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Demand Estimation Sub Committee

Presentation of 2014 Models

9th July 2014

Objectives of Meeting

- Key objectives of today's meeting:
  - Recap on DESC obligations following amendments to Section H of UNC
  - Inform DESC of process followed in derivation of NDM proposals
  - Provide summary of where TWG has reviewed the output and had the opportunity to challenge the decisions made
  - Provide summary of TWG responses to draft NDM proposals and their overall recommendation to DESC
- Outcome – Obtain DESC approval to submit NDM proposals to Transporters and Users as per UNC requirement

Purpose of NDM Modelling

- Provides a method to differentiate NDM loads and provide profiles of usage
  - i.e. End User Category (EUC) Definitions
- Provide a reasonable equitable means of apportioning aggregate NDM demand (by EUC / shipper / LDZ) to allow daily balancing regime to work
  - i.e. NDM profiles (ALPs & DAFs)
- Provide a means of determining NDM Supply Point capacity
  - i.e. NDM EUC Load Factors
- The underlying NDM EUC and aggregate NDM demand models derived each year are intended to deliver these obligations only
- NDM EUC profiles are used to apportion aggregate NDM demand and do not independently forecast NDM EUC demand

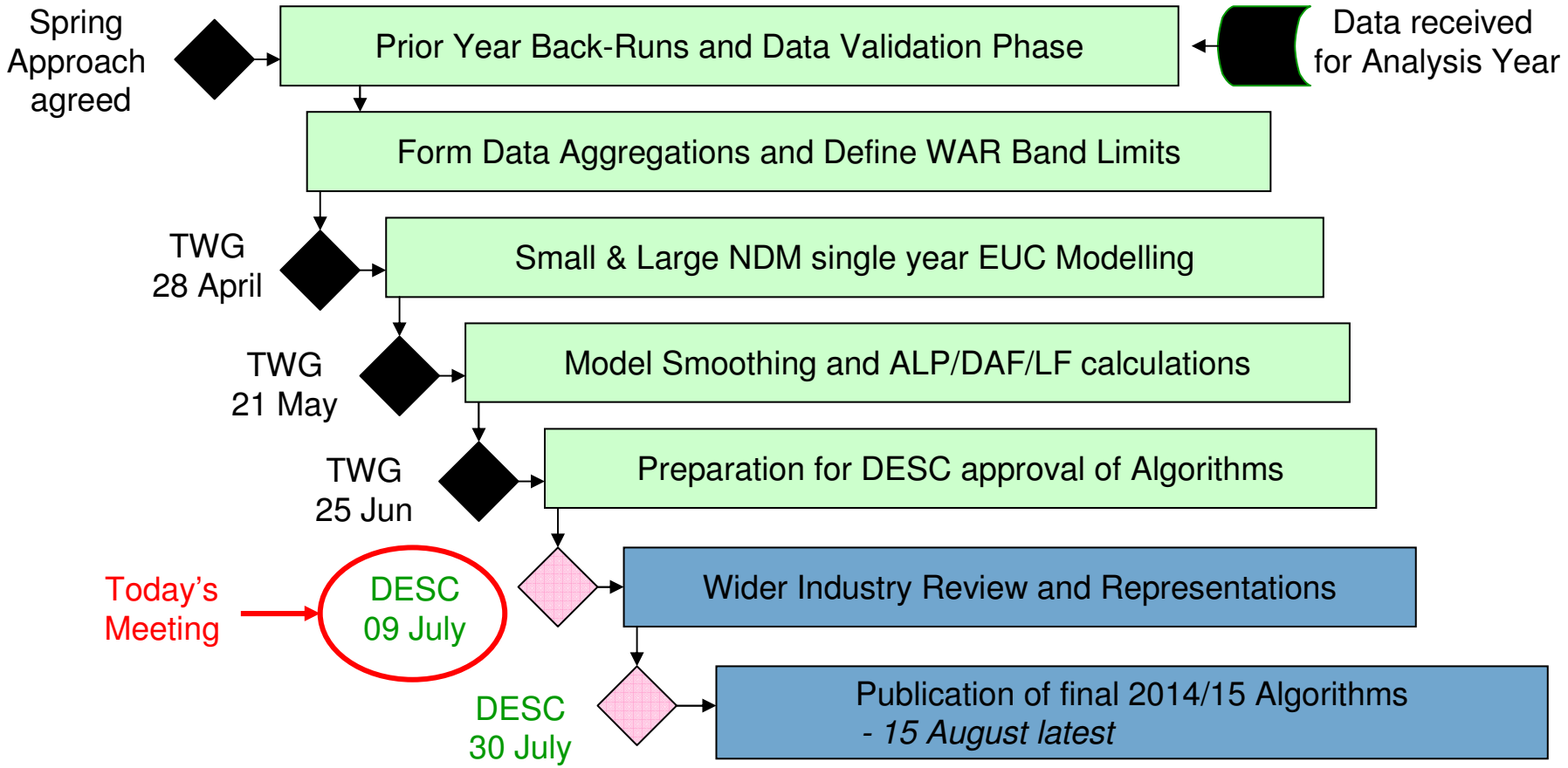
Changes to UNC Section H

- **Responsibilities for Demand Estimation changed following implementation of UNC Modification 331 on 3rd January 2012**
- **DESC collectively required by UNC to:**
  - Submit proposals to Transporters and Users for each Gas Year comprising:
    - EUC Definitions
    - NDM Profiling Parameters
    - Capacity Estimation Parameters
  - In addition:
    - Analysis of accuracy of the allocation process
    - Derivation of CWV and Seasonal Normal
    - Consultation with Industry
- **Xoserve acts as the common NDM Demand Estimation service provider**

Agreed 2014 Modelling Workplan

- Workplan for 2014 Modelling agreed at Feb DESC meeting
- Workplan aims to provide more transparency of process and introduce checkpoints for DESC/TWG review
  - 3 TWG meetings to date – April, May and June
  - Further interaction via email

Agreed 2014 Timetable



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Summary of overall process

- Series of slides to summarise the data collection, modelling, outcomes and TWG involvement / decisions made

Basis of 2014 Modelling

- Described in “Spring Approach” document, reviewed at February 2014 meeting

- Key aspects of EUC demand modelling basis for Spring 2014 analysis:
  - 13 month analysis for datalogger data sets (2013/14)
    - Data sets cover March to March
  - 13 month analysis for AMR data sets (2013/14)
    - Data sets cover March to March
  - Data validation rules in line with prev. instance of 13m validation (Spr.09)
  - CWV definitions and SN basis as Spring 2013

TWG Involvement: 28th April 2014 Objectives of Meeting

- First check point meeting of Technical Workgroup
- Key objectives of April Meeting
  - Inform TWG of numbers of validated data sets collected
  - Consider the most appropriate data sets and aggregations to apply to the most recently available sample data - i.e. 2013/14
- Outcome – TWG finalised sample sizes, aggregations and WAR Band Limits
- Next phase was then able to commence:

