



RIIO-GT2

Summary Report

Ofgem

24 June 2020

RIIO-GT2 Summary Report

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Introduction

This document has been produced by Atkins on behalf of Ofgem. It contains Atkins' methodology for reviewing the National Grid Gas Transmission (NGGT) Engineering Justification Papers (EJPs), and the key findings from these reviews.

1. Methodology

1.1. Clarification on NGGT Methodology

At the outset of this project it was assumed that the interventions in the Engineering Justification Papers (EJPs¹) had been generated using the monetised risk principles described in NGGTs NOMs methodology². However, during the project NGGT informed Ofgem that they had not used the NOMs methodology to generate the intervention volumes. Instead, each group of interventions had been generated using a variety of bottom-up methodologies. As a result, it was agreed that Atkins would review these methodologies as part of the delivery of this project.

Atkins reviewed the methodologies presented and assessed the justification of the interventions proposed in each of the business cases³. Where areas of insufficient justification were identified, Atkins highlighted them to Ofgem through continuous engagement and Supplementary Questions (SQs). Presentations summarising the intervention methodologies of each EJP and their justifications were also made to Ofgem. In some cases, NGGT⁴ were requested to generate new volumes of interventions based on Atkins' and Ofgem observations.

1.2. Review of EJP's

Atkins reviewed 24 EJPs using a methodology approved by Ofgem. An initial review of each EJP was completed which identified where further information was required. This additional information was requested using SQs sent to NGGT via Ofgem. Once the question had been suitably answered, possibly requiring multiple rounds of SQs, a summary technical note was prepared. These technical notes were submitted to Ofgem and the intervention volume adjustments were summarised in the full final report submitted to Ofgem on 11/06/20.

1.3. Deliverables

Atkins deliverables were agreed on 30 January 2020⁵ as follows:

Asset Health EJPs Deliverables:

- Interim progress report submitted on 16th March 2020.
- Engineering review sheets were to be kept which record discussions and contain decision on volumes.
- Briefing notes to be produced if needed where more in-depth discussion were required that were not accommodated by the review sheets.
- TOTEX Financial Model Input Sheet was to be produced which recorded all volumes changes across all interventions in RIIO-2.
- A final report which collected the engineering review sheets, summary notes and summary tables.
- Summary presentation to Ofgem on the major projects on 26th May 2020.

Major project EJPs:

- Interim progress report submitted on 16th March 2020.
- Engineering review sheets were to be kept, as above, but with any necessary changes to the questions for the specific project being considered.
- A briefing note to be produced if needed where more in-depth discussion was required that was not accommodated by the review sheets.
- A final report which collected the engineering review sheets, summary notes and summary tables.
- Summary presentation to Ofgem on the major projects on 28th May 2020.

¹ EJPs related to Asset Health investment.

² This refers to the new RIIO2 GT Network Output Measures (NOMs) methodology that NGGT proposed to Ofgem.

³ This is limited to volumes of interventions.

⁴ Via the agreed SQ process

⁵ Email from Colin Laing to Nikola Gargov and Sarah Marvi sent on Thu 30/01/2020 11:38.

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1.4. Process for Revising Intervention Volumes and Closing out EJPs

The process for revising intervention volumes and closing out EJP reviews was agreed at a workshop between Atkins and Ofgem on 9th March 2020:

- Where Atkins concluded that enough information and data had been provided to justify the proposed intervention volumes, Atkins were to advise Ofgem to include these intervention volumes in the TOTEX model.
- Where there was not enough information provided in the EJPs on the methodologies and assumptions driving intervention volumes, Atkins were to raise appropriate SQs to seek more evidence and information.
- If after two iterations of SQs Atkins had not obtained the requested information to a sufficient level of detail, Atkins were to flag this to Ofgem, and calls would then be arranged between Atkins, Ofgem and NGGT to resolve the remaining queries.
- In the case of the Major Projects that were proposed to be re-opened at a later date as part of the Uncertainty Mechanism, Atkins were to provide recommendations on what additional information should be presented in order to allow further funding.

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2. Key findings

This section provides an overview of findings applicable to all, or most, of the EJPs based on Atkins' review of the NGGT EJPs.

2.1. Asset Health EJPs

- **Degradation curves and calculating asset end of life** – these were not provided for all EJPs and even where they were, it was not always clear how the data was obtained and how it factored into intervention methodologies and assumptions.
- **NOMs methodology** – any mention of the use of NOMs was accompanied by a caveat that the data had not been validated at the time the EJPs were drafted.
- **Intervention methodologies** – generally, the EJPs provided little to no detail on the methodologies used to generate the intervention volumes and how asset age, degradation curves (where available) and asset condition grading information was used in determining the type of intervention required (survey / repair / refurbishment / replacement). This resulted in the need to raise SQs and then interrogate the information provided.
- **Asset condition grading** – the EJPs lacked detail on how assets were graded, what methods and guidance had been used and how many assets had been inspected as a percentage of the total asset population. This information was requested via the SQ process.
- **Quantification of benefits/drawbacks for discounted options** – where intervention programme options were discounted, no qualification was provided to explain how they had not met the objectives of the proposed asset health improvement programmes. Some of this information was requested via the SQ process.

2.2. Major Projects

It was more difficult to generalise findings across the major projects EJPs, however a few common issues were found:

- **Scope of work** – while the EJPs provide extensive narrative on why the work proposed was required, they provide little detail on the scope of the proposed work and how the scope had been determined.
- **Options** – for Wormington Compressor EJP, Atkins identified several options that had not been presented in the EJP. Generally, the EJPs only present high-level justification for rejecting the non-preferred options. More information was sought through the SQ process.
- **Quantification of benefits/drawbacks for discounted options** – similar to asset health EJPs, where options were discounted, there was very little justification or quantifiable data provided.
- **Demand and supply scenarios** – Atkins were concerned that scenarios which were biased towards showing a greater need for the projects had been used to justify the work. Also, the EJPs did not explain that the asset life of the proposed assets may go beyond the scenario timescales. Therefore the scenarios would only be applicable to a fraction of the asset life.
- **Cost accuracy** – Atkins were concerned that the projects had not been developed enough to achieve the typical cost accuracy required for project sanctions. It was noted that Ofgem are discussing implementing a mechanism, such as an Uncertainty Mechanism, to review the proposals at a later stage in development when more accurate cost information would be available. Where appropriate, Atkins made recommendations on the additional detailed cost and optioneering that should be done before further funding is approved.

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3. Scope of Review

The table below details the EJP's and major projects reviewed by Atkins on behalf of Ofgem.

Theme	EJP Title
Cab Infrastructure	Cab Infrastructure
	Fire Suppression Systems
Compressor Train	Compressor
	Gas Generator Power Train
	Variable Speed Drive
	Vent System
Electrical Engineering	Site Electrical Systems
	Standby Power Supplies
Pipelines	Depth of Cover
	Impact Sleeves
	Pig traps
	PL Coating CP
	Watercourse crossings
Plant Equipment	Above Ground Pipework, Cladding & CP systems
	Filters, Scrubbers & Preheaters
	Pressure reduction, flow control and Slamshut Systems
Structural Integrity	Pipe Supports Pits and Ducting
	Security & fences, access & buildings
	Treatment & Drainage, tanks and bunds
Valves	Valves
Major Projects	Wormington Compressor
	Redundant Assets
	Kings Lynn Subsidence
	Increasing Resilience at Blackrod Offtake

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