national gas transmission

UAGCVS Report

November 2025

Executive Summary

This report provides a review of National Gas Transmission's (NGT) Unaccounted for Gas (UAG) management since April 2013, the start of the RIIO-T1 price control. The report places particular emphasis on the period between 1st April 2025 to 30th September 2025 inclusive; the period since the publication of the May 2025 UAGCVS report.

This report also contains our Calorific Value Shrinkage (CVS) statement with an overview of its possible causes.

The publication of this report discharges NGT obligations under the Gas Transporter Licence Part J of Special Condition 5.6 (System operator external incentives, revenues and costs) – requirement to undertake work to investigate the causes of UAG and CVS.

The total assessed pre-reconciled UAG quantities for the 1st April 2025 to 30th September 2025 are lower than the previous six months (1st October 2024 to 31st March 2025), which aligns with historical seasonal trends. Pre-reconciled UAG in formula year 2025/26 is lower than the previous summer of 2024/25.

NGT is continually developing its understanding of the causes of UAG by utilising data analysis, data visualisation tools, and investigative projects.

CVS for 1st April 2025 to 30th September 2025 has remained consistent with the same period in 2024/25; the total values are 108.8 GWh in summer 2025/26 and 107.3 GWh in summer 2024/25.

Continued support from meter owners has enabled NGT to obtain and review meter validation reports for NTS entry and exit facilities. This data is used to support the identification of UAG causes, enhance NGT's ability to detect meter error, and inform the preparation of future meter witnessing programmes.

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Unaccounted for Gas and Calorific Value Shrinkage Report – November 2025

Introduction

This report provides a review of National Gas Transmission's (NGT) UAG and CVS management.

The November edition of the report provides a concise summary of assessed UAG quantities since April 2013, the start of the RIIO-T1 price control. The report places particular emphasis on the period since the publication of the May 2025 UAGCVS report - 1st April 2025 to 30th September 2025 inclusive. The November report includes a review of current UAG trends, highlights any significant changes since the previous report, and outlines investigations into the causation of UAG and CVS.

UAG, CVS, and OUG (Own Use Gas) are the three components of NTS Shrinkage. Further information on the components of NTS Shrinkage can be found via the following link:

NGT - Shrinkage

NGT also provide a range of UAG related data to accompany this report, including:

- previous UAG reports and UAGCVS reports
- daily data on the components of NTS Shrinkage

This information is available on the National Gas Transmission website via the following link:

NGT - UAG Management

The publication of this report and associated backing data discharging NGT's obligations under the Gas Transporter Licence Part J of Special Condition 5.6, is detailed in Appendix I of the report.

If you have any feedback or questions on this document, please contact NGT's Meter Assurance team via the following email address: meterassurance@nationalgas.com

The Meter Assurance Team is part of the Energy Balancing team within NGT, responsible for investigating the causes of and reporting upon UAG and CVS.

National Transmission System Unaccounted for Gas Trends

This section of the report provides information on assessed UAG quantities since April 2013, with particular focus on the period between 1st April 2025 to 30th September 2025.

Unless stated otherwise, all UAG values used in this report are pre-reconciliation. Pre-reconciled UAG is the value which is recorded at entry and exit closeout. This data shows the position prior to any reconciliations taking place. Post-reconciliation data is published on our website and is available using the NGT- UAG Management link shared above.

Formula Years 2013/14 to 2025/26

Figure 1 provides the annual assessed UAG, OUG, and CVS quantities for formula years 2013/14 to 2025/26 so far. A formula year refers to the period from 1st April to 31st March of the following year.

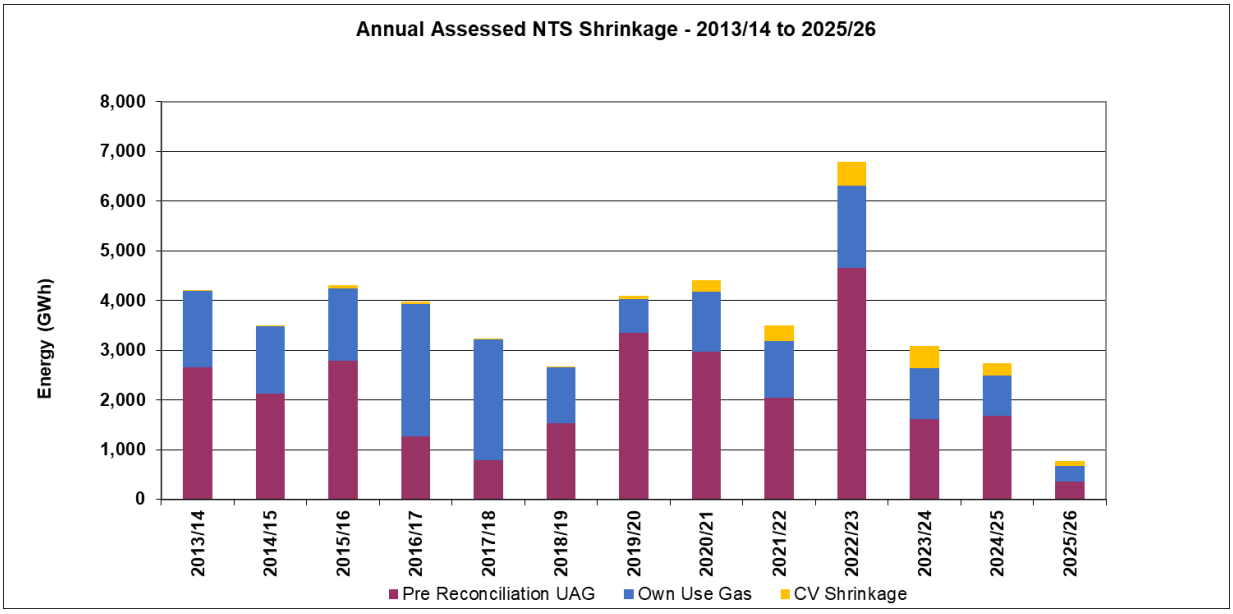

Figure 1 Annual Assessed NTS Shrinkage – 2013/14 to 2025/26

Figure 1 illustrates that in formula year 2025/26 to date, NTS Shrinkage is lower than previous years, recognising that the data is only 6 months of the current formula year. So far in formula year 2025/26, UAG is the dominant component of NTS Shrinkage, accounting for 46%, whilst OUG accounts for 40% and CVS 14%. CVS has become more prominent over the last five years and the potential causes of this are detailed later in the report.