  Single Year modelling – 2013/14 data

NDM Population Counts: Supply Point & AQ

Consumption Range	% of Total NDM	
	Total AQ	Total Count
0 – 73.2 MWh pa	72.3%	98.81%
0 – 293 MWh pa	78.1%	99.67%
0 – 2,196 MWh pa	88.6%	99.97%
>2,196 MWh pa	11.4%	0.03%

- On an AQ basis:
  - Small NDM is by far the main component of the overall NDM sector
  - The range 0-73.2 MWh pa constitutes nearly 3/4 of overall NDM
  - The range 0-293 MWh pa constitutes nearly 4/5 of overall NDM
  - The range 0-2196 MWh pa constitutes nearly 9/10 of overall NDM
  - Large NDM is very much a minority component of overall NDM

Summary of Validated Data

- Both AMRs & Dataloggers used in Small NDM Analysis (<2,196 MWH pa)
- NDM Sample Counts:

Sample Counts	*2013/14 data*	*2012/13 data*
0 to 73.2 MWh pa Range – AMR	2,981 Domestic	3,036 Domestic
73.2 to 2,196 MWh pa Range – AMR & Dataloggers	4,900	5,445
> 2,196 MWh pa Range – Dataloggers	2,972	3,412

Small NDM Supply Points (<2,196 MWh pa)
Agreed Sample Data Aggregations

	Consumption Band Analysis – 2013/14 data
Band 01 0 to 73.2 MWh pa	Individual LDZ
Band 02 73.2 to 293 MWh pa	Individual LDZ
Band 03 293 to 732 MWh pa	Individual LDZ or WS/SW Combined
Band 04 732 to 2,196 MWh pa	Individual LDZ

- Aggregations as agreed at April TWG
- In the main sufficient data available to allow individual LDZ analysis
- Decision to be made on model to be used for Band 03 – results to follow

All Small NDM EUCs
Agreed WAR Band Analysis (April TWG)

Consumption Range	Comments on 2013/14 data
0 to 73.2 MWh pa (EUC Band 1)	Not generally Monthly read – no WAR Bands
73.2 to 293 MWh pa (EUC Band 2)	Not generally Monthly read – no WAR Bands
293 to 732 MWh pa (EUC Band 3)	Agreed to merge Band 3 & 4 data for WAR Band Analysis – Model all LDZs separately except: NW/WN combined WS/SW combined
732 to 2,196 MWh pa (EUC Band 4)	

Large NDM Supply Points (>2,196 MWh pa)
Consumption Band Aggregations

Consumption Range	*2013/14 Analysis*	*2012/13 Analysis*
Band 05 2,196 to 5,860 MWh pa	Individual LDZ	Individual LDZ
Band 06 5,860 to 14,650 MWh pa	Individual LDZ	Individual LDZ
Band 07 14,650 to 29,300 MWh pa	DESC agreed to merge bands 7 and 8 enabling individual LDZ analysis to be possible By 10 or 8 Groups of LDZs	By 4 Groups of LDZs
Band 08 29,300 to 58,600 MWh pa		By 4 Groups of LDZs
Band 09 >58,600 MWh pa	National	National

- Aggregation of sample data to allow sufficient sample analysis
- Groupings to model agreed at April TWG meeting

Large NDM Bands 5 to 8: 2,196 MWh – 58,600 MWh
Proposed WAR Band Analysis

Consumption Range	*2013/14 Analysis*	*2012/13 Analysis*
Band 05 2,196 to 5,860 MWh pa	By 4 LDZ Groups	By 5 LDZ Groups
Band 06 5,860 to 14,650 MWh pa	By 3 LDZ Groups	By 3 LDZ Groups
Band 07 14,650 to 29,300 MWh pa	By 2 LDZ Groups	National
Band 08 29,300 to 58,600 MWh pa		National
Band 09 >58,600 MWh pa	N/A - No WAR Bands	N/A - No WAR Bands

- Aggregation of sample data to allow sufficient sample analysis

Single Year Modelling – 2013/14 data

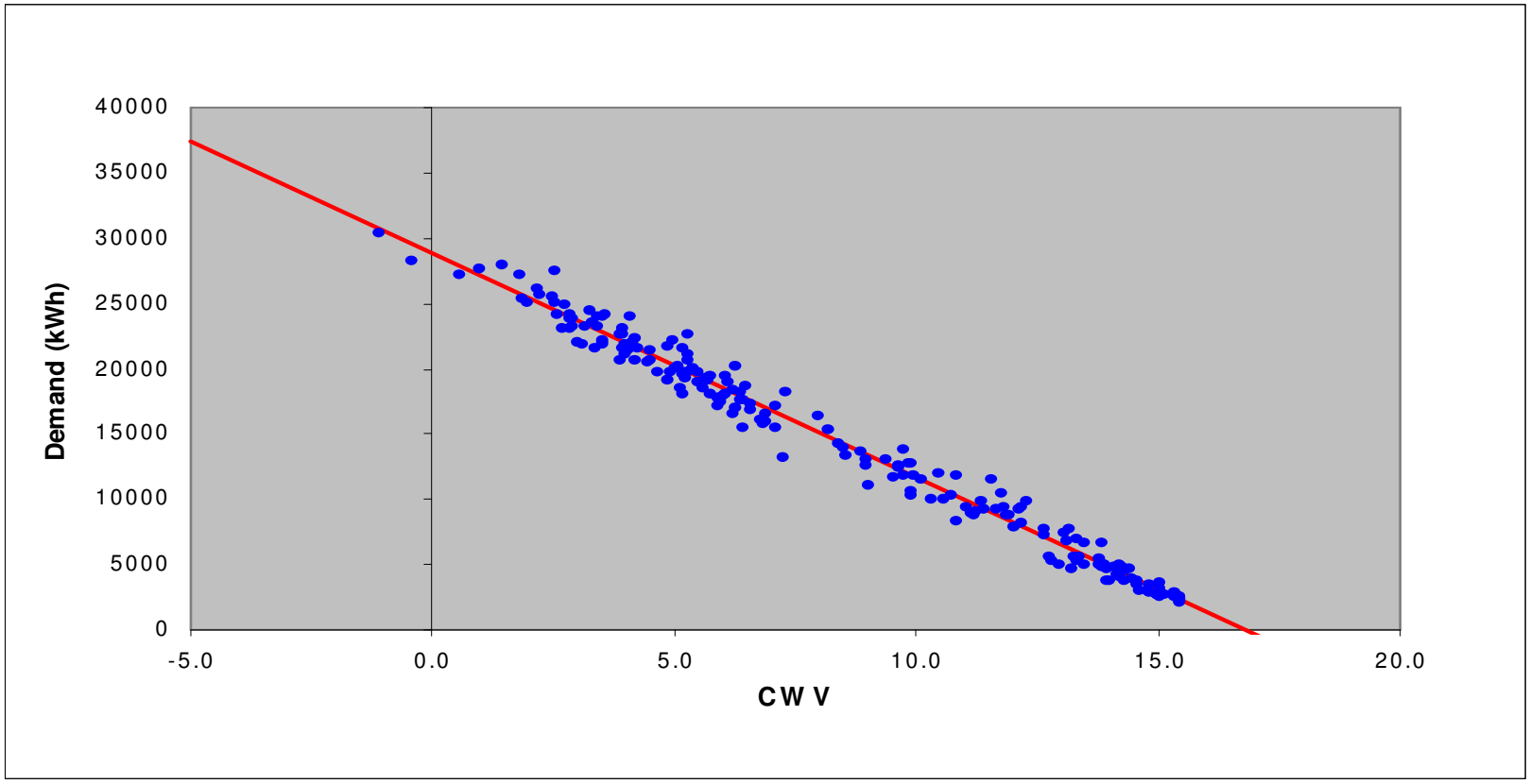
- Analysis carried out…
  - Aims to assist in the creation of profiles based on the relationship between demand to weather
  - Identify the best fit model based on available data samples
  - View of results so far and highlight any issues raised
- Tools used to identify best model :
  - R^2 Multiple Correlation Coefficient – statistical tool for identifying 'goodness of fit' (100% = perfect fit / direct relationship)
  - Variations in Indicative Load Factors
  - In some instances to support decision making T-Stats and Residuals also provided

