Consultation

NGT's Methane emissions reduction and monitoring projects: Net Zero Pre-Construction Work and Small Projects Re-opener (NZASP)

Publication date:	4.10.2023
Response deadline:	8.11.2023 (5 weeks)
Contact:	Keren Maschler
Team:	Price Control Operations – Heavy scrutiny projects
Telephone:	020 7901 7000
Email:	RIIOElectricityTransmission@ofgem.gov.uk

We[1] are consulting on our minded-to position on five projects proposed for funding by National Gas Transmission (NGT)[2] in their re-opener application submission under the Special Licence Condition 3.9 of their Gas Transporter Licence, for the purpose of improving management of and reducing methane emissions from the National Transmission System (NTS). We would like views from people with an interest in the gas transmission network and other public stakeholders.

This document outlines the scope, purpose and questions of the consultation and how you can get involved. Once the consultation is closed, we will consider all responses. We want to be transparent in our consultations. We will publish the non-confidential responses we receive alongside a decision on next steps on our website at **ofgem.gov.uk/consultations**. If you want your response – in whole or in part – to be considered confidential, please tell us in your response and explain why. Please clearly

[1] The terms 'we', 'us', 'our' refers to the Gas and Electricity Markets Authority (the Authority). Ofgem operates under the direction and governance of the Authority.
[2] Formally known as National Grid Gas Transmission (NGGT). On 1st Feb 2023 the National Gas Transmission & Gas Metering business separated from National Grid and became an independent company. National Gas is the new name, sold to a consortium led by asset manager, Macquarie. Announcement can be found here: https://extranet.nationalgrid.com/GasArchive/privatisation3.htm From National Grid to National Gas

mark the parts of your response that you consider to be confidential, and if possible, put the confidential material in separate appendices to your response.

Any enquiries related to the text of this publication should be sent to Ofgem at:

10 South Colonnade, Canary Wharf, London, E14 4PU.

This publication is available at www.ofgem.gov.uk. Any enquiries regarding the use and re-use of this information resource should be sent to: psi@nationalarchives.gsi.gov.uk

Contents

1. Introduction

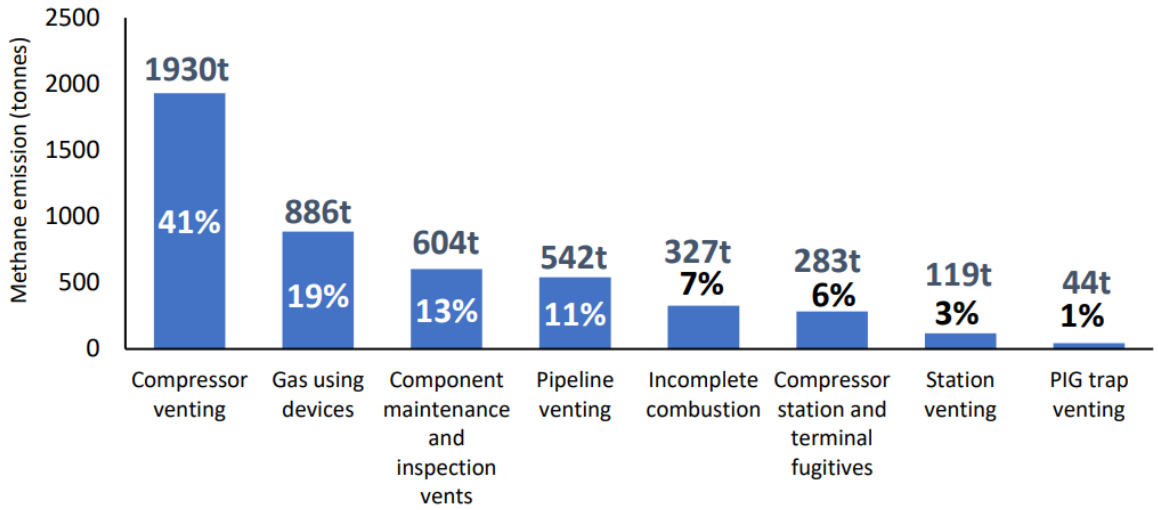
What are we consulting on?

1.1 We are consulting on our minded to position to fund several Small Net Zero related projects proposed by NGT under the RIIO-2 Net Zero Pre-Construction and Small Projects re-opener ('the NZASP reopener') found in Special Condition (SpC) 3.9 of NGT's Gas Transporter Licence.

1.2 The projects proposed by NGT under a single re-opener submission have a common overall objective to reduce methane emissions from the National Transmission System (NTS). Methane is a Green House Gas (GHG) which, in 2021 accounted for 13% 0f UK GHG emissions[3].

1.3 In 2021 emissions of methane from the NTS was equated to a total of 4.735kt (118.38kt CO2e). Figure 1 below which was submitted by NGT as part of its submission shows NGT's methane emissions for 2021 by source. The figures were based on a mix of estimation and measured emissions.

Figure 1: NGT 2021 calendar year methane emission sources and performance



[3] 2021 UK Greenhouse Gas Emissions, Final Figures (publishing.service.gov.uk)

1.4 The projects proposed by NGT have been grouped into three themes and aim to reduce up to 15% of methane emissions from operating the NTS in RIIO-2 and significantly impact compressor venting in the next price control (subject to trials in theme 2 being successful). The themes are summarised below:

- **Mobile Recompression (MR)** – Additional mobile pipeline recompression capability and new mobile recompression units to capture methane emissions arising from pipeline inspection works and compressor station depressurisations.
- **Compressor Machinery Train (CMT)** Trials of combined gas recompression and zero loss compressor seal technology to reduce methane emissions from compressor venting which is the largest contributor to whole NTS methane emissions.
- **Detection and Analytics (D&A)** – An expansion of NGT's periodic fugitive monitoring programme in scope and frequency, and an implementation of new continuous fugitive monitoring systems at selected above ground installations.

1.5 In April 2022 NGT submitted a request to Ofgem to review five projects under the above themes and identify the relevant re-opener. Following our review, we considered that the projects should be progressed, and agreed to trigger the Net Zero Pre-Construction and Small Projects reopener ('the NZASP re-opener'). Due to the similarities in scope and objectives to reduce overall methane emissions from the NTS, Ofgem agreed that a single submission could be made.

1.6 In October 2022, NGT submitted their formal application. NGT also published a redacted version of their NZASP re-opener application on their website[4].

1.7 This consultation includes a summary of NGT's proposal under each theme, and our minded to position on each of the proposed projects. For each project we reviewed and assessed:

- The full needs case,
- The options that were considered to address the need (e.g technology, number of units)
- Detailed cost information, including cost/benefit analysis (CBA) where this was an appropriate measure to evaluate the benefit of the project.

[4] Our RIIO-2 re-opener applications (2021-2026) | National Gas

1.8 Following the close of this consultation, we will carefully consider all responses we receive, and make our final decision on whether to fund these projects, and on any conditions that may apply to NGT using any NZASP funding.

1.9 We will then consult on our proposed direction to give effect to this decision, in accordance with Special Condition 3.9.10 and 6.1 of the Gas Transporter Licence.

1.10 The consultation is for five weeks and will close on 8.11.2023. We will endeavour to publish our proposed direction alongside our decision to this consultation.

