



# Gas Quality Blending Services

Consultation Report

December 2020

nationalgrid

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# 1. About this document

National Grid Gas (NGG) consulted its customers and stakeholders to explore a range of topics concerning gas quality blending services in September 2020<sup>1</sup>. We would like to thank those parties who took the time to respond.

The purpose of this document is to:

- Re-cap our reasons for consulting;
- Summarise the responses we received; and
- Set out our views in response and proposed next steps.

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<sup>1</sup> <https://www.nationalgrid.com/uk/gas-transmission/document/132926/download>  
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## 2. Background

### 2.1 Background

Several parties that deliver gas into the NTS have expressed interest in NGG developing gas quality blending services, enabling an operator at an NTS entry point to deliver off-specification gas provided that NGG could achieve a compliant blend before the gas exits its terminal onto the NTS pipelines.

NGG recognise that such a service could introduce benefits including:

- Being an economic alternative to the installation of gas processing equipment at NTS entry points;
- Providing an additional means of getting gas to the GB market;
- Enhancing the availability of existing gas fields where mid-stream / upstream blending solutions are unavailable, unreliable or uneconomic;
- Encouraging the development of new, more marginal specification gas fields in the UK Continental Shelf (UKCS), enabling additional volumes of gas to enter the NTS;
- Contributing to the UK Government's strategy of Maximising Economic Recovery of oil and gas reserves from UK waters;
- Benefiting GB security of supply; and
- Contributing to lower gas prices for end consumers.

We also recognise that the concept has potential downsides:

- Negative impact on security of supply if unavailability of blend gas locks out the non-compliant stream;
- Transfer of cost and risk from upstream parties downstream;
- Increased risk of non-compliant gas on the NTS / being delivered to consumers;
- Driver for the service being obviated by the GS(M)R Review;
- Distortion of competition in the upstream market for commercial blending services; and
- Low service value due to its interruptible nature.

The purpose of consultation was to test market views on such matters and help guide the way forward for this project, which up to now has contained three workstreams:

#### 1. **Technical feasibility**

DNV-GL have been commissioned, via Network Innovation Allowance funding, to complete a feasibility assessment. The assessment has been limited to the two entry terminals St Fergus and Bacton as these are manned terminals which receive gas via multiple incoming pipelines from several Delivery Facility Operators (DFO). The study will predict the availability of a gas quality blending service based on future projections of flow rate and quality for several different scenarios.

#### 2. **Safety assurance**

If a gas quality blending service is offered, NGG would lose a key control in its efforts to stop non-compliant gas getting onto the network. This workstream is looking at what additional controls could be implemented, and what would need to change in our GS(M)R Safety Case such that the risk of us transporting off-specification gas on the network is not increased.

### 3. **Commercial & regulatory changes**

This workstream will support the development of the business rules about how the service would be offered, charging structure, regulatory framework and any Licence or UNC changes required.

The consultation document issued in September 2020 aimed to progress workstreams 2 and 3 by seeking views from our customers and stakeholders in relation to:

- NTS entry points where the service could be offered;
- How the regulatory framework might need to change;
- Operational impacts; and
- Commercial issues, including charging.

# 3. Consultation Responses Summary

We received 14 responses to this consultation, four of which were confidential. The 10 non-confidential responses were received from the following parties:

- BBL Company
- Cadent
- Energy UK
- RWE Supply & Trading GmbH
- Shell Energy Europe Limited (SEEL)
- IUK
- Ancala Midstream Acquisitions Limited
- Neptune Energy
- Gassco
- Spirit Energy

11 responses have been published on our webpage, one response is in full but without the organisation details as per the respondent's request. The published responses can be found at <https://www.nationalgrid.com/uk/gas-transmission/about-us/business-planning-riio/stakeholder-groups/have-your-say-our-current-business-plans>

# 4. Consultation Questions and Responses

## 4.1 Theme: Service Concept and Link to GS(M)R Review

### Consultation Questions

**1. What are your thoughts on the service concept?**

**2. Do you foresee any positive or negative impacts of NGG offering such a service on your business? If so, please explain.**

**3. Do you consider there to be any risks that may arise from such a service?**

#### Respondents views:

Most respondents supported NGG progressing gas quality blending services in principle. No-one said that they were opposed to the idea.

Respondents highlighted positive impacts from offering a gas quality blending service could include benefits to the GB gas market, increased supply, potentially contributing to lower gas prices for end consumers, and security of supply.

In addition to anticipated benefits to supply, some respondents felt that the lessons from this project will help to support blending opportunities in the future, including hydrogen.

Some concerns were identified within the responses received for these questions. These include:

- An increased risk identified of off-specification gas getting onto the NTS as the risk moves closer to the NTS by allowing off-specification gas into the terminal
- The service being interruptible poses a risk, for example if off-specification gas is already in the pipeline heading towards the terminal and then the service is unavailable. Respondents expressed concern that this may increase the risk of 'flaring' the off-specification gas
- Two respondents raised competition concerns given that NGG is a regulated monopoly and other parties provide blending services already on a purely commercial basis; and
- Several respondents requested compensation for any parties who receive gas which is non-compliant as a result of the introduction of this service.

#### National Grid Response:

With regards to the increased risk of off-specification gas reaching the NTS, if NGG remove or reduce any safety controls currently in place, NGG will need to introduce new safety controls to ensure there is no greater risk offering the service than there is today. Whilst the safety controls are still under consideration and development, both enhanced communications between operators and additional gas quality monitoring and control equipment are being considered.