Small NDM Modelling Results
EUC Band 1: 0 – 73.2 MWh pa Domestic Sites

	Indicative Load Factor	R^2 Multiple Correlation Coefficient	Sample Size
SC	38%	98%	234
NO	32%	97%	237
NW / WN	35%	98%	232
NE	36%	98%	260
EM	34%	99%	256
WM	31%	98%	252
WS	32%	97%	239
EA	32%	98%	275
NT	32%	98%	241
SE	31%	98%	237
SO	29%	98%	267
SW	31%	97%	251

- Indicative Load Factor : R^2 Multiple Correlation Coefficient : Sample Size

Small NDM Modelling Results
EM LDZ, EUC Band 1: 0 - 73.2 MWh pa



Demand against EM CWV – Monday to Thursday - Holidays included

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TWG Involvement: 21st May 2014
Objectives of Meeting

- Second check point meeting of Technical Workgroup (old Technical Forum)
- Key objectives of May meeting
  - Review and confirm results of single year EUC Modelling
- Outcome – TWG discussed and agreed single year models to be used including aggregations to take forward for all NDM consumption bands
  - Band 3 - TWG agreed to merge SW and WS
  - Band 7 and 8 – agreement to merge for modelling purposes. Use 8 groups of LDZs in 14650-58600 MWh consumption band
- Next phase was then able to commence:

  Model Smoothing and derivation of draft NDM proposals

Model Smoothing and Derivation of Parameters

- Model Smoothing process carried out on 3 years of sample data (2011/12, 2012/13 and 2013/14)
- Smoothed EUC model parameter values created represent the average value from across the 3 years (in place to address year on year volatility)
- Smoothed model parameter values were then used to derive the various NDM proposals such as the ALPs
- During this phase there was further TWG interaction where details of amendments to weekend factor results were shared

TWG Involvement: 6th June to 24th June 2014
Review of draft NDM proposals

- Draft NDM proposals were published and available for review on 6th June
- Note issued to TWG inviting feedback and comments
- One response received (24th June) from E.On representative on TWG covering :
  - Request to understand reasons for pronounced day of the week shape
  - DAF inverse seasonal shape and zero profile
  - 09B Easter Profile shape
- Next phase was then able to commence:

  Investigate TWG comments and provide feedback at meeting on 25th June

TWG Involvement: 25th June 2014
Objectives of Meeting

- Third check point meeting of Technical Work Group
- Key objectives of this meeting:
  - E.On to discuss their representation
  - Review TWG comments and agree any actions
  - Agree approach to presentation of proposals to DESC
- Outcome: Following discussion about representation TWG provided support for proposals and recommended they be presented to DESC
- Further detail on representation to follow

E.On Response to Algorithms

- E.On response can be viewed on J.O website (25th June DESC meeting)
- In summary there were 4 queries specific to the draft proposals:
  - Query 1: Can we provide views on the drivers behind the change in ALP pronounced day of week shape for specified EUCs
  - Query 2: What is the driver behind the large swing in seasonal shape of DAFs for specified EUCs
  - Query 3: What is the driver for the seemingly extreme change in specified EUCs which previously had a seasonal shape and now have a DAF zero profile
  - Query 4: Can we provide views on the 09B EUC and the unusual shape entering into and exiting the Easter weekend

E.On Response to Algorithms – Query 1

- *Can we provide views on the drivers behind the change in ALP pronounced day of week shape for specified EUCs*

- Day of week shape influenced by:

  - Weekend Factors (Fri, Sat and Sun) are calculated individually for each analysis year (if proven to be statistically significant)

  - Model smoothing takes the average of the three contributing years with each smoothed set of factors retaining 2 years of underlying factors from the previous years model

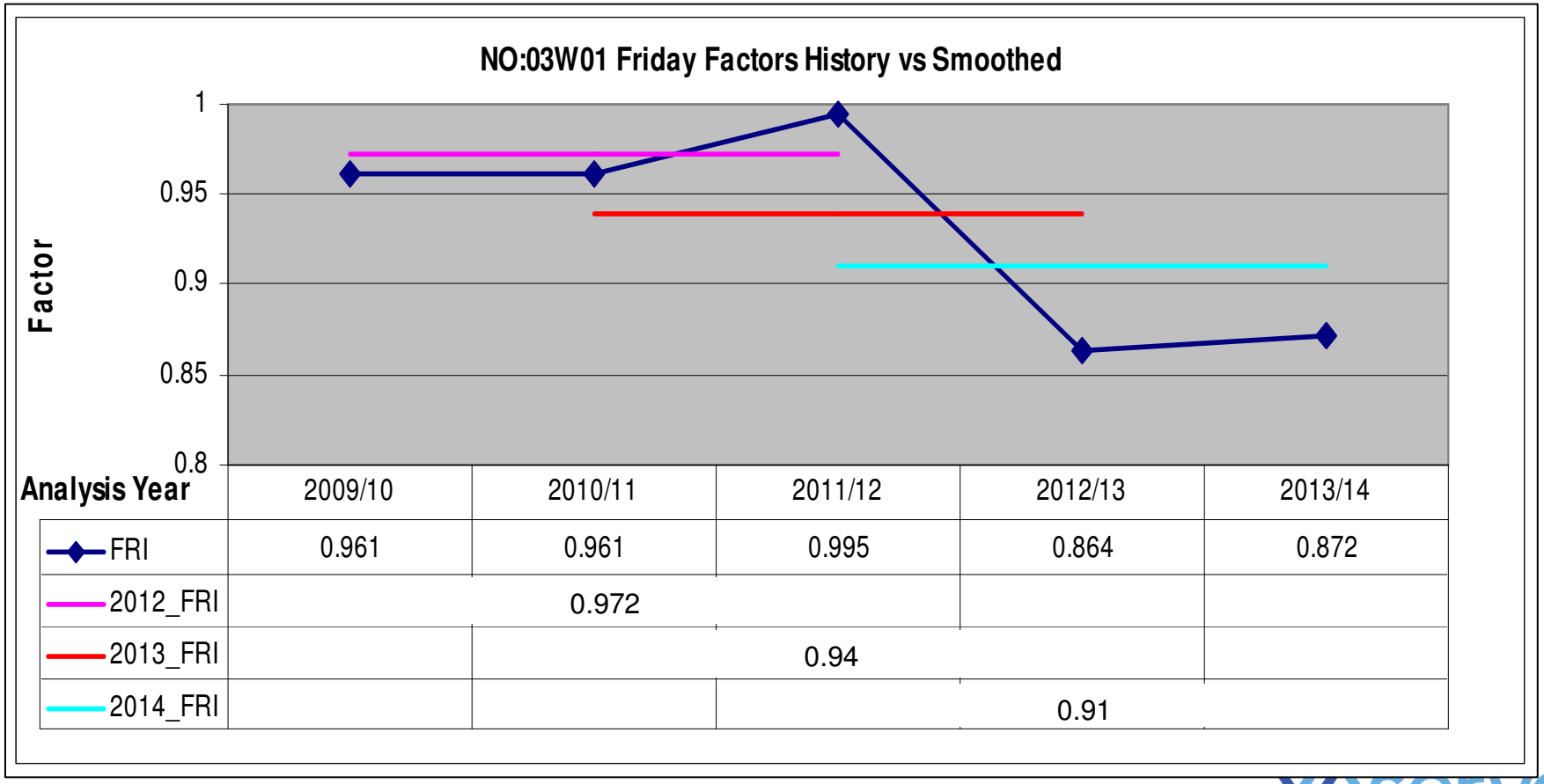
  - For EUC NO:E1403W01 the individual year of 2012/13 analysis saw a large reduction in weekend factors that was also visible in 2013/14 (see next 3 slides for evidence)

