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DESC Technical Work group

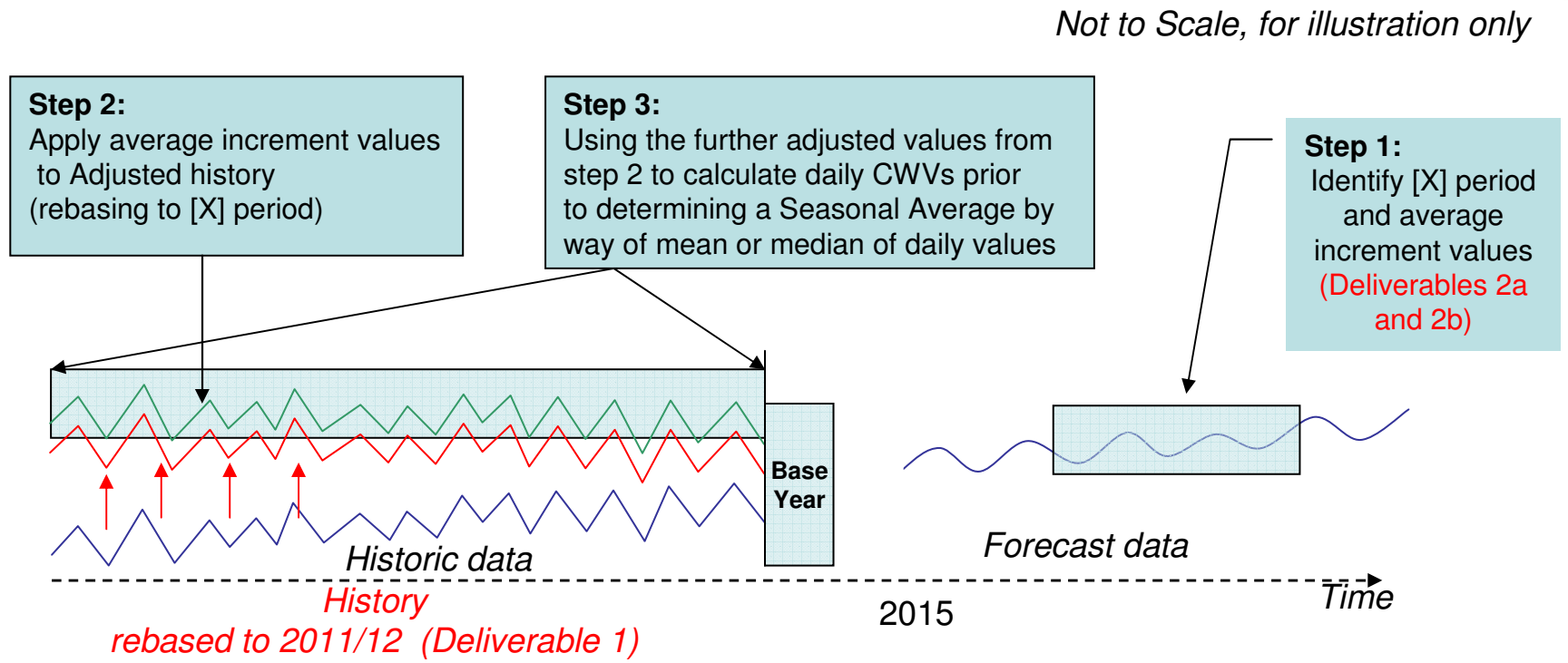
Seasonal Normal Review Update:

22 September 2014

Background

- Current Seasonal Normal Basis (SNCWV) introduced in October 2010
  - Incorporated some outputs from Met Office EP2 Project – used estimated climate change increments
- UNC now states SNCWV should be based on output derived from 'Climate Change Methodology' (CCM)
- Requested outputs of CCM Project *(updated)*
  - 50+ years hourly historic data adjusted for estimated impacts of climate change v base year 2011/12
  - Predicted hourly average values for Gas Years 2012 to 2025
  - Predicted hourly increments – difference between base year and forecast year
- Stakeholder meeting on Nov 25th agreed how the outputs will be used in defining SNCWV for G.Yr 2015 onwards

