respect › commitment › teamwork

Project Nexus Workgroup
AQ calculation

Updated 13/04/2015

Background

- Requested at the 10th March meeting (Action 0304) for “Xoserve to provide the methodology for calculating the AQ including rounding, truncating and decimal places”.
- Following slides provide the following examples
  - Reads used to calculate an AQ
  - Methodology for calculating the AQ
  - AQ Calculation following a Class change
  - Consumption used in AQ process following a retrospective update
  - Consumption used in AQ process following a consumption adjustment for a theft of gas

Reads Considered for AQ Calculation

- A read submitted on or after implementation will be validated using the new read validation tolerances
- Where an actual read is accepted or an estimated transfer read is loaded on or after implementation date this read will be used to trigger the AQ process
- Reads accepted from and including the 11th calendar day of the previous month and up to and including the 10th calendar day of the current month will be considered
- For Class 1 and 2, AQ process will only consider reads that are Closed Out, the latest Closed Out actual or estimated transfer read on the 10th calendar day
- For Class 3 and 4, AQ process will consider the latest valid actual read received or estimated transfer read on the 10th calendar day

AQ Period

- The target date for the AQ process to obtain a read to calculate the AQ is 365 days
- If a read is not available;
  - Identify if there is a read for a more recent date unto a minimum of 9 months, if no read available
  - Identify if there is a read for an older date upto a maximum of 36 months
- The AQ process will not calculate an AQ where;
  - the consumption period is less than 9 months (read date is less than 9 months)
  - the consumption period is greater than 36 months (read date is greater than 36 months)

AQ Period cont.

- Where the Supply Meter Point is or has been isolated, the AQ process will not consider the period the meter was isolated
  - An AQ will not be calculated if the period is less than 9 months after deducting the isolation period
- For a New Meter Point an AQ will not be calculated until 9 months consumption history after the registration date is available
- Where an AQ Correction has taken place an AQ will not be calculated until 9 months consumption history since the AQ Correction is available

AQ calculation following a Change in Class

- Where, following an AQ calculation month a Supply Meter Point changes Class and, as a result the method of calculating the AQ changes, the AQ will not be revised until the next AQ calculation if a valid read is recorded
- Where there is a Class change from 1 or 2 to 3 or 4 the AQ will be calculated using the AQ calculation methodology for a Class 3 or 4
- Where there is a Class change from 3 or 4 to 1 or 2 the AQ will be calculated using the AQ calculation methodology for a Class 3 or 4 until 365 days daily consumption history is available as Class 1 or 2

Calculate AQ Class 1 and 2

- For a Class 1 and 2;
  - AQ is determined by the sum of the Supply Meter Point Daily Quantities for all days in the period, to include both actual & estimated energy.
  - The latest energy will always be considered including energy calculated from replacement reads, following a retrospective update or a consumption adjustment

Calculate AQ Class 3 and 4

- The AQ for a Class 3 or 4 Supply Meter Point will be determined as:
  - AQ = AQMQ x (365/Sum of (ALPt x (1+ DAFt x WCFt)))
    - AQMQ is the AQ Metered Quantity in the AQ Metered Period
    - For each day in the AQ Metered Period
    - ALPt is the Annual Load Profile for the applicable EUC
    - DAFt is the value is the Daily Adjustment Factor for the applicable EUC
    - WCFt is the value of the Weather Correction Factor for the applicable EUC
- Where applicable, EUC will be revised according to the new AQ
- The latest energy will always be considered when calculating the AQ including energy calculated from replacement reads, following a retrospective update or a consumption adjustment

AQ Calculation for a New Supply Meter Point

- For a new Supply Meter Point, the AQ determined at MPRN registration will continue for a minimum of 9 months after the registration date until a valid read is accepted.
- The AQ will be calculated using the first valid read with a read date not less than 9 months after the supply point registration date and the opening read at registration
- The following formula is used for a new Supply Meter Point:
  - Class 1 & 2: AQ = AQ x 365 / D
  - Class 3 & 4: AQ = AQ / D x 365

  (D = the number of days in the AQ metered period)

