovery of inefficient costs from PARCA counterparty or NTS User

One intent of the PARCA is to allow a party to ensure that there is a capacity release, and that whatever the investment requirement associated with that is, the party is able to provide sufficient financial commitment to ensure that the investment is always deemed efficient. This is currently set at 50% of estimated investment costs. The risk associated with the uncertainty of the investment cost should perhaps be borne by the PARCA counterparty (NTS User), and not placed on consumers.



This would indicate a need to ensure that the level of UC is revised at the point at which Ofgem approve the application for incremental funding – when the investment costs are known. This may introduce timing issues as it is anticipated that the corresponding capacity is procured by an NTS User 24 months prior to being made available.

This risk could be mitigated by ensuring that the original UC amount is set at a level, perhaps higher than 50%, that ensures that they are >50% of actual investment costs.



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