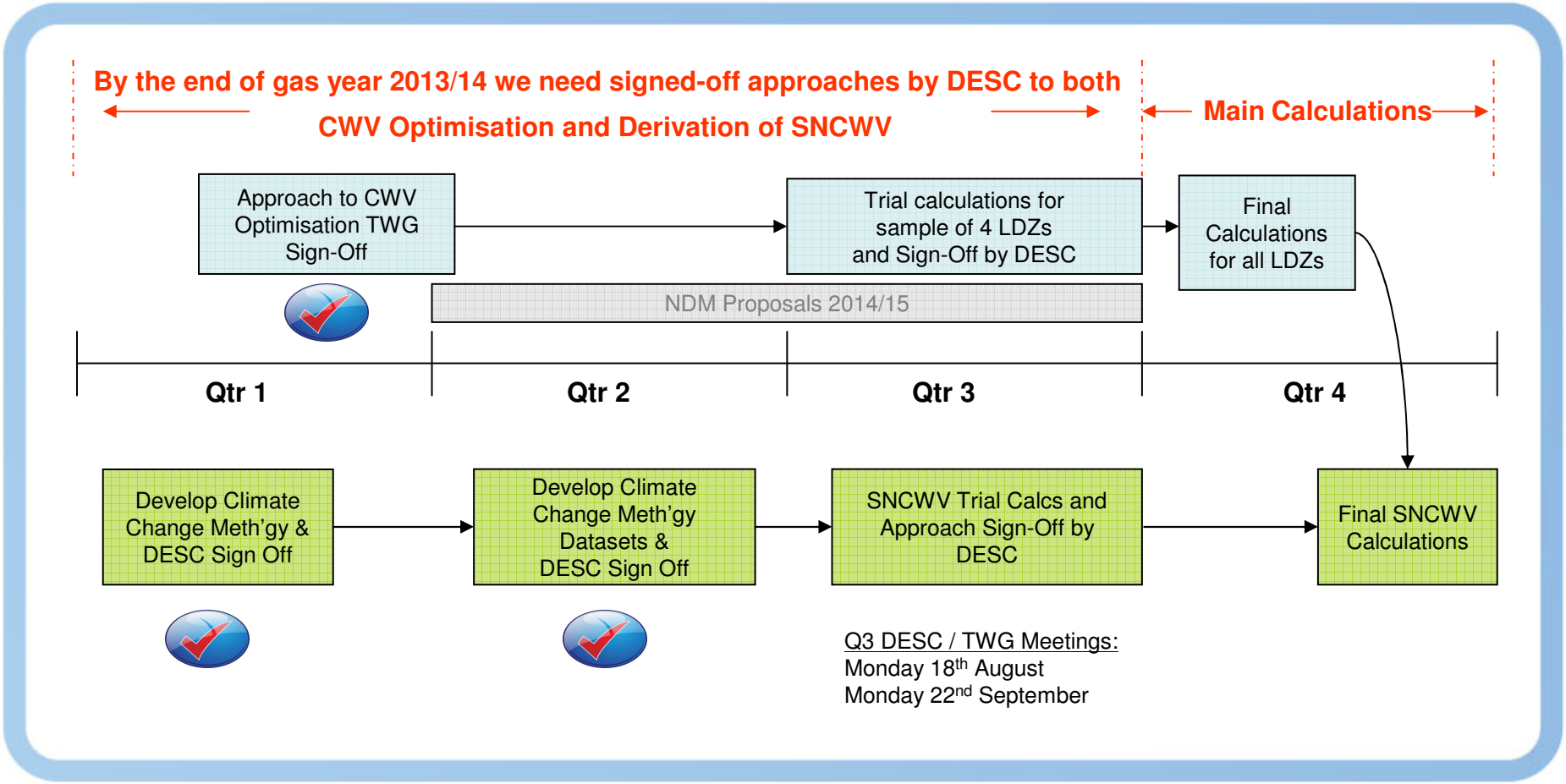
Use of Project Deliverables



Deliverables:

1) *An adjusted view of historic hourly weather datasets (derived from WSSM) reflecting estimated impacts of climate change based on results from base year 2011/12*
2) *a) Predicted hourly climatological average values for period 1st October 2012 to 30th September 2025 based on predicted impact of climate change trends for future period*
   b) Predicted hourly increments values – difference between predicted hourly climatological average values (i.e. from 2a) and base year (2011/12) averages

Seasonal Normal Review & CWV Optimisation Timeline



KEY: CWV Optimisation | Derivation of SNCWV

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Seasonal Normal Review Update