Figure 2 below presents the assessed UAG, OUG, and CVS data for the summer period (April to September) for each formula year.

The figure demonstrates that NTS Shrinkage throughout April 2025 to September 2025 is the lowest witnessed since the summer period of 2018/19. NTS Shrinkage has decreased by 48% compared to the last summer period.

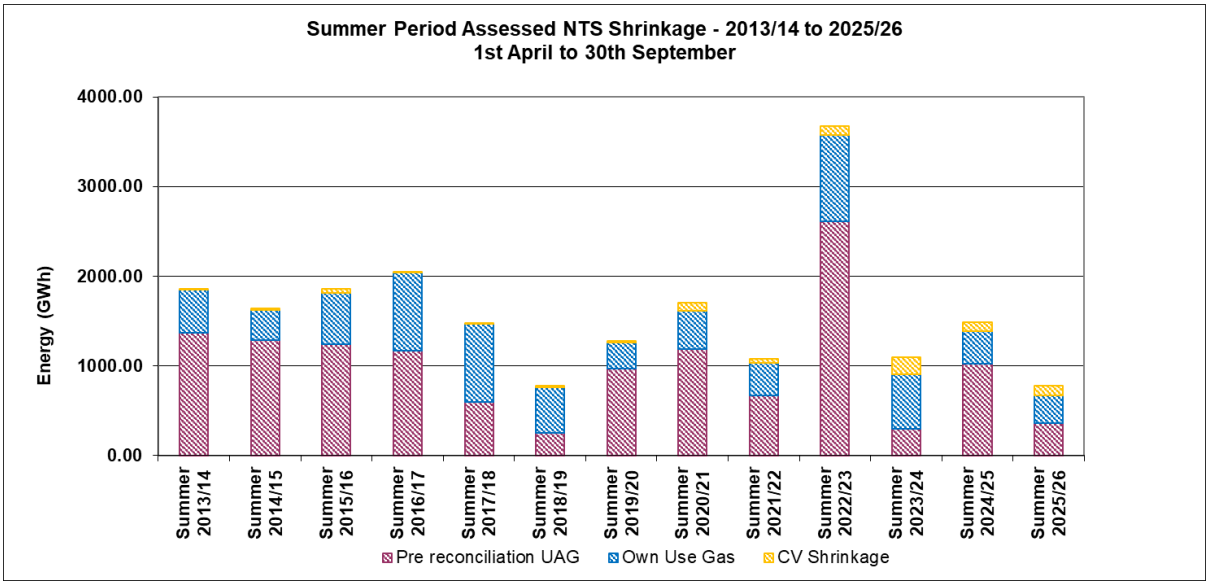

Figure 2 Summer Period Assessed NTS Shrinkage – 2013/14 to 2025/26

Pre-reconciled UAG has decreased compared to the 2024/25 summer period but is greater than the 2023/24 summer period. OUG has also decreased since last summer, although now represents a larger proportion of NTS Shrinkage. CVS maintains a similar value to that observed in 2024/25 but likewise represents a larger component of NTS Shrinkage.

Figure 3 shows the total monthly assessed UAG from April 2013 to September 2025. It also provides the average monthly assessed UAG for this formula year (60.16 GWh) represented as the horizonal black line, together with the long-term average assessed UAG for the entire period (185.41 GWh) depicted by a horizontal dashed red line.

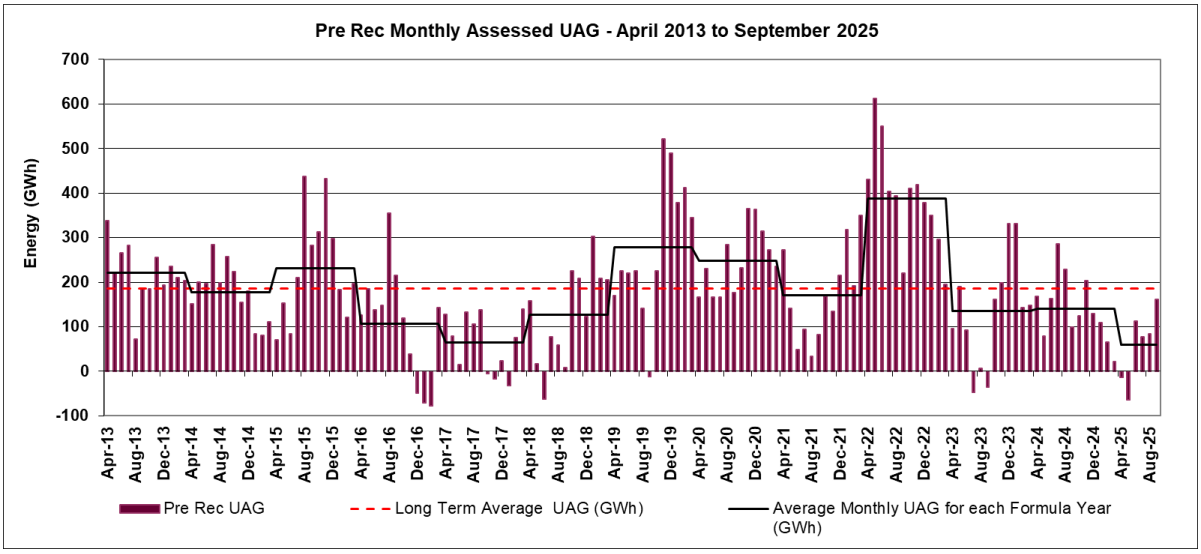

Figure 3 Monthly Assessed UAG - April 2013 to September 2025

Historically, UAG has followed seasonal patterns of lower UAG during summer months compared with winter months. This pattern is seen when comparing summer 2025/26 with the winter of 2024/25.