Context and related publications

1.11 The scope of this consultation is limited to NGT's NZASP re-opener application for five projects related to management and reduction of fugitive methane emissions. Additional information on the NZASP Re-opener can be found in our RIIO-2 Gas Distribution and Gas Transmission ('GD&T') Final Determinations ('FDs') document[5], the NZASP Governance document[6] and in Special Condition 3.9. of NGT's Gas Transporter Licence. [7]

How to respond

1.12 We want to hear from anyone interested in this consultation. Please send your response to the person or team named on this document's front page. We've asked for your feedback in each of the questions throughout. Please respond to each one as fully as you can.

1.13 We will publish non-confidential responses on our website at Consultations | Ofgem

Your response, data and confidentiality

1.14 You can ask us to keep your response, or parts of your response, confidential. We'll respect this, subject to obligations to disclose information, for example, under the Freedom of Information Act 2000, the Environmental Information Regulations 2004, statutory directions, court orders, government regulations or where you give

[5] RIIO-2 Final Determinations for Transmission and Gas Distribution network companies and the Electricity System Operator | Ofgem
[6] Net Zero Pre-construction and Small Projects Re-opener Guidance (ofgem.gov.uk)
[7] Licences available on the Electronic Public Register: https://epr.ofgem.gov.uk/

us explicit permission to disclose. If you do want us to keep your response confidential, please clearly mark this on your response and explain why.

1.15 If you wish us to keep part of your response confidential, please clearly mark those parts of your response that you *do* wish to be kept confidential and those that you *do not* wish to be kept confidential. Please put the confidential material in a separate appendix to your response. If necessary, we'll get in touch with you to discuss which parts of the information in your response should be kept confidential, and which can be published. We might ask for reasons why.

1.16 If the information you give in your response contains personal data under the General Data Protection Regulation (Regulation (EU) 2016/679) as retained in domestic law following the UK's withdrawal from the European Union ("UK GDPR"), the Gas and Electricity Markets Authority will be the data controller for the purposes of GDPR. Ofgem uses the information in responses in performing its statutory functions and in accordance with section 105 of the Utilities Act 2000. Please refer to our Privacy Notice on consultations, see Appendix 2.

1.17 If you wish to respond confidentially, we'll keep your response itself confidential, but we will publish the number (but not the names) of confidential responses we receive. We won't link responses to respondents if we publish a summary of responses, and we will evaluate each response on its own merits without undermining your right to confidentiality.

General feedback

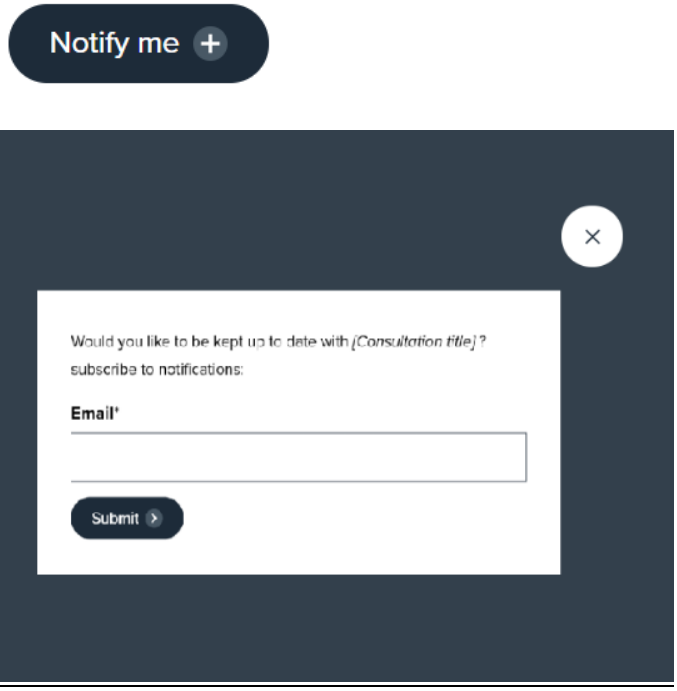
1.16. We believe that consultation is at the heart of good policy development. We welcome any comments about how we've run this consultation. We'd also like to get your answers to these questions:

1. Do you have any comments about the overall process of this consultation?
2. Do you have any comments about its tone and content?
3. Was it easy to read and understand? Or could it have been better written?
4. Were its conclusions balanced?
5. Did it make reasoned recommendations for improvement?
6. Any further comments?

Please send any general feedback comments to stakeholders@ofgem.gov.uk

How to track the progress of the consultation

You can track the progress of a consultation from upcoming to decision status using the 'notify me' function on a consultation page when published on our website.
Ofgem.gov.uk/consultations



Once subscribed to the notifications for a particular consultation, you will receive an email to notify you when it has changed status. Our consultation stages are:

Upcoming > **Open** > **Closed** (awaiting decision) > **Closed** (with decision)

2. Mobile recompression theme

Section summary

This section summarises NGT's proposals to invest in equipment that will reduce methane emissions that are caused by Operation and Maintenance (O&M) activities, our assessment and our minded to position on the needs case and level of funding of the project.

Question 1: Do you agree with our minded to position and with the proposed funding level for the projects in this theme?

Mobile pipeline recompression proposal

NGT's needs case and proposed solution

2.1 During pipeline maintenance, sections of the pipeline are depressurised by venting gas into the atmosphere or re-injecting the gas into live sections of pipeline using mobile recompression units. This is done for safety and environmental reasons.

2.2 While currently NGT's recompression units can depressurise down to a pressure of 7barg, modern machinery can reduce the pipeline pressure to 0.5barg before venting. This means that less gas will be released to the atmosphere.

2.3 As part of RIIO-2 GD&T FDs[8], Ofgem approved funding for a pair of such modern pipeline recompression machines, which are expected to capture 66% of the emissions in the pipeline venting category displayed in figure 1. NGT suggest investing in a second pair, which they expect will allow additional 24% of the gas in this category to be saved. The total expected reduction in emission of 90% equates to 490 tonne methane per Annum[9].

2.4 NGT flag that on top of gas vented during pipeline maintenance, the compressors will also improve the time taken to repressurise equipment following maintenance and enhance compliance with safety legislation. NGT also stated that this will allow

[8] See paragraph 3.66 in NGGT annex- revised here: RIIO-2 Final Determinations for Transmission and Gas Distribution network companies and the Electricity System Operator | Ofgem

[9] Total methane emission in this category is 542 tonne/year, which forms ~11% of total annual methane emission/year.

interchangeability between the machines in the fleet, leveraging efficiencies in maintenance, spare parts holdings, and operator training.

NGT's estimated cost and funding request

2.5 The total funding requested was for £4.25m, which includes **[redacted]** for machinery purchase and **[redacted]** to operate the new machines in 2025. From the next price control (PC) NGT aim to have the operational costs incorporated into the operation and maintenance (O&M) annual allowances. The estimated cost of the machinery purchase is based on a quote received from supplier in September 2022.

2.6 To evaluate the overall benefit of the investment a cost benefit analysis (CBA) was carried out, using estimated methane emission and wholesale value of gas saved, using BEIS reference value[10]. [11]

2.7 The annual net benefit of this investment is estimated at £0.76m. This calculation is based on assumptions that work volumes remain flat throughout the reminder of RIIO-2 and the next PC.

