Demand Estimation Sub Committee
CDSP Demand Estimation Systems

24th July 2018

CDSP's Demand Estimation Systems / Processes

- UK Link replacement and Gemini consequential changes implemented last year, followed by the subsequent challenges with UiG levels has meant we have not been able to make substantial progress with our desire to upgrade the modelling processes and systems used to deliver DESC's current obligations

- A clear set of Business Goals and Drivers have been identified which centre around ensuring the CDSP and DESC have more flexibility in determining how the parameters are derived

- This is the system that produces all of the various demand models and ultimately produces the ALPs, DAFs and PLFs for the start of each Gas Year

- The current target is to use any new system in the 2019 modelling work, possibly in parallel with the existing system

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CDSP's Demand Estimation Systems / Processes cont.

- The Derived Factors and Demand model supporting information is provided in multiple formats and in various folders within Folder 18 on the secure website – see below:

- Folder 18. NDM Profiling and Capacity Estimation Algorithms
    - CCYY-YY Gas Year
        - 2. Demand Estimation Sample Data
        - 3. Demand Estimation Parameters
            - a. End User Categories and Derived Factors
            - b. Demand Model Supporting Files
        - 4. NDM Algorithms Booklet

- To support our requirements gathering exercise it would be helpful to know how much of the current suite of demand model supporting files are used by the industry and how critical the format of this content is to you, where it is used

- Equally it would be good to hear if there are statistics / parameters which are not provided which may be more useful ?

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Demand Model Derived Factors & Supporting Information

- The table below covers all the files which are provided to the industry each year (i.e. Sub-Folder 3.). The file names refer to this years process:

File Name	Level	Content
EUC_Definitions_GY_201819v1.txt	EUC	End User Category definitions for Gas Year 2018/19
ALPDAF18.txt	EUC	Annual Load Profiles and Daily Adjustment Factors for Gas Year 2018/19
LF18.txt	EUC	Peak Load Factors for Gas Year 2018/19
CWV6018.txt	LDZ	History of CWVs back to 1960
SNCWV18.txt	LDZ	SNCWVs for Gas Year 2018/19
SNET18.txt	LDZ	SNETs for Gas Year 2018/19
EUCPAR18S.txt / EUCPAR18L.txt	EUC	Smoothed Demand Model output parameters containing model constant, weather sensitivity, CWV cut-off value, residual error and autocorrelation coefficient
EUCHOL18S.txt / EUCHOL18L.txt	EUC	Smoothed Holiday Code Factors and Modelling Case Code
EUCWK18S.txt / EUCWK18L.txt	EUC	Smoothed Weekend Factors and Modelling Case Code
MDLPARyy_18S.txt / MDLPARyy_18L.txt (x 3 individual yrs)	EUC	Individual Demand Model parameter files containing regression coefficients, standard error and "all days" R^2 values
ILF_3years_2018.xlsx	EUC	Individual Year Modelling Results – ILF, R^2 and sample size
DOMSMP18.pdf	EUC Band 1	Upto date view of 'Distribution' of population and sample sites in EUC Band 1 (0 to 73.2 MWh pa
WKHOLDEF18.txt	Model	Model Case Code and associated Weekday, Holiday and Summer Reduction code definitions

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Sample Data & NDM Algorithms Booklet

- In addition to the information on previous table, there are multiple files containing the daily sample demand data, which is used to derive each of the EUC demand models (located in Sub-Folder 2.)

- The NDM Algorithms Booklet also includes many tables of information and appendix (located in Sub-Folder 4.)

Summary

- The requirements gathering exercise for the new system is assuming that the modelling approach will be as per currently described in the Spring Approach document (and Section 3 of the NDM Algorithms Booklet) BUT designed in a way which provides more flexibility should DESC want to suggest changes

- In addition, it is assumed that the various supporting information output provided to the industry will still be required, so any feedback DESC can provide on both content and format would be welcome