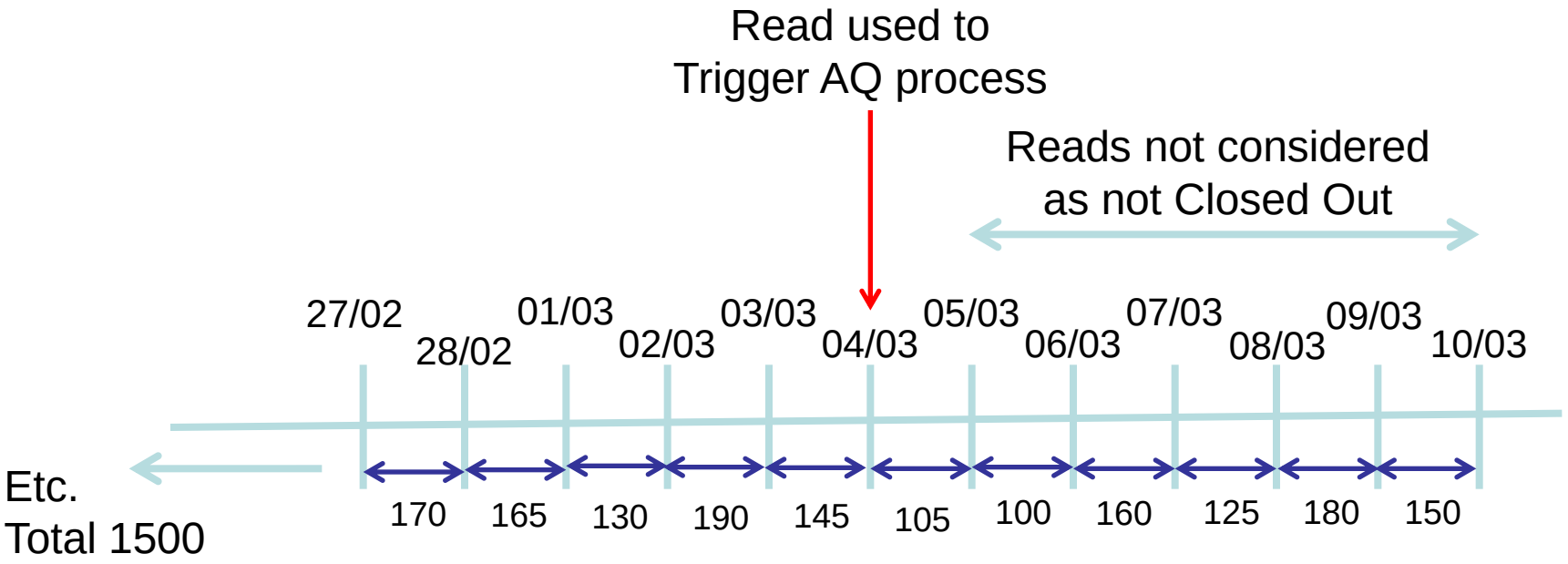
Deriving Consumption & Energy

- The following will be applied to derive the consumption;
  - Calculate the latest consumption between reads
  - Calculate the energy from the consumption
    - Average CV for Class 3 & 4
    - Daily CV for Class 1 & 2
- Total the energy (quantity) for the period.
  - Where the AQ Metered Period is less than 365
    - Quantity / number of days in the period x 365
  - Where the AQ Metered Period is greater than 365
    - Quantity / number of days in the period x 365

