



DESC Technical Work Group

EUC Modelling 2016/17 – Single Year Modelling Results **Alternative for EUC Band 7 and 8**

17th May 2016

Investigation of SE data in EUC Bands 7 and 8

- Monday to Thursday chart for SE revealed some outliers which have been investigated further since the results were published last week (see next slide for original chart)
- Further investigation of the 24 sample points in LDZ SE pointed to a potential error with the consumption data for 1 specific sample point
- Models have been re-run with this sample point being removed – results to follow
- Validation rules / criteria are designed to hopefully provide a balance between effective removal of sites with data issues on the one hand and excessive loss of sample numbers on the other
- Always the possibility that sites with unusual consumption data can pass validation rules, these sites will then be more evident in models with small samples
- Checks into the source data for the specific sample point will take place to see if there is any lessons to be learnt at the data cleansing stage

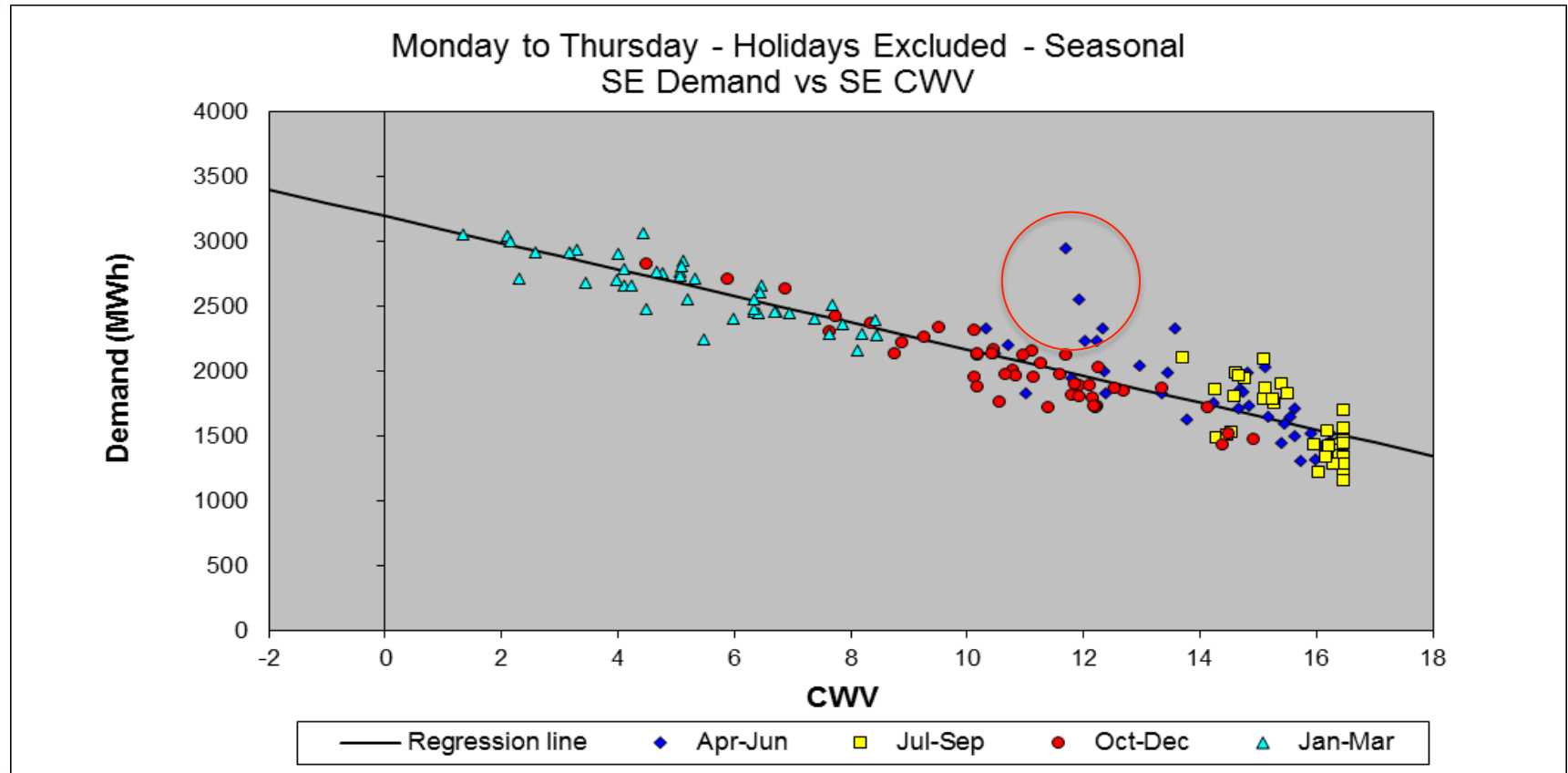
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Large NDM Modelling Results