We expect that any amendment to the Safety Case as a result of offering a gas quality blending service will require approval from the HSE and will therefore need to demonstrate an effective level of safety.

As NGG are not responsible for the flows into the terminals an interruptible service can only be offered; this will be explored in more detail further into the consultation report looking at a specific question regarding the service being interruptible. However, the service being offered on an interruptible basis reflects that the service being offered is flexible and could be available at times when firm upstream and processing is unavailable. We consider the offering to be complementary to any blending or processing arrangements rather than being in direct competition for services already in place although we accept that the need to not distort arrangements in the commercial marketplace will be an important consideration in the pricing of our service and that transparency of service terms will also be important.

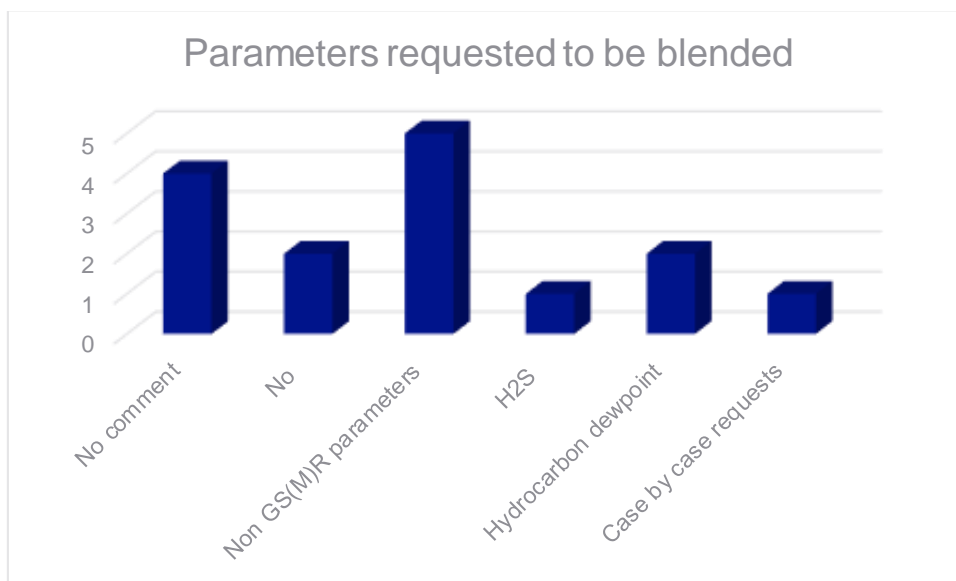
Uniform Network Code (UNC) Transportation Principal Document (TPD) section J 3.4 details 'Payment in respect of non-compliant gas'. This section places liabilities on Transporters and states they "shall be all reasonable costs and expenses reasonably incurred by the User in consequence of the offtake of non-compliant gas, including (without limitation) costs and expenses incurred". The UNC is structured so that liability is between shippers and transporters. We assume that contracts between shippers and consumers create arrangements by which shippers could claim from transporters under these UNC provisions, but we are not involved in those arrangements.

One respondent requested a review of UNC TPD section V which covers a limitation of liability for Transporters. The limitations of liability set out in section V paragraph 8.1.1 are "without prejudice to any provision.....which provides for any Party to make a payment to another." (see section V paragraph 8.1.4). This means the limitations set out in Section V paragraph 8.1.1 do not apply to payments under section J paragraph 3.4. Whilst we cannot give legal advice on the interpretation of the UNC, we welcome further discussions regarding section J and section V within UNC though the development of the service to ensure these meet stakeholder needs.

Ultimately the service is being proposed to blend the gas within the NGG terminal and to flow compliant gas onto the NTS, therefore it is our expectation that we would not experience an increased incidence of non-compliant gas being on the network. All the risks associated with non-compliant gas reaching the network will be worked through and the controls detailed within the Safety Case which will be approved by the HSE. However, we need to do further analysis to demonstrate whether we expect blending services to deliver a net benefit or risk to security of supply.

**4. Wobbe Index and Incomplete Combustion Factor are the parameters that stakeholders have so far indicated to us could be useful to have a relaxation on as a blending service. Do you see a need for this service to cover any other parameters and if so, which parameter(s) would you like to be considered and why?**

Respondents views:



**Diagram 4.0 bar chart of parameters requested for blending**

As per the bar chart, some respondents suggested that we consider a blending service for inerts and parameters not included within the GS(M)R parameters e.g. CO2. There was some interest for a blending service for GS(M)R parameters; one request to consider Hydrogen Sulphide, two requests to consider hydrocarbon dewpoint.



#### National Grid Response:

Parameters which are not governed by GS(M)R allow for more flexibility. A process for amending these parameters is established through UNC and allows assessment on a case by case basis. We propose to retain the means of amending these parameters outside this project.

We propose to offer further discussion with parties requesting other GS(M)R parameters to understand the flows at the terminals where this has been requested and whether it is feasible. In addition to considering flows consideration will need to be given to any asset integrity impacts blending these parameters may have within our terminals e.g. whether the parameters can cause corrosion to assets. However, in the short term, we propose to focus our effort on the combustion parameters of Wobbe Index and ICF because those are the parameters that the parties that are most keen to see this service developed have identified.

