XOserve

UNC Workgroup 0754R

Action 0301

April 2022

Action 0301 - task

 Correla (JL) to provide an indication of how the data set looks and clarify the difference between using the Mean and the Median figure.

 The following slides discuss the calculation and the use of the Mean figure

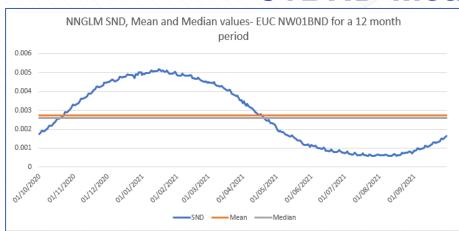


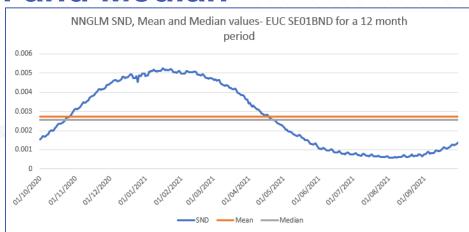
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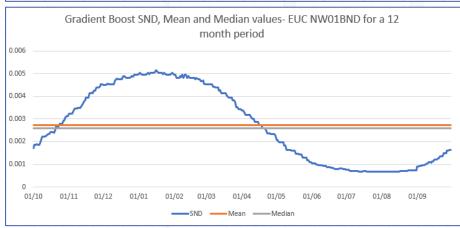
- The calculation that was presented is the 'Live' formula for calculating average Seasonal Normal Demand (effectively the daily SND).
- The next slides show the Mean and Median calculated from the Neural Networks (NNGLM) and Gradient Boosted Models
- The charts show the values for each of the test EUCs.

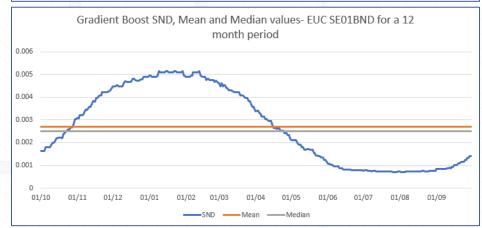


01BND Mean and Median

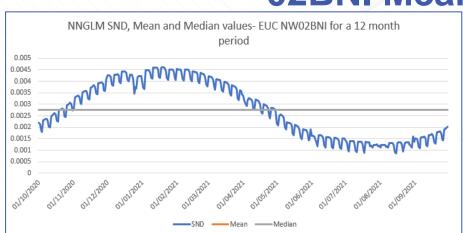


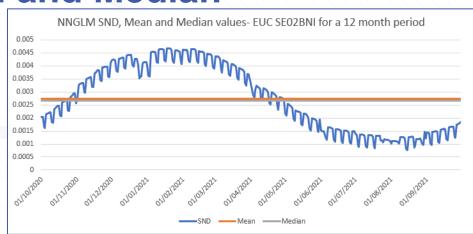


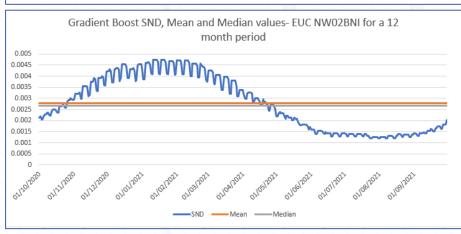


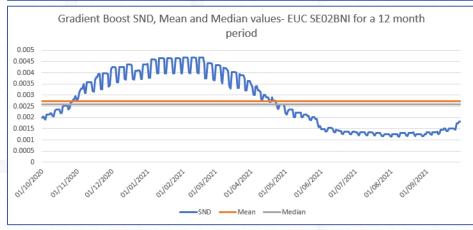


02BNI Mean and Median

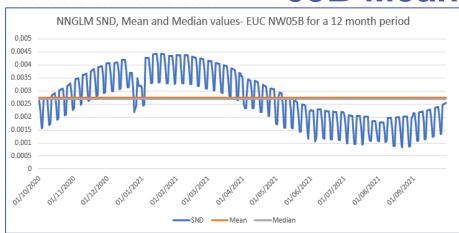


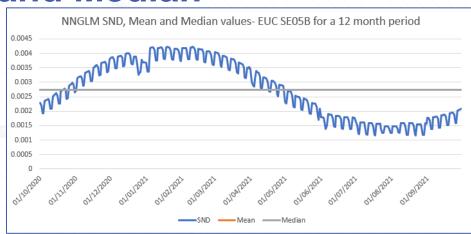


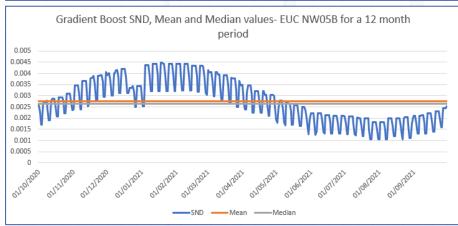


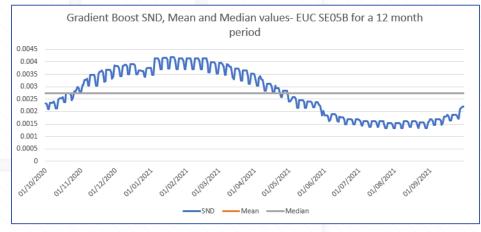


05B Mean and Median









Action 0301 - Historic use of the Mean

- 'Mean' has been used in the Demand Attribution calculation since its inception.
- The attribution calculation uses the Seasonal Normal Demand (i.e. the AQ) divided by the number of days (which for an AQ is 365).
- This is to support downstream calculations, as any calculation using the ALP value will only work with the Mean (as it needs to add up to the total SND value).
- The values wouldn't add up to the total SND value if the Median was used



Action 0301 - Conclusion

- The use of 'Mean' and 'Median' produces very similar values and some are almost identical
- 'Mean' has been used in the Demand Attribution calculation as:
 - Some datasets do not have a set of daily demands to allow calculation of a Median.
 - Downstream process rely on the use of the Mean so that values balance and add up to the correct starting point.
 - If you used the Median, each day individually would not add up to the total SND value
- This ILF is a theoretical value which is only used in the modelling process for assessment between models.