SE LDZ, EUC Band 7 and 8: 14,650 – 58,600 MWh pa



Run	ILF	R ² (All days)	Sample
SE	48%	84%	24
SE / SO	44%	93%	49

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Large NDM Modelling Results

DECISION: Band 7 and 8: 14,650 – 58,600 MWh pa

	Run1: Individual LDZ (NW/WN Combined)			Run 2: Individual LDZ (NW/WN and WS/SW Combined)		
SC	53%	89%	33	53%	89%	33
NO	67%	84%	41	67%	84%	41
NW / WN	62%	95%	100	62%	95%	100
NE	69%	87%	61	69%	87%	61
EM	61%	95%	94	61%	95%	94
WM	57%	96%	80	57%	96%	80
EA	60%	89%	42	60%	89%	42
NT	52%	91%	46	52%	91%	46
SE	46% 48%	90% 84%	23 24	44% 44%	94% 93%	48 49
SO	41%	91%	25			
WS	56%	88%	23			
SW	60%	84%	41	59%	93%	64

Indicative Load Factor (ILF) : **R² Multiple Correlation Coefficient (All days)** : **Sample Size (Supply Points)**

- Results above for both modelling runs
- Highlighted results for SE and SE/SO combined with 'rogue' supply point removed
- TWG Decision is to select between Run 1 or Run 2

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EUC Band 7 and 8: 14,650 – 58,600 MWh pa

Run 1: Individual LDZ (NW/WN combined)

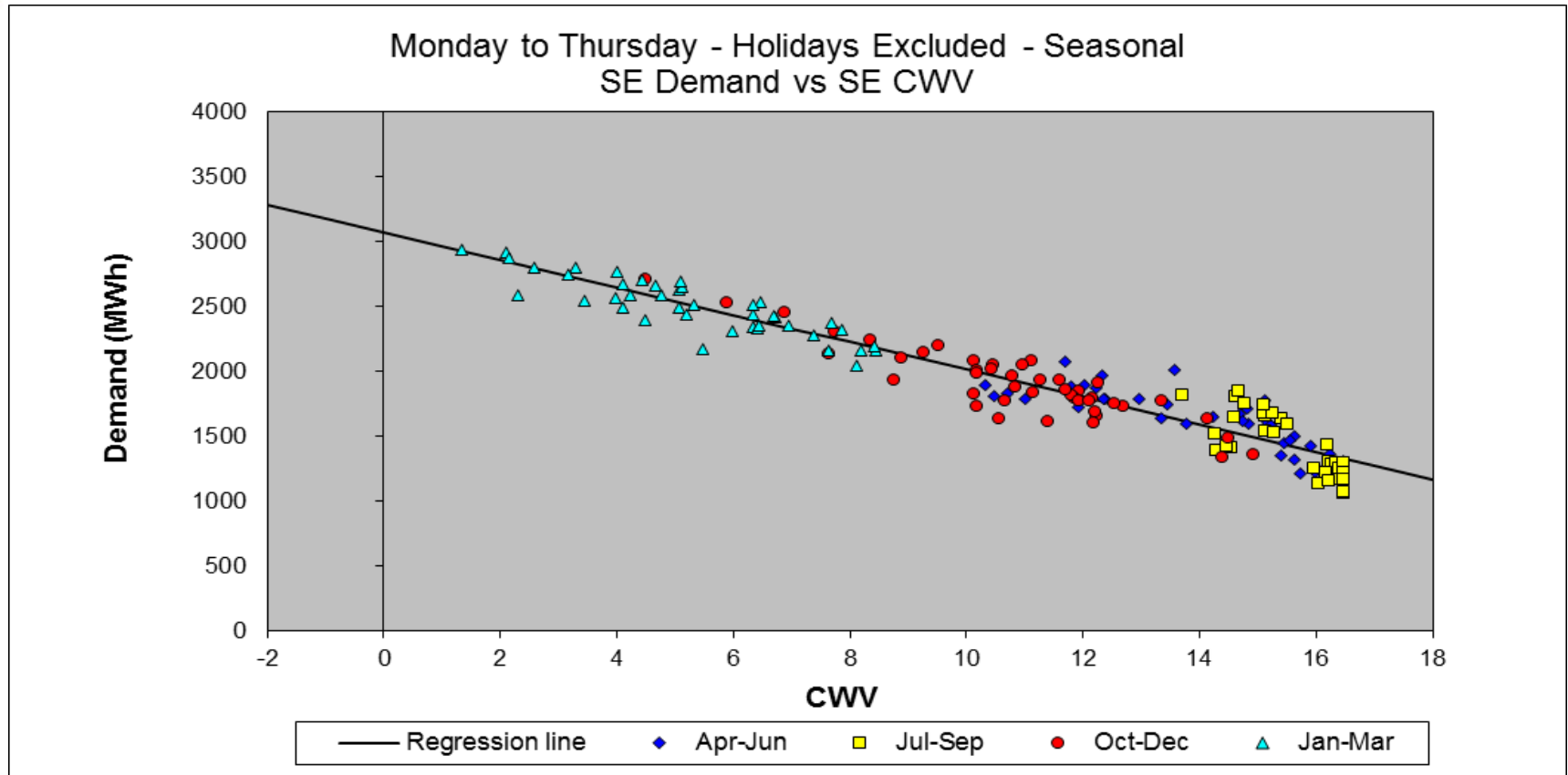
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Large NDM Modelling Results

