Seasonal Normal Review 2020

Update

Seasonal Normal Review 2020 – Exec Summary

- From 1st October 2020 a new Seasonal Normal basis will take effect, so what does this mean?
  - The Composite Weather Variable (CWV) formula will change (to include Solar Radiation)
  - The Seasonal Normal Composite Weather Variable (SNCWV) values will change
  - Class 3 and 4 NDM Nominations and Allocations will be using CWVs based on the new formula and the revised SNCWV values
  - ALL Rolling AQs / SOQs for Class 3 and 4 Supply Meter Points will reflect the new view of Seasonal Normal weather, either by…
    - Calculating an AQ using reads submitted during September 2020 which will refer to revised Weather Adjusted Annual Load Profiles (WAALPs) or
    - Applying a Seasonal Normal Ratio to existing AQ where an AQ was not calculated during September 2020
  - Note: Billing AQs / SOQs will remain unchanged and will only reflect the new Seasonal Normal basis from April 2021 (based on December 2020 snapshot)

Background – CWV and SNCWV

- Why do these values matter and why review them ?

- The CWV and SNCWV are the key building blocks used in producing EUC Demand Models and Gas Demand Profiles, namely: Annual Load Profiles (ALPs), Daily Adjustment Factors (DAFs) and Peak Load Factors (PLFs) which are subsequently used in….

  - the calculation of daily Class 3 and 4 NDM Nominations and Allocation
  - the calculation of a Class 3 and 4 Supply Meter Point's Annual Quantity (AQ)
  - the calculation of a Class 3 and 4 Supply Meter Point's Peak Offtake Quantity (SOQ)
  - any processes which perform Class 3 and 4 NDM Read Estimation

- It is therefore important that the CWV and SNCWV are reviewed to ensure they remain reflective of the latest consumption behaviours/levels and the latest weather experienced

Background – Who reviews them ?

- Section H of UNC contains all of the activities which relate to Demand Estimation and Forecasting processes

- Demand Estimation Sub Committee (DESC) alongside the Demand Estimation team at Xoserve carry out the functions referred to in this Section

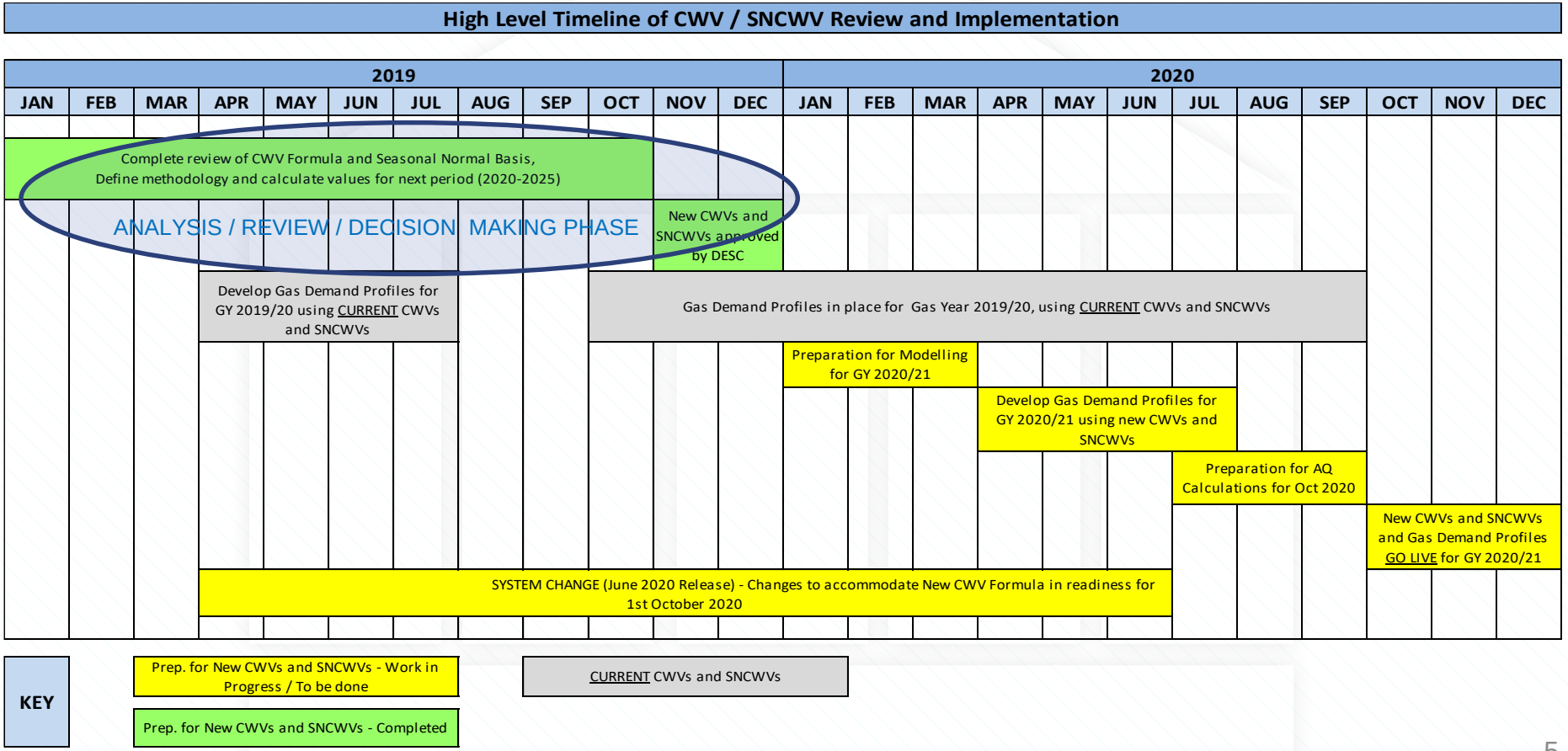
- Included in these functions is the requirement to:

  - 1) review the Composite Weather Variable (CWV) (H 1.4.3) and
  - 2) review the Seasonal Normal equivalent referred to as the SNCWV (H 1.5.3)

- The last review of the CWV formula and Seasonal Normal basis was completed by DESC in 2014. The revised values took effect from 1st October 2015 and remain in place today

- For stability across the many industry processes impacted, DESC review the CWV and SNCWV, as a minimum, every 5 years. The current basis ‘expires’ on 30th September 2020

Seasonal Normal Review – Timeline (part 1)



DESC's Review of CWV and SNCWV during 2019

- The criteria used for assessing the revised CWV formula was about improving the relationship to NDM demand which in turn should improve the accuracy of demand modelling (which is DESC's remit). In turn, this will help to drive more accurate allocation which, all things being equal, will mean reduced reconciliation levels

- The criteria for the revised SNCWV was about ensuring that the values derived reflect a sensible 'benchmark' for Seasonal Normal weather (hence use of Met Office provided Climate Change modelled output)

- Following a number of planned milestones during 2019 DESC have now concluded their review, as a result we now have:

  - A revised CWV formula (including a new 'Solar Term*') and
  - A new set of SNCWV values (including an updated view of Climate Change adjusted temperatures)

** A measure of sunlight which was proven to be an additional influence on gas demand (alongside temperature and wind speed)*

Further Information on the Analysis / Review Phase

- For audience who just need the principles / high level understanding:
  - News Article on ‘CWV Formula Review and Decision’ here (October 2019)
  - News Article on ‘SNCWV Formula and Decision’ here (December 2019)
  - News Article on ‘How the Seasonal Normal Review may impact you’ here (May 2020)
- For audience who require more of the detail:
  - Revised CWV Formula and optimised parameters presented at DESC can be found here
  - Review of the existing SNCWV presented at DESC can be found here
  - Revised SNCWV values and supporting analysis presented at DESC can be found here - Part 1 and Part 2

Data available as at March 2020

- The following documents have been published on the secure area of Xoserve's website – 'UKLink Docs' under the following folder:

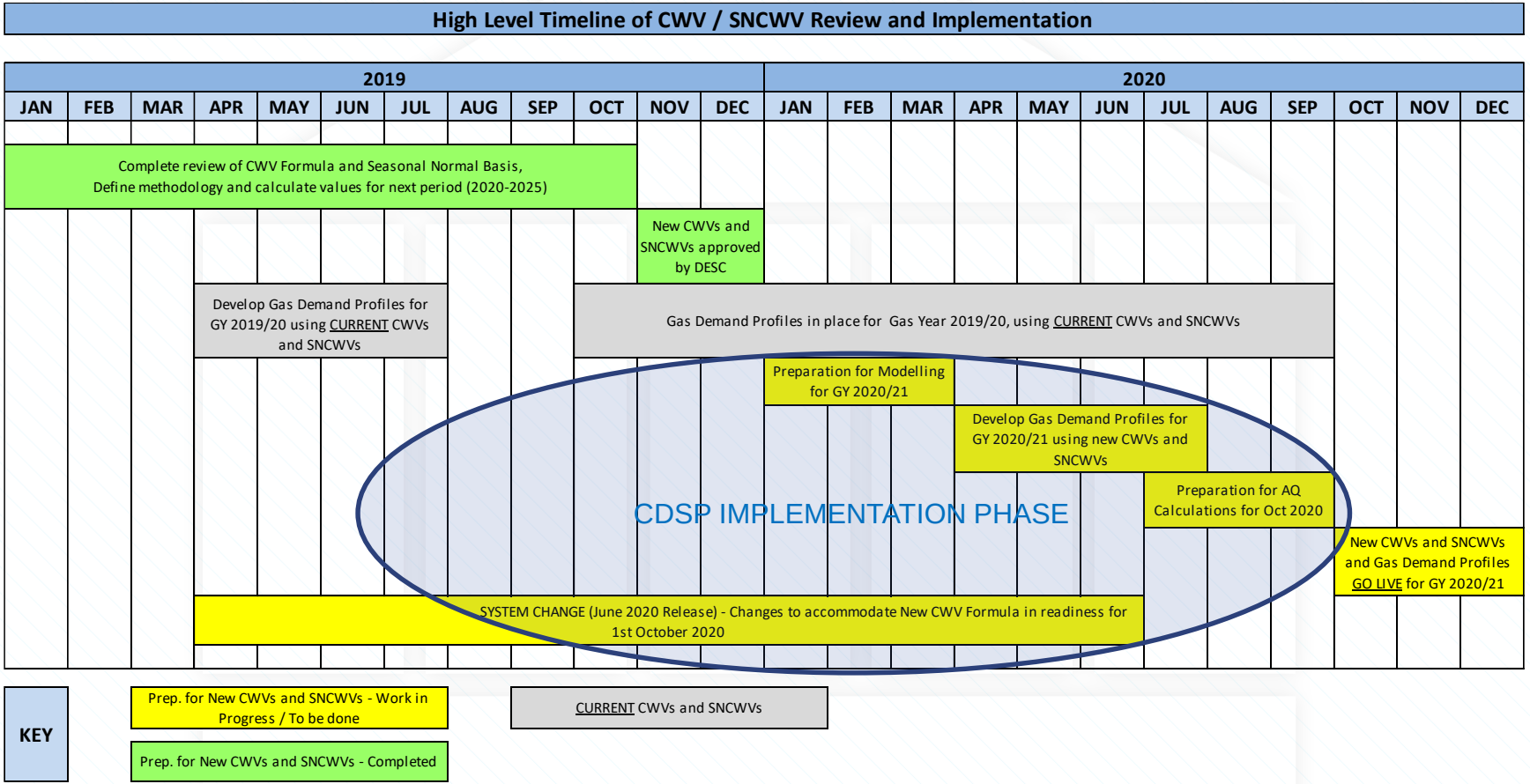
  18.NDM Profiling and Capacity Estimation Algorithms > 2020-21 Gas Year > 5. Seasonal Normal 2020

  - Revised Pseudo Seasonal Normal Effective Temperature (Pseudo-SNET) for GY 2020/21 **(SN20_SNET20.txt)**
  - Revised Pseudo Seasonal Normal Effective Solar (Pseudo-SNES) for GY 2020/21 **(SN20_SNES20.txt)**
  - Revised Seasonal Normal Compositive Weather Variable (SNCWV) for GY 2020/21 **(SN20_SNCWV20.txt)**
  - Recalculated CWV History spanning Gas Years 1960/61 to 2018/19 inclusive **(SN20_CWV6019.txt)**
  - Summary Document of Analysis completed by DESC during 2019 **(Seasonal Normal Review 2020.pdf)**

Why do AQs and SOQs need to change ?