To date in the 2025/26 formula year, no individual month has recorded assessed UAG values exceeding the long-term average UAG. However, four out of six months did exceed the assessed monthly average UAG.

Figure 4 provides the total monthly assessed UAG between April 2025 and September 2025, compared to the equivalent months in 2024/25. Total UAG over the 2025/26 summer period amounts to 360.99 GWh, which is 65% lower than the 1022.74 GWh recorded in the 2024/25 summer period.

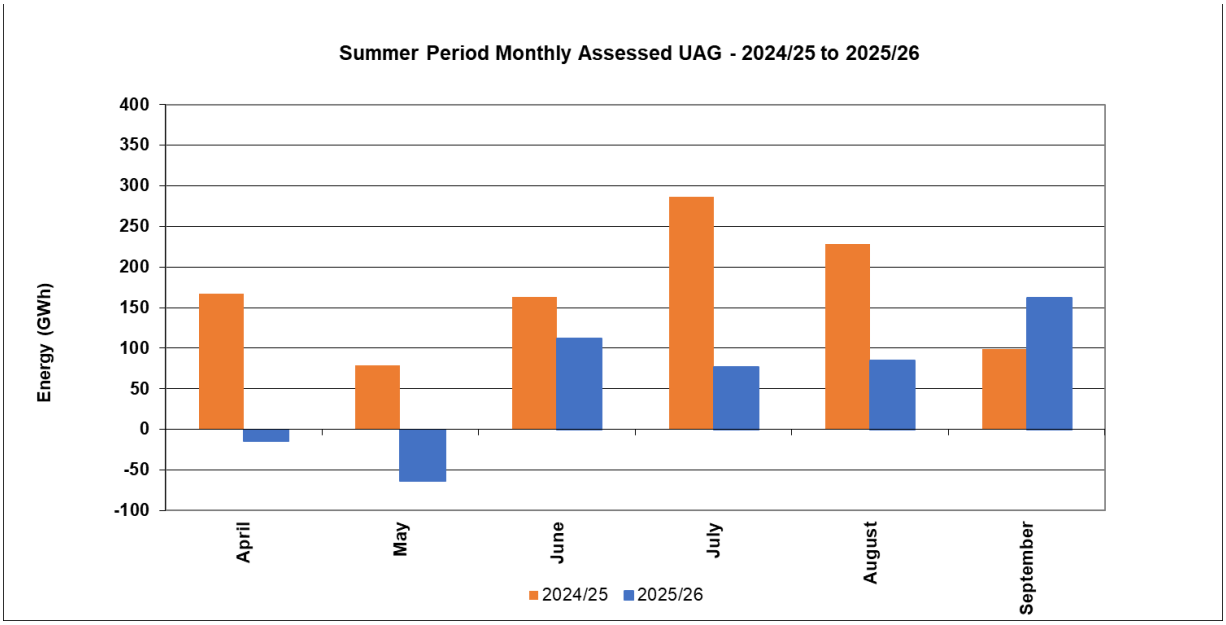

Figure 4 Summer Monthly Assessed UAG – April to September 2024/25 and April to September 2025/26

As evidenced in Figure 4, the monthly assessed UAG in summer 2025/26 ranged from -63.29 GWh to 164.95 GWh, with a monthly average of 60.16 GWh. Excluding September, these values are lower when compared to the same months in the previous year. During the same period in 2024/25, monthly assessed UAG varied from 79.14 GWh to 286.49 GWh, with a monthly average of 170.46 GWh.

Figure 5 below illustrates the daily assessed UAG values between April 2025 and September 2025, indicating that UAG exceeded ± 20 GWh on 13% of days in that period. Volatility between days has been observed with fluctuations between positive and negative UAG values.

During the summer period in 2025/26, there were 78 days where UAG values were negative, compared to 57 days over the same period in 2024/25. From April to July 2025, days with negative UAG were as prevalent as positive UAG days, resulting in a netting off effect that caused the rolling 30-day average to reduce close to zero. Between mid-April and June, the 30-day rolling average was consistently negative. This low UAG trend was investigated and is detailed in a later section of this report.