SE LDZ, EUC Band 7 and 8: 14,650 – 58,600 MWh pa



Run	ILF	R ² (All days)	Sample
SE	46%	90%	23
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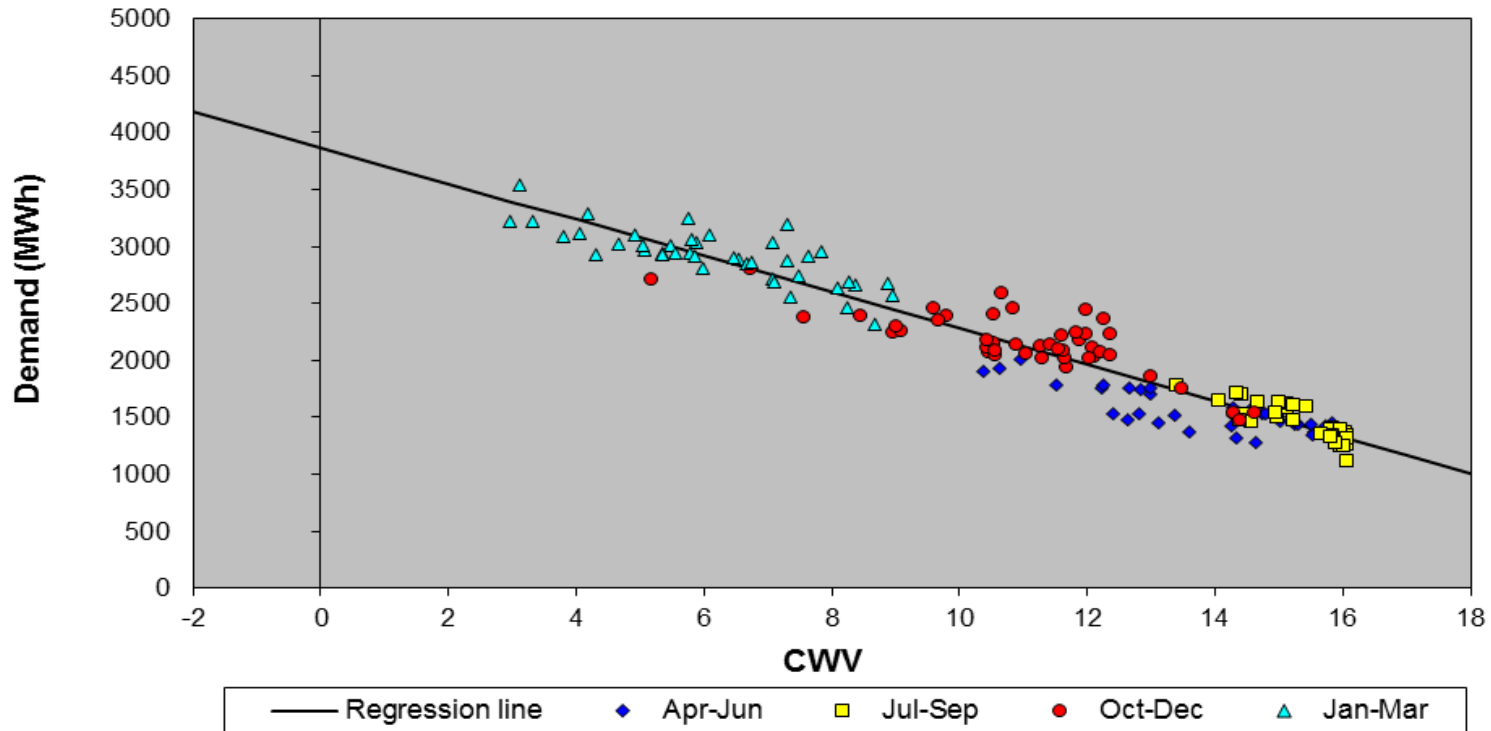


