Meter Reading Validation Tolerances

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Meter reading validation tolerances

- Xoserve's reading tolerances table does not currently contain values for the lower AQ bandings as they are TBA work in progress.

- RWE npower presented a complete table of reading tolerances for discussion at the 18th February workgroup.

- We support the concept of introducing more AQ bandings to the read tolerance table.

- In our view, the values in the RWE npower table are not suitable and should not be not be implemented.

- (We appreciate it was just intended as a basis for discussion rather than being the finished article.)

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Analysis of proposed tolerances.

- Take the case where AQ = 10,001 kWh in the table below.
- Nexus would expect consumption between any two reads 91 days apart to be 2,494 kWh. This is the basis of the validation.
- The override tolerance would be 150% of this, 3,741 kWh.
- Realistic consumption over summer (based on the ALP) would be 658 kWh, so the override tolerance seems much too high.
- Realistic winter consumption over winter would be 4,494 kWh, so the override tolerance is too low.
- A "normal" winter consumption would be rejected under these tolerances.
- Also an AQ would not be allowed to change from 1 kWh to >70,000 kWh without the use of the AQ correction process.

AQ bandings and tolerances from npower via Xoserve.		Tolerances, %		Quarterly read expectation (AQ/365*91)		Realistic consumption, based on ALP (Σ 01B ALP is about 24 for Jun, Jul, Aug), so (AQ/365*24)		Realistic consumption, based on ALP (Σ 01B ALP is about 164 for Dec, Jan, Feb), so (AQ/365*164)		Allowed under override		Allowed under market breaker	
Lower AQ Band (kWh)	Upper AQ Band (kWh)	Override	Market Breaker	Lower AQ Band	Upper AQ Band	Lower AQ Band	UpperA Q Band	Lower AQ Band	UpperA Q Band	Lower AQ Band	UpperA Q Band	Lower AQ Band	UpperA Q Band
1	1	2,000,000	7,000,000	1	1	1	1	0	0	20,000	20,000	70,000	70,000
2	200	10,000	25,000	1	50	1	14	1	90	100	5,000	250	12,500
201	500	4,000	10,000	51	125	14	33	90	225	2,040	5,000	5,100	12,500
501	1,000	2,000	5,000	125	250	33	66	225	449	2,500	5,000	6,250	12,500
1,001	5,000	400	2,000	250	1,247	66	329	450	2,247	1,000	4,988	5,000	24,940
5,001	10,000	200	500	1,247	2,494	329	658	2,247	4,493	2,494	4,988	6,235	12,470
10,001	20,000	150	400	2,494	4,987	658	1,316	4,494	8,986	3,741	7,481	9,976	19,948
20,001	73,200	300	600	4,987	18,250	1,316	4,814	8,987	32,890	14,961	54,750	29,922	109,500

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Notes and next steps

- Notes:

- When validating the consumption between reads against a flat profile, the percentage tolerances will tend to let through reads which show overly-large summer consumptions and prevent reads showing reasonable winter consumptions.

- The solution is to widen the tolerances, which introduces more risk to the AQ calculation process.

- Validating consumption between reads using a flat profile is not a good way to determine a reading's suitability for AQ calculation, which will be based on a longer reading history and a seasonal profile.

- Next steps are to continue the analysis, ensuring that:

- Normal consumption patterns do not require an override flag.

- Readings showing high consumptions on sites with AQs of 1 (e.g. commercial sites) are accepted by Xoserve.

- Risk of erroneous AQ calculations is minimised.

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