#### **5. Do you consider that the GS(M)R Review negates the need for a gas quality blending service or should the topic continue to be explored?**

##### Respondents views:

11 respondents felt that the gas quality blending service should continue to be explored with only one respondent indicating a preference to see the outcome of the GS(M)R review ahead of continuing with a gas quality blending service

Respondents feel that a service may be suitable, even if the GS(M)R review amends parameters, as an NGG blending capability may provide additional support to producers seeking to bring off-spec supplies to market. One respondent noted that recent research has indicated that 28% of remaining reserves in the Southern North Sea are outside the current GS(M)R specification.

##### National Grid Response:

There is overwhelming support in the responses we received for NGG to continue to consider offering a gas quality blending service notwithstanding the GS(M)R Review proposals, therefore our work in this area will continue.

Any outputs from the GS(M)R review, for example any approvals and indications of timeframes that could amend the GS(M)R parameters, can be considered as the gas quality blending service develops.

## 4.2 Theme: Applicable Terminals

### Consultation Question:

#### 6. Do you agree with our initial views on the categorisation of NTS entry points contained in this section 4?

##### Respondents views:

11 respondents agreed with the categorisation of terminals outlined within the consultation document.

Additional comments for this question included one respondent recommending liaising with all impacted parties e.g. upstream producers, offshore pipeline operators and upstream terminal operators to fully understand the impacts and feasibility within individual terminals. One respondent highlighted the differing supplies of gas into Easington and whether a service could work practically at that entry point.

One respondent requested a service for storage operators.

##### National Grid Response:

Whilst NGG are reassured that respondents feel the initial categorisations of terminals were appropriate, this will be kept under review as the project continues and develops. We remain of the view that Bacton and St Fergus are the terminals most suitable to offer gas quality blending services whereas Teesside and Easington are potentially suitable but would need a good deal more asset investment to make them viable. We think that in the short term the best way forward is to focus our efforts on development of this service at Bacton and St Fergus because those are the locations where we have had firm requests to do so and have the infrastructure already in place.

At this time a blending service is not being considered at storage points because the only source of blend gas is NTS gas in the pipeline to which the storage facility connects, however we will keep this under review.

#### 7. Teesside and Easington would require additional infrastructure and components to be able to offer a gas quality blending service, which would mean additional time and costs to implement. Would you support NGG further exploring this?

##### Respondents views:

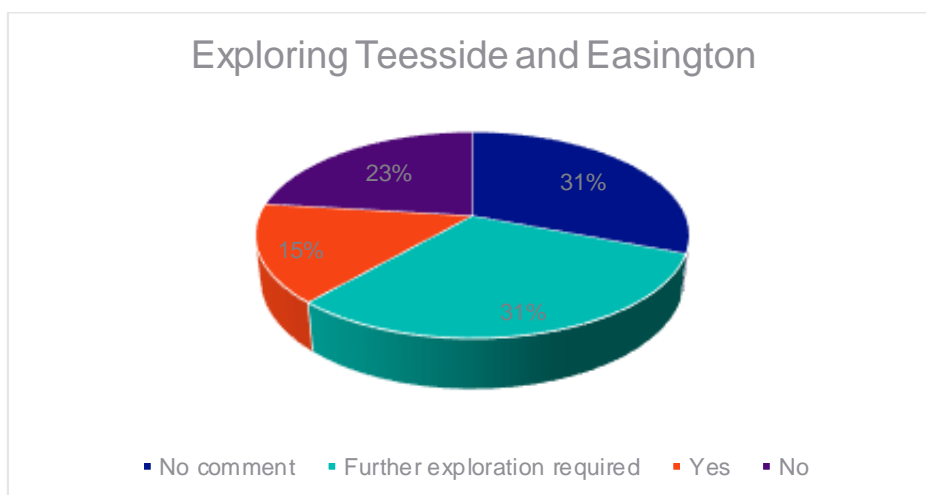


Diagram 4.1 Pie chart of respondent's views on Teesside and Easington

Responses were varied in relation to whether these terminals should be considered further. Several parties stated that further work needed to be completed with the parties who use the entry points to explore options e.g. whether the shippers using the terminal are interested in a service.

One respondent expressed interest in a service at Easington.

#### National Grid Response:

As stated above, Easington and Teesside do not currently have the infrastructure or assets to offer the service when compared to the St Fergus and Bacton terminals. As a result of this our priority will be to focus on St Fergus and Bacton in the short term where we may be able to offer a gas quality blending service sooner, which some stakeholders supported.

We will keep options open for the future with other entry points and are willing to liaise bilaterally with the party requesting a service at Easington to understand the request and give this consideration.

**8. Would you potentially be interested in a NGG gas quality blending service? If so, please advise the location where your gas is delivered, indicative volumes per day for blending and the parameter(s) you may wish NGG to consider (NOTE: Unless you specify otherwise, responses to this question 8 will be anonymised in our subsequent consultation report, i.e. we would say that 'x' number of respondents indicated a potential demand for 'y' volumes of gas to be blended at 'z' number of locations).**

Responses to this question are confidential and therefore we will not be reporting back within this consultation report.

**9. Do you think that the service is more suited to UKCS terminals rather than interconnectors?**

#### Respondents views:

Responses we received to this question were varied, most responses supported the view that a gas quality blending service is most suited to UKCS terminals. However, many respondents suggested not to rule out interconnectors needing a service in the future, especially if parameters change in continental Europe and there is divergence between EU and UK gas parameters. Multiple respondents advised to seek the views of interconnectors. Interconnector operators responded to the consultation to say that a blending service is not required at the moment although neither ruled a gas quality blending service out for the future.