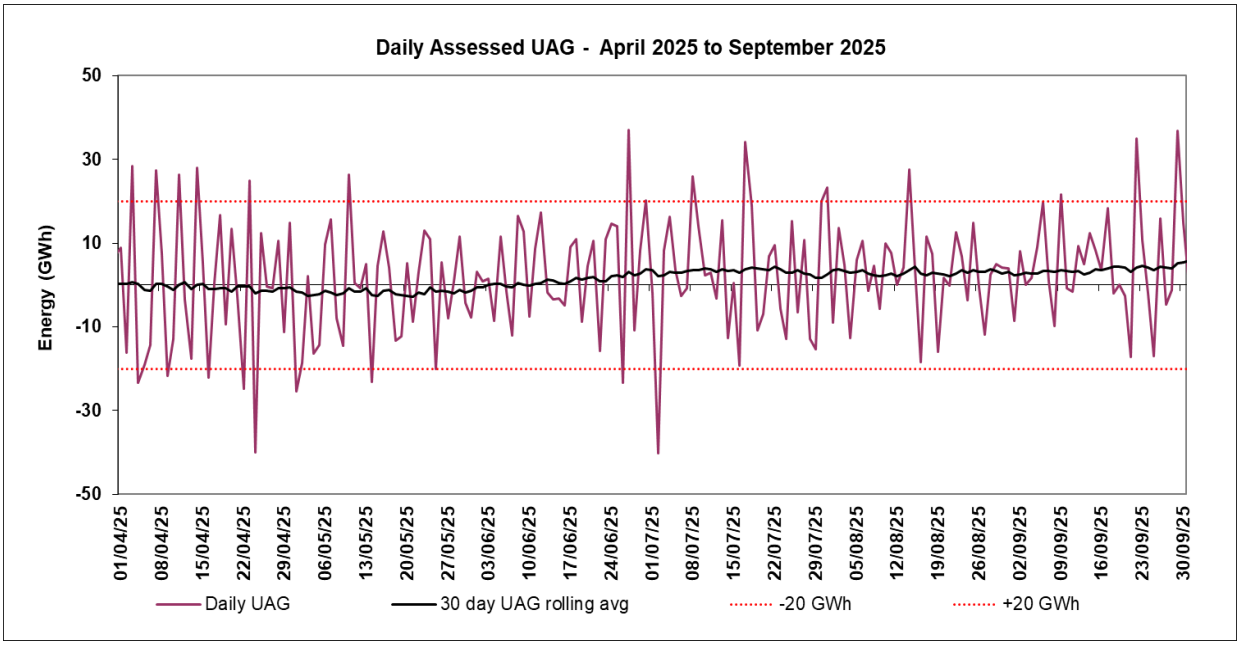

Figure 5 Summer Daily Assessed UAG – April 2025 to September 2025

NGT reviews and investigates the assessed UAG values daily, paying particular attention to high UAG days. A high UAG day is determined by the assessed UAG value for a given day exceeding ± 20 GWh. There have been less instances of high UAG days this summer period compared to last, with 24 days exceeding the ±20 GWh tolerance, compared to the 28 days observed in the 2024/25 summer period.

All high UAG days for 2025/26 so far have been identified and investigated, although the cause of high UAG has not yet been identified.

Supply and demand patterns remain consistent with those reported in the May 2025 edition of this report. Interconnectors, LDZ offtakes, and power station demand continue to follow established seasonal and annual trends. No significant changes have been observed in LNG or entry terminal flows. Monthly net interconnector positions show no new variation or change in relationship with UAG. For details of further analysis and trend investigations, refer to the UAG Investigation section of this report.

UAG Management Activities

This section of the UAG report describes the activities and inspections undertaken by NGT to improve metering calibration and accuracy.

Reviewal of Meter Validation Reports

Meter owners are obligated to perform measurement validations on each of their metering installations, on a minimum annual basis, to provide assurance that their metering equipment is measuring correctly. The test results are documented within a meter validation report and provided to NGT following the completion of validation tests.

The reviewal of meter validation reports allows NGT to raise queries where necessary, with the relevant meter owners, to confirm if any instruments that tested outside of tolerance could have introduced measurement error, thus impacting assessed UAG levels.

Figure 6 below shows the number of reports received so far this year, compared with the same point in 2024. These reports relate to meter validations conducted between April 2025 and September 2025.

NGT continues to take proactive steps to ensure reports are received and reviewed. We maintain regular communication with meter owners, monitor expected ME2 validation dates, and follow up with meter owners to request reports once validations are complete. This engagement continues until the report is received. So far in formula year 2025/26, we have requested 49 meter validation reports and received 33 compared with 51 received by the same point in September 2024.

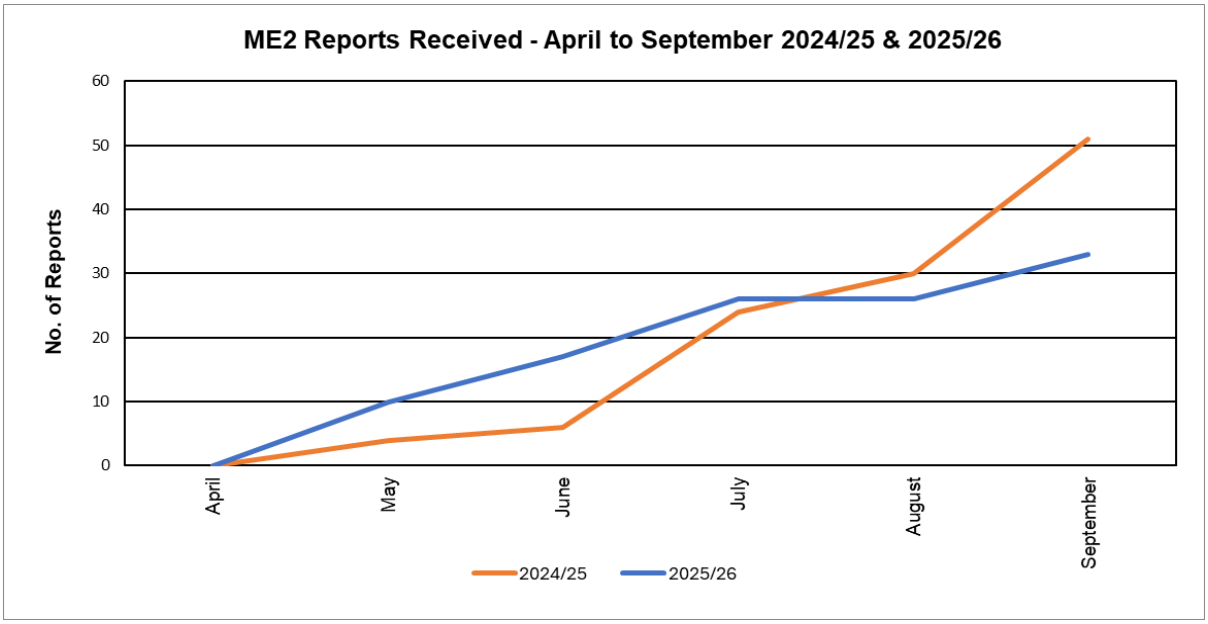

Figure 6 Cumulative number of ME2 Validation Reports Received - April to September 2024/25 and April to September 2025/26