- Recap on last TWG meeting – 18th August:
  - TWG agreed to use 5 years for the average increment period (2015/16 to 2019/20) that needs to be applied to the adjusted history
  - TWG were satisfied with Xoserve's interpretation of the high level agreement on how the CCM data should be used to derive the SNCWV
  - Xoserve agreed to produce a draft approach document for deriving the SNCWV
  - TWG reviewed the draft SNCWV profile for NE (unsmoothed) and preferred the mean version over the median
  - Xoserve agreed to produce draft SNCWV profiles for the other trial LDZs, namely SC, WM and SW

Seasonal Normal Review – Q3 Objectives

- Proposed plan for developing Seasonal Normal approach document
- Follow agreed approach for using CCM output:
  - Identify [x] period and average increment values ✓ **Done**
  - Performed for 4 Trial LDZs ✓ **Done**
  - Apply increments to adjusted history ✓ **Done**
  - Using adjusted history with increments applied calculate a set of daily CWVs for period 1st October 1960 to 30th September 2012 ✓ **Done**
    - Q. SNCWV will be calculated using history no later than 30/09/2012?
      A: DESC agreed this was correct at 30th July 2014 meeting ✓
  - During Q3 this will be done using EXISTING parameters ✓ **Done**
  - Select the Mean or Median for determining daily CWV values ✓ **Done**
- Review shape and confirm level of smoothing (if required) - **Outstanding**
- Document the approach to deriving the new Seasonal Normal basis and obtain DESC sign-off – **Outstanding**

