Gas Networks Ireland

# PC5 Innovation Fund

## Annual Report: Gas Year 2022/23 and Gas Year 2023/24

# Contents

# Glossary of Terms & Abbreviations

The table below outlines a list of abbreviations used and the definition as intended in this document:

| # | Abbreviation | Definition |
|---|---|---|
| **1** | AI | Artificial Intelligence |
| **2** | BAU | Business As Usual |
| **3** | CFO | Chief Financial Officer |
| **4** | COO | Chief Operating Officer |
| **5** | CRU | Commission for Regulation of Utilities |
| **6** | EIC | Energy Innovation Centre [1] |
| **7** | FROGI | Future Role of Gas Initiatives |
| **8** | GDN | Gas Distribution Network |
| **9** | GERG | European Gas Research Group [2] |
| **10** | IF | Innovation Fund |
| **11** | GNI | Gas Networks Ireland |
| **12** | GY | Gas Year |
| **13** | IDT | Innovation Delivery Team |
| **14** | NBIF | Network Based Innovation Fund |
| **15** | PC 5 | Price Control 5 |
| **16** | PE | Polyethylene |
| **17** | PO | Purchase Order |
| **18** | SIF | Strategic Innovation Fund |
| **19** | ToR | Terms of Reference |
| **20** | DCVG | Direct Current Voltage Gradient |
| **21** | CIPS | Close Interval Potential Surveys |

[1] Homepage - EIC | Energy Innovation Centre

[2] GERG - The European Gas Research Group

# 1 Executive Summary

The PC5 period commenced in October 2022 and runs to September 2027. This report covers the operation of the PC5 Innovation Fund for the first two years of that period.

The PC5 Innovation Fund is divided into three distinct parts, a Network Based Innovation Fund (NBIF) and a Strategic Innovation Fund (SIF), supported by an administration allowance. The total funding available for innovation in the price control is €5.3million[3] assigned as follows.


FIGURE 1 INNOVATION FUND ALLOWANCES

During the first two years of the price control, significant work was undertaken by GNI to establish the approach to innovation delivery for price control 5. A dedicated innovation delivery team was established and a detailed process designed as set out in section 2.1. This enabled GNI to meet the following key metrics after the first two years of the price control:

- Established an Innovation Steering Group including appointing two interim independent members to the Innovation Steering group and progressed the process for appointment of permanent independent members
- Awarded NBIF innovation funding to 23 projects; with delivery in progress on 21 and 2 innovation projects now complete
- Allocated NBIF funding to innovation projects of €1,031,512
- Established strategic relationships with the Energy Innovation Centre (EIC) and Innovation Exchange
- Made significant progress on the planning for a challenge-based research funding scheme with Research Ireland (formerly Science Foundation Ireland) under the SIF
- Engaged with other bodies to establish co-funding opportunities

## 1.1 Key Priorities of the Innovation Fund

As part of the management of the PC5 Innovation Fund, the CRU outlined a number of objectives which they determined to be of importance in terms of how GNI manage the Innovation Fund. GNI consider the alignment of every innovation idea and project for innovation funding to the CRU objectives and to the GNI Strategic Ambitions. The assessment of each innovation project considers the economic, safety, environmental and compliance benefits. The table below outlines the CRU objectives and the GNI Strategic Ambitions:

[3] The €5.3m allowance, as per the price control determination, is set out in 2020/21 monies and will be subject to annual HICP inflation through the regulatory model

| CRU Policy Objectives[4] | GNI Strategic Ambitions |
|---|---|
| Providing a safe high-quality service for all our gas customers | Excellence in Operations |
| Continued focus on efficient spend | Strong Financials |
| Efficiently facilitating the energy transition with a particular focus on decarbonisation | Integrated Energy System |
| Maintaining a safe and resilient gas network | Sustainable Energy Services |
| | Resilient Energy Network |
| | Energised People |

TABLE 1 ALIGNMENT OF THE INNOVATION FUND

Furthermore, the CRU highlighted the importance of:

- effectively identifying suitable projects for co-funding.
- enhancing the GNI innovation webpage in order to attract suitable applicants.
- effective dissemination of all research and innovation outcomes.

Each of these is discussed in further detail later in this report it is also noteworthy that they actively form part of our metrics and overall planning for the administration of the NBIF and SIF funds.

[4] CRU2023140_CRU_Decision_on_the_PC5_Regulatory_Framework_380056.PDF

# 2 Governance

## 2.1 Innovation Fund Overview

The Commission for Regulation of Utilities (CRU) in its decision paper 'CRU Decision on the PC5 Regulatory Framework Decision Paper'[5] set out its decision in relation to the Innovation Fund for the PC5 period. The CRU proposed total innovation funding of €5.3m. This comprised a Strategic Innovation Fund (SIF) of €1.5m and a Network-Based Innovation Fund (NBIF) of €3.4m. Administration costs across the two innovation pots are covered by a €400k Adminstrative Allowance. The NBIF aims to further best practice in the operation and mangement of the existing gas network. A maximum of €1.5m of the €3.4m NBIF can be utilised for innovation projects relating to Future Role Of Gas Initiatives (FROGI).