#### National Grid Response:

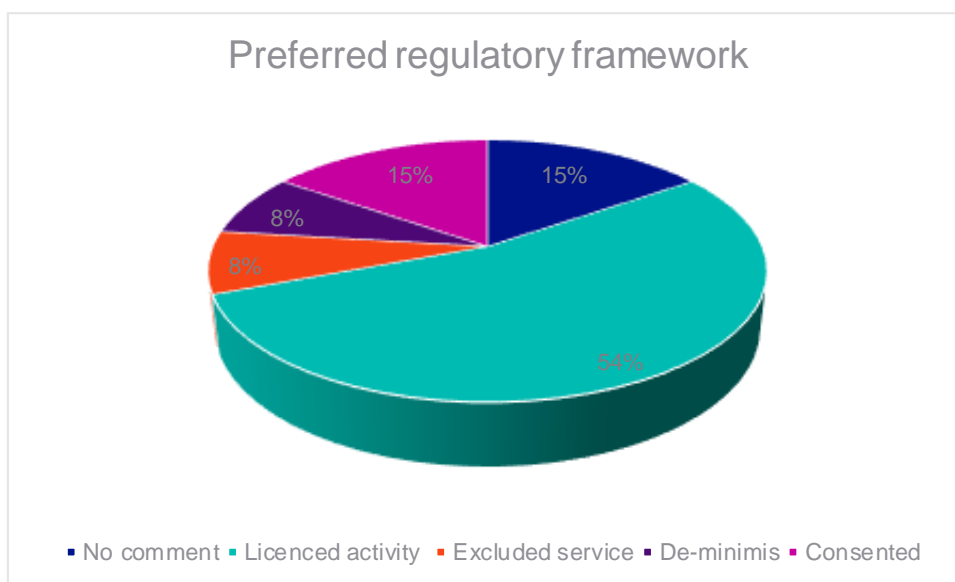
As most respondents agreed that the service is more suited to UKCS terminals, and as both interconnector operators at Bacton currently don't require a gas quality blending service, at this stage we propose to proceed on the basis that a gas quality blending service would be available to UKCS terminals. If at a point in the future, we are approached by an interconnector to offer a gas quality blending service we will consider the request.

## 4.3 Theme: Regulatory Treatment

### Consultation Questions

**10. In your view, which regulatory mechanism should NGG pursue to obtain regulatory approval for this service and why?**

Respondents views:



**4.2 Pie chart to show respondents preferred regulatory framework**

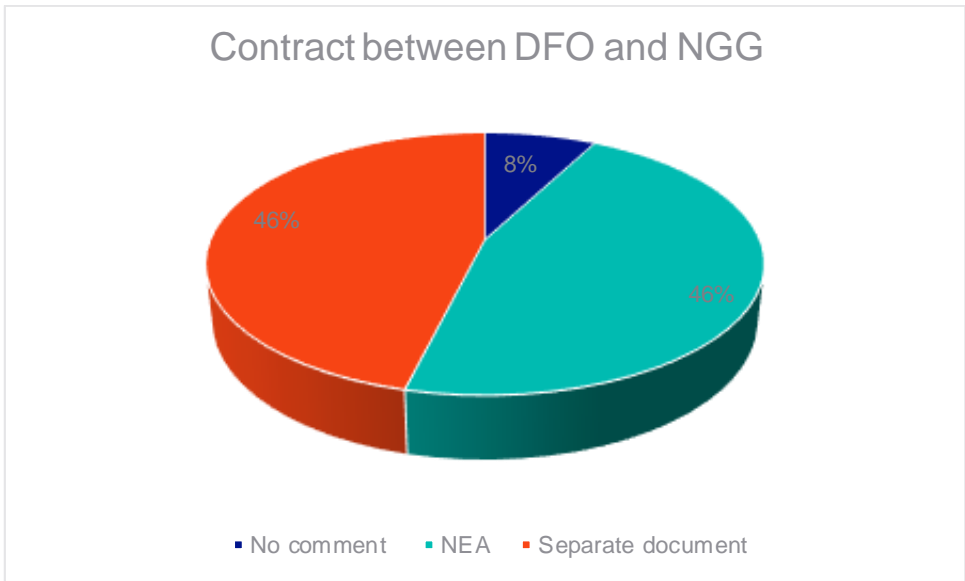
Most respondents requested this to be a licensed activity. The views of respondents were that by creating a licence condition there is transparency for the industry. In addition to this, respondents highlighted that we are proposing to use our regulated assets to provide a gas quality blending service and a licence activity will accommodate this.

National Grid Response:

As respondents were keen for a transparent process, we are reviewing all the regulatory options with a view on how transparent each option is. We note that the majority of respondents preferred this to be a licensed activity and at this stage that is our preferred approach too. However, a consent arrangement would be published on Ofgem's Electronic Public Register (EPR) and offers a level of transparency. We are also mindful that different regulatory approaches come with different levels of cost and effort to industry, Ofgem, NGG and industry. We received feedback that the regulatory mechanism ought to be proportionate to the materiality of the service and we agree with this point. Therefore, a key priority for us in the next stage of this project will be to establish what technical solutions look like at Bacton and St Fergus and the cost to implement them, after which we will again engage with industry to establish our proposed regulatory route.

