



NGGT_Annex_ Output Delivery Incentives September 2020

As a part of the NGGT Draft Determination Response

nationalgrid

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Purpose

This annex is intended to support our response to Ofgem’s “RIIO-2 Draft Determinations – National Grid Gas Transmission Annex”, issued July 9th 2020, for the following incentives:

- Entry and Exit Capacity Constraint Management
- Quality of Demand Forecasting
- NTS Shrinkage
- Maintenance

Within this annex, we provide supporting data and expand on points made in our draft determination response where appropriate. We also highlight some factual inaccuracies and what we consider to be incorrect conclusions detailed within Ofgem’s RIIO-2 draft determinations and the accompanying AFRY annexes.

Context

Incentives are designed to replicate the effects of competition on our business and aim to maintain and improve our daily operational efficiency and the service we provide to our customers. During RIIO-1 the suite of incentives worked as intended and incentivised us to take the right actions to create consumer value. Over the last two years, we’ve engaged extensively with our stakeholders to review and develop a revised suite of incentives that are focussed on areas our stakeholders have told us they value most. Our proposed package of incentives for RIIO-2 is tougher, more reflective of the changing landscape we are operating within, yet still delivers the intended consumer value. However, Ofgem has significantly reduced the scope, value and targets of the previously mentioned proposed Output Delivery Incentives; effectively nullifying them. This is directly and demonstrably contrary to the views expressed by stakeholders. It also significantly underestimates the value of the gas transmission system and its operation to the effective and efficient functioning of the wholesale energy market.

In our December RIIO-2 Business Plan Output Delivery Incentives Annex A3.03 we stated that we believe a credible incentive should, as a minimum:

- Stretch performance from status quo and go beyond our business as usual obligations.
- Recognise the changing landscape in determining the scheme design and target performance.
- Focus on those areas that matter most to consumers and customers.
- Promote investment and innovation to unlock further consumer value.
- Unlock consumer value, both now and into the future (financial or otherwise).
- Have a clear data set that enables performance to be easily measured.
- Be supported by stakeholders and in line with stakeholder priorities.

Through our RIIO-2 stakeholder engagement activities these criteria were tested with and widely supported by our stakeholders.

We consider that Ofgem’s draft determination proposals for the **Entry and Exit Constraint Management, Quality of Demand Forecasting, NTS Shrinkage** and **Maintenance** incentives fail to meet the minimum criteria set out above. We have set out our high-level observations below on why we consider this to be the case.

Broadly, the reduced financial upside potential across the draft determination proposed incentives will fundamentally change the basis and balance of our decisions. We will be more likely to focus on meeting, rather than exceeding, our business as usual obligations and will be more likely to protect performance rather than improving performance for our stakeholders. This means we are less likely to **stretch performance from status quo and go beyond our business as usual obligations**

We are disappointed that in setting their proposed incentive schemes, Ofgem have largely focussed on historic incentive performance to determine the future schemes and have largely disregarded the fact that the future landscape is different. Doing this fails to **recognise the changing landscape in determining the scheme design and target performance** and is likely to mean performance levels for the incentive schemes decline from RIIO-1 levels, eroding the consumer value built up over the RIIO-1 period. We firmly believe we will need to “run to stand still” in the RIIO-2 period given the significant challenges we articulated in our business plan proposals, bilateral discussions with Ofgem and through the supplementary question process.

We agree that Ofgem’s proposed incentive areas do **focus on those areas that matter most to consumers and customers**, however the design of the schemes means that, compared to RIIO-1, our focus is likely to reduce on those areas that, in proposing incentives, Ofgem agree matter most to consumers and customers.

The reduced financial upside potential across the proposed incentive portfolio stifles innovation and investment and therefore fails to **promote investment and innovation** and fails to **unlock consumer value, both now and into the future (financial or otherwise)** at a time where this is arguably more important than ever.

Ofgem set out within their Sector Specific Methodology Decision that they expected the RIIO-2 business plans submitted by network companies to “be underpinned by robust and high-quality engagement with stakeholders”¹. In developing our business plan proposals, we ensured our stakeholders opinions were central to the position we developed and consistent with the stakeholder led RIIO-2 approach Ofgem endorsed². We consulted with and listened to our stakeholders and accordingly made changes to our proposals **supported by stakeholders and in line with stakeholder priorities**. Ofgem’s draft determination proposals are, in several areas, significantly different to our business plan proposals and appear to disregard the supportive stakeholder views we received and included in our business plan and appears at odds with the RIIO-2 process and principles as set out by Ofgem.

¹ https://www.ofgem.gov.uk/system/files/docs/2019/10/riio-2_business_plans_guidance_october_2019.pdf

² https://www.ofgem.gov.uk/system/files/docs/2018/07/riio-2_july_decision_document_final_300718.pdf

Entry and Exit Capacity Constraint Management (CCM)

NGGTQ4: Do you agree with our proposals for the CCM incentive?

As detailed in our draft determination response, we strongly disagree with Ofgem's CCM proposal. We are extremely concerned that the draft determination proposal:

- Places significant emphasis on history and incorrectly assumes that our RIIO-1 incentive performance is a good approximation of the future risk we will manage. In adopting this simplistic approach, Ofgem have failed to recognise that the CCM incentive in RIIO-1 has successfully incentivised us to take the actions necessary to mitigate constraints on the NTS.
- Places significant weight on the flawed AFRY review of network capability which incorrectly concludes we have understated the capability of our network and therefore overstated constraint risk (please refer to the Network Capability annex for further detail).
- Means we (and by extension, the consumer) are more likely to incur constraint costs and less likely to take on risk in releasing capacity to the market.
- Fails to recognise the historic "deep" nature of the incentive and the decisions this has led to, given that levels of constraint are impacted by asset reliability and availability.
- Dismisses the inherent level of risk required to be managed due to the top down and non-seasonal nature of the capacity regime.
- Does not appear to have factored the draft determination for GT asset plans into the CCM proposals (and vice versa).
- Does not appear to have considered the views of stakeholders who have told us that they want us to minimise any disruption to their ability to flow gas onto and off the network.

We have further expanded on these points and highlighted additional points and clarifications below.

The CCM incentive is integral to the GB regime

In our Business Plan Output Delivery Incentives Annex A3.03, we said that we believe that the CM incentive scheme is integral to the GB access regime, inherent to both investment, operational activity and associated risk management. The current capacity regime is "top down" meaning we oversell capacity (double peak day demand) beyond expected levels of network capability on a day to day basis. This has an inherent risk associated to it for us to manage on behalf of customers and stakeholders and for which the scheme should continue to recognise.