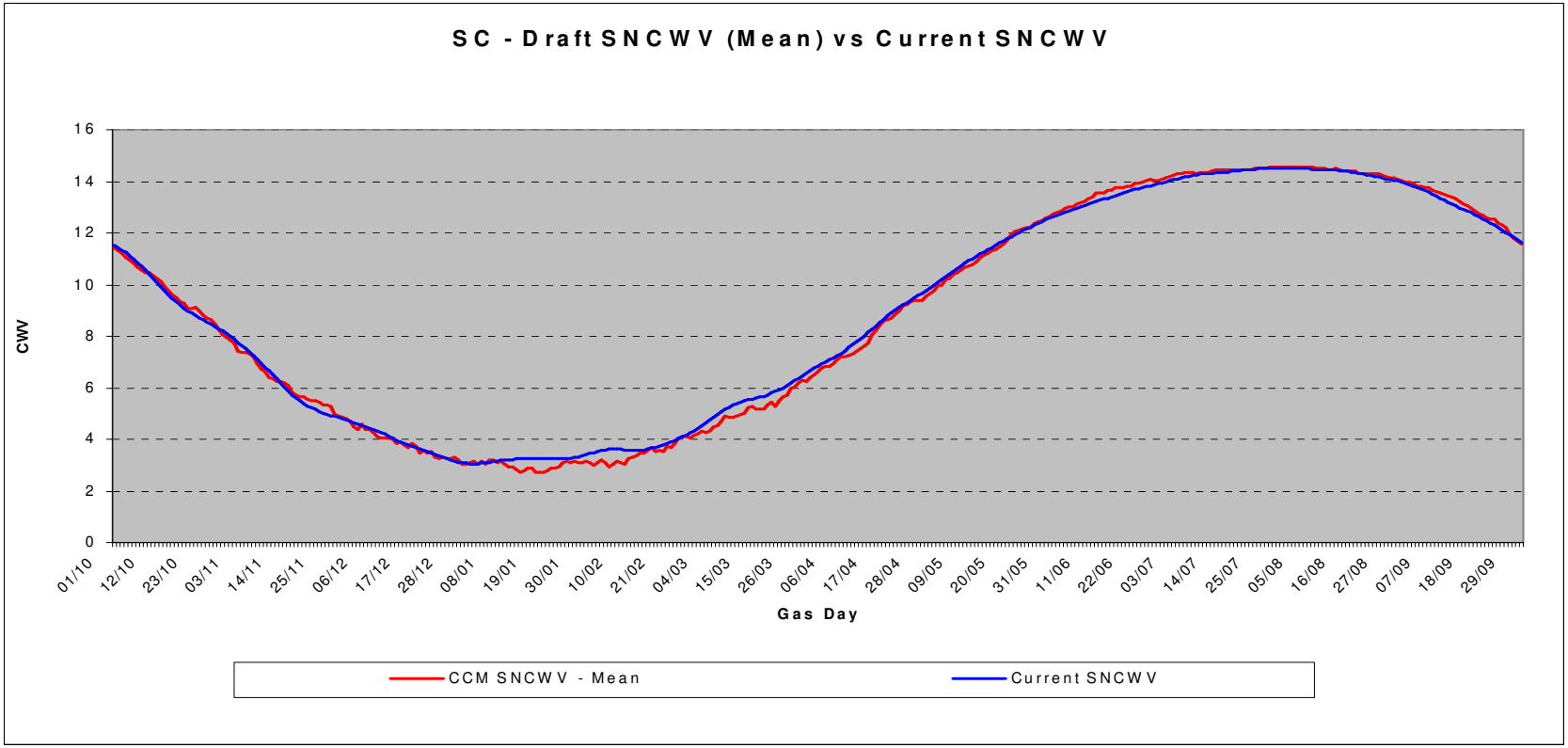
SN Methodology Document

- Xoserve have drafted an approach document for how the Seasonal Normal Composite Weather Variable (SNCWV) shall be calculated using the Climate Change Methodology (CCM) output
- The high level process diagram produced by the stakeholder group forms the foundation of the approach
- The approach ensures all parties are able to replicate the calculations using data available to all industry parties
- Note: The document is 90% complete as it does not include how any smoothing shall be applied to the final product
- The first draft of this document has been published on the JO website and is called: Draft_Approach_to_Seasonal Normal Basis_2015_v0.1.doc