NGT's Meter Assurance team will continue to engage with asset owners connected to the NTS to receive and review meter validation reports. This ongoing collaboration enables NGT to assess the validation results and follow up on any outstanding actions identified during the 2025/26 review period. The data provided and results recorded through this process inform the development of our meter witnessing programme and help to identify potential meter errors that may contribute to UAG.

Meter Witnessing

The purpose of witnessing meter validations is for NGT to gain assurance that the measurement equipment within the metering installation continues to measure the gas delivered to or taken from the NTS without bias and within the agreed measurement uncertainties. It also provides an opportunity to build stronger relationships with our customers, allowing transparency and best practice between our companies.

Witnessing involves NGT personnel attending metering installations throughout the UK during meter validations to observe and document the testing taking place.

Table 1 below outlines the meter witnessing validations undertaken by NGT so far this formula year, and those currently planned for the remainder of the formula year. All proposed witnessing activities on the schedule are subject to change, depending on resource availability and coordination with meter owners.

Meter Witnessing Site	Date of Witnessing
Marchwood Power Station	Jun-25
Goole Glass	Jul-25
Holford Storage	Aug-25
Hill Top Storage	Sep-25
Stublach Storage	TBC Nov-25
Keadby Power Station	TBC Nov-25
Carrington Power Station	TBC Jan-26

Table 1 Meter Witnessing Schedule – Formula Year 2025/26

UAG Investigation

NGT manage projects to investigate the causes of UAG. These projects include historical and future UAG patterns or trends. NGT's continued ambition is to better understand end to end data flows to identify and mitigate systematic data error. To achieve this, we are automating data flows, validating all data points, and building the tools necessary to identify the sources of UAG.

As reported in the May 2025 UAGCVS Report and in previous sections above, UAG levels remain relatively low since November 2024. Since the publication of the May edition of the report, several projects have been undertaken to investigate current UAG trends. These projects have supported the mitigation of outliers and ensure assurance in our data. Investigations will continue throughout the formula year 2025/26, with details of all projects undertaken shown in Table 2 below.

UAG Project	Target Completion Date	UAG / CVS	OUTCOME
Enhancements to UAG causality detection models	2025/26	UAG	**Ongoing**: NGT have scope for innovation project to create a tool to detect causes of UAG. The initial proof-of-concept phase is currently underway as part of a Network Innovation Allowance (NIA) project, focusing on assessing the feasibility of the proposed solution. The outcomes of this phase will inform the potential for a T3 project.
LNG Gas Temperature – impact of temperature cooling as it leaves the terminal. Scope would also include NTS compressors	Potential future project	UAG	**Ongoing**: This requires network modelling and expert determination to determine if there are impacts on volume within the network.
Improvement of data visualisation tools to assess site profiles against UAG behaviour	Extended to T3 Period	UAG	**On Hold:** Incorporate new data sets from the new data platform into our current data visualisation tools.
UAG reporting and data automation	T3	UAG	**On Hold:** This is scoped and logged on NGT IT project system, to be picked up by data architects in T3.
Low UAG trend analysis using supply and demand patterns	2025/26	UAG	**Complete**: Supply and demand patterns analysed to identify potential correlations with UAG at specific sites. A number of storage sites flagged as areas of interest and proposed for further investigation.
High UAG as % throughput investigations	2025/26	UAG	**Complete:** All days with high UAG as a percentage of throughput reviewed for the summer period. Analysis supported findings of the low UAG trend analysis above.
Site analysis for storage sites	2025/26	UAG	**Ongoing**: This requires further analysis to explore findings from the two preceding projects, focusing on specific storage sites that may correlate with recent UAG trends.

Table 2: Projects for Formula Year 2025/26

NGT has initiated a proof-of-concept project under the RIIO-T2 Network Innovation Allowance (NIA) framework to explore enhancements to UAG causality detection models, as outlined in Table 2. The primary objective of this proof-of-concept project is to develop and validate a predictive tool capable of identifying the causation of UAG within the NTS.
The project was formally launched on 3rd September 2025 following approval, and is scheduled for completion in February 2026, with all work being complete before the end of the RIIO-T2 period. NGT is currently in Phase One which focuses on data discovery and formatting and is actively engaging stakeholders through workshops, scoping relevant data, and defining test cases.

The Centre for Modelling & Simulation (CFMS) has been appointed as the external delivery partner responsible for the design, development, and validation of the tool. CFMS has emphasised that the modelling methodology will be tailored to the nature and quality of the available data to ensure an effective and robust solution.

The tool will be designed to analyse historical data, enabling NGT to detect anomalies in metering behaviour and localise potential sources of UAG at the site or meter level. The outcome of this project will be a working prototype that demonstrates the viability of the approach, identifies any data or modelling gaps, and lays the groundwork for broader deployment in subsequent projects. This project supports NGT's regulatory obligations under Special Condition 5.6 and contributes to the long-term goal of integrating predictive UAG analysis into business-as-usual operations.