**11. The DFO contract may need to be amended to offer the service; do you believe this should be done within the NEA or a different contract put in place?**

Respondents views:



**4.3 Pie chart to show respondents preferred contract between DFO and NGG**

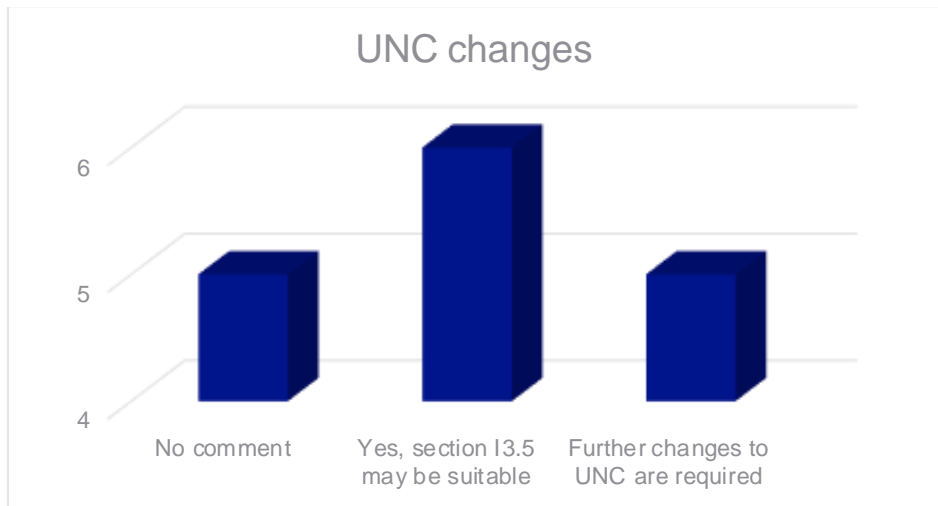
There was a split in responses with those who requested that the Network Entry Agreement (NEA) be amended and those who felt a separate contract would be the preferred option. Most respondents commented that they were keen for the process to be transparent.

National Grid Response:

At present a NEA is an operational contract and does not include any commercial arrangements. NGG’s preference is for a separate contract to be used, which the NEA would need to reference. However, the contractual structure would need to be reassessed depending on whether the DFO would be the customer of this service or the shippers who deliver gas at the relevant system entry point and we need to do more work to establish this as set out in our response to Q13.

**12. What are your views on the suitability of UNC TPD Section I3.5 ‘Special Delivery Arrangements’ to serve as the UNC basis for NGG to offer the service? Are there additional changes you believe will be required within UNC?**

Respondents views:



**4.4 Graph to show respondents views on UNC changes required**

Most respondents felt that UNC TPD section I3.5 may be appropriate to use to offer a gas quality blending service however many also requested further review of UNC throughout the development of the service.

A few respondents requested that the 'end to end' process of offering a gas quality blending service to be written into UNC, like the PARCA arrangements i.e. the full service offering to ensure transparency to industry.

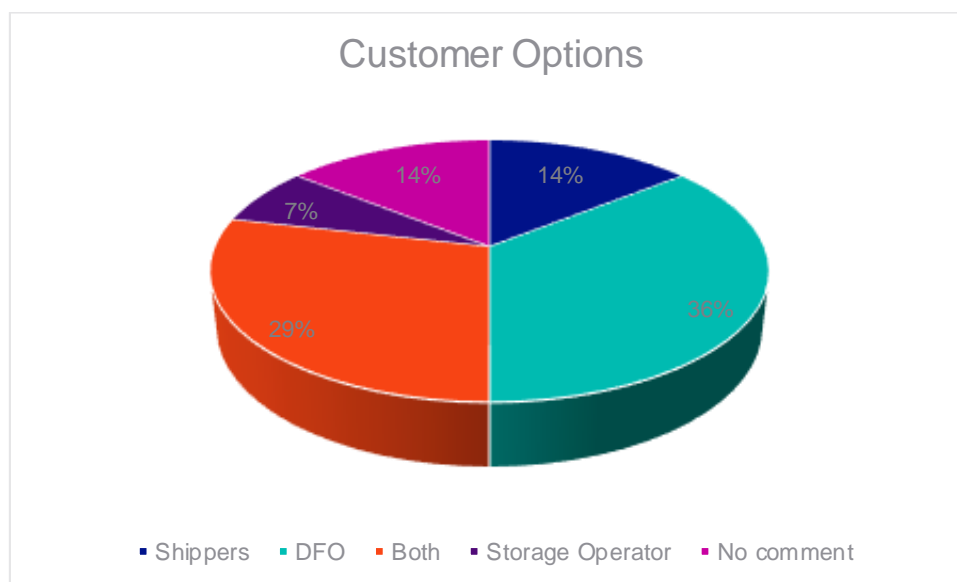
National Grid Response:

UNC TPD section I3.5 may be a suitable basis within UNC to offer a gas quality blending service. If the customer of the service is the shipper there could be additional information regarding the service included within UNC. However, if the DFO is our customer who is not a signatory to UNC, further change to the UNC may not be necessary. If this is the case, we will be as open and transparent as possible about the service offering, within the contractual framework, and would seek further engagement with industry about how this could best be achieved.

## 4.4 Theme: Charging

### 13. Who should NGG's customers be – UNC shippers, DFOs, or potentially both?

Respondents views:



#### 4.5 Pie chart to show respondents views on who should be the customer of the service

A range of views were expressed for who should be the customer of the service. Most respondents felt it should be the DFO or potentially both the UNC shipper and the DFO. Several respondents suggested that this should be explored further as the service develops.

One respondent who requested a service at a storage point requested that the storage operator ought to become the customer.

