Information to support discussion at June Distribution Workgroup - UNCVR – v2 Gazprom Proposal

Background - Tolerance Rules

- Validation Rules set out in 2 tolerance ranges
  - Inner Tolerance Range (ITR) that the Shipper User can override
  - Outer Tolerance Range (OTR) that the Shipper User cannot override (Market Breaker).
- Class 1 / 2 based on SOQ; Class 3 / 4 based on AQ.
- Class 3 / 4 is AQ/365*range
- Different AQ Bands have different ITR / OTR range….

Example:

Lower AQ Band (kWh)	Upper AQ Band (kWh)	Tolerances where read will be accepted	Tolerances where a Read will be Accepted if Submitted within Override Flag (Inner Tolerance)	Outer Tolerance Where Read will be Rejected (Market Breaker)
1	1	0% - 2,000,000% of AQ/365 x no. of days	2,000,001% - 7,000,000 % of AQ/365 x no. of days	>= 7,000,001% of AQ/365 x no. of days
2	200	0% - 10,000% of AQ/365 x no. of days	10,001% - 25,000 % of AQ/365 x no. of days	>= 25,001% of AQ/365 x no. of days
201	500	0% - 4,000% of AQ/ 365 x no. of days	4,001% - 10,000 % of AQ/365 x no. of days	>= 10,001% of AQ/365 x no. of days

Background - Tolerance Rules

- Tolerance Ranges were set based on limited information, but agreed with industry.
- Market Breaker set to protect broader market from consequential risk i.e. not to protect an individual Shipper from submitting erroneous reads.
- As required by the industry, these were provisioned so that this could be easily changed when better analysis became available
- Prior to implementation the industry sought to reassess via PNUNC / DWG – but insufficient data to pursue this within time available
- Post PNID a Change Proposal has been received and scheduled to split the 2-200 kWh band – this is in November 2018 UK Link Release

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1	1	0% - 2,000,000% of AQ/365 x no. of days	2,000,001% - 7,000,000 % of AQ/365 x no. of days	>= 7,000,001% of AQ/365 x no. of days
2	100	0% - 20,000% of AQ/ 365 x no. of days	20,001% - 45,000 % of AQ/365 x no. of days	>= 45,001% of AQ/365 x no. of days
101	200	0% - 10,000% of AQ/ 365 x no. of days	10,001% - 25,000% of AQ/365 x no. of days	>= 25,001% of AQ/365 x no. of days

Principles and Approach

- Gazprom have reviewed reads that would fail to pass Xoserve Validation
- This has identified that the current out tolerance levels are set too low i.e. valid reads are unable to be loaded into Xoserve's system
- The existing tolerance levels are configurable to reflect that they represented a best guess at point of Go Live and were expected to change
- We now have 12 months operational experience to base analysis on i.e. its not a knee jerk response
- Changing the Outer Tolerance levels does not create systemic market risk
- Allowing valid reads in allows the correct allocation of energy and thus reduces ongoing model error in relation to these sites
- Gazprom analysis combined with input from EDF and Xoserve was used to establish optimum solution which delivers greatest likelihood of reads being accepted (see table)
- By altering the Outer Tolerance levels we will not impact Shippers BAU processes
- We can therefore implement quickly

Band	AQ Band	Current	Proposed
1	1	No Change	No Change
	22-200	25,001	55,001
	3201-500	10,001	55,001
	4501-1,000	5,001	25,001
	51,001-5,000	2,001	7,001
	65,001- 10,000	501	2,001
	710,001-20,000	401	1,501
	820,001-73,200	601	1,201
	973,201-732,000	551	1,001
10	732,001-2,196,000	501	1,001
11	2,196,001-29,300,000	451	701

Requirement Statements

- Reduce instances of Meter Reading Tolerance Failures – i.e. where Shipper is unable to override this failure

- Retain existing value of Shipper User ITR, this is to:
  - Retain Shipper responsibility to validate and override as necessary
  - Remove this being a mandated Shipper change (and avoid Shipper User deferral to Major Release)