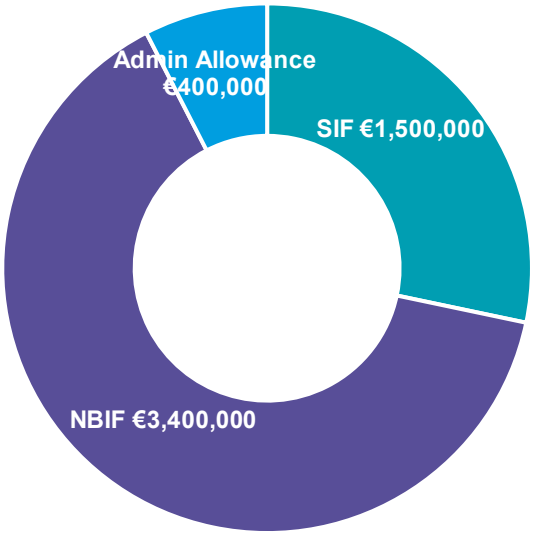


FIGURE 2 INNOVATION FUND BREAKDOWN

The CRU has published a decision paper and user guide relating to the implementation of the price control 5 (PC5) Regulatory Framework. A detailed explanation of how the innovation aspect of the framework will be implemented is presented in the price control 5 Regulatory Framework User Guide[6].

## 2.2 Innovation Process

In preparation for the CRU PC5 decision on innovation allowances the GNI Innovation Delivery Team developed an innovation process and established a pipeline of innovation ideas in the 2022/23 gas year. This ensured that the necessary processes were largely in place to commence work on innovation delivery. Upon receipt of the CRU decision in December 2023 the GNI innovation delivery team reviewed the framework and completed a review to ensure the draft process considered all elements of the final decision.

[5] Gas Networks Ireland Price Control 5 | CRU.ie

[6] Price Control 5 Regulatory Framework User Guide.PDF

In line with GNI's established delivery methodologies the innovation team designed a gated process for the management and delivery of innovation projects. The following diagram outlines at a high level what this process entails:

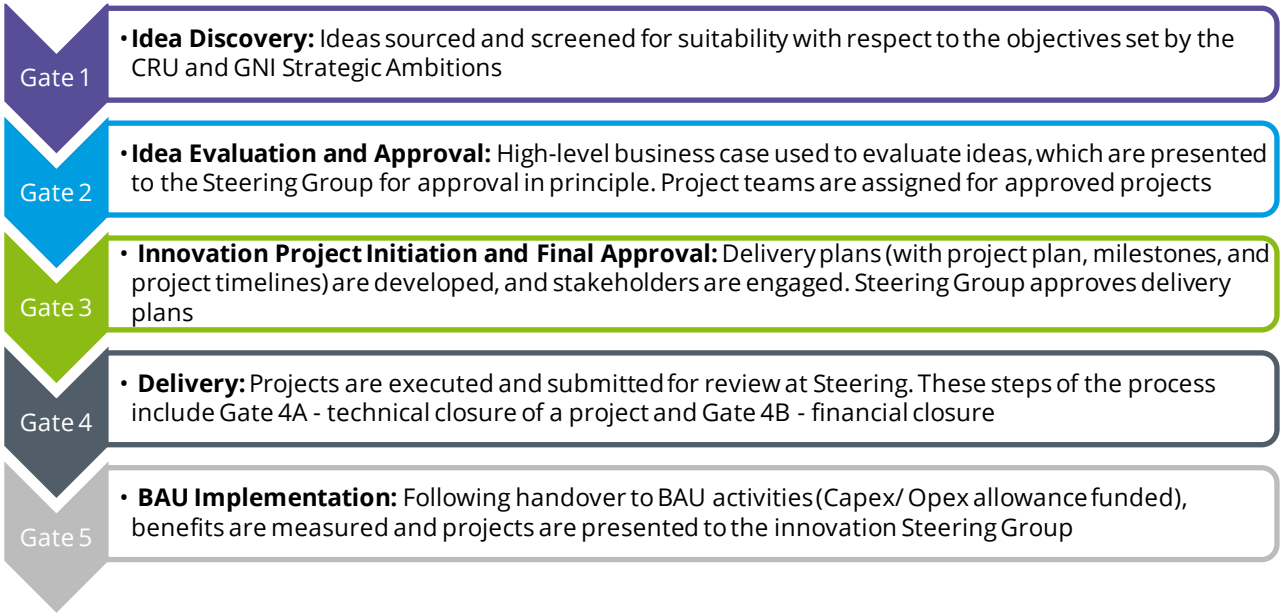


FIGURE 3 GATED PROCESS OVERVIEW

To ensure a consistent and substantial pipeline of ideas, GNI have established partnerships with innovation partners such as the Energy Innovation Centre (EIC) and the Innovation Exchange. Such partnerships have brought significant value to the innovation process to date. The EIC partnership has not only supported the identification of opportunities, as outlined at table 2 below, but has also enabled a cross jurisdictional view of innovation and collaboration with other utilities for innovation ideas at project initiation. On a quarterly basis GNI representatives attend a Gas Distribution Network (GDN) Forum facilitated by the EIC. This forum ensures continuous collaboration with other utilities to determine best in class practices and identification of co funding opportunities between GNI and other utilities.