National Grid Response:

Following the closure of the consultation, and as a result of their consultation response, we engaged with Gassco who currently operate a gas quality blending service. Gassco presented their approach to offering a service and their charging basis<sup>2</sup>. Within their service offering, shippers are the customer of the service. Shippers purchase a gas quality blending capacity product to flow off-specification gas, which is then subject to real time calculations and flow monitoring. The requirement for the service is determined each day based on a predicted gas quality from the off-spec source which is retrospectively validated at the end of each month. Where blend gas is unavailable the off-specification gas is curtailed. On a monthly basis the shippers who are recipients of the blending service are invoiced based on the volume of gas they have had blended. Gassco ensure the costs of providing the service are covered and then smear the remainder of the revenue to the shippers who provide the blend gas; thus, providing a benefit share.

We consider that the Gassco model is a viable option for us to explore further. In this scenario we would be treating the shipper as the customer, who could purchase 'blending capacity' as a product

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<sup>2</sup> <https://www.npd.no/en/regulations/regulations/regulations-relating-to-the-stipulation-of-tariffs-etc.-for-certain-facilities/> Gassco's gas quality blending tariff information

from NGG. The DFO that requires the blending service could indicate on its Delivery Flow Notification (DFN) the quality of gas that would be delivered that day which we could validate afterwards, we could calculate the volumes of gas blended and the parameters which are being blended at the relevant entry point(s) and charge shippers that have 'used' the service accordingly. This option also allows us to explore how we could create a benefit share through sharing some of the charges back to those providing the blend gas, if deemed appropriate (see our response to Q17).

Alternatively, we can continue to explore the DFO as the customer. It is anticipated that the requirement for a blending service would be known by the DFO as the physical party. A process could be set up with annual invitations through which DFOs could indicate their demand for the service, but this is not without its complexities too; how to manage different demands, service durations, availabilities of the service over time etc. If the DFO were to be the customer they will be charged for the service, and we would expect the commercial arrangements between shippers and DFOs/producers to be amended to reflect the costs to the DFO of any blending or processing required to deliver that gas to the NTS.

At this time a blending service is not being considered at storage points for the reasons provided earlier in this document, therefore we do not consider the storage operators to be required to be customers.

We will develop 'strawman' models for 'DFO as customer' and 'shipper as customer' and then engage with industry to share our thoughts and learnings.

#### **14. If the DFO, this would create a commercial relationship that is currently purely operational. Do you envisage any problems with this?**

##### Respondents views:

Most respondents did not envisage any problems from NGG creating a commercial relationship with the DFO, most suggested that having a good contract, and clear communication with producers and / or shippers, would support the arrangements. One respondent considered that the DFO may facilitate the arrangement, but the shipper should be the customer.

However, the answers given to this question linked to the answers submitted to question 13. Where a respondent felt the shipper was best placed to be the customer, they suggested that a commercial contract should not be put in place with the DFO.

One respondent suggested that should a DFO not be able to offer the shipper a service then the shipper could become the customer instead.

##### National Grid Response:

We note the parties who requested shippers to be the customer of the service and refer to our response to Q13. At this stage we are considering who is best placed to be the customer of the service and will keep industry engaged as we develop our thinking in this area.

As the specification for the gas entering into the terminal is set out within the NEA contract between the DFO and NGG it may not be possible to offer an individual shipper a service should their DFO not want to become a customer.

#### **15. Do you agree that NGG should charge for this service?**

##### Respondents views:

All respondents agreed that NGG should charge for the service. Most respondents highlighted that NGG will incur additional costs and risks operating the service and therefore these additional costs and risk premiums should be recovered. Most respondents stated that the charging arrangements should be cost reflective.



#### National Grid Response:

Based on responses received we will proceed with the project on the basis that the service will be chargeable.

### **16. What minimum and maximum service durations would be appropriate?**

#### Respondents views:

Responses to this question were varied. Issues raised within the responses include:

- Dependency on the level of investment needed and the duration for NGG to recover the costs
- The uptake of the service across the industry
- Whether the service can be offered both as a short-term solution to an issue that may be a short duration, for example, something akin to UNC modification 0714 and whether the service could be offered long term for field development
- Dependency on how long the DFO will sign up to the service within the contract
- Several responses suggested a minimum of a year but highlighted that more work will need to be done to understand the changes required and the level of interest.

#### National Grid Response:

Duration is likely to be influenced by a number of other factors; the level of interest in a gas quality blending service, the investment required, the cost of setting up and offering the service and how the service is made available. After considering consultation responses, our current view is that service arrangements should ideally be capable of accommodating short duration, event-driven requests such as that proposed by UNC Modification 0714 as well as longer term durations that may be requested.