Calculate AQ

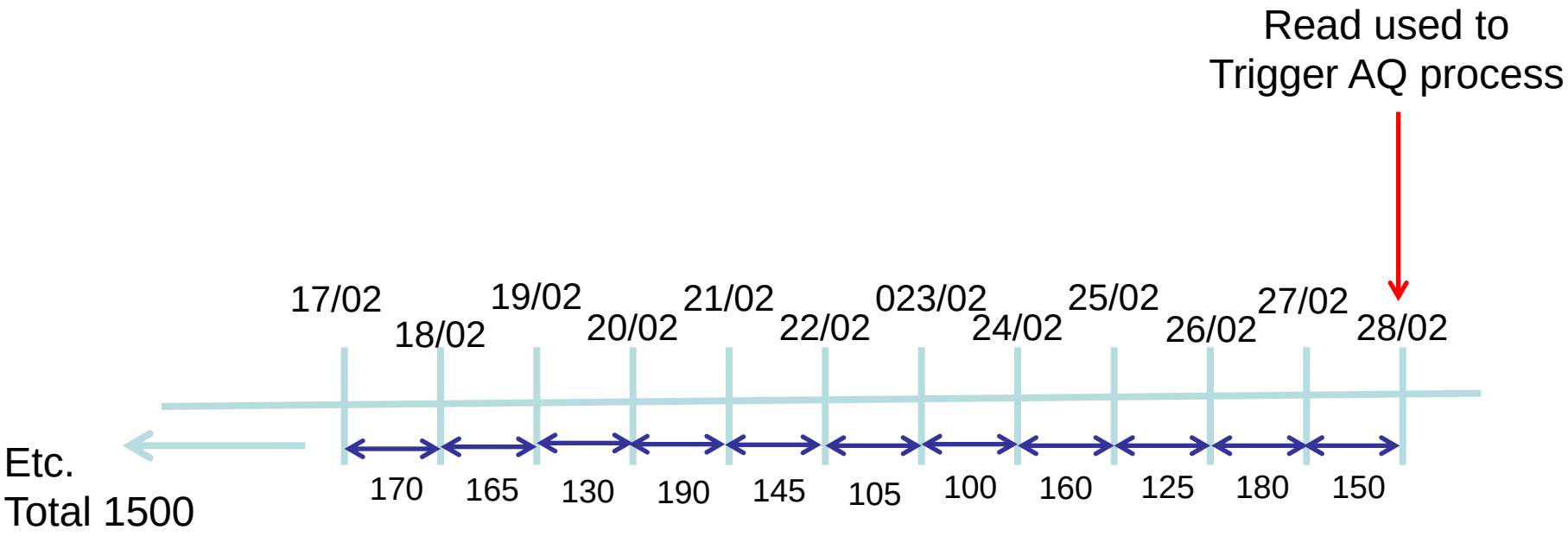
- Once the energy is calculated the value is rounded up or down to provide an AQ value
- For example
  - 108988.35 kWh during calculation = AQ of 108988
  - 108988.75 kWh during calculation = AQ of 108989

Derive Consumption Class 1 & 2



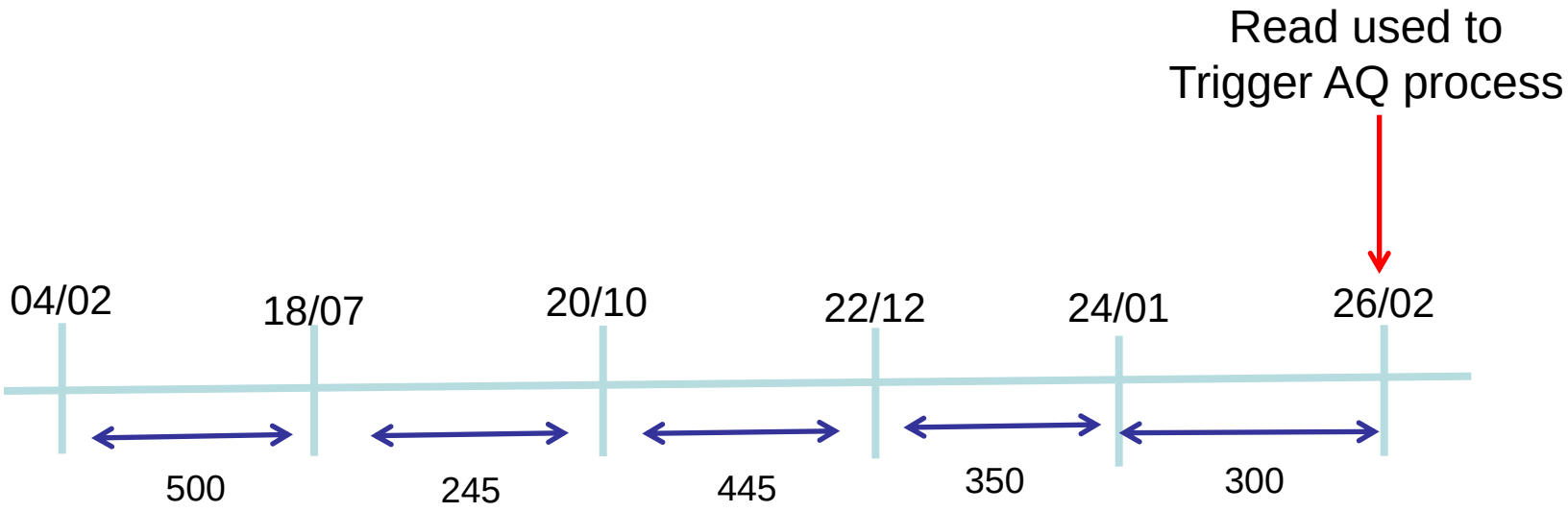
- On the 10th Calendar day the Closed Out read will be used to trigger AQ process
- Total daily consumptions used to calculate energy
  - This can be from actual reads, estimation reads or a consumption adjustment

