

NATIONAL GRID

NTS Shrinkage Incentive Ex-Ante Baseline Values Statement For 2018/19

December 2017

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 2018/19.

This document will be updated and published five times for 2018/19:

- June 2017 (Initial Publication)
 - UAG & CVS baseline volumes for Q2 2018
 - CFU baseline volumes for all quarters in Formula Year 2018/19
- September 2017 (Update)
 - UAG & CVS baseline volumes for Q3 2018
- December 2017 (Update)
 - UAG & CVS baseline volumes for Q4 2018
- March 2018 (Update)
 - UAG & CVS baseline volumes for Q1 2019
- July 2019 (Update)
 - Energy Efficiency Variance CFU
 - Energy Efficiency Variance for CVS

A separate document will exist for each incentive year.

An electronic version of this publication can be found at the following internet page: <https://www.nationalgrid.com/uk/gas/system-operator-incentives/nts-shrinkage>

If you require further details about any of the information contained within this document or have comments on how this document could be improved, please contact Chris Aldridge at:

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NTS Shrinkage Incentive Ex-Ante Baseline Values Statement

For

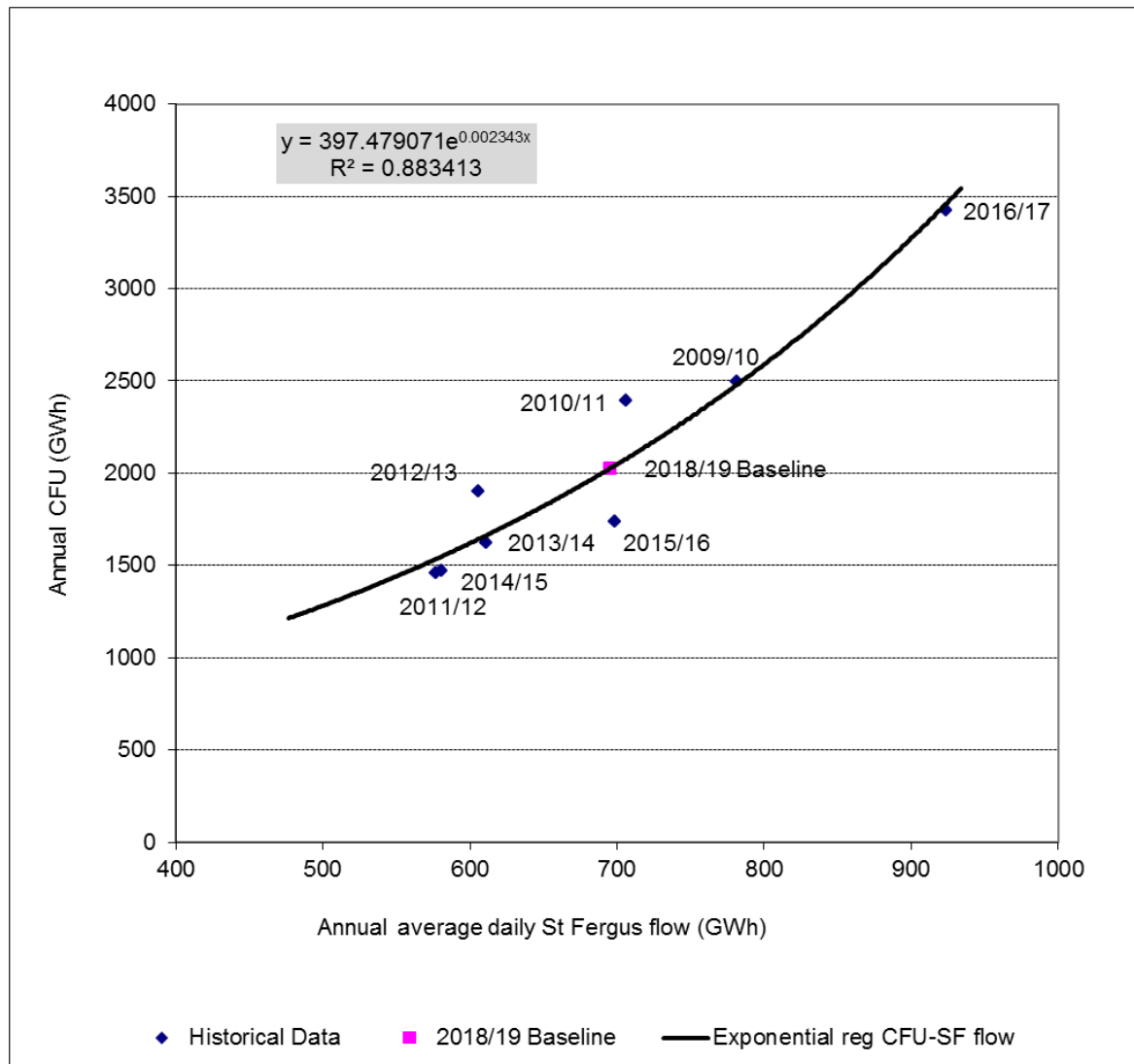
Incentive Year 2018/19

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 2016/17 inclusive, is:

$$\text{Total CFU (GWh)} = 397.479071 \times \exp^{0.002343 \times \text{Daily Average St Fergus Flow}}$$



STEP 2

The forecast flow at the St Fergus ASEP for 2018/19 is:

(B) **695 GWh/day**

Inserting the forecast flow at St Fergus ASEP into equation (A) gives a total CFU baseline volume of:

(C) **2025 GWh**

STEP 3

The quarterly CFU volumes for 2016/17 were:

	Q2 Apr-Jun	Q3 Jul-Sep	Q4 Oct-Dec	Q1 Jan-Mar	TOTAL
GWh (Gas Equivalent)	473	689	1057	1205	3424
%	14%	20%	31%	35%	100%

Applying the above quarterly percentages to the total CFU baseline volume (C) gives the following quarterly CFU baseline volumes for 2018/19:

	Q2 Apr-Jun	Q3 Jul-Sep	Q4 Oct-Dec	Q1 Jan-Mar	TOTAL
GWh (Gas Equivalent)	280	408	625	713	2025

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 split of quarterly CFU baseline volumes between electricity and gas for 2018/19:

	Q2 Apr-Jun	Q3 Jul-Sep	Q4 Oct-Dec	Q1 Jan-Mar	TOTAL
Gas GWh	149	271	426	482	1328
Elec GWh	44	45	66	77	232

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)

The quarterly UAG & CVS baseline volume for 2018/19 are as follows:

	Q2 Apr-Jun	Q3 Jul-Sep	Q4 Oct-Dec	Q1 Jan-Mar	TOTAL
GWh	139	269	213	*Mar 2018	*Mar 2018

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

ENERGY EFFICIENCY VARIANCE – COMPRESSOR FUEL USE

The annual CFU efficiency volume variance for 2018/19 will be published in July 2019, following calculation and audit.

ENERGY EFFICIENCY VARIANCE – CALORIFIC VALUE SHRINKAGE

The annual CV shrinkage efficiency volume variance for 2018/19 will be published in July 2019, following calculation and audit.