2.8 Table 1 below summarizes NGTs funding request profile:

Table 1: cost phasing for pipeline recompression preferred option in 18/19 price base

UM application 18/19 pricing (£m)	22/23	23/24	24/25	25/26	Total requested
Machinery staged payments	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
OPEX				[redacted]	[redacted]
Total	[redacted]	[redacted]	[redacted]	[redacted]	**£4.25m**

NGT's proposed delivery plan

2.9 Tender is expected in FY 22/23, and commissioning expected in FY 25/26.

[10] The values can be found in annex 1 on the following page: Valuation of greenhouse gas emissions: for policy appraisal and evaluation - GOV.UK (www.gov.uk)
[11] More about NGTs approach to CBA can be found in the Methane emissions Common Elements document, page 11 here: Gas download (nationalgas.com)

2.10 NGT plans to have one additional pressure pipeline recompression set in operational service on planned pipeline depressurisation on the NTS.

2.11 NGT proposes that successful criteria should be that having no planned pipeline vents in the next PC and beyond, and greater than 90% reduction of emissions in this category of pipeline recompression (see figure 1).

Our assessment of the needs case and minded-to decision on funding

2.12 We are of the view that reducing pressure in the pipeline to 0.5barg instead of 7barg ahead of pipeline maintenance will reduce the amount of methane that is released to the atmosphere.

2.13 We are of the view that there is benefit in funding a second pair of pipeline recompression units (on top of the ones already approved as part of RIIO-2 GD&T FDs), as these machines will reduce the pipeline pressure and thus will ensure less gas will be released to the atmosphere when pipeline is depressurised.

2.14 The CBA carried out by NGT showed that a second pair of pipeline recompression units will deliver the highest net present value in comparison to the other options that were considered. We have reviewed the CBA and are content with the way it was conducted, the input to the CBA and agree with the result based on the inputs.

2.15 The estimated cost of the additional set is based on a quote from supplier which was submitted as supporting evidence to the submission. NGT also provided detailed breakdown of the estimated operating costs of the machines setting out the activities, time and staff that will be needed. We are content that these costs represent value for consumers and are in line with our experts' view.

2.16 We are therefore proposing to allow the total amount of funding requested. In particular, we are minded-to **approve funding of a total of £4.25m,** as requested and to allow ie. **[redacted]** for machinery purchase and [**redacted**] to operate the new machines in 2025. We don't propose any reductions.

2.17 We recognise that actual capex costs may have changed since submission and that it may be necessary to adjust the level of funding considering actual cost data becoming available.

2.18 Following engagement with NGT, we understand that updated information may be provided to Ofgem once this consultation is published, as NGT will further engage

with potential suppliers. Any changes will be highlighted in our decision, as we will set our final funding decision and will consult on the respective Special Condition changes (see chapter 5: next steps)

2.19 If the change to the cost will materially impact the result of the CBA we will consider whether a new consultation will be required.

2.20 We are content with the delivery plan as summarised above and as detailed in NGT's full submission and subject to the issuance of the final decision to this consultation we expect NGT to follow it.

2.21 For further details on our proposed deliverables and reporting requirements please see chapter 5 in this document.

Compressor depressurisation and PIG trap recompression

NGT's needs case and proposed solution

2.22 This investment is seeking to reduce methane emissions from the following activities that NGT carries out regularly as part of operating and maintaining the NTS:

- Planned depressurisations of compressor stations: these are required in summer to facilitate maintenance. This is done by **venting gas into the atmosphere**. Specifically, in 2021 methane emission under station venting was 119 tonnes and formed 3% of total emissions.
- In-Line Inspection (ILI) runs; these require Pipeline Inspection Gauges (PIGs) to be put into the pipeline so they can travel through the pipeline, gathering condition information. At the start and end of an ILI run, a PIG trap door needs to be opened to insert or remove the PIG from the pipeline. This requires the gas in the PIG trap to be **vented to atmosphere.** In 2021 pig trap venting was estimated at 44t, ~1% of total methane emissions.

2.23 NGT assessed the options available for reducing venting from both activities as it currently has no ability to either reduce the emissions from its ILI runs, nor to reinject the gas when depressurising compressor stations.

2.24 NGT noted that same type of technology can be used for both activities. However, the critical factor in choosing the technology and the number of units was the ease of implementation in ILI runs, because of the long working days involved in this process. Such factor was less critical for the depressurising compressor stations.

2.25 The preferred option to reduce emissions from both ILI runs and venting is to purchase eight small recompression units for compressor station depressurisations and PIG trap recompression.

2.26 Three units are due to be dedicated to compressor station depressurisations to ensure that the time taken to reduce pressure at compressor stations is reasonable, and four units are dedicated to PIG trap venting. To ensure the maximum possible gas saving, one spare unit has been included to cover maintenance and/or breakdown of a unit.

2.27 The estimated emission saving for ILIs is 90%, (40t/annum), and the estimated emission saving from compressor depressurisation is 98% (117t/annum) if used for all planned compressor station depressurisations.

2.28 To evaluate the overall benefit of the investments two separate CBAs were carried out, using estimated methane emissions and wholesale value of gas saved, using BEIS reference value. Assumptions used for the CBA can be found in appendix 1.

2.29 For PIG trap recompression four units showed the highest Net Present Value (NPV) in the CBA. For compressor station depressurisation it was found that the highest NPV option in the CBA was to invest in two units. However, NGT flagged that there are qualitative benefits in purchasing three units:

- third machine will allow additional reduction in methane emissions with little difference in cost.
- NGT expects that more uses will be discovered when staff become familiar with the operation of the machine.

2.30 NGT also flagged that using the same machines for these two different purposes provides flexibility within the fleet.

NGT's estimated costs and funding request

2.31 Total funding requested was £3.77m, which includes [redacted] for a total of seven machinery purchase and [redacted] for a one-off payment to operate and maintain the new machines in 2025. NGT flag that their intention is that from the next PC the operational costs will be reflected in the asset health plan. The capex is based on quotes from a single supplier.

Table 2: cost phasing for Compressor depressurisation and PIG trap recompression in 18/19 price base

UM application 18/19 pricing (£m)	22/23	23/24	24/25	25/26	Total requested
Machinery staged payments	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
OPEX	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total	[redacted]	[redacted]	[redacted]	[redacted]	**3.77**

NGT's proposed delivery plan

2.32 Subject to a final decision on approval of funding by Ofgem, a competitive tender will be carried out, and a market scan conducted, to determine if one supplier continues to be able to provide the recompression units. The tender is expected to take three months, following which an order will be placed.

2.33 Expected delivery times are one year, therefore recompression units are expected to be commissioned and available within the 2025 outage season.

2.34 NGT suggests that a progress report will be included in its annual regulatory reporting pack.

Our assessment on needs case and minded-to decision on funding

2.35 We are of the view that there is a need to reduce emissions from planned depressurisations of compressor stations and from ILI runs.

2.36 We are of the view that there is benefit in funding three recompression units for Compressor station depressurisation. We agree with NGT's view that although the CBA that was carried out for compressor station depressurisation showed the highest NPV in purchasing two units, given the geography of the NTS network and the need to mobilise the units across GB, there are operational benefits which justify purchasing an additional unit, and the marginal cost of the third unit is expected to be considerably low.

2.37 We are of the view that there is a benefit in funding four recompression units for PIG trap recompression as the CBA that was carried out showed a positive NPV.