A new data platform is also currently planned to be delivered within the T3 period, providing access to raw data that was previously unavailable. This enhanced data accessibility will contribute to the success of our future projects.

The projects that are scoped in Table 2 for 2025/26 will be scheduled in the coming months dependent on resource and data availability.

All closed out projects can be viewed in previous UAGCVS reports.

CVS Statement and Investigation

Calorific Value Shrinkage (CVS) is gas which cannot be billed due to the application of Gas (Calculation of Thermal Energy) Regulations 1996 (amended 1997) and is the Local Distribution Zone (LDZ) energy difference between measured and billed Calorific Value (CV).

The regulations outline that the daily CV average for a given charging area is calculated by summing the product of the CV and volume for all supply inputs and dividing by the total volume of gas entering the charging area.

The maximum daily CV average for a charging area permitted by the regulations is equal to 1.0 MJ/m³ above the lowest measured daily CV of the supply inputs into that charging area. Consequently, if for any given day an input into a charging area has a CV outside of this range, a capped CV (lowest CV + 1MJ/m³) will be applied to the whole region for billing purposes. This is to protect customers who may live near this supply of lower quality gas and prevent them overpaying for gas they are receiving. Correla manages the CV billing process on behalf of the Distribution Networks.

To calculate CVS, NGT deduct the value that is used to bill downstream shippers based on the principles detailed above, from what was measured leaving the NTS by Ofgem approved equipment. Corella releases these values daily, following the closure of the gas day at D+5.

CVS occurs daily in all charging areas with more than one supply input into the region, which usually equates to small quantities if capping hasn't occurred and is a result of the charging area CV being rounded to one decimal place following its calculation. With CV capping being the major contributing factor to CVS, UNC Offtake Arrangement Document Section F 2.2 details that all parties cooperate with the view to avoid or minimise the amount of CVS each day.

With that in mind, if capping results from an NTS to LDZ Offtake, NGT will investigate and where possible, work to minimise or prevent capping. This may involve providing guidance to the Distribution Network Operator (DNO) on adjusting flow patterns through the offtakes or exploring alternative solutions within the NTS to enhance gas blending. If CV capping is caused by a non-NTS connected asset, such as a biomethane site injecting gas into the LDZ, the DNOs may investigate the source.

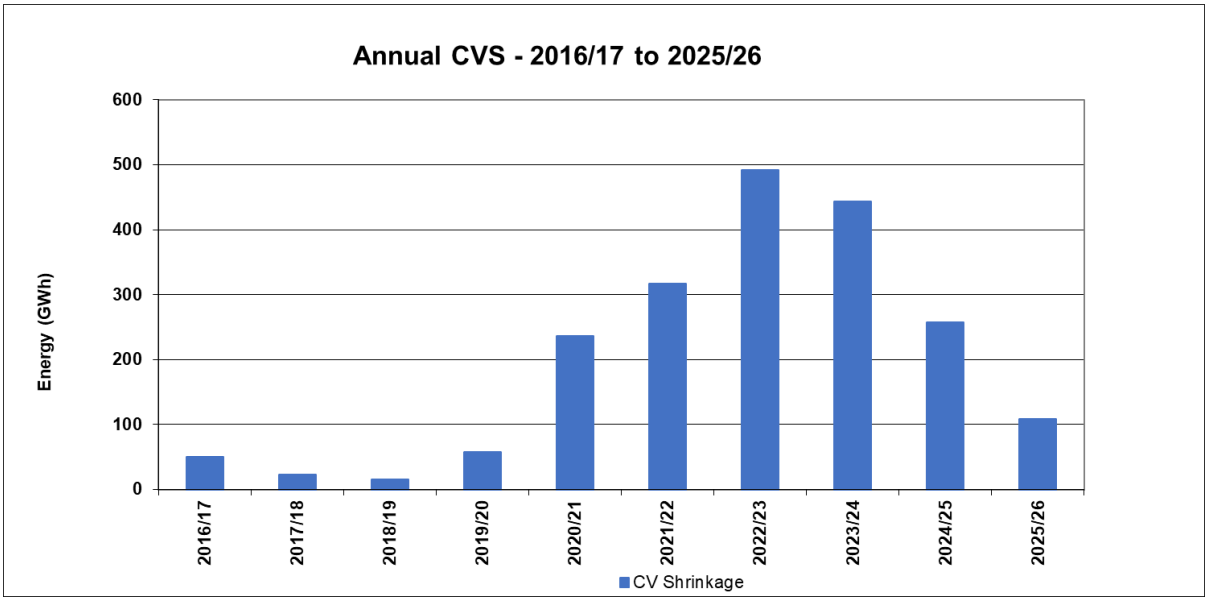

Figure 7 Annual CVS 2016/17 to 2025/26

Figure 7 above provides a view of CVS between 2016/17 and 2025/26. CVS in 2025/26 is 58% lower when compared to the previous year, recognising there are only 6 months of data for 2025/26.