In footnote 24 of the draft determination document, Ofgem state that "In reality, NGGT is unlikely going to have to comply with this obligation as demand never reaches such high levels." and as such appears to dismiss our belief that the scheme should recognise the inherent risk of selling capacity beyond levels of network capability on a day to day basis. Ofgem's simplistic conclusion disregards the diverse and nodal nature of both the capacity regime and the network we operate and manage. This appears to contradict the acknowledgement that capability changes as demand and supply changes, meaning there is an inherent risk that needs to be continuously managed at all demand levels.

In reaching their conclusions, Ofgem have ignored that we are obliged to make capacity available at double peak demand levels for 365 days a year. During RIIO-1 we have seen numerous points on the network flowing at, or close to, the obligated levels on both an end of day and instantaneous flow basis. By way of example, the graphs below show the end of day flows versus the capacity obligation for two different Entry points, using the regulatory period 2019/20 as a sample period:

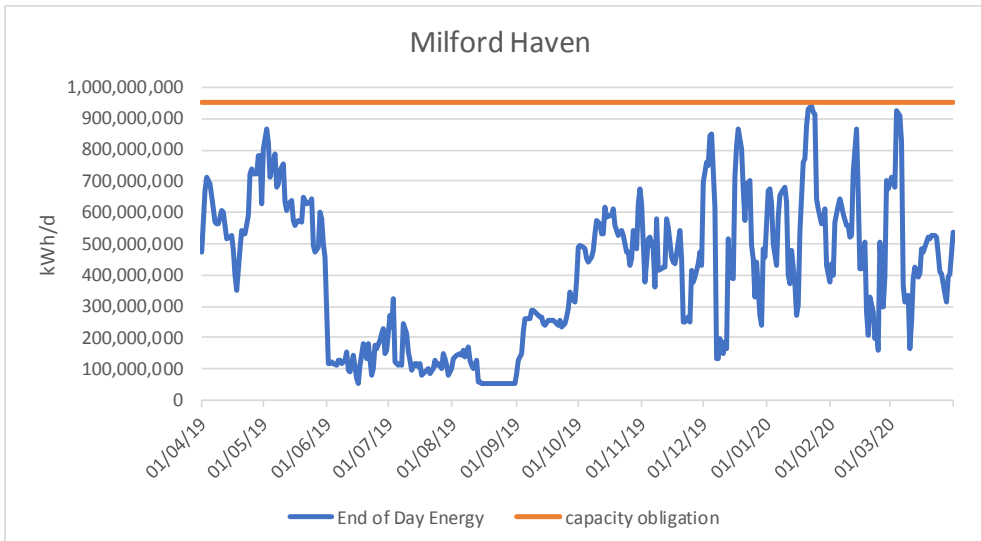


Figure 1: Milford Haven End of Day flows Vs Capacity obligation

This shows that Milford haven flows have been at or close to obligated levels on several occasions throughout the year, even though demand itself was not at peak level at any time during the sample period, resulting in inherent risk needing to be managed.

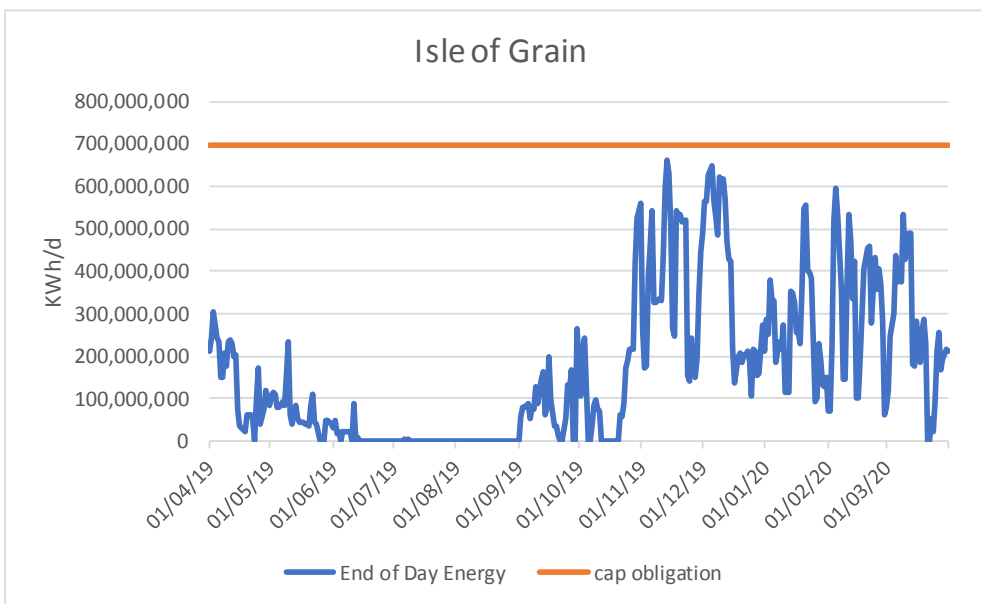


Figure 2: Isle of Grain End of Day flows Vs Capacity obligation

For Isle of Grain we saw more typical seasonal behavior, where flows approached obligated levels on several occasions, despite the 2019/20 Winter being wet and mild, again resulting in the need for inherent risk to be managed.

Our customers can book up to obligated levels every day of the year and therefore are able to book capacity at levels over and above the capability in that part of the network, given that the capability of the network varies on a day to day basis and therefore differs to our capacity obligated levels, which remain flat.

To illustrate this point further, the graph below shows flows at Milford Haven since October 2019 versus our forecast Milford Haven capability and illustrates that flows at a single entry point can often be near to, or indeed exceed, the capability in that part of the network. Further, this diagram illustrates that flows from Milford Haven are typically agnostic of season:

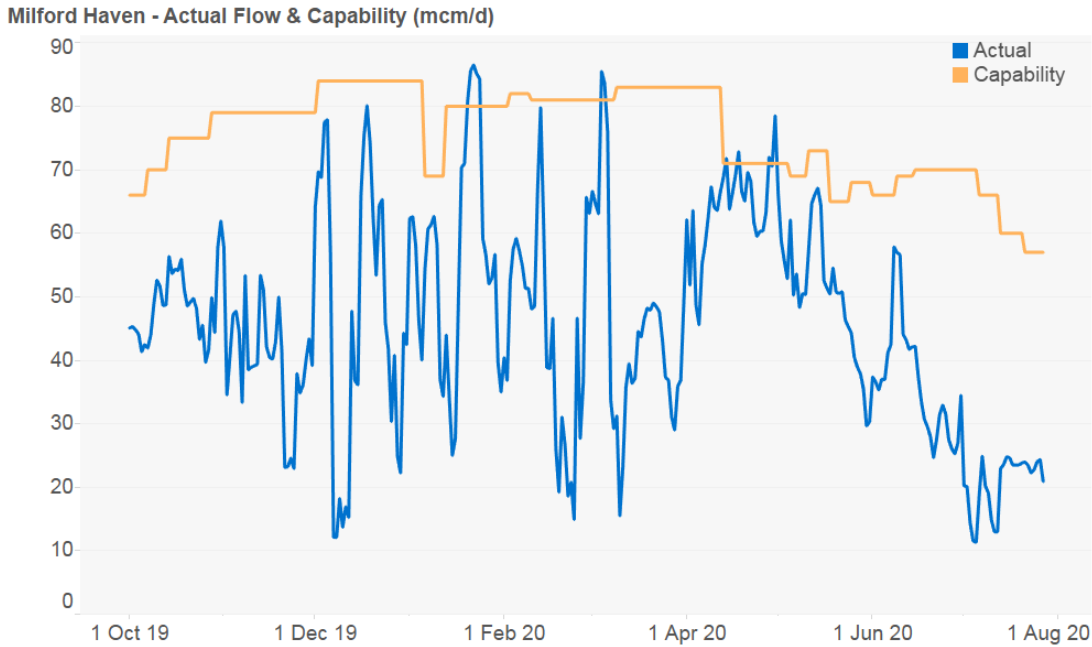


Figure 3: Milford Haven flow Vs Capability

We therefore consider it to be inevitable that we will need to continue managing the inherent risk resulting from the top down, non-seasonal and nodal access regime and that the RIIO-2 CCM scheme must recognise this.

CCM Consumer value

Appendix 4 of our business plan annex A3.03 included costs incurred outside of the CCM incentive itself and these were used to inform the consumer value of the scheme. We are disappointed in Ofgem’s conclusions that we have not demonstrated a clear consumer value case for RIIO-1 or RIIO-2. It appears to us that, according to Ofgem’s apparent logic, the only way to demonstrate / prove the value of the scheme is for the risk to not be managed effectively and costs to be incurred, which in itself would be to the detriment of both customers and consumers.

AFRY’s conclusions on the consumer value case articulated in our business plan centre on the fact that assumptions have been made on the costs and frequency of constraint management actions in the absence of an incentive. Whilst we agree assumptions have had to be made, we fail to see how we, or indeed any party, can articulate the consumer value of the scheme without making such assumptions. Whilst we don’t believe it would be prudent to restate the consumer value analysis conducted here, we do continue to believe the assumptions we have used are based on robust logic, that they are entirely reasonable and could still be viewed as conservative.

Notwithstanding the above, in our draft determination response we provided an example where, during April and May this year, 40% of GB’s demand was met through Milford Haven.

[REDACTED]. In our business plan, we recognised the need to be more transparent on the costs incurred outside of the CCM scheme itself to manage constraints as we believe that further transparency in this area will be beneficial to inform future decisions, and improve the articulation of the value of the scheme to our stakeholders and the effort we denote to minimise constraint risk. We have already begun a pilot of a new process to ensure such costs are captured across the business at the right level of granularity.

[REDACTED]

[REDACTED]

[REDACTED]

Draft determination proposed CCM target

We are deeply concerned that the AFRY critique of our proposed CCM target is demonstrably flawed and, in places, factually incorrect. We therefore strongly disagree that such a flawed critique has been used by Ofgem to dismiss our proposed target and the rationale underpinning it.

AFRY state in their annex that *“The forecasted CCM incentive cost target is based on assumptions which do not reflect typical operating conditions and therefore overestimate the number and magnitude of constraints as well as the associated costs.”*

We are very concerned that AFRY have provided no clear evidence to substantiate such a statement, given its importance and implication. It is not clear to us what AFRY are basing this assessment on, what AFRY consider typical operating conditions to be or why they consider that our proposed target was based on assumptions that do not reflect typical operating conditions. No explanation is offered to substantiate this position, and no further explanation has been forthcoming via bilateral discussions with Ofgem on the matter. Conversely, our proposed target is based upon an extremely thorough and repeatable risk analysis of many thousands of plausible supply and demand FES based scenarios. In addition, we also incorporated recently seen “typical” Milford Haven supply scenarios into this analysis. To ensure the less likely and highest cost scenarios were not given undue weight, we then effectively normalised the outputs by averaging out the risk outputs.

We remain convinced that our proposed cost target is robust, based upon typical operating conditions, recognising that typical historic operating conditions are likely to be very different to typical future operating conditions and reflective of the risk we expect to manage in RIIO-2. Moreover, we continue to believe our proposed cost target underestimates the risk we expect to manage due to, for example, the inclusion of our assumptions of BAU managed risk, which has resulted in us removing on average £23.6m cost allowance per annum from the modelled target. We also clearly stated in our business plan proposal that we discounted data sets that are not deemed credible through operational challenge and review.

We disagree with AFRY that BAU should be based upon historic costs incurred through the scheme as this fails to recognise the purpose of the incentive itself to minimise these costs. For this reason, we proposed using number of scalebacks and operational experience at Milford Haven specifically, as an approximation of constraint days compared to our RIIO-1 forecast.

AFRY state that *“the ~12 events forecasts at the start of RIIO-1 lead to direct costs, whereas the ~4 historical events have not triggered constraint costs. In fact, to date, there have been precisely two historical events consistent with the type of events in the forecast number which, assuming the rest of the methodology is sound, suggests the 67% reduction should actually be a 84% reduction.”*. We again consider that this logic fails to recognise that a purpose of the incentive is to minimise costs. As stressed in our business plan proposal we used scale back events as they are the first commercial tool we utilise to manage constraints and are quantifiable and tangible as commercial actions taken during the RIIO-1 period. We disagree with AFRY’s assertion that the ~12 events forecasts for RIIO-1 would lead to direct costs, rather they illustrated the cost risk we expected to face under the RIIO-1 period.

AFRY conclude that *“alongside the FES-based scenarios, the underlying supply/demand scenarios that feed the calculation of raw constraint costs already include historical information. Therefore, applying an additional adjustment based on holistic observation may possibly lead to a double-counting of historical information, increasing the inaccuracy of the proposed target.”*. This conclusion is wrong. We’d like it noted that there is no double counting of historic information. Our business plan was clear and explicit that our Monte Carlo analysis would select single scenarios for each run and hence double counting simply is not possible. When generating constraint forecasts, the model performs its Monte Carlo analysis and picks the independent scenarios with an 8/10 chance of selecting from the FES data, a 1/10 chance of selecting from the Historic flows and a 1/10 chance of selecting from the Uniform Distribution.

For South Wales risk specifically, AFRY make several observations that we'd like to clarify and expand on. We note that AFRY conclude that "a 4 mcm/d increase in capability applied before the forecast of the number of constraint events (i.e. within the Network Capability process) would not only have a very significant impact on the number of events forecast, but we would also expect this to reduce the average magnitude of each event." Critically and disappointingly AFRY do not substantiate how or why this conclusion has been reached.