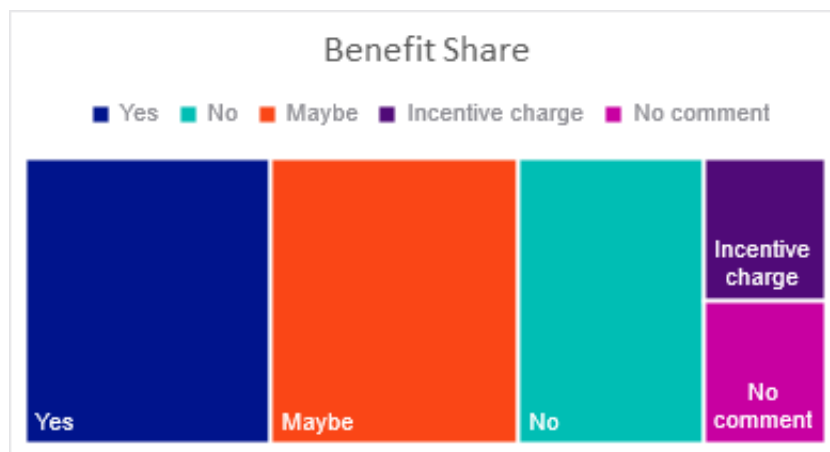
Consideration needs to be given to whether gas quality blending services need to be considered on a case by case basis and implications of this e.g. whether NGG could submit one generic amendment proposal to its GS(M)R Safety Case to HSE to cover all blending services or whether each service request would trigger its own bespoke risk assessment and therefore a Safety Case amendment proposal would be required each time. This may impact on whether the service can be offered long term or short term.

As NGG will need to cover the costs of setting up the service and to avoid future stranded assets, it is likely a minimum duration may be included within the contract however at this stage this is unknown.

Industry will be engaged about ongoing developments with any outcomes or decisions on durations being communicated at a time when these are known.

**17. Please share your thoughts on whether DFOs/ shippers delivering on-specification gas at a terminal where a blending service is in place should receive a share of the revenue that NGG receives from the DFO delivering off-spec gas for providing the service**

Respondents views:



**4.6 Treemap to show respondents views on benefit share**

A variety of views were submitted in response to this question. Some respondents stated that those providing the blend gas should receive a benefit share as they considered this reasonable and logical.

Others disagreed, arguing that benefit share would bring additional complexity. One respondent highlighted that the parties providing the blend gas are not being requested to do anything differently, they are required to provide gas within the GS(M)R parameters, the same as all entry points where a gas quality blending service is not being provided.

Several parties were unsure. Of those who were unsure the complexity of such an arrangement was highlighted as a reason why it may not be suitable.

One respondent expressed concerns regarding behaviours that benefit share could drive; whether this would disincentivise parties from upstream processing.

One respondent suggested an open and transparent incentive regime could be introduced.

National Grid Response:

We are not surprised that responses are split on this question because either point of view is arguable. On the one hand, we could not provide the service were it not for neighbouring terminals delivering on-spec gas but on the other hand we do not currently foresee asking those parties to do anything differently; they would have the same obligations to deliver compliant gas to the NTS as at any other NTS entry point where blending does not apply. We are therefore likely to be guided by pragmatism rather than principle on this point; the opportunity to provide a benefit share may be impacted by the outcome of who the customer of the service is and if the financial materiality in the round for this service is relatively low, we may conclude that the additional complexity is unwarranted. The issues will be different according to whether the DFO or the shipper is the customer.

As the service proposal progresses, we will continue to consider benefit share and communicate further proposals on this question.

## **18. What is the maximum lead-time that would be acceptable to you between signing up for the service and it becoming available?**

### Respondents views:

A variety of views were submitted in response to this question. Timeframes differed from 3-4 months to 12-18 months. Most respondents felt that this would need to be discussed between those who wish to request a gas quality blending service and NGG. There was a suggestion that this could be discussed on a case by case basis depending on the changes required for the service requested e.g. infrastructure, commercial and operational arrangements.

### National Grid Response:

Further work is required to establish the safety controls which may be necessary and the impacts to each terminal. NGG need to consider whether the controls can be generic across the service offering or whether they need to be bespoke to each service request. This could impact on the lead-time that is needed to offer a gas quality blending service. Any required asset investment, infrastructure and / or components would impact on the lead-time.

Industry will be engaged in ongoing developments concerning lead-time.

## **19. How should we make the service available?**

### Respondents views:

Responses to this question were varied. Suggestions included:

- Dependency on the timeframe requested e.g. long term could be based on a PARCA type arrangement, or offered like a capacity product, there was a view that offering the service on a short-term basis could provide users of the service greater flexibility e.g. for if upstream processing was unavailable
- An annual invitation window e.g. inviting expressions of interest or an annual auction
- DFOs requesting blending for specified periods but with daily requirements confirmed on an ongoing basis
- Standard terms and conditions for all
- A flexible approach to allow for new blending requests which falls outside of an annual process

### National Grid Response:

Based on the feedback received further work is required to develop a process that could work with those requesting a service now and those who may require a service in the future. This work will be informed once a decision has been made about whether the customer would be the DFO or the UNC shipper.

## **20. How do you anticipate the structure of the charging to work?**

### Respondents views:

Some respondents suggested a one-off charge whereas other respondents felt a daily fee and monthly invoicing would be more appropriate. Some respondents suggested an auction whereas one indicated an incentive regime.

Most respondents agreed that the charging arrangements should be transparent and cost reflective. One respondent highlighted that the beneficiaries of the service should be those who pay for it.

#### National Grid Response:

Further work is required in this area to consider how the structure of the charging will work. We are minded towards simplicity but will need to evaluate once we have a firmer view about the likely costs of providing the service and who the customer of the service (DFO or shipper) will be.

### **21. Do you consider that the service would be useful to terminal operators if it is only offered with NGG reserving the right to interrupt at short notice?**

#### Respondents views:

Responses to this question were varied. Most respondents agreed that the service should be interruptible, but more work needs to be completed to understand the impacts of this. Examples of concerns raised include:

- Whether the length of the service duration is a factor e.g. is interruptible better when the service is for a short-term duration e.g. UNC modification 0714 compared to a long-term duration
- If off-specification gas is introduced into the offshore pipeline two – five days before entering NGG and then the service is unavailable what happens to the off-specification gas;
- Production cuts at short notice and associated costs.