Derive Consumption Class 3



- On the 10th Calendar day the latest valid read received will be used to trigger AQ process
- Consumption from the reads in the period will be used to calculate the total consumption
- AQ calculated using the AQ calculation methodology

Derive Consumption Class 4

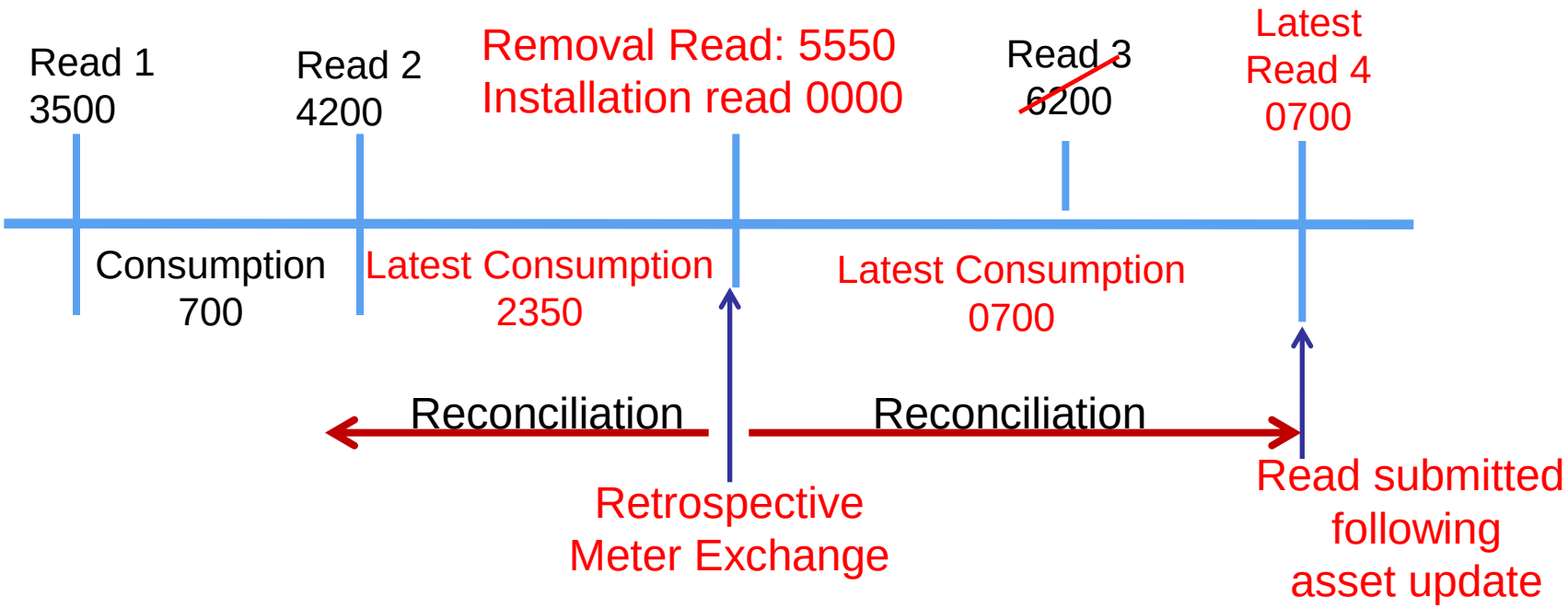


- On the 10th Calendar day the latest valid read received will be used to trigger AQ process
- Consumption from the reads in the period will be used to calculate the total consumption
- AQ calculated using the AQ calculation methodology