AFRY go on to state "We also do not understand why the 4 mcm/d-based reduction should only be applied to the uniform distribution case." We were clear in our business plan that the Uniform distribution was unique to South Wales but only contributed 1/10th of the scenarios applied to establish the South Wales risk. The FES and historic scenarios were not unique to South Wales and encompassed all points on the network, therefore we took a whole system approach to reduce the cost target and reduced the cost associated to that proportion of our risk output by 67%. To apply a 4 mcm/d reduction in addition to the 67% reduction would not be appropriate or practical and potentially would double count risk reduction. In response to AFRY's observations, we have conducted further analysis and increased capability in our modelling by 5% across all boundaries to show the difference this makes to the original South Wales risk output (i.e. prior to reducing the outputs for the purposes of our business plan proposed scheme target). The results of this are shown below:



This shows that increasing capability across the network by 5% brings the average cost risk down by ~£2.3m per annum compared to a reduction of ~£10.6m per annum for the SW in our business plan proposal and demonstrates that:

- A 5% increase in capability across the network has a limited impact on the forecast constraint risk to be managed.
- Applying AFRY's logic to increase capability before the forecast number of constraint events would result in a scheme target significantly higher than that proposed in our business plan.

CCM re-opener

Ofgem state that "The scheme is designed to run for the full period of the price control and we do not believe that there is justification for a re-opener." We are disappointed that Ofgem have not included detail on why they consider there is no justification for a re-opener to review the scheme if the annual cap or collar of the scheme is breached. We do note that AFRY state that a re-opener would lead to an additional reduction in risk to us. However, we fail to see how this conclusion has been made; a re-opener would give rise to a review which could result in the scheme parameters being increased, decreased or remaining as-is.

AFRY also state that there is no identification of the elements and/or events that may trigger a re-opening of the scheme. We were clear in our business plan proposal that there could be many reasons, including

potential unforeseen events, which could lead to the scheme cap or collar being breached. As such, we didn't believe it was appropriate to explicitly detail each possible reason, we instead proposed that the trigger for a scheme review would be a cap or collar breach and the reasons for the cap and collar breach would form part of the dialogue with Ofgem to establish the scope of the review, or not as the case may be.

Removal of entry overruns

If a Shipper's flow exceeds their entry capacity entitlements for any given gas day, they will incur entry overrun charges. The overrun charge is the Shipper's financial incentive to buy all the capacity that it needs. Under the current incentive scheme, 55.64% of revenue is returned to Shippers because of the scheme sharing factor.

Ofgem propose entry overruns are removed as a revenue component of the CCM scheme as this "*rewards NGGT for events not under its control*" and because "*NGGT should not be financially rewarded for shippers' errors*". We disagree with the removal of entry overruns as a revenue component of the scheme and the rationale underpinning the proposed removal. Whilst we accept that we have limited control over the revenue generated from entry overruns, we are able to reject energy nominations and notifications if they are above capacity bookings. The original inclusion of entry overruns into the scheme was based upon the fact that gas flows in excess of capacity bookings presents additional risk for us to manage. This, as far as we are aware, was never underpinned by an assumption that we have control over the level of overruns.

The removal of entry overrun revenues can weaken or even remove the incentive on Shippers to book Entry capacity because all revenue from entry overruns would be returned in entirety to Shippers, as opposed to the current arrangements where 55.64% is returned via the incentive scheme sharing factor. On a point of principle, this means in the unlikely event that all Shippers overrun, then they will all be credited back in their entirety any overrun charges, effectively removing the financial incentive to book entry capacity.

Ofgem state that analysis shows the revenues from entry overruns appears to result from Shipper errors. We have not been party to this analysis, so cannot comment on its validity, however we consider it highly unlikely that all entry overruns directly result from Shipper errors. Whilst we accept that being financially rewarded for Shipper errors is not ideal, that is the nature of the regime. Regardless of whether overrun revenues are removed from the incentive scheme, if an overrun results from a Shipper error, the resulting overrun charge is being credited back to a party (i.e. Shippers and/or ourselves). Furthermore, we don't consider revenues received from Entry overruns as reward, given that the entry overrun revenue effectively replaces revenue foregone for capacity that hasn't, but should have, been booked. The removal of entry overruns from the scheme also means that any revenues generated from entry overruns would no longer offset the costs of any constraints.

We believe it to be misleading for AFRY to critique our RIIO-1 business plan rationale for inclusion of entry overruns; the current document under review is the Business Plan for RIIO-2 and makes no reference to this rationale. Furthermore, it is not clear to us what has changed between our RIIO-1 business plan, where the arguments for inclusion of entry overruns were accepted, and RIIO-2 where Ofgem are now proposing their removal.

Finally, both the AFRY Constraint Management annex and Ofgem's draft determination suggest that we could seek to maximise the revenue from overruns to offset the cost of constraints. We fundamentally disagree with this principle on an ethical basis and would like it noted that we have not and would not seek to deliberately maximise overrun revenues.

AFRY annex - further points of clarification

We have noted some factual inaccuracies and further points of clarification with regards to the AFRY annex, please find these below.

“NGGT consistently and overwhelmingly outperforms: in each year, the performance measure exceeds the target by over £28m.”

We'd like to point out that our incentive performance under RIIO-1 to date has only been around 54% of the maximum reward attainable through the CCM scheme. When subject to the sharing factor, this has resulted in £99m being returned to customers to date.

“The proposal includes a revised target based on the forecasted costs of network constraints”

We'd like to clarify that the target we proposed is based upon the forecast cost risk we expect to manage, not the forecast costs we expect to incur. We also removed forecast revenues from the target, based upon the average annual revenues we saw through the scheme in RIIO-1, excluding some outliers.

“Constraint avoidance costs The treatment of these costs – i.e. whether they have been otherwise recovered from consumers through Totex allowances – is also not clear.”

We can confirm the costs quoted in the AFRY report are logged against the Totex allowances and therefore subject to the Totex sharing factor.

“significantly lowering the sharing factor proposed by NGGT would reduce the risks of NGGT receiving windfall gains whilst maintaining an incentive on CCM”.

We disagree with this statement, we believe the level of the scheme cap is more appropriate to guard against windfall gains. The sharing factor is more appropriate to ensure the right balance of risk and reward between ourselves and our customers.

“While the proposed RIIO-2 scheme retains the cap and collar structure as a means of risk management, the proposed collar limit has been significantly reduced, so we would expect a material reduction in the associated risk. The reduction is not presented in the proposed scheme's description.”