Of the 23 projects approved to date the following table shows at a high level the source of the ideas, with the majority coming from the business itself:

| Project Origination | Number of Projects |
|---|---|
| GNI | 16 |
| EIC | 5 |
| GERG | 1 |
| UK Utility Week Conference | 1 |
| **Total** | **23** |

TABLE 2 PROJECT ORIGINATION BREAKDOWN

Innovation Ideas generated from within the business are also explored at the Discovery stage through our engagement with other utilities and the wider innovation community to understand the current best practice approaches and the potential benefits of the proposed innovation.

## 2.3 Innovation Steering Group

The primary governance forum for the PC5 Innovation Fund is the Innovation Steering Group. This group is made up of members drawn from the following GNI pillars as well as two external interim independent members:

- COO
- Assets & Infrastructure
- Strategy & Regulation
- Business Services
- Finance
- Customer & Business Development
- People

Representation from each pillar ensures that each idea and project is considered with the impact and value it can add to the entire organisation and ensures that when a project reaches implementation that there is buy in from senior representatives from each pillar to endorse the successful adoption by business-as-usual teams.

The addition of two external independent members provides a depth and breadth of experience and knowledge beyond GNI and enables the consideration of other jurisdictional and industry learnings. Through their experience they provide external challenge to GNI's thinking providing real time feedback for concepts, ideas and approaches. Interim appointments were made in Q4 2023 to support the Innovation Steering Group while a formal appointment by CRU of the enduring PC5 independent members is anticipated to occur in Q2 2025.

Following the first two years of the price control our interim independent members provided the following feedback on the management of the fund:

> *"We have been impressed by the swift establishment of the PC5 innovation programme by GNI colleagues. They have secured a wide range of promising projects and put in place effective processes for estimating benefits, managing funding, approving investments, and monitoring milestones.*
>
> *This programme has the potential to deliver significant financial, quality, and customer service benefits. Projects totalling around EUR 1,000,000 of costs have the potential to generate many times more benefits for customers. This is extremely exciting. However as is the case with all innovation programmes significant uncertainties remain.*
>
> *In the coming year a priority is to identify additional innovations and for the projects underway substantially increase the focus on actual and anticipated benefits realisation. As we gravitate towards the end game of decarbonisation, we are focused on the sustainability of the existing gas network and on the early intervention in the future of gas. Looking at the energy transition, this provides a strong foundation and enhances the renewable ambition that starts us on the road to ultimate decarbonisation.*
>
> *While all projects show potential, for innovation programmes it is not unusual for 80% of benefits to come from 20% of projects. Next year, we will encourage GNI to be even more flexible during delivery. This might involve terminating difficult projects early or increasing investment in high-benefit projects."*

The steering group has a regular meeting once a quarter to review and approve new projects. They also monitor the overall financial status of the fund and as required approve additional project funding as projects move through the gated process. Periodic updates are provided to Steering in relation to ongoing projects. All documentation, including Cost Benefit Analysis, application form and project plan, are provided to Steering members in advance to enable meaningful discussion and challenge at Steering meetings. As required, the steering group can convene additional meetings to discuss time sensitive items for approval, in keeping with the ethos of efficiently managing project progress. Further information regarding steering membership and the steering meetings can be found at Appendix 1.

# 3 Network Based Innovation Fund

## 3.1 Overview

During Gas Year 2023/24, 23 projects were approved for funding under the PC5 Network Based Innovation Fund. The total funding allocated as of 30th September 2024 across these projects was €1,031,512. Two innovation projects were completed during Gas Year 2023/24 with implementation plans where appropriate being progressed.

## 3.2 Projects in Progress Summary

The table below outlines the 21 in progress projects, the funding allocated to them, the CRU objective to which they align, and an indicator of whether the project is a FROGI. Note an innovation project linked to FROGI, for the purposes of the €1.5m funding allocated cap within the NBIF, is defined as any innovation project related to biomethane network entry infrastructure, compressed natural gas (CNG) refuelling infrastructure for road transport, preparatory activities for the transportation and use of hydrogen on the gas network or pay as you go (PAYG) smart meter solutions for gas customers. To date two FROGI projects are in progress.