On the other hand, another respondent stated that the level of interruption is likely to be less than would be experienced if the service was not available.

#### National Grid Response:

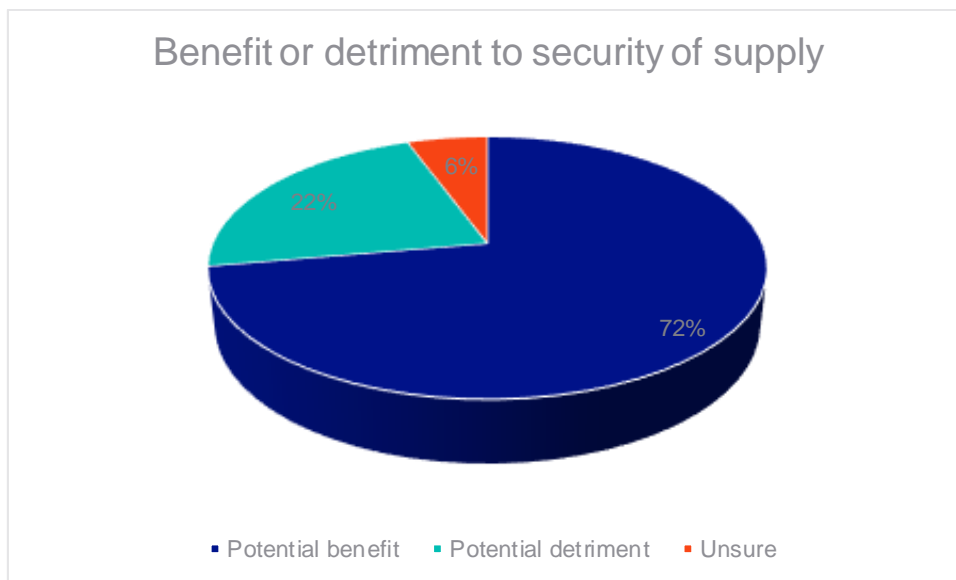
Two schools of thought are evident from consultation; some see the interruptible nature of the proposed service as barrier to take-up while others consider that additional flexibility in relation to gas quality at the beach is valuable. Whilst there continue to be parties that take the latter view, we propose to continue blending service development.

We remain of the view that a NGG blending service will have to be interruptible for the following reasons:

- Risk of equipment failure within the NGG terminal that prevents the safe blending of gas streams, for example. gas quality equipment, flow signals, loss of control systems;
- Plant outages or isolations that impact on our ability to blend gas streams. This can happen during maintenance and asset health work where areas are isolated resulting in restricting gas routes through the terminal which may prevent the blending of different sources of gas
- Insufficient availability of blend gas to ensure a compliant mix

**22. Do you believe that an NGG gas quality blending service would be likely to result in a benefit or detriment to security of GB gas supply? Please explain your answer.**

Respondents views:



**4.7 Pie chart to show respondents views on benefit or detriment to security of supply**

Of the responses received, 13 agreed that the service could benefit security of supply. Within these responses, four highlighted that there is also a risk of detriment to security of supply where the service is interruptible, and curtailment may be required.

National Grid Response:

Most respondents view the service as being beneficial to security of supply and therefore we feel it is important to continue to progress the proposal. We envisage doing further analysis to try to quantify whether the service could be expected to deliver a net benefit for gas security, i.e. whether enabling more gas getting to market outweighs the risk of losing the non-compliant stream when blend gas is unavailable.

**23. If you wish to provide any other feedback on the issues raised in this consultation, please do so here.**

Respondents views:

Where responses were received to this question, respondents highlighted the need to develop gas quality blending services to support the energy transition into the future e.g. hydrogen. Respondents suggested that the outcomes from this project could create a framework and principles for future blending and the learnings from his project could support future changes.

National Grid Response:

Whilst we appreciate that there may be useful wider learning points in relation to potential future blending of hydrogen with natural gas, from this project, we need to ensure that the project has value in its own right.

## 5. Next Steps

We would like to thank those parties who took the time to respond to our consultation. The information we have received, both in bilateral meetings as well as in written responses, has allowed us to consider and explore the topics from the consultation in more detail. We are encouraged by the positive tone of responses and the new ideas we have heard has helped our thinking about how to design these services in the most appropriate way.

As this consultation report demonstrates, there are a number of issues to work through which are often inter-dependent and given the potential safety and operational impacts, we are not able yet to state with any certainty that this is a service we will be able to provide. However, we appreciate that some parties want us to deliver this service as soon as possible and we are therefore committed to working through these issues at pace in conjunction with our customers and stakeholders next year.

During the first quarter of 2021 we will work up a detailed plan for this project which will include key milestones and dates we will be striving to achieve. This plan will include some indicative timeframes of when we intend to engage with the industry.

Whilst this formal period of consultation has now closed, we are keen to hear industry views on our proposed next steps and as we move forward with the potential changes that we have identified. If you would like to discuss this project further please contact Phil Hobbins on 07966 865623 or by email [philip.hobbins@nationalgrid.com](mailto:philip.hobbins@nationalgrid.com) or Rachel Hinsley on 07811 762440 or by email [rachel.hinsley1@nationalgrid.com](mailto:rachel.hinsley1@nationalgrid.com). [We welcome your engagement at any time.](#)

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