

RIO-GD3 Call for Evidence

Feedback on Gas Distribution Network
Business Plans for RIO-GD3 related to
methane emissions reduction



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Ofgem, as the energy regulator in the UK, sets price controls on the companies that run the gas and electricity networks in Great Britain. These price controls ensure that current and future consumers get the network services they require at a fair price. Ofgem does so through the RIO model, where they set network company *Revenues* using *Incentives* to deliver *Innovation* and *Outputs*.

The current RIO-2 price control for the gas distribution (GD) sector is due to finish in March 2026. The RIO-3 price control for this sector will then start on 1 April 2026. Business Plans were submitted by Gas Distribution Networks in December 2024. As part of preparing for RIO-GD3, Ofgem is running a call for evidence on Business Plan submissions.





In the Business Plans submitted by GDNs for the RIO-GD3 period, tackling methane leakage from the network to develop the infrastructure fit for a low-cost transition to net zero is a consistent theme. Methane leakage forms around 98% of a gas distribution network company's business carbon footprint [1] and with the gas distribution industry contributing 6% of the UK's methane emissions in 2021, methane leakage is a key driver of UK emissions [2].

For over 20 years, the UK's gas networks have been undertaking the Iron Mains Replacement program (IMRRP) across their network. This process, which concludes in 2032, has been the key driver of methane emissions reductions across the networks in recent years. As the IMRRP reaches its conclusion, there is a need to look to new innovations to enable further reduction of methane leakage across the network. Innovative detection technologies have developed at pace over recent years, and provide a new, observed approach to the measurement of network leakage.

The innovation in methane detection technologies has been recognised by the EU Methane Strategy by the European Commission which requires both gas distribution and transmission networks to implement more rigorous leak detection and repair protocols, alongside detailed data on their emissions [3]. We do not have any such conditions here in the UK and instead continue to rely on the Shrinkage and Leakage Model (SLM). The SLM relies on coefficients developed over 20 years ago and calculates network leakage based on the pipe material and diameter in the network. GDNs are being challenged on the SLM, most recently with the shipper community raising the modification for the role of an Independent Shrinkage Expert to provide an Independent Shrinkage Model [4]. This modification highlights the view that there is a need for an updated methodology to track methane leakage across the network.

In the GD3 SSMD in 2024, Ofgem noted that stakeholders consider that the SLM is ‘complicated and does not drive material behaviour change to reduce shrinkage’ [5]. Ofgem confirmed this view of the SLM as outdated by removing the shrinkage ODI-F related to the SLM. As a result, for the GD3 period, networks are not financially incentivised to ensure that their operations minimise shrinkage to meet a minimum floor. At a time where networks are focused on tackling methane emissions, the lack of a consistent metric to track progress is challenging. Ofgem have identified that for GD4 they expect to re-introduce a shrinkage incentive, with the SSMD noting ‘the use of real time data and leak detection technologies... could support the introduction on an ODI-F in RIIO-GD4’ [5]. Implementing this incentive would require sufficient historical data using a consistent metric across networks to set a floor and provide a benchmark for networks on their performance.

At present, the Digital Platform for Leakage Analytics (DPLA) is the leading innovation project providing a metric tracking the methane leakage across the network. The project combines in-field methane detection technologies and probabilistic modelling to detect leaks. The SIF innovation funded project, developed from the 1st Round of SIF in 2021, will reach completion of the Beta phase in June 2025. In their GD3 plans, all four GDNs have identified opportunities for funding DPLA through both baseline and uncertainty mechanisms, as summarised below.

RIIO-GD3 Funding Requests for DPLA		
GDN	DPLA Advanced Leak Detection Technologies	DPLA Probabilistic Model and Organisational Preparation
 Cadent Your Gas Network	£47.7m (baseline) to roll out advanced leak detection technologies.	DPLA will be fully operational by 2027 and supported through a £5.1m (baseline) request for probabilistic model deployment, and organisational preparation
 Northern Gas Networks	£4.9m (baseline) to roll out advanced leak detection technologies.	DPLA cost will be will be in the region of £20m (Uncertainty Mechanisms)
 SGN Your gas. Our network.	£12.4m (UIOLI) to roll out advanced leak detection technologies.	Expect full Roll Out to cost £50m (NZASP Re-opener)
 WALES & WEST UTILITIES	£7m (baseline) to roll out advanced leak detection technologies.	No costs or timescales for DPLA included in WWU's plan

Should the networks deploy DPLA in the manner set out in the GD3 plans, there will be significant disparity in the speed of deployment. Funding under Uncertainty Mechanisms (UMs) will require:

- Waiting until April 2026 to being drafting an application under a UM; and
- A Reopener with Ofgem, a process potentially taking between 6 to 12 months with significant administrative effort required by both Ofgem and networks.

In contrast, Cadent, the lead network on DPLA have already deployed the project on their North London and East Anglia networks placing them 12 months ahead of the other networks. Their request for Baseline funding will avoid any delay and could lead to customers outside of the Cadent network not seeing the

benefit of the innovation until up to 2 years later. The delay may also have a knock-on impact on the development of any potential shrinkage incentive for GD4, limiting the data available to Ofgem when setting a floor and performance targets.

Since the submission of Business Plans, the SIF Beta innovation project has aligned on a single ‘blended approach’ for the deployment of DPLA across the Cadent networks. The clarity in project direction has been developed with networks through successful roundtable events, as well as increased engagement across the industry. As a solution that uses probabilistic modelling to detect leaks across the higher-pressure tiers of the network, the model can leverage existing pressure data to generate leak indications for the network on a daily frequency. As such the model represents a scalable solution that has been demonstrated across high and intermediate pressure networks. To date, the model has identified an example historic leak 3 weeks before it was found by operatives, as well as locating multiple leaks to within 60m of the actual location.

As one of the first cross-network SIF innovation project to transition to BAU, Ofgem has the opportunity to use the allocation of funding in GD3 to enable the transition of DPLA from innovation to Business as Usual, signalling to future SIF projects their intentions for this area. With 8 SIF Round 1 projects closing in the next 2 years, and further rounds to come, DPLA could provide a blueprint for these other projects to realise the full value that the SIF mechanism was set up to provide.

The project has aligned on a ‘blended approach’ for the DPLA rollout. Ofgem noted in the SSMD that ‘costs, timescales, and cost-benefit analysis...will enable (Ofgem) to develop an appropriate mechanism at Draft Determinations’. With this alignment, the project has actively engaged with SGN, WWU, and NGN since the Business Plans submission to clarify costs and timescales for their network rollouts. Ofgem now has the opportunity, through the draft determinations process, to ensure alignment across the networks through the funding mechanism selected for DPLA and avoid industry-wide delays in developing a consistent leakage measure for the UK’s gas network.

[1] [Annual Environmental Report 2024 - Cadent](#)

[2] [UK greenhouse gas emissions national statistics - Gov UK](#)

[3] [EU Methane Strategy - European Commission](#)

[4] [Establishing the Independent Shrinkage Charge and the Independent Shrinkage Expert | Joint Office of Gas Transporters - Gas Governance](#)

[5] [RIIO-3 Sector Specific Methodology Decision – GD Annex - Ofgem](#)