  - Xoserve are satisfied the underlying data and calculations are correct, however without contacting the individual sites for a commentary on their change in usage it is not advisable to speculate on drivers behind these changes in behaviour

  - Item added to TWG Adhoc work areas log for possible further investigation (Monday to Thursday behaviours)

E.On Response to Algorithms – Query 1

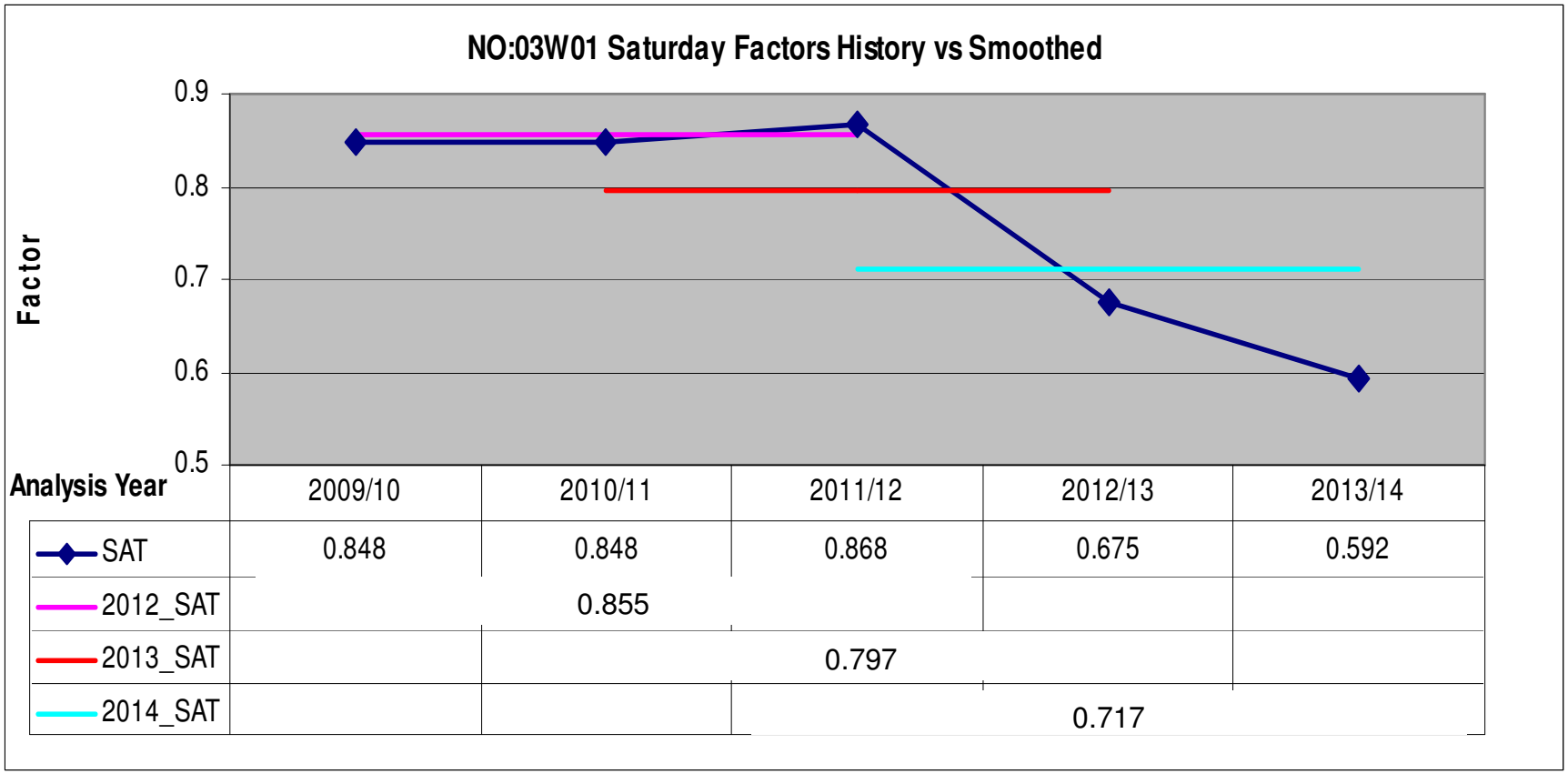
NO:E03W01 – Friday factors history



Analysis Year	2009/10	2010/11	2011/12	2012/13	2013/14
FRI	0.961	0.961	0.995	0.864	0.872
2012_FRI		0.972			
2013_FRI			0.94		
2014_FRI				0.91	