We proposed a symmetrical scheme to help ensure balanced focus on risk and reward. We set both the reduced cap and collar at levels we believe are possible, but unlikely to be reached. We don't consider it appropriate to proportionally alter scheme collars dependant on the level of risk and doing such could have significant implications. Further, reducing the collar as proposed by Ofgem does not reduce the risk, instead it simply reduces our exposure to that risk, with the balance moving to the consumer.

“NGGT appear also to have significant concerns with the raw forecasts produced because of the two reductions to the raw forecast costs”

We'd like to make it clear that we do not have concerns with the raw forecasts which we believe is a robust representation of the risk we expect to manage in RIIO-2. We applied reductions as we believe it is appropriate to stretch performance and apply learnings from the previous price control period of the level of risk we managed without the need for commercial action. This is entirely consistent with the principles we have adopted in the design of all proposed RIIO-2 ODIs, whereby the targets proposed ensure we must go beyond business as usual to generate reward.

Maintenance

NGGTQ3: Do you agree with our proposals for the Maintenance incentive?

Whilst we are pleased that Ofgem have agreed with our proposal to widen the scope of maintenance activities under the Maintenance incentive scheme; we are very disappointed in their suggestion to include this in a downside-only incentive. Our stance remains that this should be a symmetrical financial incentive as we continue to deliver performance above and beyond our basic UNC requirements and enter a more challenging time in the Energy sector.

The following provides further detail to support our response.

Future Challenge

Ofgem concluded that we would outperform the target proposed in our Business Plan if this was applied to the RIIO-1 Maintenance plan. Whilst this may be true from the analysis performed, it is not appropriate to use this as validation for designing this future-looking scheme.

The RIIO-2 period presents an expected increase in network activity which will need to be delivered against an increasingly challenging environment; our aging assets will need to be maintained during a time of increased volatility on the network as supply and demand profiles continue in their unpredictable nature (we highlighted this in our response to NGGT_SQ_POL_20). The complexities of running the network are ever changing. Traditionally, and for most of RIIO-1;

- The network operated a North-to-South transmission
- There were steady supplies of Liquefied Natural Gas (LNG) at various points in the year
- Power Station demand remained predictable, with low levels of renewable energy

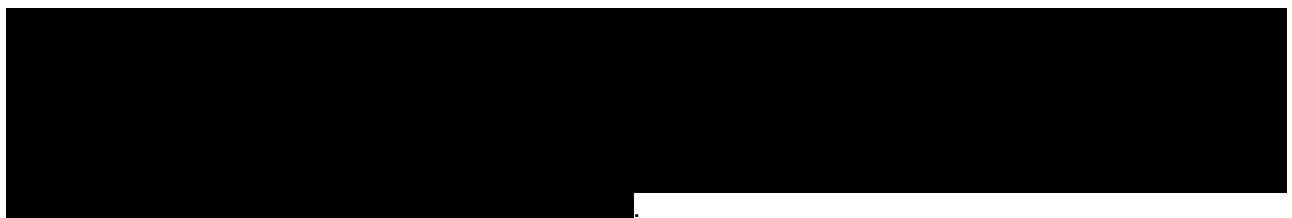
As we enter RIIO-2, this is changing;

- Northern supplies are reducing as LNG becomes a larger player the GB supply picture; this presents a dynamic backdrop that is based on the global markets.
- Renewables have increased their generation capability and with it introduced significantly more demand uncertainty; renewable power generation is much more intermittent due to the weather. This is a significant issue during the heavily loaded summer maintenance period when power generation makes up a greater proportion of gas demand.

We confirmed in NGGT_SQ_POL_20 our prediction that the volume of work with the potential to require a maintenance day was 2-3 times the (annual) volume (in costs terms) when compared to RIIO-1. A prime example of this increased workload relates to CIP (Close Intervention Protection) digs; there were 14 CIPS digs in RIIO-1, which compares to 318 funding-approved (out of 429 requested) CIP (Close Intervention Protection) digs for RIIO-2. On top of this number, Ofgem has also already approved funding for our proposed 195 ILI (In-Line-Inspection) digs. Overall, more work (in particular these very network-intrusive activities), means more challenge to align different parties' requirements alongside our own resource and contractor requirements.

Stakeholder value and impact

Despite this challenging backdrop, we will strive to continue to accommodate consumer's requests and deliver customer commitments, whilst also balancing our own portfolio of essential works. We have done this in the past and will continue to do so but we need the support from Ofgem to be able to deliver this to a high-standard and balance the risk to us.



Further to our own maintenance, it is prudent to expect more consumer requests for maintenance alignment over the RIIO-2 period as maintenance is fulfilled on their existing assets, and requests for new connections

increase as the energy industry further evolves. In 2019 alone, 20 Remote Valve Operations (RVOs) were moved or cancelled, 12 In-Line-Inspections days were moved or cancelled, and 12 days related to other work were moved.

We've listened to our Stakeholders

Based upon consumer feedback, we added a new element to the incentive scheme proposal to include non-RVO maintenance at NTS exit points. We are committing ourselves to driving the right behaviours in both efficient planning and customer satisfaction, whilst also meeting safety and reliability standards and other customer requirements for connections and diversions.

We know that this is what our customers want. The following insight was gained from customers during the Shallow Incentive Review in 2017.

When asked "National Grid is currently incentivised to reduce the number of RVO maintenance days submitted to customers every year by Ofgem. Would you like to see this incentive expanded to include all maintenance days, and why?" the response was "**Yes, because it will further minimise impact**"

- Centrica, Stallingborough Power Station, 2017

"We are **delighted** that you are considering **more maintenance activities** under the umbrella of the incentive, **we have wanted this for a while**". - Energy UK, 2017

Whilst it is good that Ofgem recognise the importance of this to customers, it is not appropriate for this now to be an additional element of a penalty-only scheme; we've widened our remit of works but for no reward opportunity. As we have already portrayed above, the industry greatly benefits from the successful planning of activities on the network; changes to the maintenance plan have the potential to cost customers hundreds of thousands of pounds in lost revenue dependent on their business type and their commercial arrangements. As part of the Shallow Review proposal in 2017, we estimated that the value provided to power stations alone being able to operate when they would have been called off was ~£1.4m³.

Consultation Position on scheme parameters

Ofgem have accepted the proposed scheme targets and collars based upon the evidence provided but, of a somewhat contradictory nature, suggested that there was not enough information to justify a reward-based scheme. In addition to this point, in principle, we do not think it is appropriate to have an asymmetric incentive; having an upside will promote the right behaviour and allow us to make the right choice for our consumers. It would encourage equal focus on risk and reward.

Ofgem acknowledge that it is good to increase the scope of the work but believe that there is only a small room for improvement relating to ILI jobs, and as these are only a small proportion in relation to the 'non-RVO' works overall, they do not justify a financial reward. We do not believe this to be true and would like to highlight that ILI and CIP digs are amongst the most network-impacting jobs as they can require isolating parts of the network.