| Current Gate | Project Name | Funding Approved | CRU Objective | FROGI |
|---|---|---|---|---|
| 2 | One Piece Inlet 4bar Stopper | €74,958 | Continued focus on efficient spend | N |
| 2 | Recompression Equipment | €9,471 | Maintaining a safe and resilient gas network | N |
| 2 | Digital Twin | €29,392 | Maintaining a safe and resilient gas network | N |
| 2 | Pipeline Marker Posts | €4,243 | Maintaining a safe and resilient gas network | N |
| 2 | Fire Safety Stick | €13,323 | Maintaining a safe and resilient gas network | N |
| 2 | Re-Usable Temporary Fittings | €6,011 | Maintaining a safe and resilient gas network | N |
| 2 | CNG Methane Recovery System | €92,122 | Maintaining a safe and resilient gas network | **Y** |
| 2 | Pipeline Coatings (Metallic) | €10,893 | Maintaining a safe and resilient gas network | N |
| 2 | Vapor Pins | €7,629 | Maintaining a safe and resilient gas network | N |
| 2 | Communication with deaf customers | €9,159 | Providing a safe high-quality service for all our gas customers | N |
| 2 | Remote Methane Detector | €19,334 | Maintaining a safe and resilient gas network | N |
| 3 | Recycled Aggregates | €11,905 | Efficiently facilitating the energy transition | N |
| 3 | Wafer Regulator | €41,522 | Maintaining a safe and resilient gas network | N |
| 3 | Gas Analyser | €182,150 | Efficiently facilitating the energy transition | **Y** |
| 3 | Crawler Inspection Tool | €168,428 | Providing a safe high-quality service for all our gas customers | N |
| 3 | Microsoft AI Co-Pilot | €138,367 | Continued focus on efficient spend | N |
| 3 | Repair Clamps | €66,958 | Maintaining a safe and resilient gas network | N |
| 3 | Satellite Based Monitoring | €78,358 | Maintaining a safe and resilient gas network | N |
| 4a | Valve Chamber Cleansing | €7,404 | Continued focus on efficient spend | N |
| 4a | Underground Detection | €12,014 | Maintaining a safe and resilient gas network | N |
| 4a | Digital Keys | €16,049 | Maintaining a safe and resilient gas network | N |
| **Total** | | **€999,690** | | |

TABLE 3 PROJECTS IN PROGRESS

## 3.3 Completed Projects Overview

Two projects were completed during the 2023/24 Gas Year. The total cost to deliver these projects was €31,822. One of these projects will progress to BAU adoption in 2025 however the second project will not progress to BAU adoption as the technology is not currently fit for purpose for the GNI use case.

| Current Gate | Project Name | Funding Approved | CRU Objective | FROGI | BAU Adoption |
|---|---|---|---|---|---|
| 4b | Polyethylene Slabs | €17,845 | Maintaining a safe and resilient gas network | N | Y |
| 4b | Voice Technology | €13,977 | Continued focus on efficient spend | N | N |
| **Total** | | **€31,822** | | | |

TABLE 4 COMPLETED PROJECTS

### 3.3.1 Polyethylene Slabs Overview & Outcome

**Overview**

Impact protection slabs are used as an additional safeguard against pipeline damage from plant and equipment. The existing solution is to use reinforced concrete slabs for impact protection which are carbon intensive to produce as well as taking up large storage space and are challenging to install.

This project explored polyethylene (PE) slabs as a lightweight pipe protection replacement to concrete slabs. Through significant testing of prototypes, which included burying the PE slabs and the use of an excavator in the test site, specific use cases were identified where PE would be an appropriate solution for impact protection.

**Implementation & Expected Benefits**

PE slabs will be adopted by BAU in 2025 through an upcoming Capex project on the transmission network. The PE Slabs will be laid as impact protection on a 585m section of the network.

For this project, the expected hard benefits from purchasing and installing PE slabbing versus current concrete slabbing for a 585m section of pipeline (418 slabs) is expected to realise a financial benefit of €20,312. (Note this calculation does not include civil works, lighter materials handling, or reinstatement on the pipeline.)

Furthermore, per a National Grid Value Survey, there are significant carbon savings associated with using PE slabbing versus concrete equivalents, for a 3 x 5m coverage using concrete the associated carbon emissions are 1.69 tCO2 compared to 0.95 tCO2 for PE slabs. This is an indicative 44% carbon emission saving. This project will be monitored through 2025 to gather and provide any additional feedback to the supplier to further enhance this solution following BAU implementation.

### 3.3.2 Voice Technology Overview & Outcome

**Overview**

This innovation aimed to introduce new technology to increase efficiency and reduce errors when field teams are filling in forms while out on site.

Voice to text technology was explored with the view to allowing technicians to speak into handheld devices and the software would complete the required forms instead of filling in forms by hand or digitally. The objective was to reduce time spent filling in forms and reports and increase the quality of the outputs.

**Outcome**

Through trials and testing, while user sentiment was largely positive around the ease of using the technology it was identified that the technology available today did not provide the accuracy and consistency required to replace or support existing GNI processes. Several recommendations and requirements were provided to the IT team should this technology be considered again in the future.

## 3.4 In Progress Project Spotlights

Below are two example projects in progress to give a sense of the type of innovations that are being explored through the innovation fund.

### 3.4.1 Crawler Inspection Tool

All pipelines need to be regularly inspected to ensure the integrity of the network. Currently there are certain parts of the gas network that it is not feasible to complete an inline inspection[7] therefore these pipelines require additional surveillance and are part of an operational review.

