



NTS Shrinkage Incentive

Ex-Ante Baseline Values Statement
For 2021/22

June 2020

nationalgrid

About This Document

This document sets out baseline value targets that National Grid Gas plc (“National Grid”) in its role as holder of the Gas Transporter Licence in respect of the NTS (“the Licence”) is required to publish in accordance with the NTS Shrinkage Incentive Methodology Statement for Formula Year 2021/22.

This Shrinkage Incentive Ex-Ante Baseline Values Statement is an initial statement effective for Formula Year 2021/22, ahead of arrangements for this Formula Year (the first of the RIIO-2 period) being confirmed.

This document will be updated and published five times for 2021/22 (subject to arrangements being confirmed):

- June 2020 (Initial Publication)
 - UAG & CVS baseline volumes for Q2 2021
 - CFU baseline volumes for all quarters in Formula Year 2021/22
- September 2020 (Update)
 - UAG & CVS baseline volumes for Q3 2021
- December 2020 (Update)
 - UAG & CVS baseline volumes for Q4 2021
- March 2021 (Update)
 - UAG & CVS baseline volumes for Q1 2022
- July 2022 (Update)
 - Energy Efficiency Variance CFU
 - Energy Efficiency Variance for CVS

A separate document will exist for each incentive year.

For further information please contact:

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Website

The most recent document can be found here:

<https://www.nationalgrid.com/about-us/system-operator-incentives/nts-shrinkage>

NTS Shrinkage Incentive Ex-Ante Baseline Values Statement for Incentive Year 2021/22

Methodology

For more information on the methodology used to calculate the baselines please refer to the accompanying Methodology Statement found on the national grid website.

Baseline Volumes – Compressor Fuel Usage (CFU)

Step 1

The relationship between flow at the St Fergus ASEP and total CFU, using data from 2009/10 to 2019/20 inclusive, is:

$$\text{Total CFU (GWh)} = 347.125493 \cdot x \exp^{0.002440 \cdot \text{Daily Average St Fergus Flow}}$$



Step 2

The forecast flow at the St Fergus ASEP for 2021/22 is:

742 GWh/day

Inserting the forecast flow at St Fergus ASEP into the equation in Step 1 gives a total CFU baseline volume of:

2,122 GWh

Step 3

2019/20 Quarterly CFU Volumes

	Q2 Apr-Jun	Q3 Jul-Sep	Q4 Oct-Dec	Q1 Jan-Mar	Total
GWh (Gas Equivalent)	338	195	322	282	1,137
%	30%	17%	28%	25%	100%

Applying the above quarterly percentages to the total CFU baseline volume in Step 2 gives the following.

2021/22 Quarterly CFU Volumes

	Q2 Apr-Jun	Q3 Jul-Sep	Q4 Oct-Dec	Q1 Jan-Mar	Total
GWh (Gas Equivalent)	630	363	601	527	2,122

Step 4

Applying the prevailing view of electric compressor replacement, along with historical information of the split between gas and electric compressor usage, gives the following.

2021/22 Quarterly CFU Baseline Volumes Split Between Gas & Electricity

	Q2 Apr-Jun	Q3 Jul-Sep	Q4 Oct-Dec	Q1 Jan-Mar	Total
Gas GWh	386	229	382	290	1,287
Elec GWh	81	45	73	79	278

Note: Electricity energy usage values in this table are one third of the electricity (gas equivalent) energy values

Baseline Volumes – Unaccounted for Gas (UAG) & Calorific Value Shrinkage (CVS)

2021/22 Quarterly UAG & CVS Volumes

	Q2 Apr-Jun	Q3 Jul-Sep	Q4 Oct-Dec	Q1 Jan-Mar	Total
GWh (Gas Equivalent)	930	*Sep 2020	*Dec 2020	*Mar 2021	*Mar 2021

Note: *Indicates when the UAG & CVS Baseline Volume targets will be published

Energy Efficiency Volumes – CFU & CVS

The annual CFU and CVS energy efficiency adjustment volumes for 2021/22 will be published in July 2022, following calculation and audit.

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