- An AQ represents the ‘normal’ annual consumption for a Supply Meter Point which has been based on a pair of meter readings. There are 2 components to the AQ calculation:
  - Part 1 is to calculate the ACTUAL consumption between Read x and Read y
  - Part 2 is to ‘weather correct’ the ACTUAL consumption in order to represent an annual NORMAL consumption
- The ‘weather correction’ element is referred to as the Weather Adjusted Annual Load Profile (WAALP). This utilises the ALP, DAF, SNCWV and CWV, all of which will be impacted by the outcomes from the Seasonal Normal Review
- Where it has not been possible to calculate an AQ in time for 1st October 2020 a Seasonal Normal ratio is required to adjust the current AQ to ensure all on the same basis
- SOQs, which represent the expected peak day consumption of a Supply Meter Point, are a function of the AQ and the Peak Load Factor (PLF) and so naturally will also change. The PLF can change every year depending on the Demand Model characteristics but this year will also include changes as a result of the Seasonal Normal Review

Seasonal Normal Review – Timeline (part 2)



Seasonal Normal Review 2020 – Implementation

- Following the completion of DESC's analysis, review and decision making phase it is now necessary to 'implement' these new values

- Although all values become effective from gas day 1st October 2020 there are processes such as Demand Estimation and AQ calculation that require work ahead of this date

- It is appreciated that the industry will want to understand the likely impacts to AQ and SOQ levels as a result of these changes asap, as a result during Q1 of 2020 the existing EUC Demand Models (i.e. derived in 2019) were re-stated using the new weather values (CWVs / SNCWVs) in order to provide an INDICATIVE view

  Results were shared with DESC here. The ACTUAL results will be known later in the year

- The next few slides focus in on the work to be done and information that will be provided ahead of 1st October 2020

Seasonal Normal Review 2020 – Implementation – Q2

- Q2 2020 – April to June
  - The BAU activity of EUC Demand Modelling will take place during this quarter BUT using the new CWV and SNCWV values
  - Draft Gas Demand Profiles (ALPs, DAFs and PLFs) for Gas Year 2020/21 to be published in early June for review by DESC (secure area on UK Link Docs)
  - CWVs calculated off-line using new formula for Gas Year 2019/20 will be published in April, May and June (secure area on UK Link Docs)
  - Major June release will include system changes to accommodate changes in CWV formula i.e. inclusion of Solar Radiation – note changes will effectively lie dormant until 1st October 2020

Seasonal Normal Review 2020 – Implementation – Q3

- Q3 of 2020 - July to September
  - CWVs calculated off-line using new formula for Gas Year 2019/20 will be published in July, August and September (secure area on UK Link Docs)
  - To support AQ calculations in September 2020:
    - For all EUCs, revised historical ALPs and DAFs* based on 2020 EUC Demand Models to be calculated and published around early August
    - Seasonal Normal Ratios* to be calculated and reviewed by DESC in early July and likely published early August
    - Weather Correction Factors (WCFs) to be published for historical years early August

    ** Timings depend on successful completion of Industry consultation on this years EUC Demand Modelling processes which is normally mid to late July*
  - Note: The Seasonal Normal Ratio for each EUC will be applied to those Supply Meter Points which fail to calculate in the September 2020 AQ calculation run. This ensures all Live Supply Meter Points effective from 1st October 2020 will be on the same Seasonal Normal weather basis

Further Communication for remainder of the year

- Attendance at various Industry Forums to promote awareness and explain impacts

- High Level Overview:
  - At least one more ‘News Article’ to follow this year

- Detailed Material discussed at DESC:
  - Further updates will be provided at every DESC meeting this year (April, May, July) and there will a Key Messages issued by Joint Office after each meeting

- Data Publication on UK Link Docs:
  - A number of additional files will be provided in the folder 18.NDM Profiling and Capacity Estimation Algorithms > 2020-21 Gas Year > 5. Seasonal Normal 2020

- Any questions on the Seasonal Normal Review 2020 process can be directed to the Demand Estimation team at Xoserve

  Email: Xoserve.demand.estimation@xoserve.com