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Large NDM Modelling Results

SO LDZ, EUC Band 7 and 8: 14,650 – 58,600 MWh pa

Monday to Thursday - Holidays Excluded - Seasonal
SO Demand vs SO CWV



Run	ILF	R ² (All days)	Sample
SO	41%	91%	25
SE / SO	44%	94%	48

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EUC Band 7 and 8: 14,650 – 58,600 MWh pa

Run 2: Individual LDZ (NW/WN, WS/SW and SE/
SO combined)

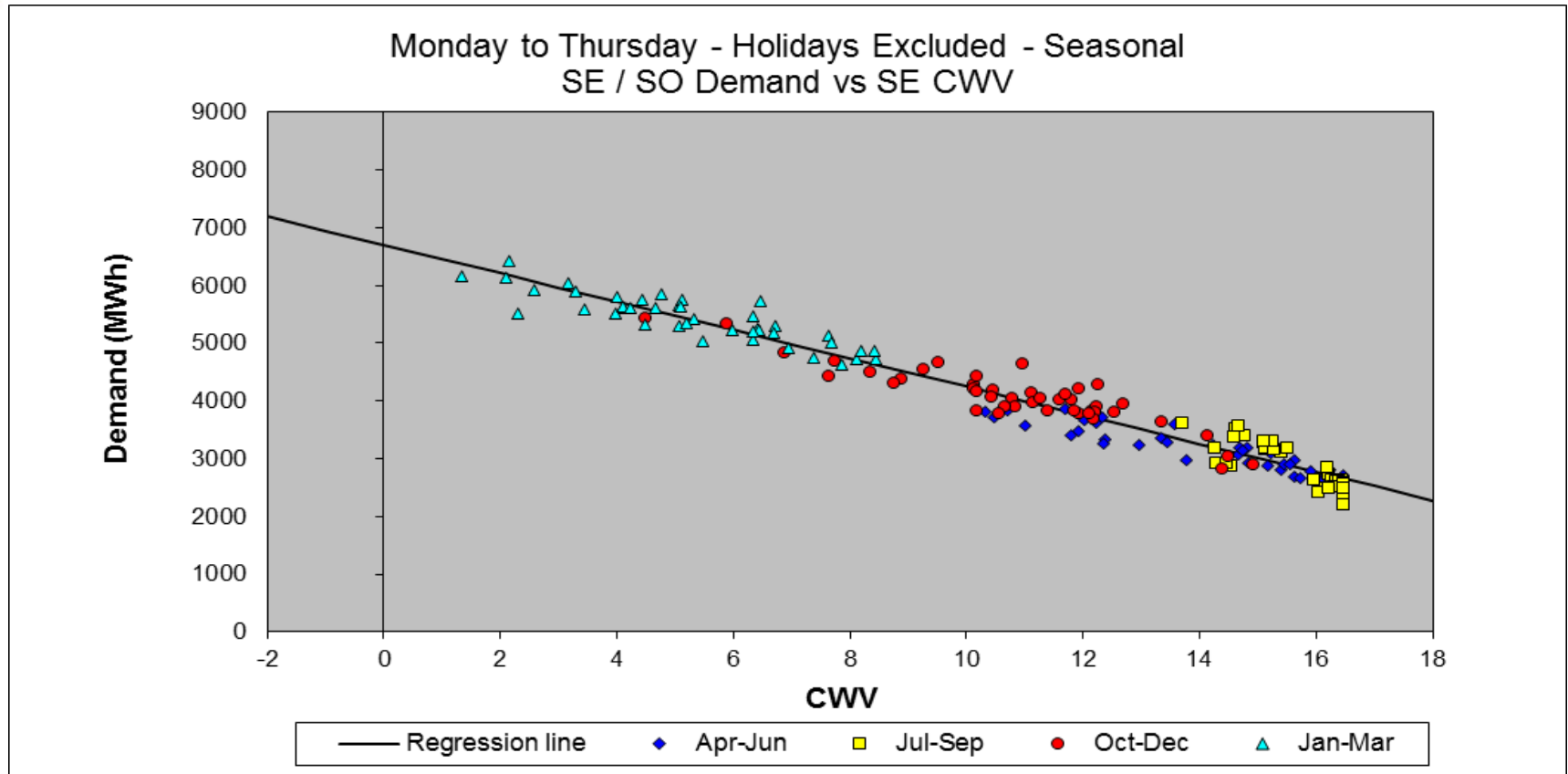
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Large NDM Modelling Results