2.38 The estimated cost of purchasing seven recompression units was based on quote from supplier which was submitted as supporting evidence to the submission. NGT also provided a detailed breakdown of the estimated operating costs of the recompression units setting out the activities, time and staff that will be needed.

2.39 We are therefore proposing to fund the investments for compression depressurisation and PIG trap recompression and to **allow funding of a total of £3.77m** ([redacted] to purchase the units and [redacted] to operate the new machines in 2025).

2.40 We recognise that actual capex costs may have changed since submission and that it may be necessary to adjust the level of funding considering actual cost data becoming available.

2.41 Following engagement with NGT, we understand that updated information may be provided to Ofgem once this consultation is published, as NGT will further engage with potential suppliers. Any changes will be highlighted in our decision, as we will set our final funding decision and will consult on the respective Special Condition changes (see chapter 5: next steps)

2.42 If the change to the cost will materially impact the result of the CBA, we will consider whether a new consultation will be required.

2.43 We are content with the delivery plan as summarised above and as detailed in NGTs full submission and subject to the issuance of our final decision to this consultation, we expect NGT to follow it.

2.44 For further details on deliverables and reporting requirements please see chapter 5 in this document.

3. Compressor Machinery Train theme

Section summary

This section summarises NGT's proposals to trial equipment with the aim to reduce methane emissions from certain Operation and Maintenance (O&M) activities, the estimated costs of the preferred option, our assessment and our minded to position on funding of this trial.

Question 2: Do you agree with our minded to position and our proposed funding level for the proposed solutions in this theme?

Gas recompression and zero loss compressor seal

NGT's needs case and proposed solution

3.1 Compressor venting is NGT's largest contributor to methane emissions, equating to 1,930 tonne/year in 2021 (41% of total annual emissions). Whilst some reduction can be achieved through strategies to reduce venting, such as planning, technological solutions need to be utilised to manage those which cannot.

3.2 To make significant reductions NGT looked to address this area of operation if they could identify technically feasible solutions. Via earlier innovation desktop trials and investigations, NGT identified that there are now several engineering solutions available that are suitable for trials to reduce methane emissions from Compressor Machinery Train (CMT[12]).

3.3 NGT proposes to invest in trials to enable reduction of methane emissions that arise from compressor venting and normal operation, and to use the trial outputs to provide evidence for future cost-effective targeted investments to further reduce compressor venting in the next PC.

3.4 In addition to vented emissions, during normal operation, there is a need for critical compressor units to be held in "pressurised stand-by" to enable the Gas National Control Centre (GNCC) to ensure the NTS demand and supply are

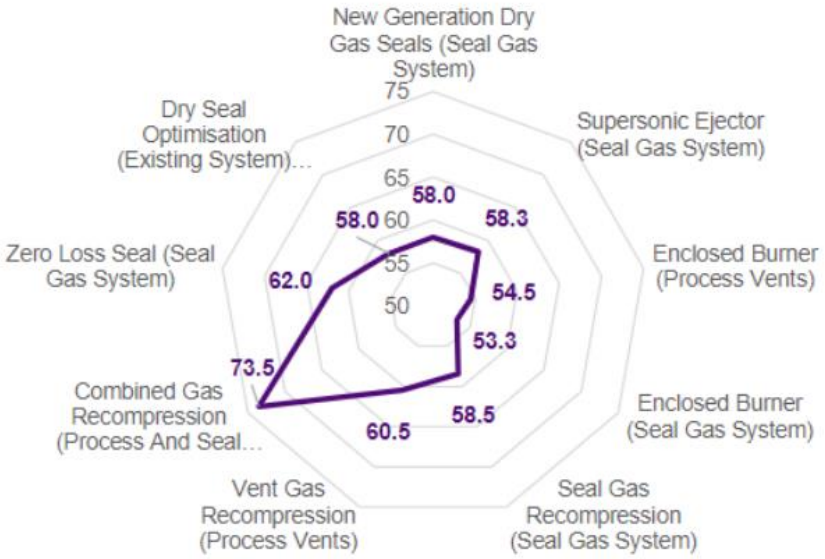
[12] A Compressor Machinery Train is all of the equipment that forms a gas compressor on the network including ancillary equipment like control valves, lube oil system etc.

balanced: this results in methane emissions from compressor seals at a low but continuous rate.

3.5 Options were identified as part of the innovation project CH4RGE[13]. The options were scored using criteria like emissions captured, cost, energy usage as well as engineering, legislative and systems integration complexity. Selection of sites and compressor units considered compressor venting amounts, seal leakage rates and run hours.

3.6 Figure 2 below shows the result of the option assessment using a spider diagram.

Figure 2: ***Spider diagram of CMT methane reduction options and their scoring following BAT assessment during CH4RGE NIA project***



3.7 Following these investigations, NGT is seeking funding for the design, purchase and trial of methane emission reduction from CMT which utilises combined gas recompression (scored 73.5) and zero loss compressor seal (scored 62).

3.8 The sites and compressor units chosen for trial and the most appropriate technology (i.e zero loss seal or combined gas recompression) have been selected considering compressor venting amounts, seal leakage rates and run hours.

[13] CH4rge stage 1: CH4RGE – Methane Reduction from Gas Equipment | ENA Innovation Portal (energynetworks.org). CH4RGE stage 2: CH4RGE – Methane Reduction from Gas Equipment (Stage 2) | ENA Innovation Portal (energynetworks.org)

3.9 NGT flagged that combined gas recompression solution is the best available technical solution for high running compressors with on/off operation but where gas is maintained in the casing for long periods a zero-loss seal is more appropriate.

3.10 Based on the above as well as outage availability, compatibility with OEM technology and projected future use NGT suggested four sites for the trial:

- Site 1 - [name of site redacted] - Combined Gas Recompression
- Site 2 - [name of site redacted] – Combined Gas Recompression
- Site 3 - [name of site redacted] – Zero Loss Seal
- Site 4 - [name of site redacted] – Zero Loss Seal

3.11 Site selection could evolve based on several factors; network usage, criticality and optimisation of trial data.

NGT's estimated costs and funding request

3.12 The total funding requested is of a total of £8.38. CMT estimated cost is based on quotes provided by suppliers. Opex has been capitalised for delivery of this project, as all costs are capitalised when installing a new asset.

3.13 NGT provided as part of the submission a breakdown of costs and supporting evidence, including quotes provided by potential suppliers. The estimated costs are summarised in the table below:

Table 3: cost phasing for CMT in 18/19 price base

UM application 18/19 pricing (£m)	22/23	23/24	24/25	25/26	Total requested
CMT forecast[14] including incurred costs[15]	0.15	2.29	3.77	1.19	7.40
Risk	0.00	0.17	0.41	0.41	0.98
Total including risk	0.15	2.45	4.18	1.60	8.38

[14] These costs include: installation costs in four sites, Original Equipment manufacturer costs (OEM), and NGT own staff costs and overheads.
[15] Cost already incurred by NGT so far (Assigned through 'Use It Or Lose It' cost centre (UIOLI_NGGT0013))

NGT's proposed delivery plan

3.14 NGT will deliver two Combined Gas Recompression and two Zero Loss Seal trials on CMTs on the NTS by the end of the RIIO-2 GD&T PC (subject to final design and award), in line with NGT's proposal.