This project aims to use a remote-controlled robotic crawler inspection tool to perform inline inspections of sections of transmission pipelines which cannot be inspected using existing pipeline inspection gauge technologies currently in use. The technology under review is called the "Pipe Explorer" and was identified as a possible solution in conjunction with one of our contractors. The proposed solution is self-propelled, remotely controlled and untethered. There are variations that can inspect pipelines ranging from 6" to 36" in diameter.

[7] Inline Inspection measures and records irregularities in pipelines including corrosion, cracks, deformations, or other defects.

This technology will further enable GNI to provide a safe high-quality service for all our gas customers and maintain a safe and resilient gas network by enhancing our inline inspection capability. During 2025 this technology will be trialled on a section of our pipeline to ensure its viability in a live gas environment and to ensure the appropriate information is gathered by the tool.

It is anticipated that €286,000 of benefits would be realised in a 10-year period if this technology is successful due to no longer requiring DCVG, CIPS interval extended to 15 Years and a reduction in the number of direct assessment excavations.

### 3.4.2 Microsoft 365 Co-Pilot

Generative AI offers enormous productivity benefits for individuals and organizations, and while it also presents very real challenges and risks, businesses, like GNI, need to be measured in their adoption of technologies, while exploring how the technology can improve their internal workflows and enrich their products and services.

Microsoft Copilot

Microsoft have incorporated generative AI capabilities into its productivity suite of applications (Teams, Outlook, PowerPoint, Excel and Word) – branding it as Microsoft 365 Co-Pilot. As part of a recent license renewal, these capabilities are available to GNI.

As an organisation GNI are open to exploring the possibilities offered by Generative AI as part of a wider IT Strategy. As a first phase, a proof of concept using Microsoft 365 Co-Pilot was conducted over a 15-week period. Successfully concluding on 30th August 2024, the phase delivered:

- A low-risk initiative to understand generative AI and its possible use in GNI
- Identification of users and use cases to realise value
- Building of a capability for further roll-out

Through the end of 2024 and into early 2025, further trials and testing of the AI capability will be conducted for the specific use cases identified in the proof of concept.

This project has been co-funded with two of our strategic partners, Accenture and Microsoft, who have supported GNI's AI adoption journey.

It is anticipated that the benefits that could be realised from this initiative could be equivalent to €4million in time savings over a 10-year period on the basis of 100 users of the software realising a time saving of 20 mins per day.

# 4 Strategic Innovation Fund

The Strategic Innovation Fund comprises two parts, 1) a challenge-based research initiative and 2) other co-funded research opportunities. A total fund of €1.5million is available across both of these initiatives divided as €1.2million and €0.3million respectively.

## 4.1 Challenge Based Research Initiative

GNI working with Research Ireland[8] developed two challenges for a proposed challenge-based research grant scheme, to be co-funded by GNI and Research Ireland. The Innovation Steering Group also reviewed and provided input to the challenges for this initiative. These challenges are summarised as follows:

### Challenge 1: Energy System Integration Challenge

The Energy System Integration Challenge seeks to support the development of solutions to accelerate the optimisation and integration of the energy system in Ireland's transition to a low carbon economy. There are two broad areas under this Challenge:

(1) the integration of renewable gases at a local and regional level and
(2) the development of Artificial Intelligence based solutions for intelligent gas network performance diagnostics.

### Challenge 2: Biomethane and Biohydrogen Production Challenge

The Biomethane and Biohydrogen Challenge seeks to support the development of solutions which improve the efficiency, efficacy and commercial viability of:

(1) biomethane and
(2) biohydrogen production,

including extraction and utilisation of the byproducts, to accelerate Ireland's transition to a low carbon economy.

During the course of 2024 engagement commenced on a collaboration agreement between Research Ireland and GNI to formalise the arrangements of a challenge-based research grant scheme which is anticipated to launch in Q2 2025.

It is anticipated the €1.2million provided for this initiative will be transferred in stages to Research Ireland for disbursement to the successful research applicants, during the course of the remaining PC5 period.

## 4.2 Other Co funding Opportunities

For the remaining €0.3million allowance for other co-funding opportunities, GNI is engaging with research and industry partners with a view to identifying appropriate opportunities for the utilisation of this fund.

[8] Promoting National Research & Innovation - Research Ireland

# 5 Financial Overview

## 5.1 Network Based Innovation Fund

In the 2023/24 gas year 23 projects received funding from the Network Based Innovation Fund totalling €1,031,512. This means that 30% of the NBIF fund has been allocated to various projects as outlined in section 3. These projects are at various stages of completion as at the end of the gas year however the total spend as of 30th September 2024 is €316,879 representing 30% spend versus the allocated amount. It is anticipated that as we move through the price control 5 period the percentage amount spent versus allocated will increase significantly as projects progress through the delivery lifecycle and come to conclusion.

