

Modification 0519: Harmonisation of Reference Conditions at Interconnection Points



First Workgroup Meeting
2nd December 2014

Presentation Content

- What are reference temperatures?
- Why change UNC?
- Proposed solution
- Expected impacts

What are Reference Temperatures?

- Gas measurement is sensitive to temperature
 - Measurements are 'corrected' to constant temperatures
 - Volume @ $x^{\circ}\text{C}$
 - CV @ $y^{\circ}\text{C}$
- } Energy @ x / y
- 'Commercial' energy figures such as nominations and capacity bookings may also be declared at particular reference conditions

Why Change?

- The EU Interoperability and Data Exchange Network Code requires the use of the following reference temperatures for “*any data exchange and data publication related to Regulation EC No 715/2009*”
 - 0°C for volume
 - 25°C for calorific value
- UNC (General Terms, Section C) sets reference temperature of 15°C
- National Grid NTS considers that UNC needs to be amended to facilitate the use of 0/25 reference temperatures to be used for IP capacity and nominations processes

Solution Overview

- IP capacity to be offered and booked on a 0/25 basis
- IP nominations and matching to be managed on a 0/25 basis
- IP allocations to be provided to shippers on a 0/25 basis
- 'Balancing allocation' to be added to the 0/25 allocation to correct to 15/15 based on a 0.9990 conversion factor

Note: The EU Interoperability Code provides for 15/15 conditions to continue at the Moffat IP, subject to regulatory approval, which National Grid NTS and BGE(UK) will seek.

Therefore, subject to such approval being granted, this Modification will only apply in respect of the Bacton IPs.

Expected Impacts

- IP shippers will need to manage their nominations differently
 - Moves the issue 'across the flange' at Bacton
- Gemini system changes required
 - Indicative costs of £400k - £450k
 - Deliverable by 1 May 2016 but not 1st October 2015
 - 'Transitional' nominations and allocations at 15/15?
- Shipper systems changes?

Solution in Detail: CAPACITY BASELINES

- Current IP baseline figures remain unconverted
 - Indirect effect is a very small increase to NG obligations
 - Moffat = 0.4 GWh increase ($433.4 \text{ GWh} \times 0.001$)
 - Bacton = 1.2 GWh increase ($1,200^1 \text{ GWh} \times 0.001$)
- Reference conditions are not specified in the Licence hence no change to the Licence is required
- NG NTS proposes to clarify the application of different reference conditions in a forthcoming review of capacity release methodologies driven by EU changes

¹ Assumed Bacton IP baseline post split (illustrative purposes only)

Solution in Detail: CAPACITY BOOKINGS

- Existing bookings at the IPs:
 - Remain unconverted
- Future bookings at the IPs:
 - Gemini sends unsold capacity at the IPs to PRISMA unconverted
 - GB shippers bid for IP capacity on PRISMA at 0/25
 - GB shipper bookings are not converted when 'downloaded' to Gemini

Solution in Detail: ENERGY (NOMINATIONS)

- Shippers at both sides of the IPs nominate at 0/25
 - i.e. if the nomination is within the shipper's 0/25 capacity entitlement no overrun charge will apply
- TSO-TSO matching process at 0/25
- Confirmed Quantities sent to shippers either side of an IP by their TSO at 0/25

Solution in Detail: ENERGY (ALLOCATIONS)

- 'Allocate as nominate' regime results in shipper allocations at 0/25
- Capacity overrun assessment determined based on the 0/25 allocation
- Add an extra line ('balancing allocation') to each IP shipper's Gemini account containing the difference between its 0/25 allocation and the equivalent value at 15/15

- Example:

Shipper NTS entry nomination from IUK = 100,000 kWh

Shipper Confirmed Quantity after matching = 100,000 kWh

Shipper allocation = 100,000 kWh

'Balancing allocation' = 100 kWh ($100,000 * 0.001$)

Quantity available for GB offtake/trading = 100,100 kWh

Solution in Detail: INVOICING

- An extra line(s) detailing the 'balancing allocation' will appear on the shipper's energy balancing invoice
- Transportation invoicing (commodity charges) will be based on the 0/25 allocation
 - NG NTS will need to ensure commodity charge setting and revenue collection is done on a consistent basis

Relevant UNC Text

Parameter	UNC Definition	UNC Sections Affected
Gas	" gas " means any hydrocarbons or mixture of hydrocarbons and other gases consisting primarily of methane which at a temperature of 15 C and an absolute pressure of 1.01325 bar are or is predominantly in the gaseous state.	General Terms, Section C
Quantity and Volume	a " quantity " of gas is a quantity in kWh; a "volume" of gas is a volume in MCM.	General Terms, Section C
Cubic Metre or M ³	"Cubic Metre" or "M ³ ": when applied to gas, that amount of gas which at a temperature of 15 C and an absolute pressure of 1.01325 bar and being free of water vapour occupies one 1 cubic metre;	General Terms, Section C
Calorific Value	"calorific value": that number of Megajoules produced by the complete combustion at a constant absolute pressure of 1.01325 bar of 1 Cubic Metre of gas at a temperature of 15 Ccalorific value shall be REAL as defined in ISO6976-1995(E)	General Terms, Section C
Nominations	a "Nomination" is a nomination by a User in respect of a quantity of gas to be delivered to or offtaken from the Total System on a Day;	TPD, Section C Nominations
Allocations	the "User Daily Quantity Input" or "UDQI" is the quantity of gas treated as delivered by a User to the Total System on that Day at a System Entry Point; the "User Daily Quantity Output" or "UDQO" is the quantity of gas treated as offtaken by a User from the Total System on that Day at a supply point for connected system exit point	TPD, Section E Daily Quantities, Imbalance and Reconciliation
Capacity	System Capacity is expressed in kWh/Day	TPD, Section B, System Use and Capacity

Summary

- A mod to deliver EU compliance
- Low commercial impact
- Requires system changes that are not deliverable before the new nominations and matching regime is introduced with effect from 1st October 2015
- NG NTS therefore expects to seek agreement from adjacent TSOs to initially match and allocate at 15/15
- UNC rules needed to cater for the above