3.15 NGT is proposing to deliver a close out report outlining their findings regarding deployment of the methane emission reduction solutions for the CMT by end of RIIO-2 PC. This will include the impact on emissions, reliability of the solution, impact on CMT reliability and understanding gained on the challenges around integration on legacy compressors.

3.16 NGT propose to report on progress as part of RRP submissions.

Our assessment on needs case and minded-to decision on funding

3.17 We agree that there is a need to reduce methane emissions from CMT. We recognise that NGT, through earlier innovation work for which Ofgem approved (CH4RGE) identified several technologies that could be rolled out and trialled to reduce emissions from CMT.

3.18 We are of the view that the proposed technologies that were scored highest in the innovation work should be trialled to allow reduction of methane emissions: combined gas recompression and zero loss seal. These trials should allow NGT to understand the impact on emissions, the reliability of the solution and the challenges of integrating those solutions.

3.19 We are of the view that the sites selected by NGT have been chosen using the most relevant criteria.

3.20 We reviewed cost breakdown provided by NGT and are content to allow funding direct costs which covers design services and installation costs, and OEM capex. It also includes costs already incurred by NGT between January and July 2023. We engaged with NGT and queried about some of their own staff estimated costs as well as their contingency estimates.

3.21 NGTs own staff cost estimate included £102,248 (18/19 price base) for non-specific staff that are not a constant on the project but will support it. For example, operational resource, SMEs, H&S advisor, procurement and other resources

brought into the project to aid with design development/approvals/appraisals, project delivery and also closure. NGT estimated 10 working days per month from August 2023 until 2025.

3.22 We agree that there may be some support needed occasionally on the project from outside the core team dedicated to deliver the specific project, however, we don't agree that 10 days every month until the end of the project is a realistic estimate, nor do we think this should be funded via the specific project costs, as such occasional support should be funded from NGTs baseline allowance. We therefore propose to disallow these costs entirely.

3.23 NGT included in its costs estimate £981,800 for contingency. To arrive at this figure, NGT developed a quantitative risk assessment (QRA), and a Monte Carlo analysis was used to produce the P80 values[redacted]. This is not in line with our general approach to risk, and we would only consider a P50 value[redacted]. We also note that this figure represents ~13% of total project costs. We are therefore proposing to reduce the total risk allowance to 10% of the allowed total project costs, in line with similar projects approved in the past.

Table 4: summary of Ofgem's proposed reductions and proposed allowance for CMT

UM application 18/19 pricing (£m)	Total requested by NGT	Ofgem's Proposed reduction	Ofgem's Proposed allowance
CMT forecast[16] and incurred costs[17]	7.40	0.10	7.30
Risk	0.98	0.25	0.73
Total including risk	8.38	0.35	8.03

3.24 Following engagement with NGT we understand that updated information may be provided to Ofgem once this consultation is published, as NGT will further engage with potential suppliers. Any changes will be highlighted in our decision, as we will set our final funding decision and will consult on the respective Special Condition changes (see chapter 5: next steps)

3.25 If the change to the cost will materially impact the result of the CBA we will consider whether a new consultation will be required.

[16] These costs include: installation costs in four sites, Original Equipment manufacturer costs (OEM), and NGT own staff costs and overheads.
[17] Cost already incurred by NGT so far (Assigned through 'Use It Or Lose It' cost centre (UIOLI_NGGT0013))

3.26 We are content with the delivery plan as summarised above and as detailed in NGT's full submission and, subject to the issuance our final decision on this consultation, we expect NGT to follow it.

3.27 For further details on deliverables and reporting requirements please see chapter 5 in this document.

4. Detection and analysis theme

Section summary

This section summarises NGT's proposals to enhance its current fugitive emissions monitoring program and where necessary to carry out small repairs to reduce methane emissions. It also includes a proposal to introduce continuous monitoring in compressor stations. The section sets out the estimated costs of the preferred options, our assessment and our minded to position on funding these initiatives.

Question 3: Do you agree with our minded to position and our proposed funding level for the projects in this theme?

Periodic emission monitoring and small repairs

NGT's needs case and proposed solution

4.1 The current NTS methane emission performance is based on a periodic fugitive survey programme which consists of four-yearly surveys of compressor stations and terminals only. There are 509 additional Above Ground Installations (AGIs) on the NTS that are not regularly surveyed, and fugitive emissions are only normally found when work intrusive work is undertaken on equipment at individual sites. There is scope to improve the detection of fugitive methane emission from the AGI assets.

4.2 NGT is seeking to enhance its existing fugitive survey programme both in frequency and in scale to improve NGT's visibility and understanding of its fugitive methane emission performance.

4.3 NGT proposes to introduce an enhanced risk based proportional periodic fugitive emission monitoring at AGIs, and to undertake Opex repair (e.g. grease injection) and apply monitoring programme where larger investment is needed (rather than small repair), and where capex funding is required to resolve.

NGT's estimated cost and funding request

4.4 NGT is not seeking any Capex allowance. Following engagement with Ofgem earlier in 2021/22, some of the existing RIIO-2 funding for Monitoring of Realtime Fugitive Emissions (MoRFE) of £980k was repurposed and utilised to cover Capex

requirements and purchase of measuring equipment, therefore, NGT is seeking Opex allowance only and no Capex.

4.5 The requested Opex allowance was estimated using data from current existing monitoring programme which is delivered by third party (eg not in house), for example, in relation to number of days/hours required. The proposed solution is to carry out the survey in house rather than by third party and thus deliver the programme efficiently.

4.6 The requested allowance does not cover any Capex repair for cases where such repairs will be identified. Any such repair funding will be sought by NGT as part of its Asset Health allowance of the next PC.

4.7 Due to the main objective of the investment (gathering better understanding of the NTS), a CBA to justify the investment was not an appropriate tool to assess the proposal, however, NGT assumes a 10% reduction in the number of gas escapes identified for each year of the enhanced periodic monitoring programme.

4.8 The estimated costs are summarised in the following table:

Table 5: Opex cost phasing for periodic fugitive monitoring preferred option

UM application 18/19 pricing (£m)	22/23	23/24	24/25	25/26	Total
Monitoring programme Opex	0	0.44	0.44	0.44	1.33
TR32 monitoring of 'capex' repairs	0	0.33	0.63	0.89	1.85
'New' repair Opex	0	1.80	1.62	1.46	4.88
TR32 monitoring of planned repairs	0	1.47	1.32	1.19	3.98
Total funding request	**0**	**4.04**	**4.01**	**3.98**	**12.04**

NGT's proposed delivery plan

4.9 NGT is seeking to deliver a measurement based above ground network methane emission performance baseline by the end of the RIIO-2 period. NGT plan procurement of equipment (using existing funding) and desktop/site-based training and development of monitoring procedures for the equipment in 22/23 and begin using own equipment and the new monitoring programme in 23/24.

Our assessment of the needs case and proposed funding decision

4.10 We agree that there is benefit in expanding the existing monitoring programme to improve visibility of the NTS.

4.11 However, we disagree with NGT's proposed solution. We are only proposing to allow funding for periodic monitoring element. Below we have provided our view on each of the elements proposed by NGT.

Expansion of existing monitoring programme

4.12 We agree that there is value in expanding the existing periodic fugitive monitoring programme and enhance visibility of methane emissions from the NTS. We recognise that the current programme only covers compressor stations and terminals, and there is value in understanding the level of fugitive emissions at the remaining above ground assets to help inform future mitigations strategies for the NTS.