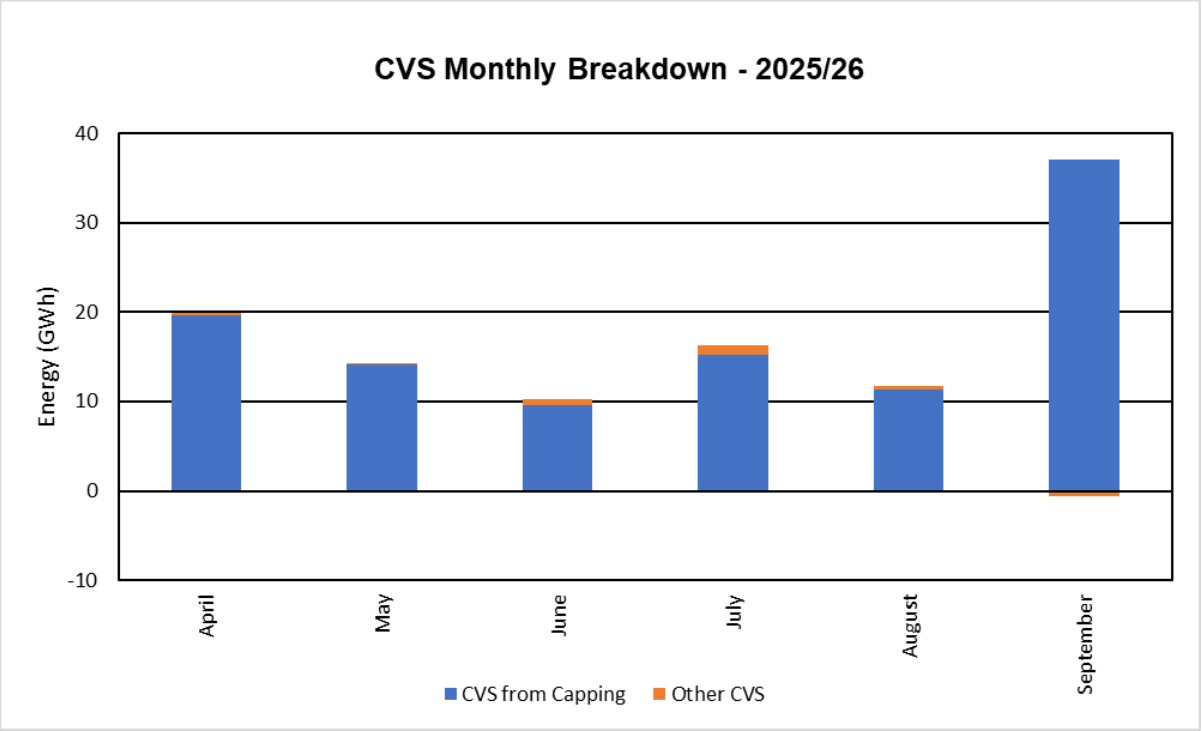

Figure 8 CVS Monthly Breakdown 2025/26

Figure 8 provides a monthly breakdown of CVS for 2025/26. This shows the proportion of CVS due to CV Capping (in blue) and the remainder of other CVS (in orange), which can be either positive or negative when not caused by CV capping. This is due to the rounding of the LDZ CVS to 1 decimal place, as previously mentioned.

Figure 9 below illustrates that in 2025/26 so far, CVS due to capping has generally remained consistent with the previous summer period, totalling 106.95 GWh and 101.60 GWh respectively.

Throughout the last six months, capping occurred in 10 of the 13 LDZs (EA, EM, NE, NO, NW, SC, SE, SO, SW and WM). Higher volumes of capping have been witnessed throughout June and July, which occurred mainly in NO & NE LDZ due to multiple offtake site calorific values being low for several days. The impact of this can be seen in Table 3 below.

There have been 262 instances of CV capping between April and September 2025, whereas the same period in 2024 witnessed 182 instances. Of the 262 instances in this period, 45% of the total capped energy was identified in NE LDZ and 29% was identified in NO LDZ.

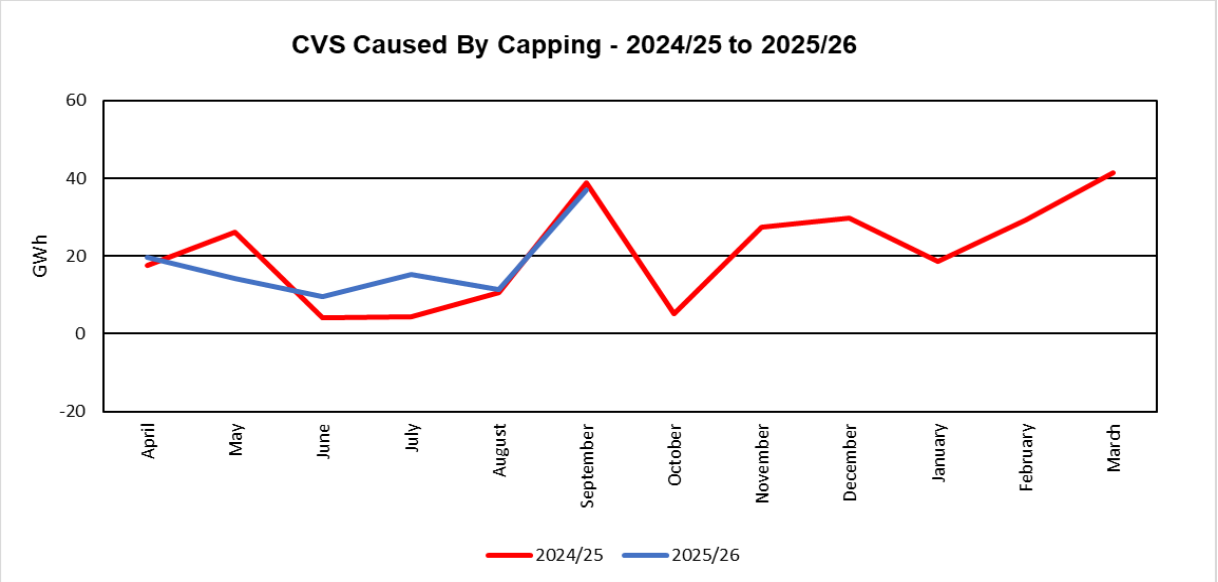

Figure 9 CVS Caused by Capping in 2024/25 and 2025/26

Table 3 indicates that CVS due to capping over summer 2025/26 has predominantly occurred in the NE and NO LDZs, amounting to 78.97 GWh. CVS caused by capping in the NE LDZ has increased by 105% when compared to the same period in 2024/25, while in NO it has decreased by 40%. NE and NO account for 74% of the total CVS attributed to capping in 2025/26.