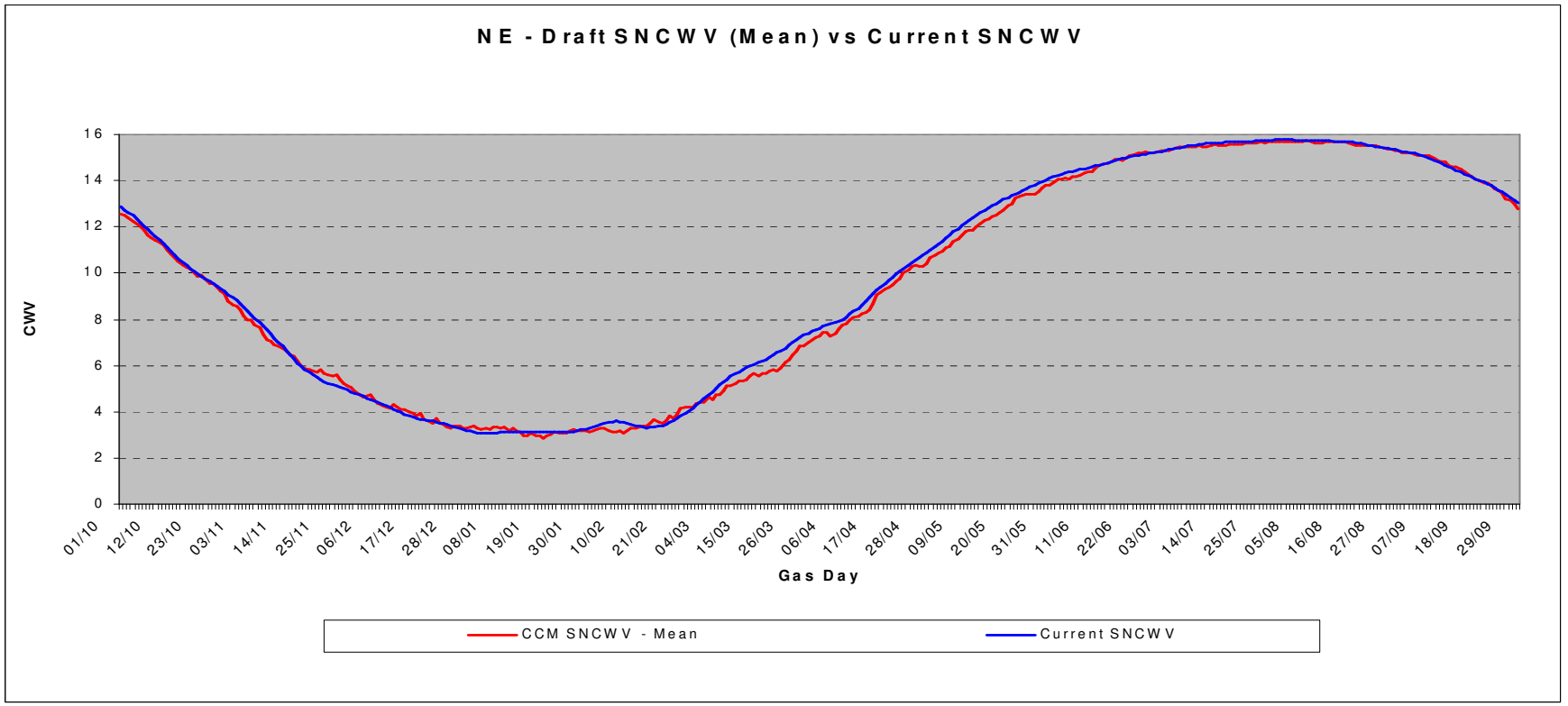
Draft SNCWV calculations

- Following the draft approach document Xoserve have calculated the SNCWV for the 4 trial LDZs – SC, NE, WM and SW
- As TWG discounted the median as an approach at the last meeting, only the mean value has been displayed
- There has been no smoothing applied to the final value at this stage – welcome thoughts from TWG on smoothing

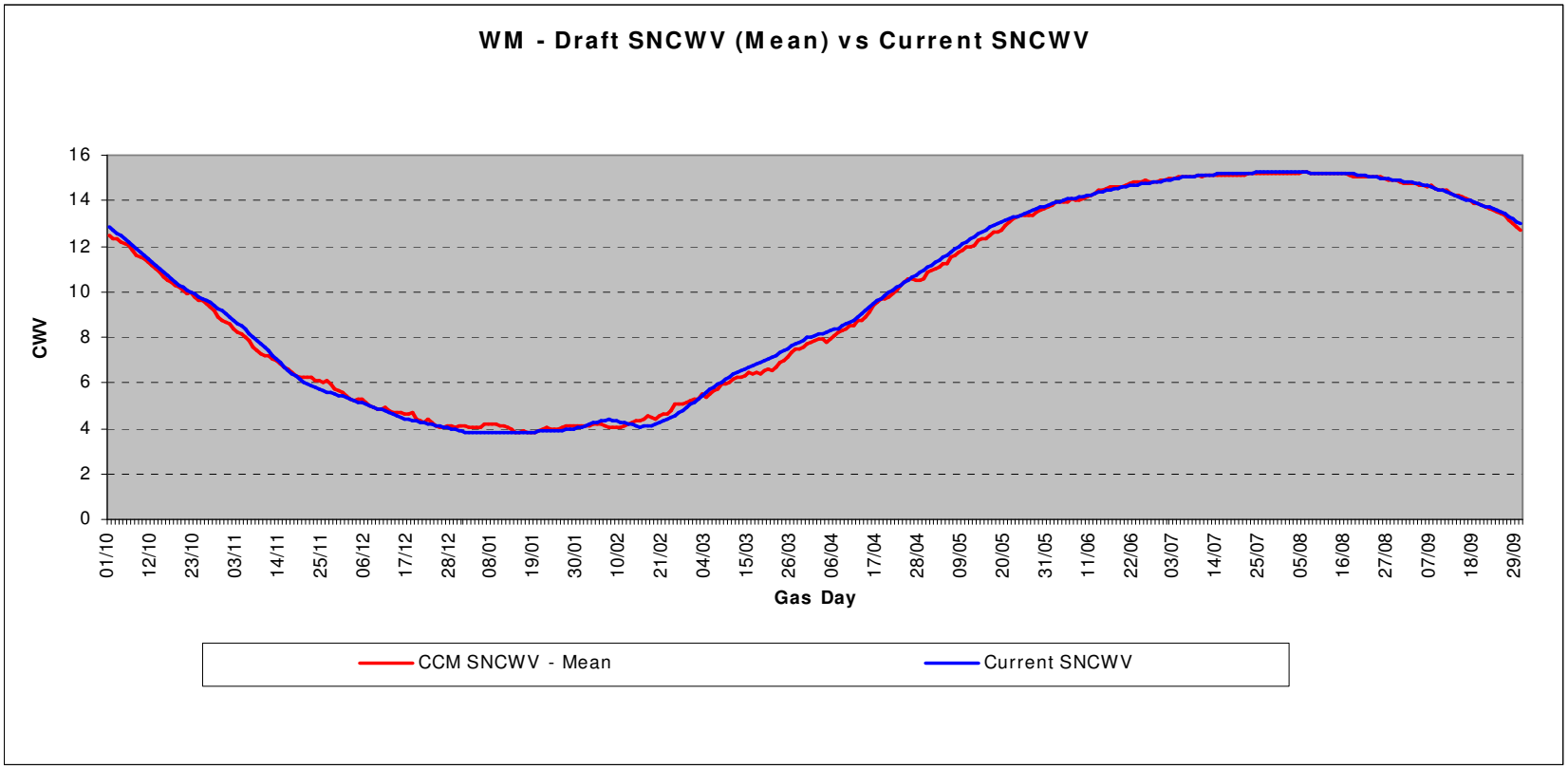
Draft SNCWV for SC – Using MEAN of daily CWVs