4.13 We agree that expanding periodic monitoring programme only to NGT's largest AGIs will not allow NGT to establish a more accurate and complete performance across the NTS. We agree with NGT's approach to understand the baseline level of emissions at all above ground level installation on the NTS.

4.14 This activity would provide NGT with a baseline understanding of emissions from the above ground assets across the network. We agree that robust monitoring will allow NGT to incorporate improved understanding of its methane emissions performance into its asset health replacement program and prioritisation tools.

4.15 We note that the requested funding was based on interpolation of information from third party which allowed NGT to assess the scope of the activity needed to expand its current program.

4.16 We are therefore proposing to **approve funding of a total amount of £1.296m** for the expansion of the existing monitoring programme. This amount has been calculated after the deduction of the funding NGT requested (ie. £1.33m) the amount of funding that was approved for the existing periodic monitoring programme (£0.034m), as it will replace it.

4.17 The need to deduct the existing funding was identified as part of the assessment and NGT agreed that this has been an oversight and agreed it should be deducted to avoid overlap of funding.

New Repairs- Opex

4.18 We recognise that repairs may be needed where leakage is detected. However, our proposal is not to allow funding for these repairs as part of this re-opener. Our view is that NGT is already funded to maintain its assets via its RIIO-2 Opex allowance. One of the key objectives of baseline Opex allowance provided is to repair leaks when they are found.

4.19 We recognise that expanding monitoring activity may lead to more leaks being detected. However, over/under spend due to changes in volume of work is NGT's risk to manage. It is NGT's responsibility to ensure that the NTS and any AGIs are operated and maintained regularly and note that leakages from these assets could have been detected through regular O&M activity, especially if the leak is significant (for example, can be identified by other means such as noise, or fault indication).

4.20 We are therefore **proposing to disallow funding for repairs of a total £4.88** as requested by NGT.

4.21 We also note that the allowance that was requested was based on estimates regarding the number of leaks that will be detected, and thus may change considerably when the baseline survey is conducted.

4.22 We also note that NGT flagged the risk that if more leaks than anticipated are found, the periodic monitoring program will not be fully delivered. We are of the view that this may result in "first come first serve" repairs, and that assets that may well be leaking will remain un-known. We consider it a risk to the objective of the programme which is to first and foremost understand the full picture of the NTS in terms of fugitive emissions.

4.23 We welcome further engagement with NGT throughout the process if a significant additional repair programme is needed. In such case we will expect justification for the additional level of repairs, compared to previous levels and we may also ask NGT to provide a programme of repairs that will be supported by a CBA, to help demonstrate that the work being undertaken represents value for money for consumers.

Monitoring and detecting gas leaks where repairs are delayed[18]

4.24 We propose **not to approve any of NGT's requested funding of £5.83** for additional monitoring and detecting gas leaks where repairs are delayed. We recognise that NGT's own work procedure sets out requirements to repair leaks when they are found, and if not possible, to continue monitoring until such time that repair is possible. However, the work procedure submitted to us by NGT does not state the frequency of the additional site visits to monitor the gas escape. It states that the frequency will be determined based on circumstances.

4.25 As per above, our view is that the additional site visit monitoring is also work that should be covered by existing Opex.

4.26 Furthermore, the requested allowance for monitoring gas leaks is speculative in relation to the number of leaks, and specifically the number of leaks that will require additional monitoring (above and beyond the existing monitoring cycle).

4.27 As per above, we welcome NGT to approach Ofgem if the level of leakage that is detected will have significant impact on their Opex. We believe that this flexible approach to dealing with a relatively unknown number of issues with unknown costs helps to strikes the balance between improved environmental performance and increased costs for consumers.

4.28 As a financial regulator one of Ofgem's roles is to ensure that consumers are being charged only for efficient costs and where it has the greatest impact. In the context of methane emissions, it is important to put this re-opener request in context: the UK energy sector as a whole is estimated at to produce 6000kTCO2e, or 11% of total UK methane emissions[19]. Of this, Gas Transmission leakage in 2020 was estimated at ~6ktCo2e, while Gas Distribution leakage was estimated at 127KtCO2e[20]. Considering the cost-of-living crisis and specifically the cost of energy, we need to ensure that consumers' money will be used efficiently and will bring the most environmental benefit.

4.29 We are content with the delivery plan as summarised above and as detailed in NGTs full submission and expect NGT to follow it, in relation to the expansion of the monitoring programme only.

[18] This is related to both planned repairs that are delayed, and Capex repairs (TR32 in the table).
[19] United Kingdom methane memorandum - GOV.UK (www.gov.uk)
[20] UK emissions data selector - NAEI, UK (beis.gov.uk)

4.30 For further details on deliverables and reporting requirements please see chapter 5 in this document.

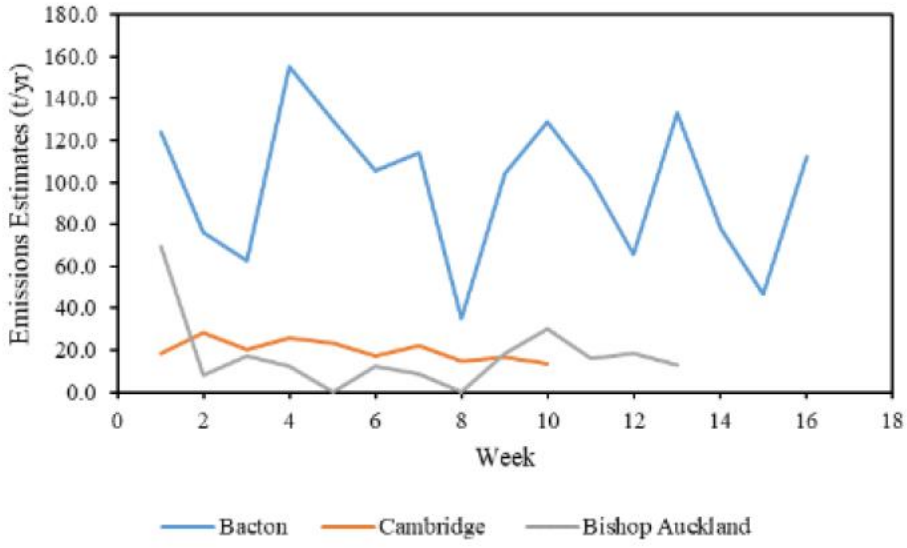
Continuous Emission Monitoring

NGT's proposed needs case and proposed solution

4.31 NGT, through a series of innovation projects[21], identified short duration fugitive emission events at ground level and at height which are large enough to potentially contribute a significant amount to the total site fugitive emissions and, therefore, require detection and management. These short duration emission events would not be captured by the periodic detection alone.

4.32 Figure 3 below shows weekly mass emission rate estimates from MoRFE field campaign.

Figure 3: weekly mass emission rate estimates from MoRFE field campaign



4.33 NGT therefore in their NZASP re-opener application are requesting funding for installing continuous fugitive emission monitoring system at all its compressor stations and terminals. NGT flags that deployment of continuous monitoring at compressors and terminals will bring approximately 70% of pressure holding assets on the NTS under permanent fugitive gas escape monitoring. NGT will then be able

[21] Monitoring of real-time Fugitive Emissions (MORFE) | ENA Innovation Portal (energynetworks.org)

to assess the effectiveness of these continues monitoring systems for monitoring fugitive methane emissions for the reminder of RIIO-2 period and consider the appropriateness for wider implementation in the next PC.