It was also highlighted that we have continued to perform throughout RIIO-1 despite the number of activities increasing and it was suggested that we would continue to outperform for the 'Days' part of the scheme. We have reiterated above the expected increase in NTS outage access that will be required during RIIO-2, and the consequential risk of limited flexibility to move non-customer impacting works as the network becomes more congested. Last year, we had to cancel 6 days which were aligned to one outage alone; we really are only ever, on average, 2 outages away from negative performance against the incentive.

³ Figure calculated by determining revenue generation per MW; taking into account gas, electricity and carbon price, additionally it is in line with what power stations state they generate

It was also suggested that there is no supporting evidence for stretch beyond business as usual activities for the 'Changes' element. We do go above and beyond our contractual obligations. An example of this is our recent support to ██████████ in fulfilling ILI Dig works on ██████████. The planned ILI Dig work isolated both customers for several weeks, which we had agreed and aligned with ██████████. Subsequently the isolation window needed to be moved to allow ██████████ to carry out their own maintenance, which we managed to accommodate by ongoing liaison with both parties, at much inconvenience to our own operation. The 'change' element was a key driver in ensuring we didn't simply cancel these works but worked with our customers to re-plan the ILI digs to another window within their advised outage periods.

There are real risks associated with the incentive. AFRY concluded that *"in the last three years of data, NGGT still had room for worsening performance of between 3 and 10 additional change days before affecting the maximum incentive payment"*. To counter this argument, we want to highlight that we routinely have work which is ten days or more of customer impacting work. A single change to one of these complex jobs could result in poor performance for the incentive. As an example, in 2017 there were 11 jobs that had 10 or more maintenance days/advice notice days.

A further example to add to this, in 2019, an ILI job was cancelled due to a Pig Trap PSSR (Pressure Systems Safety Regulations) failure. Prior to this event, we were on track to perform well under the incentive (£500,000 revenue). However, this single event resulted in the incentive performance dropping significantly to £298,000. Again, this highlights the precarious nature of the scheme penalty system and the very real level of risk that we manage.

Regarding the penal-only scheme, we believe that we will need a greater level of investment to deliver good performance during RIIO-2 but if we have a zero upside, it means that we are more likely to;

- Protect incentive performance rather than improve incentive performance – changes the trade-off / balance between maintenance costs vs customer impact.
- Changes cost trade-offs between our activities and therefore could impact alignment with customers focus on minimising our costs rather than alignment with customers
- Use more maintenance days.

This will all impact the benefit currently received by the customer and the industry as we have already emphasised above.

Incentives by their nature provide a shift in focus for the business towards the desired goal, rewarding innovation in process, technology or behaviour and penalising poor performance (as provided in NGGT _SQ_POL_26). Fundamentally, it is important to recognise proactive good performance that has been achieved; being rewarded for these initiatives with a financial opportunity enables the regulatory regime to drive strong performance. Therefore, a financial upside should be upheld.

Current level of performance is 'Business as Usual'

We have clearly demonstrated what can be achieved with the right focus; our strong customer engagement work has achieved outputs that have been valued by our customers. However, we need to retain this high level of focus to maintain these levels of performance in an increasingly challenging backdrop. There is a very real risk that our levels of performance could decrease; to avoid this, we will need to continue to enhance our processes and maintain high levels of customer engagement.

Under Section L of the UNC, we are required to publish our maintenance programme twice a year. Whilst there is an argument that we are simply delivering our obligations, we uphold our stance that what we deliver is above and beyond this and the value we create for our customers is paramount. We have articulated this both through our Business Plan submission and the information provided in this response.

Quality of Demand Forecasting

NGGTQ2: Do you agree with our proposals for the Quality of Demand Forecasting incentive?

As detailed in our draft determination response, we disagree with Ofgem's proposals for the Quality of Demand Forecasting incentive. Ofgem's calibration of the scheme means that it is too small to warrant further investment to improve D-1 forecast accuracy and removing a financial incentive for the D-2 to D-5 scheme means it is more likely that forecasting accuracy will deteriorate. A more challenging/dynamic use of the network, alongside greater supply and demand volatility increases the challenges to accurate forecasting and investment levels just to stand still. We believe the outcome will be a focus on maintaining D-1 forecast accuracy, rather than seeking to improve D-1 and D-2 to D-5 forecast accuracy.

We have no additional points to make in this annex from those provided in our draft determination response. However, in our draft determination response we stated that we would provide further visual representations on annual Mean Absolute Error (MAE) against the annual average demand volatility (day to day demand change). Using available daily data between calendar years 2011 and 2019, these can be found below and clearly show how the forecast error for each demand sector increases as demand volatility increases:

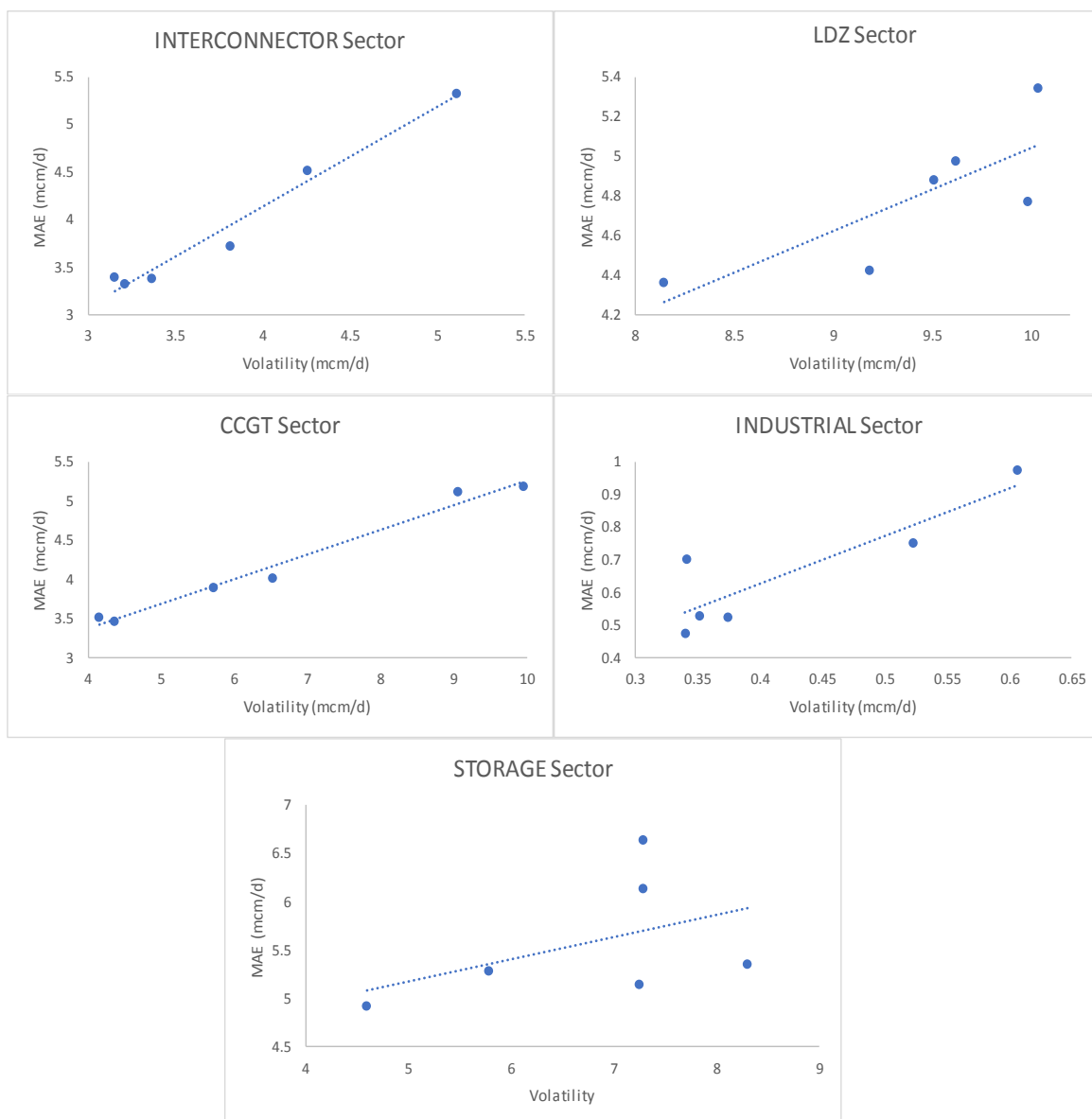


Figure 4: Demand forecast error by sector vs volatility

NTS Shrinkage

NGGTQ7: Do you agree with our proposals for the Shrinkage incentive?

Ofgem have proposed the removal of a financial incentive for NTS Shrinkage to be replaced by a reputational incentive for the energy procurement part of the scheme, with a Licence obligation for reporting the costs of procured energy compared to 'perfect foresight' and 'pure on the day' purchases scenarios, and additional Licence obligations to investigate the causes of UAG and CVS.

As detailed in our draft determination response, we disagree with this draft determination proposal and the rationale underpinning it; the purpose of our proposed NTS Shrinkage incentive is to minimise the price risk and overall cost of shrinkage through efficient system operation and energy procurement. Without a financial incentive, the provision of shrinkage is more likely to become process driven and would alter the balance of risk as we become less focused on cost targets. This carries inherent risk of increased consumer costs and as a reputational only incentive does not provide focus in the areas described.

Ofgem have concluded that buying gas through the Forward markets has in fact cost the consumer more over the RIIO-1 period than buying gas through the Prompt markets or leaving to cash out. Whilst this may be true, at a principle level we believe that this is the wrong approach to take; it creates risk to the consumer who for any exceptional event would then be exposed to disproportionately high daily shrinkage costs. Without a financial incentive, the provision of shrinkage is more likely to become process driven and would alter the balance of risk as we become less focused on cost targets. This carries inherent risk of increased consumer costs and as a reputational only incentive does not provide focus in the areas described.

We have expanded on some of the points detailed in our draft determination response and highlighted some factual inaccuracies contained with the draft determination and accompanying annex. These can be found below.

Consumer value

We know that this incentive is important to our consumers and stakeholders. In our Business Plan, we conveyed the direct impact of our performance to NTS Users through recovery of costs via the Commodity Charge, the consequential impact to customer charges and ultimately the impact to consumer bills. Our decisions and actions in procuring energy is important; we strive to buy energy below the target price, are energy efficient and aim to keep costs such as TNUoS to a minimum.

We continually review and adapt our trading strategies and we manage the risk of market price volatility and uncertainty; this provides a level of price protection, including against short term price spikes resulting from difficult market conditions. Ofgem have acknowledged this in their draft determinations document but have focused on their analysis that suggests "*consumers would have been better off had NGGT procured NTS Shrinkage gas on the day (i.e. cash-out value)*". Whilst this may be true of the RIIO-1 period in hindsight, we believe that the trading strategy we adopt is in the best interest of the consumer in terms of avoiding risk and therefore removing a financial incentive on the basis that the on the day market has outperformed the forwards market is of a concern.

The number of exceptional events during RIIO-1 was low, but that shouldn't be indicative of the potential future risk that could materialise during RIIO-2. We have also seen examples where this isn't true, namely in years where the market is rising such as 2016/17 where our gas procurement cost was £49.7m against a SAP cost of £52m and a cash out cost of £54m.

Market prices are currently at historic low levels, so there is strong potential for upward pressure on gas market prices and rising market conditions, leading to the potential for forward trading to be more economical than leaving to prompt procurement. This is illustrated below:

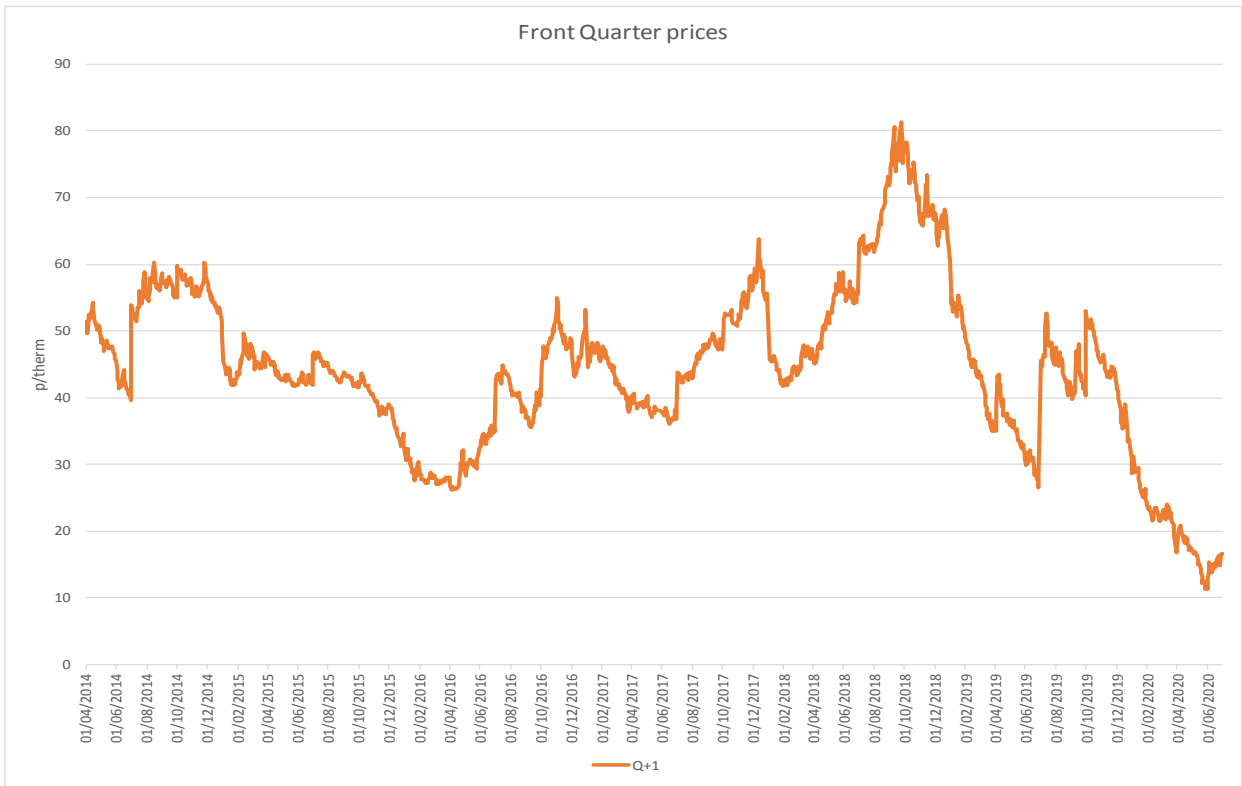


Figure 5: Front quarter gas prices

This is the historical view (since 2008 to current) of front quarter forward gas prices and shows that front quarter gas prices are currently at historic lows, with most historic forward quarter prices being above the current price.



Figure 6: NBP day ahead gas prices

A similar pattern can be seen for NBP gas day ahead prices where prompt gas prices are also at historical lows. At no point in the last 12 years have we seen day ahead gas prices at such low levels.

The difference between gas and electricity trading

Ofgem’s rationale for removing the financial incentive is that prompt or leaving to cash-out has largely outperformed the shrinkage target. This could be inferred that our Shrinkage trading strategy should become more focussed on Prompt. However, there are key reasons why we source gas and electricity products in the way that we currently do.

Electricity

To run electric compressors, we need electricity to be supplied to us, like any large industrial user. We have a contract with an external company to do this. We cannot trade directly on the market because we are not a Supplier, so we instead trade through that company.

For electricity purchases, we can only trade forward contracts. We do not know when the VSDs will be used for operational requirements, and hence we would be unable to trade electricity on the day.

In practice, under the current incentive, we only trade forward for quarters. We do not trade Prompt

_____ and this means that the impact of cashing out on incentive performance is relatively small.

It is therefore not clear how Ofgem intend to measure our performance on electricity purchases when we are unable to trade on the day contracts - the benchmark of ‘on the day’ holds no relevance. Around 25% of our purchases last year were electricity trades, and VSD usage is anticipated to increase during the RIIO-2 period and so correspondingly electricity trading will increase. Therefore, the relevance of Ofgem’s performance metric will decrease against our overall energy purchases. We would like to know how Ofgem intends to account for this.

Gas

For Own Use Gas (OUG), we take gas from the NTS to run gas compressors. It does not need to be supplied to us first. For OUG, plus Unaccounted for Gas and CV Shrinkage, we buy gas on the wholesale market – specifically we trade the “title” to an amount of gas - and expect that to materialise as more supply, or less demand. We trade this as a gas shipper, and can trade over different timescales including within day, for the gas day.

Ofgem propose that we should report on costs of procured energy compared to ‘perfect foresight’ and ‘pure on the day’ purchases scenarios.

For gas purchases, we can trade both on the Forwards and Prompt markets. We believe it is possible to compare our performance to the ‘perfect foresight’ and ‘pure on the day’ purchases. However, it is currently unclear as to how “perfect foresight” and “pure on the day” purchases are measured and therefore this is subject to Ofgem clearly defining these.

Methodology Statement

We are obligated as part of our GT Licence to publish a methodology statement describing how we calculate forecast volumes of gas and electricity. The Methodology Statement exists so that the method of calculating some of the licence terms⁴ is set out outside of the Licence; there is a separate approval process for creation and change. The methodology is namely about volumes: (a) forecasts for forward procurement for all gas

⁴ (a) forecasts FGVT and FEVT for each quarter, (b) efficiencies EEVCFU and EEVCVS for each year

and electricity (b) efficiencies compared to a benchmark for CFU (gas and electricity) and CVS gas. Both elements form the current incentive target.

We make this available to our customers so that they have awareness of how much energy we need to buy, the costs for which are ultimately passed on to them. Ofgem's proposals however dispense with a target, so there would be no need for a Methodology Statement to set out how to calculate licence terms. We believe dispensing of the methodology under Ofgem's proposal needs further consideration as a methodology that aids transparency on shrinkage forecast volumes has merit.

We note that AFRY finds that *"the current shrinkage methodology is questionable and has not been justified in NGGT's Business Plan"*. We'd like to point out that the current shrinkage methodology is consulted on with industry and Ofgem have a right to veto, so we are both surprised and disappointed that Ofgem agree with such an unfounded statement and merit its inclusion in their draft determination proposals.

In their draft determination, Ofgem state *"We do not think that NGGT's proposed additions to the NTS Shrinkage methodology target will make the target-setting process more robust"*. We are disappointed that Ofgem have not provided any rationale for this conclusion nor detailed which of our proposed additions they are referring to.

Factual discrepancies

We recognise the detail provided by AFRY in their document and commend their thorough approach to producing their report. There are, however, some factual discrepancies that we would like to address, which are listed below;

- CVS is defined as gas "lost" because of the variation in CV across a local area breaching the cap imposed. Gas is not 'lost', it is gas that cannot be billed (1.1.1 Shrinkage concepts)
- *"The total shrinkage volume in 2018/19 was 2.7 TWh, and over the first six years of RIIO1 it has averaged 3.6 TWh"*. Please note that this is just the gas volume; it doesn't include the electricity component, ~0.2 GWh. It is our assumption that this would be the same for the RIIO-1 average figure (1.1.1 Shrinkage concepts)
- The *"majority of outperformance comes from the performance against the price element of the incentive"* (2.1.2 Historical performance against target). We believe that this assumption has been made because of the inclusion of TNUoS. Over the first six years of RIIO-1, profit components were TNUoS £17m; Volume efficiency £8m; Procurement i.e. price £6m
- The 'Perfect foresight strategy 2' conveyed in Annex A is impossible even with perfect foresight of volumes and prices. For example, the best price for a single gas day may be a future quarter price, however that means we would then be buying the same volume for every day in that quarter at that price, which may not be the best price for the other days within that quarter under a perfect foresight assessment.