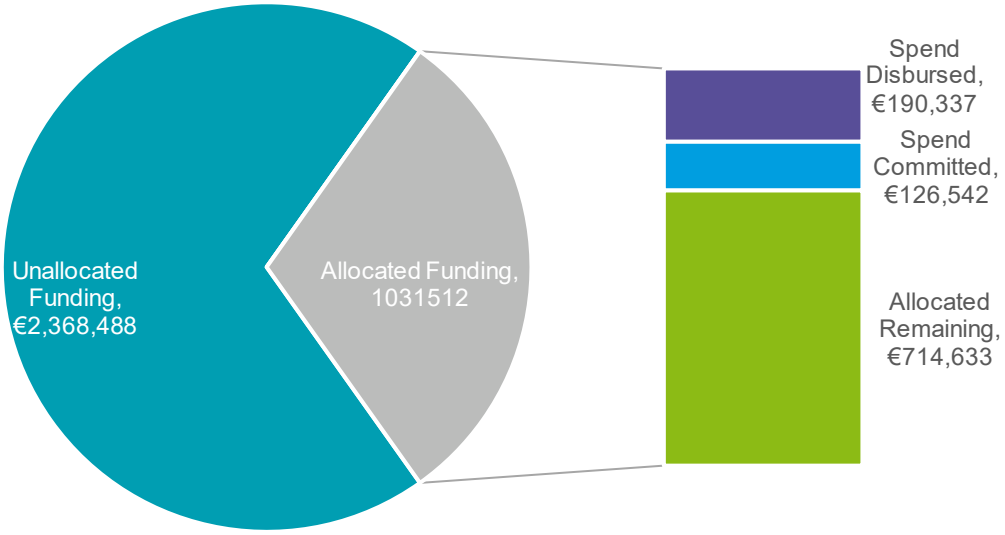


FIGURE 4 NBIF OVERVIEW

There are two key metrics which GNI track as well as the detailed financials figures, these are co-funding opportunities and FROGI. In the 23/24 Gas Year:

- **2 FROGI** projects have been approved to date, the Gas Analyser project and the CNG Methane Recovery project. The Gas Analyser project aims to find an analysis tool similar to the chromatographs used today that would enable the analysis of the constituent parts of biomethane and hydrogen as well as the existing analysis capability for natural gas. The CNG Methane Recovery project explores options to reduce methane leakage from CNG refuelling stations in line with Regulation (EU) 2019/942. The total allocated funding for these projects so far is €274,272, noting the CRU decision that no more than €1.5million should be allocated to FROGI these projects represent 18% of the available funding for FROGI.

- **1 co-funding** opportunity has also been approved, the Microsoft AI Co-Pilot project. This project aims to introduce AI to support the day-to-day operations of multiple departments within GNI that support the continued operation of the gas network. As of 30th September 2024, GNI allocated €138,367 (52%) to this project while our innovation partners, Microsoft and Accenture (Avanade) provided co-funding[9] of

[9] The value on which the total co-savings reward can be earned is limited to 50% of the size of the NBIF excluding project management costs (i.e., €1.70m). The 5% co-funding incentive limits the total reward to €85k over PC5.

€126,905 (48%). Based on the CRU's direction this would enable a saving of €6,918.35 (5% of €138,367) for GNI.

The table below shows a summary of the funding allocated per project as of 30th September 2024, highlighting the FROGI and co-funded projects discussed above.

| # | Project Name | Funding Approved | Co-Fund | Co-Fund Amount | FROGI |
|---|---|---|---|---|---|
| **1** | 4bar Domestic Service Stopper Follow On | €74,958 | N | | N |
| **2** | Recompression Equipment | €9,471 | N | | N |
| **3** | Digital Twin | €29,392 | N | | N |
| **4** | Pipeline Marker Posts | €4,243 | N | | N |
| **5** | Fire Safety Stick | €13,323 | N | | N |
| **6** | Re-Usable Temporary Fittings | €6,011 | N | | N |
| **7** | CNG Methane Recovery System | €92,122 | N | | Y |
| **8** | Pipeline Coatings (Metallic) | €10,893 | N | | N |
| **9** | Vapor Pins | €7,629 | N | | N |
| **10** | Communication with deaf customers | €9,159 | N | | N |
| **11** | Remote Methane Detector | €19,334 | N | | N |
| **12** | Valve Chamber Cleansing | €7,404 | N | | N |
| **13** | Recycled Aggregates | €11,905 | N | | N |
| **14** | Underground Detection | €12,014 | N | | N |
| **15** | Wafer Regulator | €41,522 | N | | N |
| **16** | Gas Analyser | €182,150 | N | | Y |
| **17** | Digital Keys | €16,049 | N | | N |
| **18** | Crawler Inspection Tool | €168,428 | N | | N |
| **19** | Microsoft AI Co-Pilot | €138,367 | **Y** | €126,905 | N |
| **20** | Repair Clamps | €66,958 | N | | N |
| **21** | Satellite Based Monitoring | €78,358 | N | | N |
| **22** | Polyethylene Slabs | €17,845 | N | | N |
| **23** | Voice Technology | €13,977 | N | | N |
| **Total** | | **€1,031,512** | - | **€126,905** | - |

TABLE 5 ALLOCATED FUNDING BY PROJECT

## 5.2 Strategic Innovation Fund

The Strategic Innovation Fund discussed in section 4 has not utilised funding in the Gas Year 23/24 as work is ongoing on the collaboration agreement with Research Ireland (formerly Science Foundation Ireland). It is anticipated that once a collaboration agreement is signed in the 2024/25 Gas Year that funding will be paid under the terms of the agreement to Research Ireland from the €1.2million funding allocated to the challenge-based research initiative.