4.34 The preferred option for deployment is to implement a flexible length lease/hire agreement with a continuous fugitive measurement system provider for enhanced continuous fugitive gas escape detection from all compressor stations and terminals. The benefits of such approach are that this will allow NGT the flexibility to review the marketplace ahead of the next PC, and to move to a different technology should an improved offer come to market.

Estimated costs and funding request

4.35 The cost is estimated at £1.47m in 2018/19 price base. Following several quotes from suppliers, NGT selected one supplier that was best suited to meet NGT's requirements. In its selection NGGT looked at the following factors: different options of terminal deployment, available hire, lease and purchase arrangement as well as cost benefits and risks associated with the different arrangements. Maturity of technology of the solution has also been considered as well as suppliers delivery capability. Table 6 below shows spend profile in RIIO-2 period.

Table 6: Opex cost phasing for continues fugitive monitoring preferred option

UM application 18/19 pricing	23/24	24/25	25/26	Total
Continuous monitoring costs	0.29	0.49	0.69	1.47

4.36 As with the periodic monitoring, a CBA to justify the investment was not considered an appropriate tool to assess the proposal, as the scope is limited to improving NGT's understanding of its methane emission performance and will not in itself result in emission reduction.

4.37 NGT flagged that a tender will take place following a funding award from Ofgem, where the technology will be determined based on suppliers' proposals and the same factors as mentioned above that will ensure best value to consumers. NGT remains agnostic to the actual technology and the supplier.

NGT's proposed delivery plan

4.38 NGT aims to procure equipment in 2023 and carry out desktop/site-based training on operation of selected system for deployment. During 2023 and 2025 installation will take place at 22 compressors and terminals on the NTS.

4.39 By the end of RIIO-2 PC NGT aim to deliver:

- A measurement based above ground network methane emission performance baseline combining both periodic and continuous fugitive detection
- Deployment and continuous fugitive monitoring systems at compressors and terminals on the NTS
- A report outlining NGT's optimised fugitive gas escape detection strategy, combining periodic and continuous monitoring methods

Our assessment of the needs case and our minded-to decision on funding

4.40 We don't agree that this investment will bring significant benefits to consumers. We are therefore **proposing not to allow funding of a total of £1.47**, as requested by NGT in their NZASP re-opener application.

4.41 This investment does not reduce methane emissions or identify the exact location of leaks to enable repair. Reading the close out report from the MoRFE it is clear that continuous monitoring is not accurate for fugitive leaks and mainly identifies vents from activities that are normally an unavoidable part of operating the system. As the report itself stated: "*The (detection system) itself cannot replace traditional walk over leak detection and repair surveys as it does not identify the individual leaking asset or component but can be used to identifying potential source areas which should improve speed of leak detection".*

4.42 Given our minded to position above to provide funding for reduction of methane emissions from operation (see chapters 2 and 3) and the expanded monitoring programme (this chapter), we see only limited benefit in additional investment in continuous monitoring.

4.43 It is likely that the system will only reflect what is already known, which is that operation of the system impacts methane emissions, and that methane emissions are high whenever there is operational venting (emergency venting, shut down/open up etc). Fugitive or unintentional leakages from compressor stations

and terminals however are unlikely to be related to short duration emissions and will be captured by the periodic detection programme.

4.44 We note that the close out report of MoRFE also states that "*NGT are required to provide a detailed cost-benefit analysis in their RIIO T2 discussions with Ofgem to fund potential roll out. The monitoring system must give value for money for consumers and meet their requirements".* We agree with this point. NGT did not submit a CBA or equivalent that this investment represents value for money for consumers.

4.45 We also note continuous monitoring was actually approved and funded as part of the RIIO-2 GD&T FD[22], however, NGT approached Ofgem and asked to repurpose the allowance stating that "there are better value options available, for example, procuring periodic detection equipment that will allow expansion of emission detection".

4.46 We agree with NGT's own view that there are better value options available, and as stated above, given the additional funding for other projects to reduce emissions and enhance monitoring (which were not in place at the set out of RIIO-2), we are of the view that this investment will have little additional benefit for consumers.

Reporting requirements and proposed project deliverables

4.47 We have not considered any reporting requirements as our minded to position is not to approve funding for continuous emission monitoring.

[22] See paragraph 3.72, 3.73 in our RIIO-2 Final Determination – NGGT annex: RIIO-2 Final Determinations for Transmission and Gas Distribution network companies and the Electricity System Operator | Ofgem

5. Summary of minded-to funding position, reporting requirements and next steps

Section summary

This section summarises Ofgem's minded to funding position, reporting requirements and proposed project deliverables. It also sets out the next steps following this consultation.

Question 4: Do you agree with our proposed reporting requirement?

Question 5: Do you agree with our proposed project deliverables and their associated delivery dates?

Ofgem minded to position

5.1 The table below summarises NGT's funding request per project and Ofgem's minded-to position on the level of funding for each project submitted under this NZASP re-opener application.

Table 7: Ofgem minded-to position on funding for this reopener in £m (18/19 price base)

Theme	Project	NGT funding request	Ofgem proposed reduction	Ofgem proposed allowance
Mobile recompression theme - total	**Pipeline recompression**	4.25	0	4.25
	Compressor station and PIG trap recompression	3.77	0	3.77
	Mobile recompression theme total	**8.02**	**0**	**8.02**
CMT	**zero loss seal and combined gas recompression**	8.38	0.35	8.03
	CMT total	**8.38**	**0.35**	**8.03**
Detection and Analysis 9D&A)	**Monitoring programme Opex**	1.33	0.03	1.3
	Monitoring program - repairs	4.88	4.88	0
	Monitoring program – additional monitoring (opex repairs)	3.98	3.98	0

	Monitoring program – additional monitoring (capex repairs)	1.85	1.85	0
	Continues fugitive monitoring	1.47	1.47	0
	D&A theme - total	**13.51**	**12.21**	**1.3**
NZASP	**Total NZASP - all themes**	**29.91**	**12.56**	**17.35**

Proposed reporting requirements

5.2 Subject to a final decision on funding, NGT will have to report to Ofgem on progress of the approved projects using the annual Regulatory Reporting Pack (RRP)[23] submissions. The information should include as a minimum:

- Progress (eg – tender, purchase, operation), including any risks to the timely delivery of the project should be set out in the RRP submission commentary.
- Actual spend and forecast spend for the coming years should be included in the respective table in the RRP excel template

5.3 **For the CMT project:** We note that in its submission NGT identified four provisional sites for the trial, however those sites may change depending on circumstances (network usage, criticality etc). Changes to the site locations and reason for the change should be included in the RRP commentary.

5.4 **For periodic monitoring project**, Full report on monitoring results. This should include analysis of the findings and proposal for next steps (if relevant). It should be provided as an annex to the RRP report following delivery.