E.On Response to Algorithms – Query 1

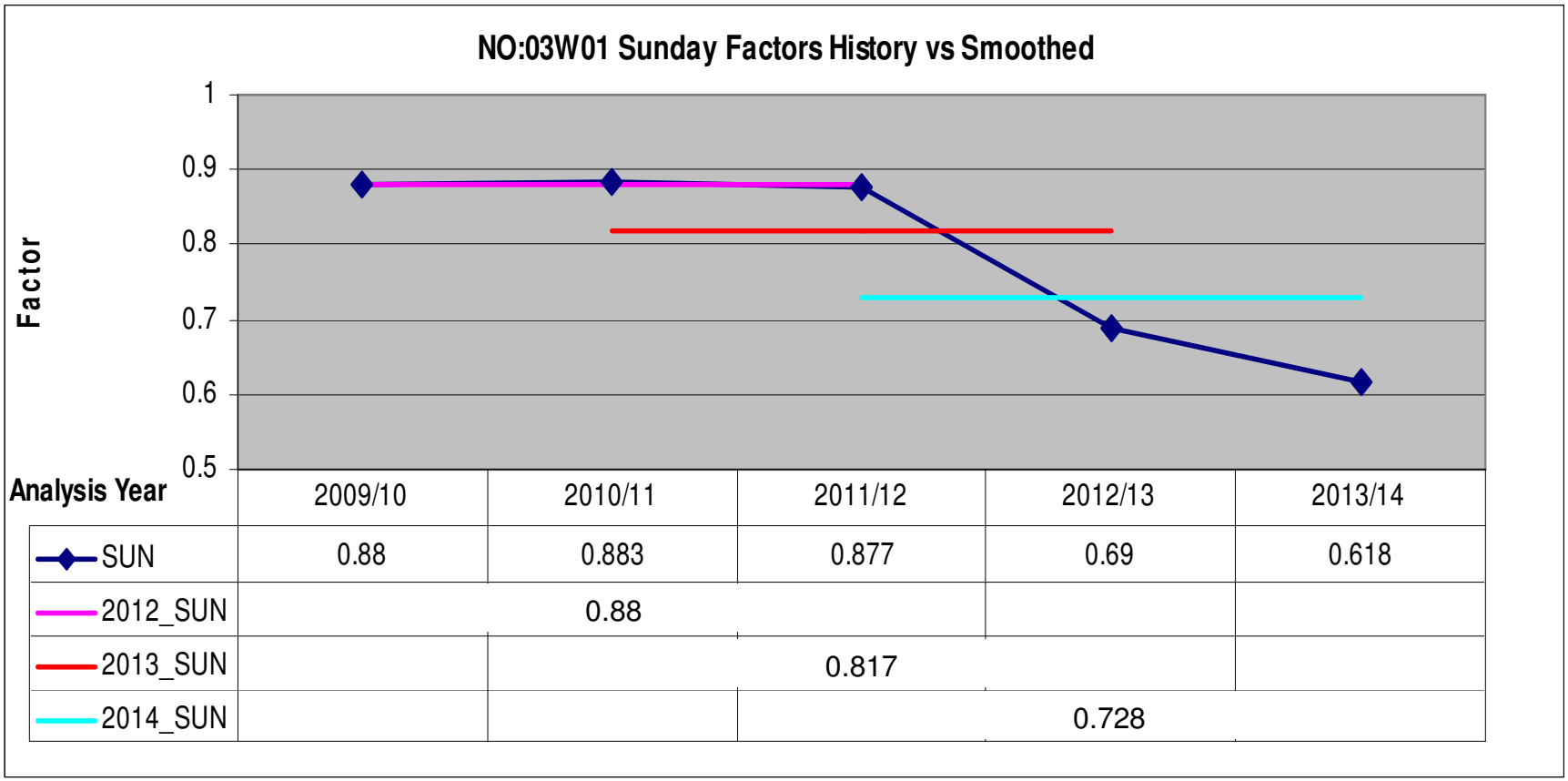
NO:E03W01 – Saturday factors history



Analysis Year	2009/10	2010/11	2011/12	2012/13	2013/14
SAT	0.848	0.848	0.868	0.675	0.592
2012_SAT		0.855			
2013_SAT			0.797		
2014_SAT				0.717	

E.On Response to Algorithms – Query 1

NO:E03W01 – Sunday factors history



Analysis Year	2009/10	2010/11	2011/12	2012/13	2013/14
SUN	0.88	0.883	0.877	0.69	0.618
2012_SUN		0.88			
2013_SUN			0.817		
2014_SUN				0.728	

E.On Response to Algorithms – Query 2

- *What is the driver behind the large swing in seasonal shape of DAFs for specified EUCs*

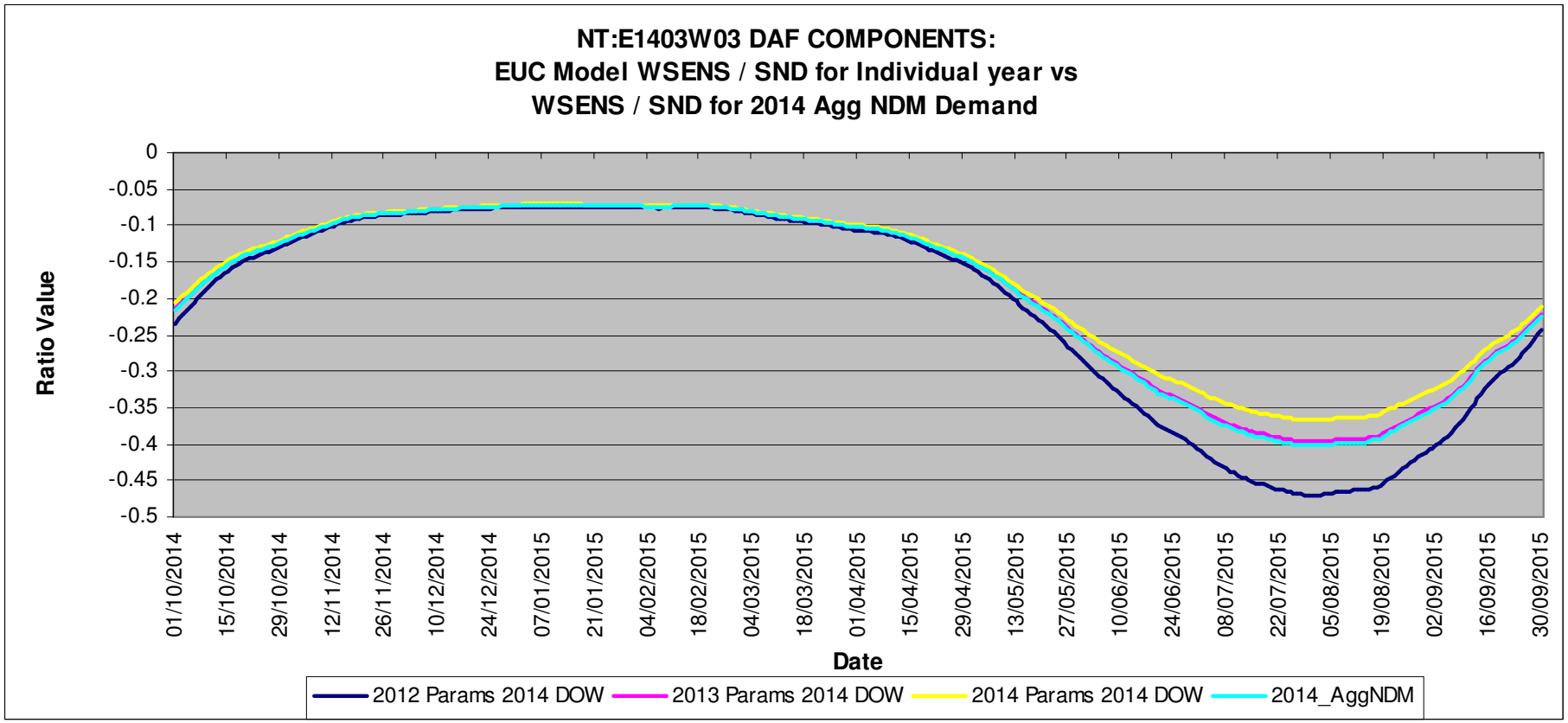
- Reminder of the DAF Formula:
  - $$\frac{WSENS_t / SND_t \text{ (for EUC)}}{WSENS_t / SND_t \text{ (for aggregate NDM in LDZ)}}$$