Month	CVS caused by Capping (GWh)													Total
	EA	EM	NE	NO	NT	NW	SC	SE	SO	SW	WM	WN	WS	
Apr-25	3.16	0.09	6.73	2.22	0.00	0.00	0.00	0.00	0.00	0.00	7.38	0.00	0.00	19.58
May-25	1.72	0.00	7.35	1.22	0.00	0.80	1.63	0.00	0.00	0.00	1.47	0.00	0.00	14.19
Jun-25	2.06	0.00	3.54	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.59
Jul-25	4.32	0.00	8.14	2.58	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	15.17
Aug-25	2.09	0.25	4.42	4.06	0.00	0.32	0.16	0.00	0.00	0.00	0.00	0.00	0.00	11.30
Sep-25	0.00	0.00	17.97	16.72	0.00	0.19	0.00	0.06	0.05	2.12	0.00	0.00	0.00	37.12
Summer 24/25	0.22	0.54	23.54	51.50	2.86	13.30	3.24	0.00	0.00	2.12	4.27	0.00	0.00	101.60
Summer 25/26	13.35	0.34	48.17	30.80	0.00	1.31	1.78	0.18	0.05	2.12	8.85	0.00	0.00	106.95

Table 3 CVS Caused by Capping

Capping in NE LDZ occurred on 126 days between April and September 2025. The rationale behind this capping is mainly due to the differing volumes of gas supplies entering the NE LDZ from Teesside, Easington, and St Fergus terminals. The gas entering the network at Teesside typically has a higher CV, whereas Easington often delivers a lower CV. Of the days affected by CV capping in NE LDZ, 111 are attributed to the location of Paull Offtake. This offtake supplies gas directly from Easington into the NE LDZ, where blending the lower CV gas from Easington is not feasible due to the network configuration. Consequently, other offtakes delivering into the NE LDZ, receiving higher CV gas from Teesside and St Fergus Terminals, create a disparity in CV across the LDZ, leading to CV capping.

Capping in NO LDZ occurred on 73 days between April and September 2025. These occurrences were due to several sites in the NO LDZ requiring the application of an attributed CV from a flowing neighbouring site to calculate energy. Of these 73 instances, the attributed CV was much lower compared to the other offtakes delivering gas into the NO LDZ.

Additional CV capping was observed in the EM and WM LDZs, some of which is attributed to low biomethane site CV within the LDZs.

Conclusion

In conclusion, the total assessed pre-reconciled UAG quantities for the 1st April 2025 to 30th September 2025 is lower than the previous six months (1st October 2024 to 31st March 2025), which aligns with historical seasonal trends.

NGT is continually developing its understanding of the causes of UAG by utilising data analysis, data visualisation tools, and investigative projects.

CVS for 1st April 2025 to 30th September 2025 has remained consistent with the same period in 2024/25; the total values are 108.8 GWh in summer 2025/26 and 107.3 GWh in summer 2024/25.

Continuing support from meter owners has enable NGT to obtain and review meter validation reports for NTS entry and exit facilities. This data is used to support the identification of UAG causes, enhance NGT's ability to detect meter errors, and inform the preparation of future meter witnessing programmes.

Appendix I

National Gas Plc (NTS) Gas Transporter Licence Special Condition Part J 5.6

Part J: Requirement to undertake work to investigate the causes of UAG and CVS

5.6.53 The licensee must use reasonable endeavours to undertake UAG Projects and compile a CVS Statement for the purposes of investigating the causes of UAG and CVS for each Regulatory Year.

5.6.54 The licensee must, unless the Authority otherwise directs, publish the UAGCVS Reports and provide a copy to the Authority by 1 May and 1 November in each Regulatory Year for the preceding six month period ending on 31 March and 30 September respectively.

5.6.55 The licensee must outline in the UAGCVS Report:

(a) the UAG Projects the licensee has undertaken in the previous period;

(b) the UAG Projects the licensee proposes to undertake in the next period and its views on whether, and if so how, the findings of the UAG Projects may be taken forward in order to reduce the volume of UAG;

(c) the reasons why any UAG Projects that the licensee proposed to undertake have not been undertaken during the Regulatory Year;

(d) a CVS Statement outlining the work conducted during the previous period to investigate CVS, and explaining the licensee's understanding of the causes of CVS;

(e) any additional activities and inspections undertaken by the licensee to improve metering calibration and accuracy;

(f) a summary of any relevant discussions concerning UAG or CVS at industry fora and with interested parties on a one-to-one basis; and

(g) any data or information related to UAG or CVS that the Authority may reasonably request.

5.6.56 During the period of 28 days beginning with the date of publication of a UAGCVS Report the licensee must, unless the Authority otherwise consents, publish on its website all the relevant data referred to in the UAGCVS Report.

Interpretation and definitions UAG

is unaccounted for gas and means the amount of gas (GWh) that remains unaccounted for after the Entry Close-out Date following the assessment of NTS Shrinkage performed in accordance with the Uniform Network Code. **UAG Projects** means the projects currently undertaken by the licensee including:

(a) the witnessing by the licensee of the validation of Measurement Equipment at NTS System Entry Points or Supply Meter Installations at NTS Exit Points; and

(b) investigation and analysis of data in order to seek to identify causes of UAG.

UAGCVS Report

means a report required under Part J of Special Condition 5.6 (System operator external incentives, revenues and costs).

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