Proposed project deliverables

5.5 Project deliverables are project specific outputs, such as key activity milestones or evidence to be reported to Ofgem, which demonstrate delivery of the projects that funding is awarded for. These would sit within the direction, meaning deliverables should be met as a condition of receiving funding through this re-opener and

[23] Guidance and templates concerning the annual reporting requirements can be found here: Notice proposing modifications to the Regulatory Instructions and Guidance (RIGs) RIIO-2 Year 2 for GT, GD and Regulatory Finance | Ofgem

funding can be adjusted where Ofgem determines under or non-delivery of a project deliverable.[24]

5.6 In accordance with the NZASP re-opener governance document, we are consulting on the proposed project deliverables. We welcome views on the project deliverables and may make clarifications or amendments to these as a result of the consultation. Prior to a decision being issued, NGT should indicate, in writing, that they will comply with the project deliverables following any amendments made by Ofgem.

5.7 For all projects which we are minded-to approve, we are content with NGT's proposal for deliverables as described in their re-opener submission. We are thus proposing to adopt those deliverables with a few amendments

5.8 The amendments we propose relate to delivery deadlines to account for the timing that has passed since the submission was made and our consultation. We do however expect NGT to be able to make up for the delay by the next financial year and follow their own plan.

Table 8: proposed project deliverables by projects

Project/FY[25]	December 2023	2023/24	2024/25	2025/26
Pipeline recompression	Part payment of one high/low pressure pipeline recompression set.	Part payment of one high/low pressure pipeline recompression set.	Part payment of one high/low pressure pipeline recompression set.	Commissioned one high/low pipeline recompression set.
Compressor station and PIG trap recompression	Procurement of eight small recompression units for compressor station depressurisations and PIG trap venting.	Part payment of eight small recompression units for compressor station depressurisations and PIG trap venting.	Part payment of eight small recompression units for compressor station depressurisations and PIG trap venting.	Commissioned eight small recompression units for compressor station depressurisations and PIG trap venting.
CMT (site 1) **[redacted] Combined Gas Recompression**	Develop (Detailed design, order long lead materials, FEA[26], FPSA[27])	Develop (Detailed design, FEA, FPSA)	Execute programme	Close project/ Analysis and Report Findings

[24] Subject to a well-reasoned justification for under or non-delivery from the licensee.
[25] Any financial year ends on the 31st of the last year. 2022/23 ends on the 31st of March 2023.
[26] Formal Environmental Assessment
[27] Formal Process Safety Assessment

CMT (site 2) **[redacted] – Combined Gas Recompression**	Develop (Detailed design, order long lead materials, FEA, FPSA)	Develop (Detailed design, FEA, FPSA)	Execute programme	Close project / Analysis and Report Findings
CMT (site 3) **[redacted] – Zero Loss Seal**	Develop (Detailed design, order long lead materials, FEA, FPSA)	Develop (Detailed design, FEA, FPSA)	Execute programme	Close project / Analysis and Report Findings
CMT (site 4) **[redacted] – Zero Loss Seal**	Develop (Detailed design, order long lead materials, FEA, FPSA)	Develop (Detailed design, FEA, FPSA)	Execute programme	Close project / Analysis and Report Findings
Expanded monitoring programme	Procurement of periodic fugitive emissions monitoring equipment[28] and desktop/site-based training for the team. Shadowing of third-party contractor carrying out existing periodic fugitive surveys for 2022/23. Development of monitoring procedures using own equipment.	Periodic fugitive surveys in-house of all compressor stations, terminals and multi-junctions using developed procedures. Survey 1/3 of other AGIs. Participate in proficiency testing as a provider of periodic fugitive monitoring services and apply for accreditation	Periodic fugitive survey at all compressor stations, terminals and multi-junctions. Survey 1/3 of AGIs not yet tested. Obtain accreditation for periodic fugitive monitoring methods to bring within scope of ISO17025 accredited laboratory.	Periodic fugitive survey at all compressor stations and terminals and multi-junctions. Survey remaining 1/3 of AGIs not tested so all assets have been fully monitored at least once.

5.9 For all the projects above, NGET is also required to provide shortly after delivery a close out report in line with NZASP Governance Document: These reports should set out: how the projects were delivered, as set out in its re-opener application, and any instances of under or non-delivery.

We will engage with NGT to agree on the exact timing of the report following delivery.

Next steps

5.10 Following close of consultation and review of responses, Ofgem will publish its decision. Alongside the decision Ofgem will publish a proposed direction and

[28] This equipment was already funded.

proposed changes to the relevant Special License condition to give effect to its decision.

5.11 The direction and changes to the Special Condition will be consulted on in line with part C of Special Condition 3.9: Net Zero Pre-construction Work and Small Net Zero Projects Re-opener (NZPt) and Special Condition 6.1. of NGT's Gas Transporter Licence.

List of appendices

Appendix	Name of appendix
1	CBA parameters
2	Privacy notice on consultation

Appendix 1 : CBA Parameters

Table 9 below summarises the parameters which were used to populate CBA for the mobile recompression and CMT methane reduction themes. For D&A theme a CBA was not used.

Factor	Value	Value for CMT
2022/23 to 2018/19 conversion	1.17	1.18
GWP of methane over 100-year horizon	25	25
2022 Carbon values in £2020 prices per tonne of CO2 – Low Series	£124	£124
2022 Carbon values in £2020 prices per tonne of CO2 – Central Series	£248	£248
2022 Carbon values in £2020 prices per tonne of CO2 – High Series	£373	£373
USD to GBP: $1	0.86	0.83
EUR to GBP: €1	0.87	0.86

Table 9: Factors used in CBA analysis

Appendix 2 : Privacy notice on consultations

Personal data

The following explains your rights and gives you the information you are entitled to under the General Data Protection Regulation (GDPR).

Note that this section only refers to your personal data (your name address and anything that could be used to identify you personally) not the content of your response to the consultation.

1. The identity of the controller and contact details of our Data Protection Officer

The Gas and Electricity Markets Authority is the controller, (for ease of reference, "Ofgem"). The Data Protection Officer can be contacted at dpo@ofgem.gov.uk

2. Why we are collecting your personal data

Your personal data is being collected as an essential part of the consultation process, so that we can contact you regarding your response and for statistical purposes. We may also use it to contact you about related matters.

3. Our legal basis for processing your personal data

As a public authority, the GDPR makes provision for Ofgem to process personal data as necessary for the effective performance of a task carried out in the public interest. i.e. a consultation.

4. With whom we will be sharing your personal data

N/A

5. For how long we will keep your personal data, or criteria used to determine the retention period.

Your personal data will be held for six months after the project is closed)

6. Your rights

The data we are collecting is your personal data, and you have considerable say over what happens to it. You have the right to:

- know how we use your personal data
- access your personal data
- have personal data corrected if it is inaccurate or incomplete
- ask us to delete personal data when we no longer need it
- ask us to restrict how we process your data

- get your data from us and re-use it across other services
- object to certain ways we use your data
- be safeguarded against risks where decisions based on your data are taken entirely automatically
- tell us if we can share your information with 3rd parties
- tell us your preferred frequency, content and format of our communications with you
- to lodge a complaint with the independent Information Commissioner (ICO) if you think we are not handling your data fairly or in accordance with the law. You can contact the ICO at https://ico.org.uk/, or telephone 0303 123 1113.

7. Your personal data will not be sent overseas

8. Your personal data will not be used for any automated decision making.

9. Your personal data will be stored in a secure government IT system.

10. More information

For more information on how Ofgem processes your data, click on the link to our "ofgem privacy promise".