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Project Nexus

Additional Meeting to discuss Interim AQ
Tolerance Check

5 June 2015 (by Teleconference)

- Possible interim AQ tolerance levels discussed at Project Nexus UNC Workgroup on 12 May 2015
- Members asked Xoserve to use a different approach to possible tolerance
- Agreed that a smaller working group would be better to deal with this complex topic
- Additional analysis undertaken and slides updated where indicated

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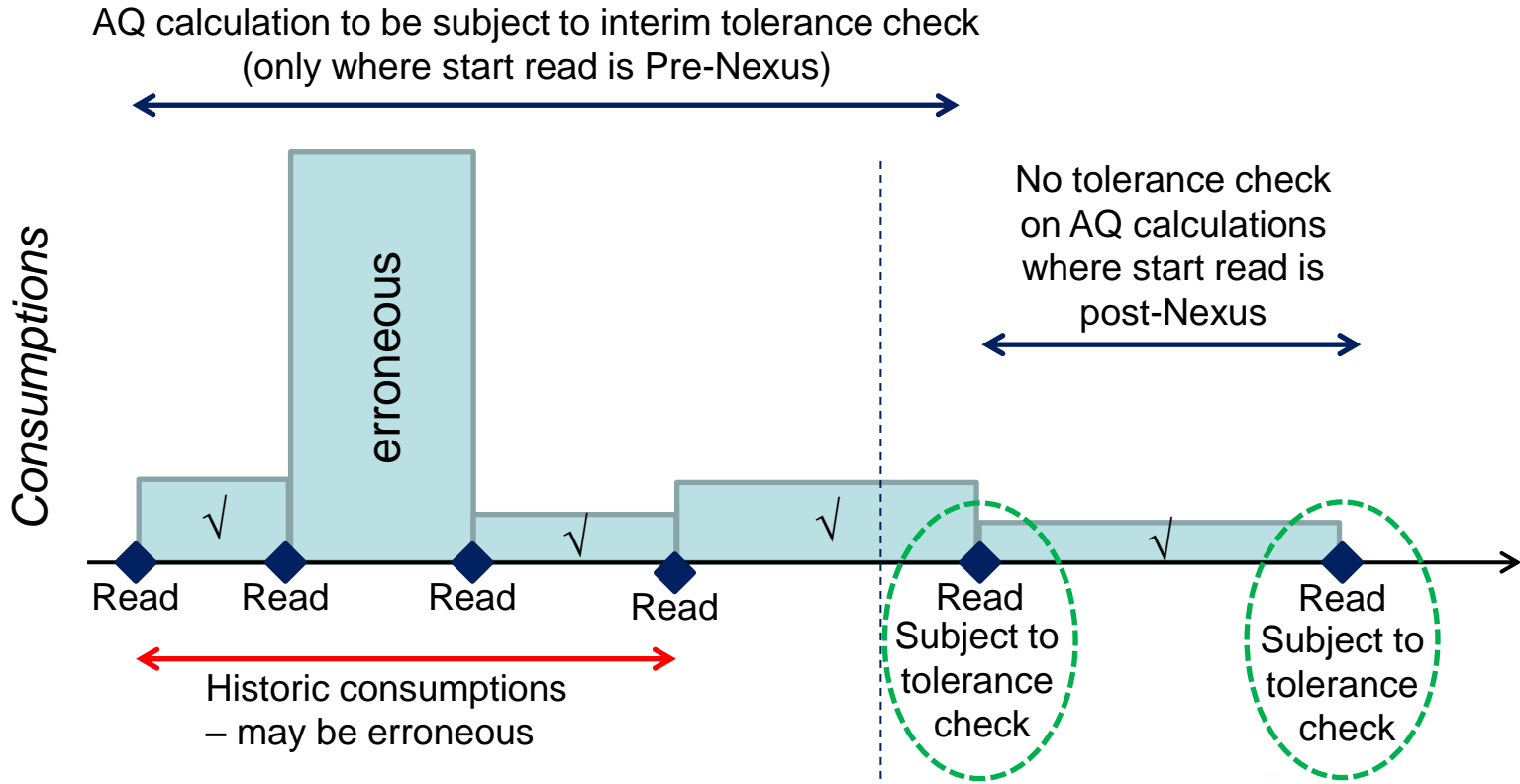
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- Concerns about outcome from Rolling AQ calculation for an interim period
- New meter readings subject to AQ/SOQ based tolerances
- Start read for AQ calculation may be pre-Nexus – erroneous read/consumption could inflate the AQ
- AQ goes live following month – no Amendment process
- Proposal for an additional AQ tolerance check for an interim period only
- Tolerances to be applied only where start read is pre-Nexus ...