Notifications as a Result of AQ process

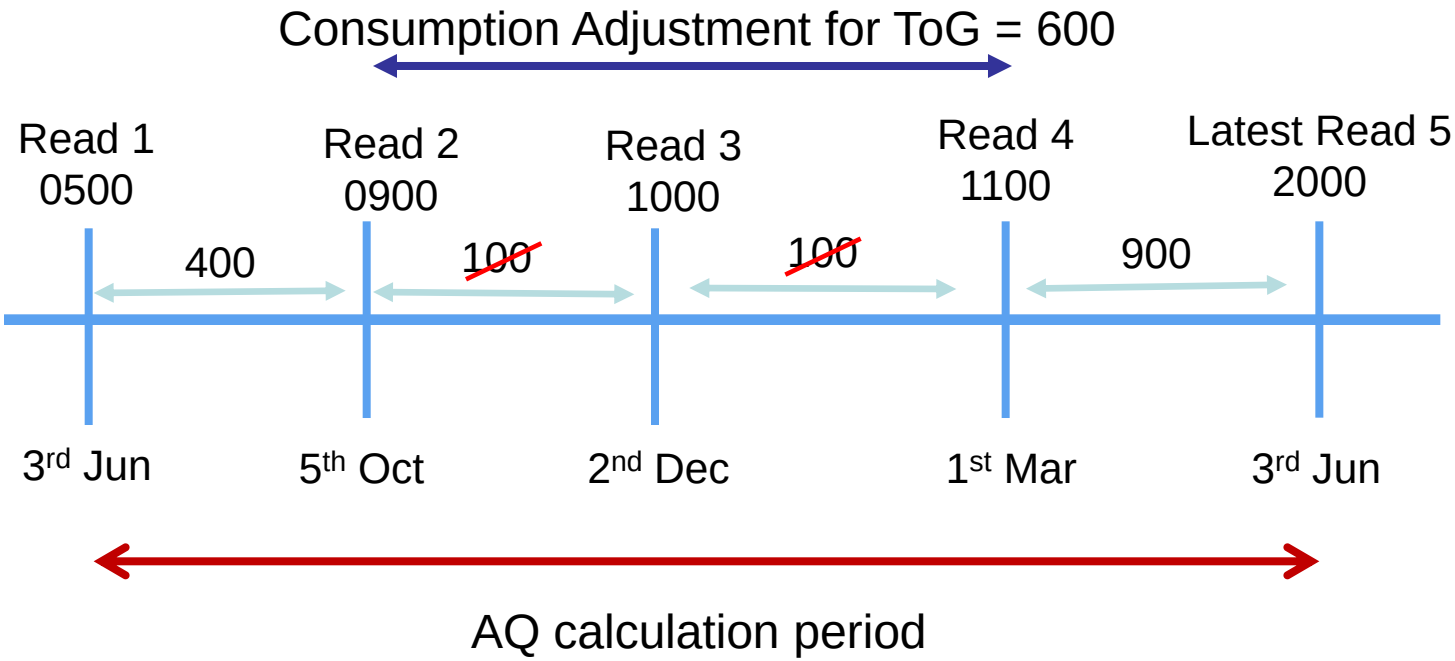
- Notifications will be issued to the Registered Shipper following AQ calculation where;
  - Supply Meter Point is not Class 1 but qualifies as Class 1 due to the AQ
  - The Supply Meter Point should have a Meter Read Frequency as Monthly but is currently Annual (Class 4 only)
  - Emergency Contact details must be supplied for the Supply Meter Point
  - Site specific Correction Factor must be supplied for the Supply Meter Point
  - Priority Consumer status is no longer eligible
  - DN Interruption is no longer eligible

AQ Calculation following a Retrospective Adjustment



- Original consumption pre retrospective adjustment = 2700
- Latest consumption following retrospective asset update = 3750
- Upto the retro update the consumption of 2700 would have been used for AQ process
- Following retrospective update the consumption of 3750 will be used for subsequent AQ process, where applicable

AQ Calculation following a Consumption Adjustment



- Original consumption of 200 between 5th October and 1st March would have been used for AQ process
- Following consumption adjustment, 600 will be the latest consumption between 5th October and 1st March used for subsequent AQ process, where applicable