- Utilisation of existing parameters for change in order to realise implementation as soon as possible

Analysis – OTR Read Rejections

- Application of Tolerance Bands with respect to Gazprom proposal
- All readings were subject to Tolerance Failures
  - They may have also been subject to other Meter Reading Failures too

NB: Updated to include v2

- Note:
  - Orange Band shows existing tolerance bandings
  - Blue Band shows 'Proposed' tolerance bandings
  - Grey Band shows 'Suggested' – Alternative Gazprom proposal if required
  - Green band shows revised Gazprom Proposal v2 (applies to Band 6-9 incl)

Analysis

- Summary of increase in Reading acceptance versus Gazprom proposal

Indicates % of Readings that failed OTR Validation that would pass with the alternative tolerances.

Band	AQ Band	Current	Proposed	% Reads	Proposed	% Reads
1		No 1Change	No Change	-	No Change	
	22-200	25,001	55001	40.9%	55,001	40.9%
	3201-500	10,001	55001	40.8%	55,001	40.8%
	4501-1,000	5,001	25001	37.2%	25,001	37.2%
	51,001-5,000	2,001	7001	22.1%	7,001	22.1%
	65,001- 10,000	501	1801	18.0%	2,001	19.0%
	710,001-20,000	401	701	8.8%	1,501	18.1%
	820,001-73,200	601	1101	14.3%	1,201	16.3%
	973,201-732,000	551	901	29.3%	1,001	37.7%
10	732,001-2,196,000	501	1001	30.8%	1,001	30.8%
11	2,196,001-29,300,000	451	701	34.4%	701	34.4%

Table amended to include v2 Change Proposal

Band 7 Scenario 1 – Read duration = 1 month

AQ	Method	10001		19999	
Outer Tolerance Applied		4.01 Current	15.01 Proposed	4.01 Current	15.01 Proposed
Typical monthly consumption	AQ/12	833		1667	
Max allowed energy (kWh approx)	Typical Monthly Consumption * Outer Tolerance	3,342	12,510	6,683	25,015
Reconciliation energy (kWh approx)	Max Allowed Energy - Typical Monthly Consumption	2,509	11,676	5,016	23,349
Energy rec value	Rec Energy * Rate	£50	£234	£100	£467
New AQ (approx – depends on actual weather for period)	Reconciliation energy + Existing AQ	12,510	21,677	25,015	43,348
AQ Increase (%)	% Between New and Existing	25	117	25	117

Assumptions:

- SAP (energy price) 2p/kWh
- Previous reads were all in line with AQ
- Ignores interim AQ validation tolerances

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Band 7 Scenario 2 – Read duration = 12 months

AQ	Method	10001		19999	
Outer Tolerance Applied		4.01	15.01	4.01	15.01
Typical Annual consumption	AQ	10001		19999	
Max allowed energy (kWh approx)	Typical Annual Consumption * Outer Tolerance	40,104	150,115	80,196	300,185
Reconciliation energy (kWh approx)	Max Allowed Energy - Typical Annual Consumption	30,103	140,114	60,197	280,186
Energy rec value	Rec Energy * Rate	£602	£2,802	£1,204	£5,604
New AQ (approx – depends on actual weather for period)	Reconciliation energy + Existing AQ	40,104	150,115	80,196	300,185
AQ Increase (%)	% Between New and Existing	301	1401	301	1401

Assumptions:

- SAP (energy price) 2p/kWh
- Ignores interim AQ validation tolerances

Other Requirement Statements?

- Testing
  - First parameter change in production – testing of revised values is required

Next Steps

- June ChMC approved that a change to the values be progressed, and indicatively approved target implementation on R3 date, the proposer of the UNCVR change recognised ChMC reservations about the values and referred to DSG for any further input – 13th June 2018 - **Complete**

- DSG – discussions at DSG - 22nd April 2018 / 08th May 2018 / 18th June 2018 - **Complete**

- DWG – Final review prior to submission to UNCC – 28th June 2018

- UNCC – Presentation of revised UNCVR – 19th July 2018