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Implementation*

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Scope of proposed interim tolerance check

- In scope
 - AQ increases following monthly system calculation
 - SSP to LSP increases
 - LSP to LSP increases
 - Start read date is pre-UKLink Replacement go-live
- Out of scope
 - AQ decreases (or unchanged) following monthly system calculation
 - AQ increases but stays within SSP
 - Start read date is post-UKLink Replacement go-live
 - AQ corrections (post-Nexus process)

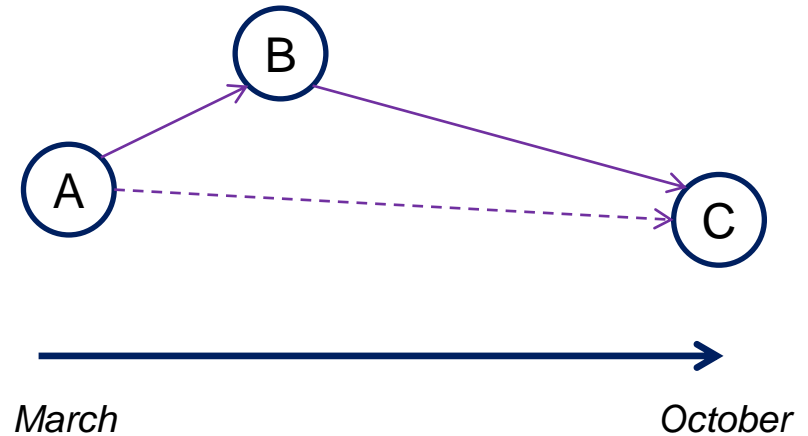
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Analysis previously undertaken

- Analysed all 2013 and 2014 AQ calculations where initial outcome was an increase:
 - LSP to LSP
 - SSP to LSP
- Within SSP excluded
- Compared initial increase to final outcome following Xoserve and Shipper investigations
- 2015 AQ Review excluded – final outcomes not yet known



A = Previous live AQ, prior to re-calculation

B = System calculation - revised AQ

C = New Gas Year AQ, following Xoserve and Shipper investigations

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WITHIN LSP INCREASES – UPDATED RESULTS

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Discussion at May PN UNC

- Initial Xoserve analysis presented
- Suggested a single tolerance for all LSP AQ calculations
- Shipper request to mirror the latest proposed meter read tolerances
- Proposed meter read tolerances tested against 2013 and 2014 LSP AQ calculations
- E.g. 73,201 to 732,000 AQ – Outer read tolerance of 550% of AQ/365 – tested an AQ tolerance of 550% increase

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LSP to LSP – Updated AQ Tolerance levels (now based on Outer Read Tolerances)

Lower AQ Band (kWh)	Upper AQ Band (kWh)	Proposed AQ Tolerance - % increase in AQ	Maximum Allowable New AQ -- kWh	Worst case false acceptances per 1000	Worst case number of rejections per 1000
73,201	732,000	550%	4,758,000	8	17
732,001	2,196,000	500%	13,176,000	8	16
2,196,001	29,300,000	450%	161,150,000	9	22
29,300,001	58,600,000	400%	293,000,000	9	37
58,600,001	and above	350%	4.5 x previous AQ	4	31

- Results shown are “worst case” based on 2013 and 2014 AQ Review – data quality should be better after migration to new UKLink – impossible to quantify impact of data cleansing
- Likely outcomes are similar to previous Xoserve suggestion and appear to give good balance between rejections and erroneous acceptances

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SSP TO LSP INCREASES – UPDATED RESULTS

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11 SSP to LSP Increases – Updated Assessment

- Much greater volatility of change amongst SSP to LSP Threshold Crossers
- Previously reviewed 2013 and 2014 Threshold Crossers – based on initial system calculation
- Sub-divided population using proposed Read Tolerance Sub-Bands (PN UNC 10th March)
- All sub-bands show big initial increases, mostly reduced subsequently by Xoserve and Shipper investigations
- Shippers requested that Xoserve revise the analysis, using the latest proposed read tolerances ...

