



**1 in 20 Peak CWVs**

**DESC: 7<sup>th</sup> October 2019**

# Estimated Change in 1 in 20 Peak Demand (1 of 3)

- When optimising the new CWV parameters we look to assess the likely impact of the changes to peak day demand
- In order to do this we need to re-state the CWVs using the new parameters for our full history (back to 1960)
- As Solar is part of the formula now, we need to include the solar observations, for many of the stations the history is patchy and requires an agreed infill methodology before we can derive the CWV history for each LDZ
- Heathrow is the one station where the history is mostly complete, we have filled in the gaps using our initial view of a infill methodology (to be shared and agreed shortly)

# Estimated Change in 1 in 20 Peak Demand (2 of 3)

- We have calculated a set of CWVs for EA, NT and SE (the LDZs that use the Heathrow stations) using the proposed CWV parameters for the period 1<sup>st</sup> October 1960 to 30<sup>th</sup> September 2018
- From this history a 1 in 20 peak CWV has been calculated, using the same approach as described in Section 11 of NDM Algorithms Booklet
- The draft values of the 1 in 20 peak CWV has been 'inserted' into the fitted line formula ( $y=mx + c$ ) for each of the 8 years used in the CWV optimisation analysis
- The calculated peak demand from each of the 8 years was compared to the current basis in order to form a view of the possible impacts to peak day demand using the new formula and parameters

# Estimated Change in 1 in 20 Peak Demand (3 of 3)

LDZ	1 in 20 CWV (Current)	Estimated 1 in 20 CWV (New)	Estimated % change in Peak Day Demand
EA	-4.94	-4.66	+ 0.50%
NT	-6.08	-5.63	- 3.59%
SE	-6.44	-4.70	- 2.76%

- We can provide figures for the remaining LDZs once the infill methodology is agreed for Solar Radiation, hopefully the figures above provide reassurance
- Note: In 2014, the change in weather history was a more significant change, this time we are using the existing weather history
- Caveats on the above figures:
  - Infill methodology not approved
  - The true impact to peak demand will be known once all of the models are re-stated on the new basis, the new SNCWV is known and the full peak day simulations are run (expected in 2020)