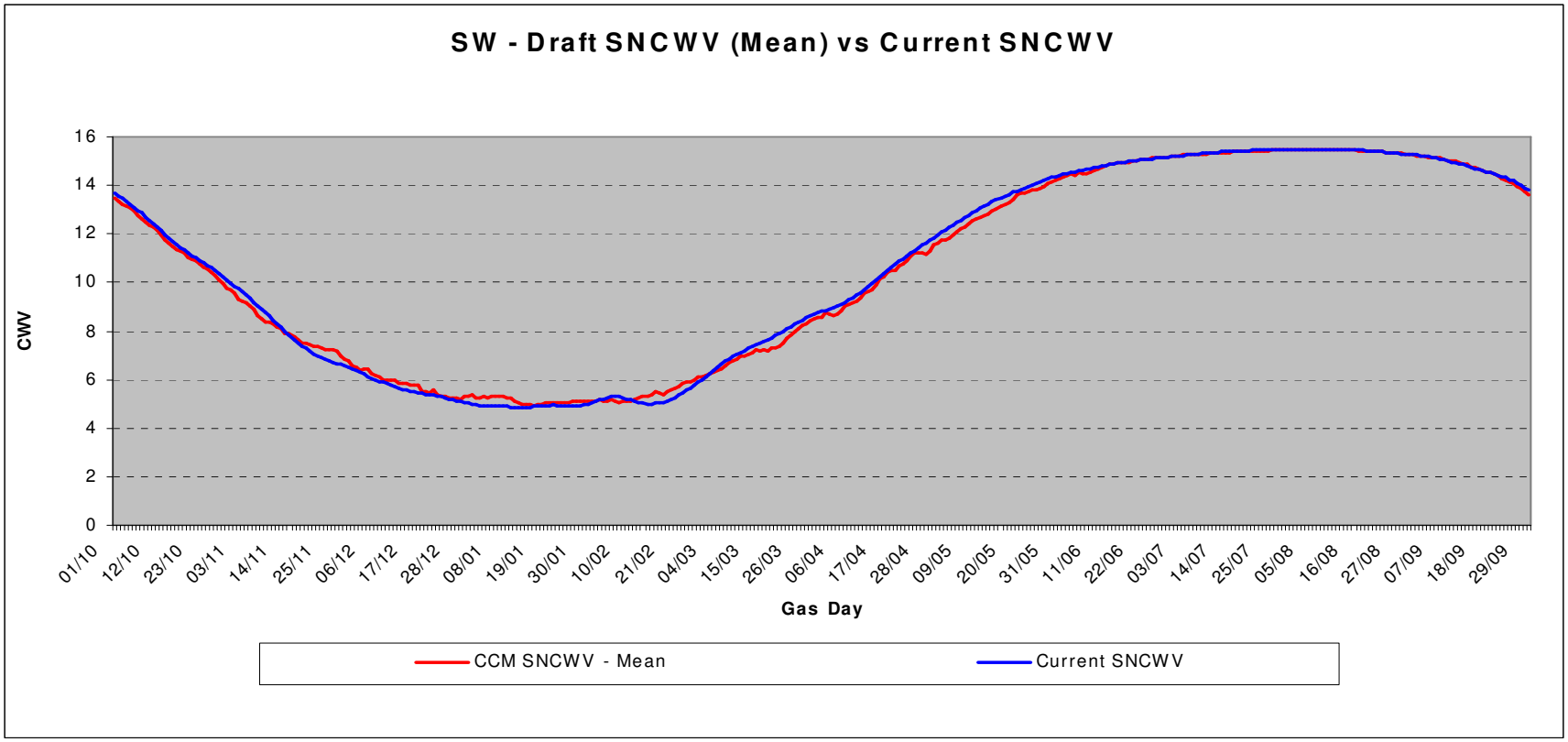
Draft SNCWV for NE – Using MEAN of daily CWVs



Draft SNCWV for WM – Using MEAN of daily CWVs



Draft SNCWV for SW – Using MEAN of daily CWVs



Options & Next Steps

- Xoserve welcome feedback on draft approach document and profiles generated so far for Trial LDZs
- TWG comments also welcome on smoothing techniques / options available for final SNCWV profile