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SSP to LSP – Updated AQ Tolerance levels (now based on Outer Read Tolerances)

Lower AQ Band (kWh)	Upper AQ Band (kWh)	Proposed AQ Tolerance - % increase in AQ	Maximum Allowable New AQ -- kWh	Worst case false acceptances per 1000	Worst case number of rejections per 1000
1	1	7,000,000%	70,001	-	1,000
2	200	25,000%	50,200	-	1,000
201	500	10,000%	50,500	-	1,000
501	1,000	5,000%	51,000	-	1,000
1,001	5,000	2,000%	105,000	13	987
5,001	10,000	500%	60,000	-	1,000
10,001	20,000	400%	100,000	7	989
20,001	73,200	600%	512,400	183	572

Tolerance would not permit any threshold crossers

- Results shown are “worst case” – data quality should be better after migration to new UKLink – impossible to quantify impact of data cleansing

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SSP to LSP Increases – Summary

- Previous analysis found no obvious answer to a tolerance % at any confidence level
 - rejections + false acceptances close to 1,000 for most sub-bands
- Use of proposed outer read tolerances would allow very few threshold crossers
 - Would prevent any AQs between 1 and 1,000 becoming LSP until a post-Nexus start read becomes available
- Is this an acceptable consequence or excessively cautious?
- Reminder of alternative approach on next slide ...

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14 SSP to LSP Increases – Alternative Approach

- Alternative approach suggested at previous meeting – determine a maximum acceptable financial exposure – set tolerance to prevent an AQ increasing above that level
- E.g. agree a maximum average exposure of [£500] of energy allocation for a month = max AQ of [300,000 kWh] based on 2p/kWh
- Set % tolerance levels to prevent any AQ increasing above that level

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Example – SSP to LSP – max exposure £500 per month

Target revised max AQ		300,000		
Estimated max monthly energy allocation		£	500	2 p/kWh
Initial AQ (kWh)	Percentile Threshold	Cut-off level - % increase in AQ	Worst case false acceptances per 1000	Worst case number of rejections per 1000
1	0.31	29,999,900%	139	694
2-200	0.09	149,900%	83	910
201-500	0.18	59,900%	165	824
501-1000	0.21	29,900%	196	793
1001-5000	0.14	5,900%	141	856
5001-10,000	0.17	2,900%	169	829
10,001-20,000	0.17	1,400%	159	835
20,001+	0.34	310%	106	660

- Results shown are “worst case” – data quality should be better after migration to new UKLink – impossible to quantify impact of data cleansing
- Actual monthly exposure depends on weather and time of year

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Summary/ next steps

- Updated analysis to be discussed at a special sub-group meeting
 - Invitees: all May PN UNC attendees
 - Date/time: Friday 5th June from 11.00 till 1.00.
 - Location: t-con – **see next slide for details**
- Sub-group to make recommendation to next PN UNC
- Tolerances to be documented in a UNC Related Doc
- Tolerances will be parameters in the interim solution and can be amended

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- Dial-in details for special t-con: (June 5th at 11am)
 - Participant Access Code – 76451578#
 - The number to ring depends on where in the country you are calling from
 - ring the number closest geographically:
 - Birmingham 0121 210 9185
 - Glasgow 0141 202 0815
 - Leeds 0113 301 0015
 - London 020 7950 1251
 - Manchester 0161 601 3094

The logo for Xserve, featuring the word "Xserve" in a blue, sans-serif font. The "X" is stylized with a blue outline and a white fill.

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