- EUC NT:E03W03 has seen a change in its weather sensitivity compared with that derived from the aggregate NDM demand model over the past 3 years (see next 2 slides)
  - The 2012/13 EUC model was more weather sensitive than agg.NDM demand
  - The 2013/14 EUC model was comparable to the agg.NDM demand
  - The 2014/15 EUC model was less weather sensitive than agg.NDM demand

- Xoserve are satisfied the underlying data and calculations are correct, however without access to much more information it is not advisable to speculate on drivers behind these changes in behaviour

E.On Response to Algorithms – Query 2

NT:E03W03 – WSENS / SND Ratios (Gas Year)



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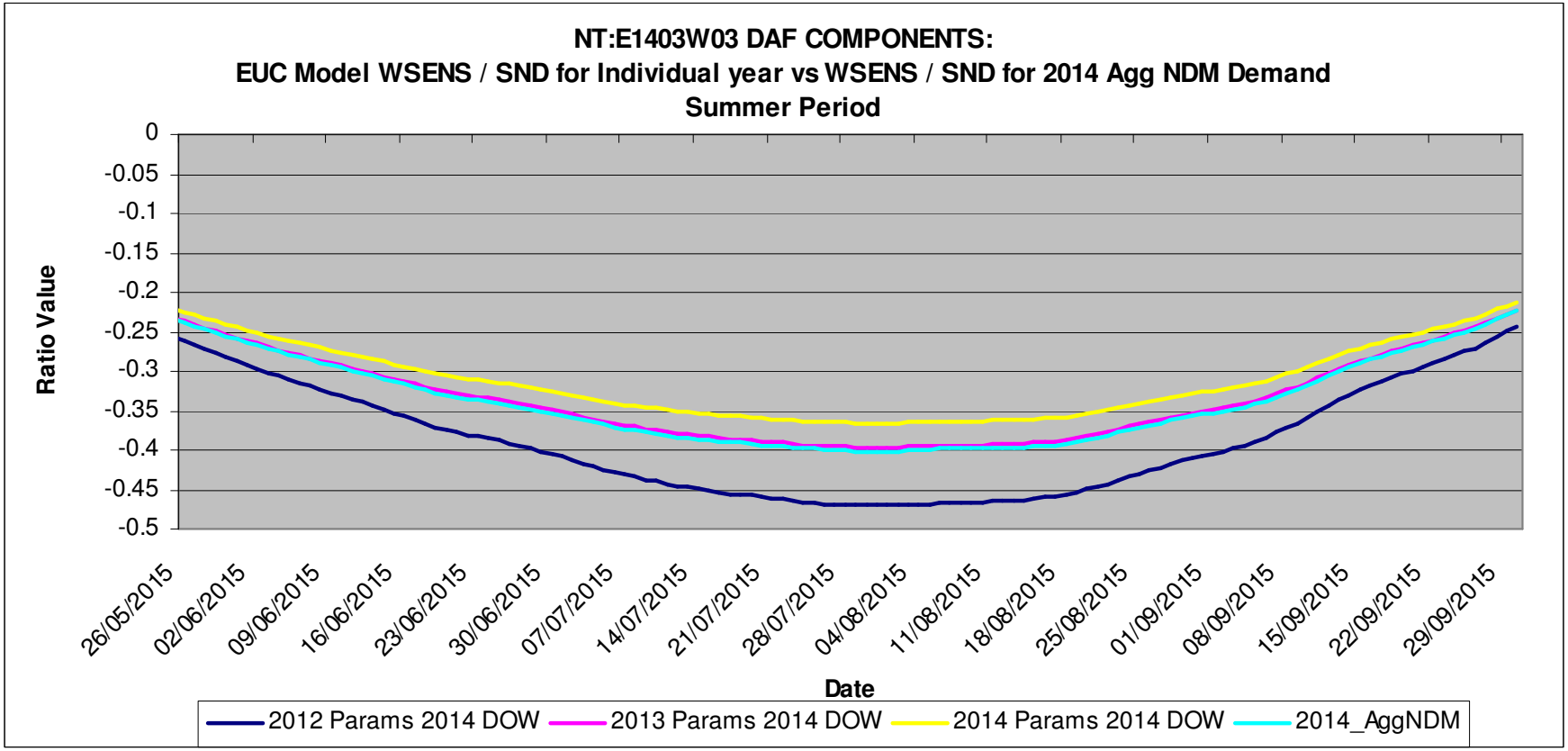
E.On Response to Algorithms – Query 2

NT:E03W03 – WSENS / SND Ratios (Summer period)