GNI in Gas Year 2024/25 will be actively engaging with reputable parties to identify co-funding opportunities to facilitate the allocation of the remaining €0.3million of the SIF allowance.

## 5.3 Administration Fund

Per the CRU decision paper there is a €0.4million allowance to support the administration of the Innovation Fund over the period from 2022 to 2027. This allowance supports a wide range of project management and related activities across both the SIF and NBIF. As of the 30th of September 2024, €62,394 of this fund had been utilised. This money supported the costs associated with the interim independent steering members, administration and project management costs up to 30th September 2024. It is forecasted that these costs will increase in the remaining years of the price control as the number of projects under management is expected to increase.

# 6 Dissemination

To provide awareness to the public of GNI's innovation activities and to continue to foster an innovative culture within GNI, the dissemination of information relating to projects is of key importance during price control 5 as it has been in previous price controls. During price control 5 the Innovation team have been actively working to promote innovative activity through an internal and external communications strategy.

## 6.1 Internal Communications

GNI holds quarterly companywide updates which the innovation delivery team presented at two during the 2023/24 Gas Year spotlighting some of the projects that were underway and providing a broad understanding to the wider organisation of the ongoing innovation work and encouraging people to submit any ideas that they believe should be explored as part of innovation. As a result of those spotlights subsequently the IT department and the Learning & Development team asked for a more focused session for their areas to provide a more in-depth discussion on innovation at GNI. This has subsequently raised some potential new project ideas that are being considered for development. A portal for the submission of innovation ideas from the business was also established on the company intranet.

## 6.2 External Communications

GNI recognises the importance of engaging with external stakeholders, such as our suppliers, as part of our innovation journey. The GNI Procurement department hosted an annual Supplier Day on 6th October 2024 the theme of which was Innovation. As part of this engagement the innovation delivery team presented on the innovation process and some ongoing projects encouraging suppliers to engage their points of contact in GNI on any ideas or solutions that could support innovation in GNI.

One of the keyways to engage external parties is through the GNI website. In 2024 the team commenced updates to the Innovation webpage to reflect initial decisions related to innovation in price control 5. Further updates are planned for 2025 to make the website more engaging and informative and to incorporate innovation project updates and outcomes.

# 7 Conclusion

The Innovation Fund for price control 5 continues to deliver on its strategic objectives. Having completed two years of the PC5 Innovation fund there have been many successes and achievements. Particularly the completed project which moves to a monitoring and oversight phase in 2025 to record the benefits from BAU adoption. Twenty-one projects continue in the delivery phase with the potential for considerable benefits to be realised.

There were several preparatory initiatives which were undertaken at the beginning of the PC5 period to ensure the responsible management of the fund. These included the establishment of a gated delivery process to ensure that there is a clear path for successful delivery of innovation ideas and that there is a mechanism for initiatives to either succeed or fail, as appropriate.

To continue to utilise the Innovation Fund appropriately for the remaining three years of the price control, the Innovation Steering Group continues to take a considered approach to the allocation of the remaining funds. In consideration of the CRU's 'use it or lose it' principle, GNI is on track to have all funds allocated to innovation projects and initiatives by the end of the price control period. However, it is expected that some projects commenced in PC5 will continue in delivery past the end of the price control period. Overall, the fund is progressing well, and we would anticipate there would be an opportunity to consider an expanded innovation fund for the next price control.

GNI would like to acknowledge the contribution of our steering members and the valuable input of our interim independent members to the success of the Innovation Fund to date and appreciate their support. A process to seek applications for permanent independent member for the Innovation Steering Group will be undertaken in Gas Year 2024/25.

Significant progress has been made in Gas Year 2023/24 in collaboration with Research Ireland on the development of plans for a challenge-based research funding scheme and we look forward to further progress in the next Gas Year.