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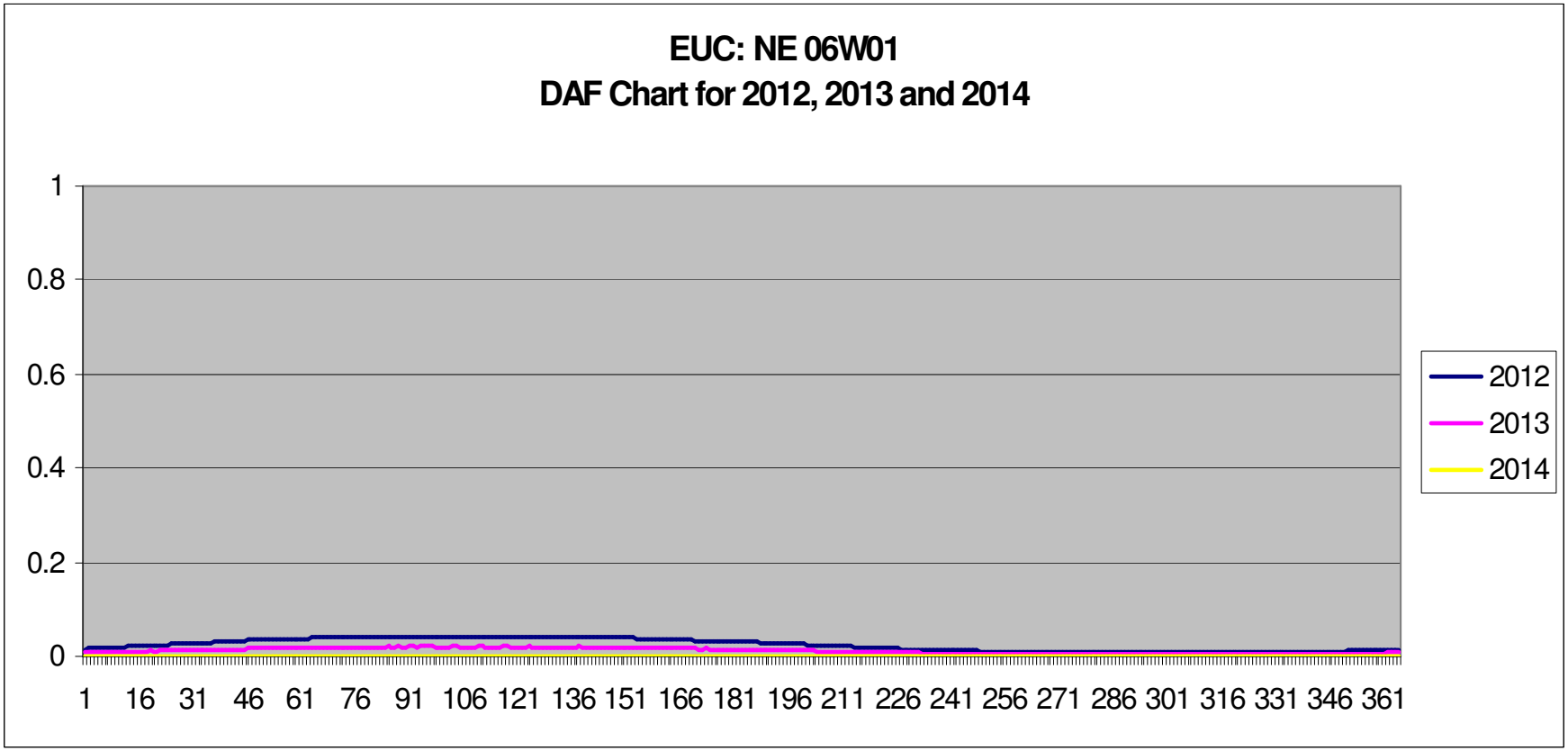
E.On Response to Algorithms – Query 3

- *What is the driver for the seemingly extreme change in specified EUCs which previously had a seasonal shape and now have a DAF zero profile*
- The smoothed model for EUC NE:06W01 has seen a minimal change in its weather sensitivity. The scale used on the chart makes it appear an extreme change
- The NE model has continued a trend of becoming less weather sensitive and is now a 'flat' model. Xoserve are satisfied there are no issues with the data or calculations and believe these to be minor changes
- A chart of the DAFs for this model is on the next slide using a scale typically used for this parameter
- The increase in weather sensitivity exhibited in the DAFs in EUC model NE:07W01 is not connected to any changes observed in Band 6 models. This year will have been influenced by the merger of the underlying models for Bands 7 and 8 which has contributed to the smoothed model

E.On Response to Algorithms – Query 3

NE:E06W01 – DAF



E.On Response to Algorithms – Query 4

- *Can we provide views on the 09B EUC and the unusual shape entering into and exiting the Easter weekend*

- Easter holiday period in the modelling system starts on Wednesday before Good Friday and ends on Friday following Good Friday

- The Holiday codes are as follows:
  - 6 – Easter Saturday and Easter Sunday
  - 7 – Good Friday and Easter Monday
  - 8 – All other days in Easter holiday period

- Ideally if the holiday codes are working correctly you expect to see the factors gradually increase i.e. Code 6 largest reduction in demand compared to standard Monday to Thursday

- Table on next slide shows the results for the Large NDM EUCs which shows the holiday codes working as expected for all EUCs (other than 09B) which is reassuring

- Correct observation however results are driven by data and this particular model is subject to large churn in terms of sites used and so perhaps not unsurprising that results are unexpected

E.On Response to Algorithms – Query 4

Summary of Easter Holiday Codes for Large NDM EUCs

LDZ	HOLCODE	05B	05W01	05W02	05W03	05W04	06B	06W01	06W02	06W03	06W04	07B	07W01	07W02	07W03	07W04	08B	08W01	08W02	08W03	08W04	09B
SC	6	0.763	0.56	0.865	0.755	0.566	0.704	0.445	0.485	0.764	0.648	0.667	0.497	0.535	0.645	0.785	0.82	0.648	0.613	0.726	0.752	0.705
	7	0.903	0.773	0.954	0.91	0.728	0.889	0.609	0.573	0.839	0.842	0.811	0.659	0.647	0.718	0.879	0.907	0.793	0.716	0.803	0.851	0.698
	8	0.994	1	1	0.982	0.906	0.984	0.971	0.911	0.987	0.937	0.979	0.991	0.93	0.963	1	0.999	0.992	0.948	0.955	0.97	0.847
NO	6	0.576	0.397	0.737	0.683	0.496	0.538	0.445	0.485	0.771	0.66	0.683	0.497	0.536	0.649	0.791	0.827	0.647	0.614	0.726	0.751	0.705
	7	0.686	0.52	0.79	0.802	0.62	0.616	0.611	0.572	0.832	0.809	0.762	0.658	0.647	0.712	0.855	0.883	0.791	0.715	0.797	0.826	0.697
	8	0.932	0.967	0.929	0.91	0.785	0.946	0.974	0.895	0.944	0.883	0.948	0.991	0.92	0.927	0.919	0.994	0.992	0.939	0.927	0.887	0.833
NW	6	0.575	0.397	0.75	0.713	0.623	0.513	0.447	0.487	0.792	0.722	0.689	0.498	0.537	0.66	0.859	0.833	0.651	0.615	0.737	0.805	0.708
	7	0.679	0.519	0.802	0.842	0.728	0.584	0.613	0.573	0.858	0.832	0.77	0.659	0.648	0.728	0.922	0.89	0.796	0.717	0.805	0.88	0.7
	8	0.952	0.974	0.958	0.959	0.898	0.932	0.975	0.903	0.978	0.918	0.963	0.991	0.925	0.952	0.983	0.987	0.991	0.944	0.944	0.954	0.84
NE	6	0.594	0.352	0.678	0.715	0.748	0.56	0.317	0.373	0.647	0.785	0.538	0.497	0.536	0.662	0.856	0.63	0.645	0.615	0.735	0.806	0.707
	7	0.75	0.515	0.759	0.832	0.862	0.645	0.467	0.496	0.756	0.887	0.637	0.658	0.647	0.724	0.91	0.73	0.789	0.716	0.809	0.869	0.699
	8	0.926	0.939	0.946	0.961	0.901	0.953	0.944	0.876	0.921	0.961	0.938	0.989	0.918	0.93	0.93	0.946	0.989	0.937	0.928	0.895	0.83
EM	6	0.584	0.352	0.674	0.695	0.746	0.487	0.317	0.372	0.643	0.768	0.527	0.497	0.536	0.659	0.848	0.62	0.646	0.614	0.732	0.787	0.706
	7	0.716	0.515	0.759	0.821	0.86	0.633	0.467	0.495	0.757	0.883	0.656	0.658	0.647	0.724	0.905	0.748	0.79	0.716	0.804	0.863	0.699
	8	0.968	0.939	0.947	0.956	0.908	0.959	0.943	0.876	0.923	0.958	0.928	0.989	0.918	0.931	0.93	0.937	0.989	0.937	0.925	0.893	0.83
WM	6	0.58	0.352	0.674	0.694	0.745	0.412	0.317	0.372	0.642	0.753	0.524	0.497	0.536	0.659	0.843	0.617	0.648	0.614	0.732	0.783	0.706
	7	0.709	0.515	0.763	0.835	0.855	0.558	0.467	0.497	0.764	0.88	0.642	0.658	0.648	0.728	0.919	0.734	0.792	0.716	0.806	0.873	0.7
	8	0.931	0.942	0.959	0.979	0.939	0.857	0.943	0.881	0.938	0.967	0.909	0.99	0.921	0.94	0.949	0.916	0.99	0.939	0.932	0.91	0.834
WN	6	0.575	0.397	0.75	0.713	0.623	0.513	0.447	0.487	0.792	0.722	0.689	0.498	0.537	0.66	0.859	0.833	0.651	0.615	0.737	0.805	0.708
	7	0.679	0.519	0.802	0.842	0.728	0.584	0.613	0.573	0.858	0.832	0.77	0.659	0.648	0.728	0.922	0.89	0.796	0.717	0.805	0.88	0.7
	8	0.952	0.974	0.958	0.959	0.898	0.932	0.975	0.903	0.978	0.918	0.963	0.991	0.925	0.952	0.983	0.987	0.991	0.944	0.944	0.954	0.84
WS	6	0.6	0.532	0.76	0.801	0.718	0.544	0.478	0.562	0.856	0.784	0.677	0.525	0.543	0.697	0.812	0.703	0.678	0.621	0.777	0.76	0.705
	7	0.726	0.65	0.848	0.895	0.858	0.655	0.684	0.659	0.934	0.885	0.751	0.688	0.658	0.756	0.886	0.809	0.825	0.727	0.837	0.854	0.697
	8	0.941	0.989	1	0.989	0.941	0.956	0.996	0.944	0.996	0.959	0.949	1	0.947	0.978	0.97	0.972	1	0.965	0.974	0.949	0.84
EA	6	0.757	0.645	0.929	0.894	0.764	0.619	0.478	0.564	0.878	0.801	0.699	0.524	0.544	0.706	0.826	0.661	0.678	0.622	0.778	0.765	0.708
	7	0.835	0.721	0.973	0.97	0.832	0.752	0.686	0.663	0.949	0.873	0.791	0.688	0.66	0.763	0.883	0.738	0.825	0.728	0.841	0.837	0.7
	8	0.987	0.991	1	0.995	0.901	0.979	0.996	0.938	1	0.918	1	1	0.945	0.979	0.948	0.946	1	0.962	0.969	0.906	0.836
NT	6	0.876	0.644	0.926	0.895	0.765	0.894	0.476	0.564	0.875	0.808	0.698	0.524	0.543	0.704	0.829	0.659	0.676	0.621	0.776	0.767	0.707
	7	0.956	0.719	0.972	0.966	0.827	0.955	0.684	0.662	0.946	0.88	0.789	0.687	0.659	0.761	0.886	0.736	0.823	0.727	0.84	0.84	0.7
	8	0.989	0.991	1	0.994	0.896	0.99	0.995	0.936	1	0.915	1	1	0.943	0.978	0.946	0.945	1	0.961	0.968	0.905	0.835
SE	6	0.825	0.645	0.929	0.89	0.768	0.83	0.477	0.564	0.863	0.793	0.722	0.524	0.544	0.705	0.821	0.67	0.677	0.622	0.777	0.761	0.708
	7	0.882	0.72	0.973	0.966	0.83	0.894	0.685	0.662	0.934	0.865	0.816	0.688	0.66	0.763	0.878	0.748	0.824	0.728	0.841	0.833	0.7
	8	0.974	0.991	1	0.995	0.899	0.972	0.996	0.938	0.999	0.913	0.993	1	0.944	0.979	0.945	0.924	1	0.962	0.969	0.904	0.836
SO	6	0.812	0.533	0.77	0.808	0.769	0.685	0.478	0.564	0.876	0.792	0.715	0.525	0.544	0.705	0.82	0.735	0.68	0.622	0.778	0.761	0.708
	7	0.87	0.651	0.85	0.873	0.859	0.772	0.685	0.66	0.937	0.848	0.781	0.689	0.659	0.758	0.865	0.839	0.828	0.727	0.836	0.823	0.698
	8	0.992	0.989	1	0.971	0.914	0.967	0.996	0.942	1	0.936	0.961	1	0.946	0.982	0.961	0.98	1	0.963	0.973	0.918	0.838
SW	6	0.657	0.533	0.769	0.813	0.755	0.558	0.48	0.564	0.874	0.809	0.686	0.525	0.544	0.704	0.832	0.707	0.679	0.622	0.777	0.77	0.707
	7	0.774	0.652	0.853	0.889	0.883	0.69	0.688	0.661	0.943	0.888	0.755	0.689	0.659	0.76	0.888	0.812	0.826	0.728	0.838	0.844	0.698
	8	0.979	0.988	0.996	0.96	0.895	0.943	0.996	0.941	0.995	0.932	0.942	1	0.945	0.977	0.958	0.968	1	0.963	0.966	0.917	0.837

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NDM Algorithm Performance

- In addition to production of demand models and derived factors DESC also has the responsibility to provide a summary of the algorithm performance in the preceding year
- Xoserve performs this role as the common demand estimation service provider
- The main algorithm performance analysis for the gas year is completed in Autumn however historically a review has also been undertaken during Spring using the recently collected data and published in Appendix 13 of the NDM report
- DESC agreed at the November 2012 meeting to only refresh the analysis once a year and to provide a repeat of the Autumn analysis in the annual NDM report
- The NDM report including Appendix 13 will be published in the UK Link Docs area

Recommendations to DESC

- Objective: Obtain DESC approval to submit NDM proposals to Transporters and Users as per UNC requirement
- Draft NDM proposals are ready to be submitted to wider industry for review
- TWG have been involved throughout the process and provided their recommendation to proceed
- Appendix 13 summarising NDM algorithm performance has been published
- DESC majority now required to proceed to next phase

Next Steps

- w/c 14th July
  - Prepare documentation and apply any final revisions
  - Xoserve publish DESC's proposals by 14th July for industry to review
- w/c 21st July
  - Users and Transporters have 5 b.ds to review and submit representations to DESC
- w/c 28th July
  - DESC meeting to review representations and consider response
  - Proposed meeting date – Wed 30th July
- w/c 4th August
  - DESC provide formal response to representations (via Xoserve)
- w/c 11th August
  - Xoserve on behalf of Transporters publish final proposals to industry (no later than 15th August) and submit interface files to key systems

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