# Appendices

## Appendix 1: Steering Membership and schedule of meetings

| Meeting | Date | Time | Location |
|---|---|---|---|
| **PC5 Innovation Steering #1** | 11/10/2023 | 10:30 – 12:30 | Virtual - Microsoft Teams |
| **PC5 Innovation Steering #2** | 06/12/2023 | 10:30 – 12:30 | In Person - Network Innovation Centre, Brownsbarn |
| **PC5 Innovation Steering #3** | 26/03/2024 | 10:30 – 12:30 | Virtual - Microsoft Teams |
| **PC5 Innovation Steering #4** | 13/06/2024 | 10:15 – 13:15 | In Person - Network Innovation Centre, Brownsbarn |
| **PC5 Innovation Steering #5** | 10/09/2024 | 10:30 – 13:00 | Virtual - Microsoft Teams |

TABLE 6 STEERING MEETINGS SUMMARY

| Name | Job Title | Company | Role |
|---|---|---|---|
| **Liam Nolan** | Head of Technical Development & Technical Training | GNI | Chair |
| **Paul O'Dwyer** | Innovation Delivery Manager | GNI | Deputy Chair |
| **Ita Ryan** | Innovation Project Manager – Engineering, Technical | GNI | Innovation Delivery |
| **Anita Wilson** | Innovation Project Manager – Secretariat/ Governance | GNI | Secretariat, Innovation Delivery |
| **Joshua Tawadrous** | Project Analyst | GNI | Innovation Delivery |
| **Roibeard Long** | Innovation Project Manager – Secretariat/ Governance | GNI | Secretariat (until September 2024) |
| **Clive Deadman** | Steering Member (Independent) | 1905 Investments | Interim Independent Member |
| **PJ Rudden** | Steering Member (Independent) | Aengus Consulting | Interim Independent Member |
| **Anne Moore** | Sustainability Manager | GNI | Steering Member |
| **Cathal McCarthy** | Head of HR Operations | GNI | Steering Member |
| **Dermot Kelleher** | Head of Change & Continuous Improvement | GNI | Steering Member |
| **James Burchill** | Chief Technical Engineer | GNI | Steering Member |
| **Kate Gannon** | Head of Customer Care & Communications | GNI | Steering Member |
| **Killian McCarthy** | Finance Business Partner | GNI | Steering Member |
| **Paul Lennon** | Head of Asset Management | GNI | Steering Member |

TABLE 7 STEERING MEMBERSHIP

# Appendix 2: In Progress Project Descriptions

| Project Name | Project Purpose |
|---|---|
| **One Piece Inlet 4Bar Stopper** | This project aims to modify the existing 4 Bar stopper tool to isolate services in order to replace one piece customer isolation valves. |
| **Recompression Equipment** | The unit will allow the gas within an isolated pipeline or stream to be recompressed into a live gas pipeline, reducing methane emissions during maintenance activities. |
| **Digital Twin** | The aim of this project is to create a Digital Twin which is a single software model that links all the information, e.g. as laid drawings, technical records, material certs, asset data information and dynamic data, that is currently going to SCADA. |
| **Pipeline Marker Posts** | The aim of this project is to reduce maintenance costs relating to the landscaping surrounding marker posts and increase visibility of the pipeline for surveys. |
| **Fire Safety Stick** | This project explores possible options to replace or supplement fire extinguishers. |
| **Re-Usable Temporary Fittings** | This project explores potential re-usable options for electrofusion connections. |
| **CNG Methane Recovery System** | This project explores options to reduce methane leakage from CNG refuelling stations in line with Regulation (EU) 2019/942. |
| **Pipeline Coatings (Metallic)** | This project explores alternate pipeline coating options to preserve the integrity of the pipeline and equipment. |
| **Vapor Pins** | This project explores suitable options for acquiring gas samples when a smell of gas is reported ensuring the integrity of the sample for testing. |
| **Communication with deaf customers** | This project explores how technology can be used to enable immediate contact with hard of hearing customers if there is a potential gas escape. |
| **Remote Methane Detector** | This project explores available option to allow a fitter / leak surveyor to check for leaks in multioccupancy buildings without requiring access. |
| **Valve Chamber Cleansing** | This project explores available solutions to allow underground fire valve and road valve chambers to be cleared of silt and rubbish. |
| **Recycled Aggregates** | As part of GNI's sustainability objectives, a review of how to reduce the embodied carbon within the network was undertaken. This project explores the use of recycled aggregates to support this objective. |
| **Underground Detection** | This project explores available technologies to enable understanding of the location of underground assets. |
| **Wafer Regulator** | Currently there is a single source supplier for wafer regulators. This project explores alternate options on the market to reduce maintenance and emissions. |
| **Gas Analyser** | Biomethane is being introduced to the network at various points and in the near future Hydrogen will also be injected. This project explores alternate options to Chromatographs that can accommodate biomethane and Hydrogen. |
| **Digital Keys** | This project explores available access control solutions to replace mechanical keys. |
| **Crawler Inspection Tool** | This project aims to explore available technology to enable internal inspection of pipelines which were not previously inspectable with the use of a pipeline inspection gauge (PIG). |
| **Microsoft AI Co-Pilot** | This project aims to explore the opportunities available from the use of Microsoft AI Co-Pilot. |
| **Repair Clamps** | This project aims to explore temporary repair clamps suitable for PE. |
| **Satellite Based Monitoring** | This project aims to explore using satellites to monitor Transmission pipelines under the wayleave. |

TABLE 8 IN PROGRESS PROJECTS DESCRIPTION