SE LDZ, EUC Band 7 and 8: 14,650 – 58,600 MWh pa



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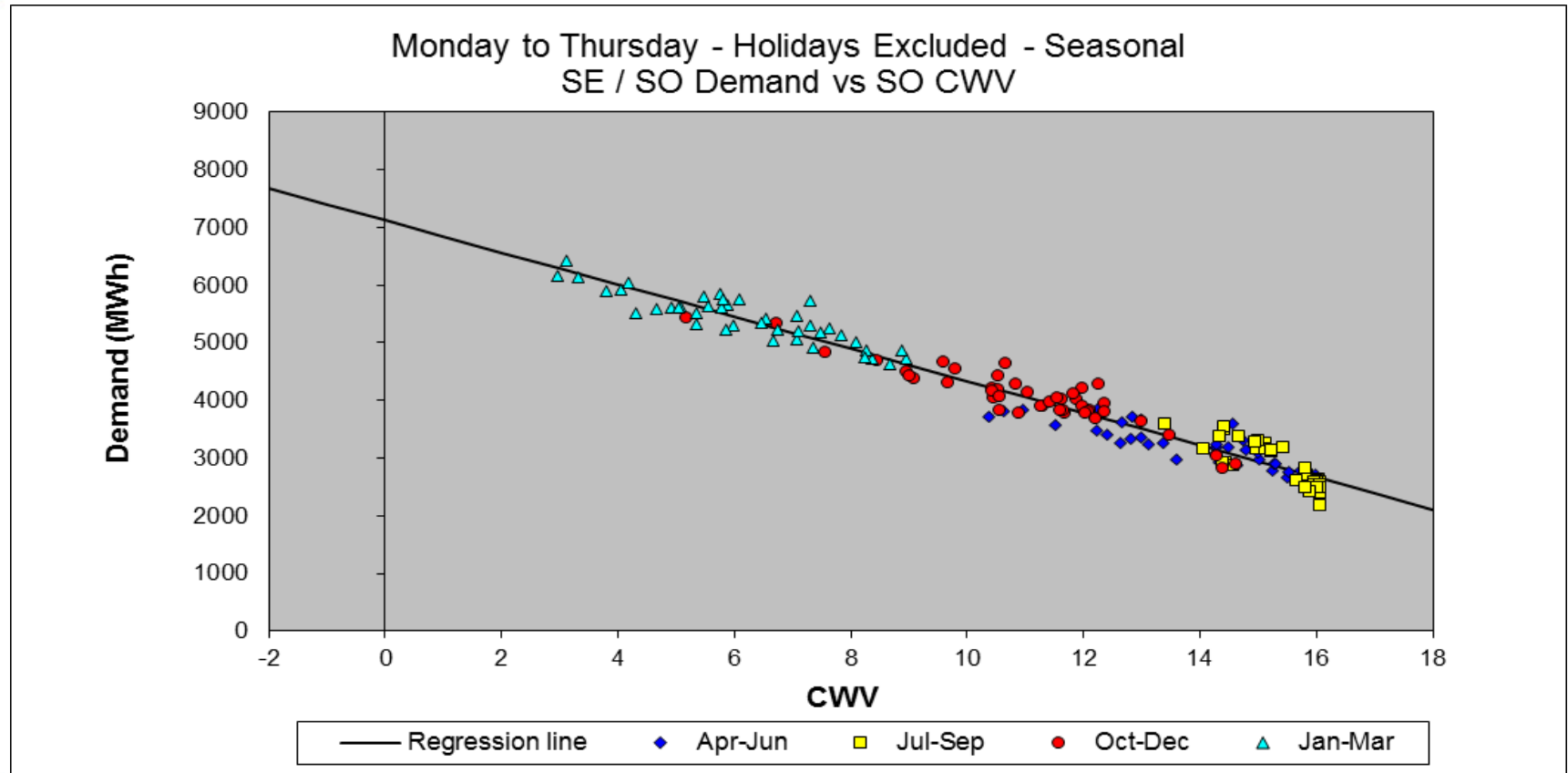
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Large NDM Modelling Results

SO LDZ, EUC Band 7 and 8: 14,650 – 58,600 MWh pa



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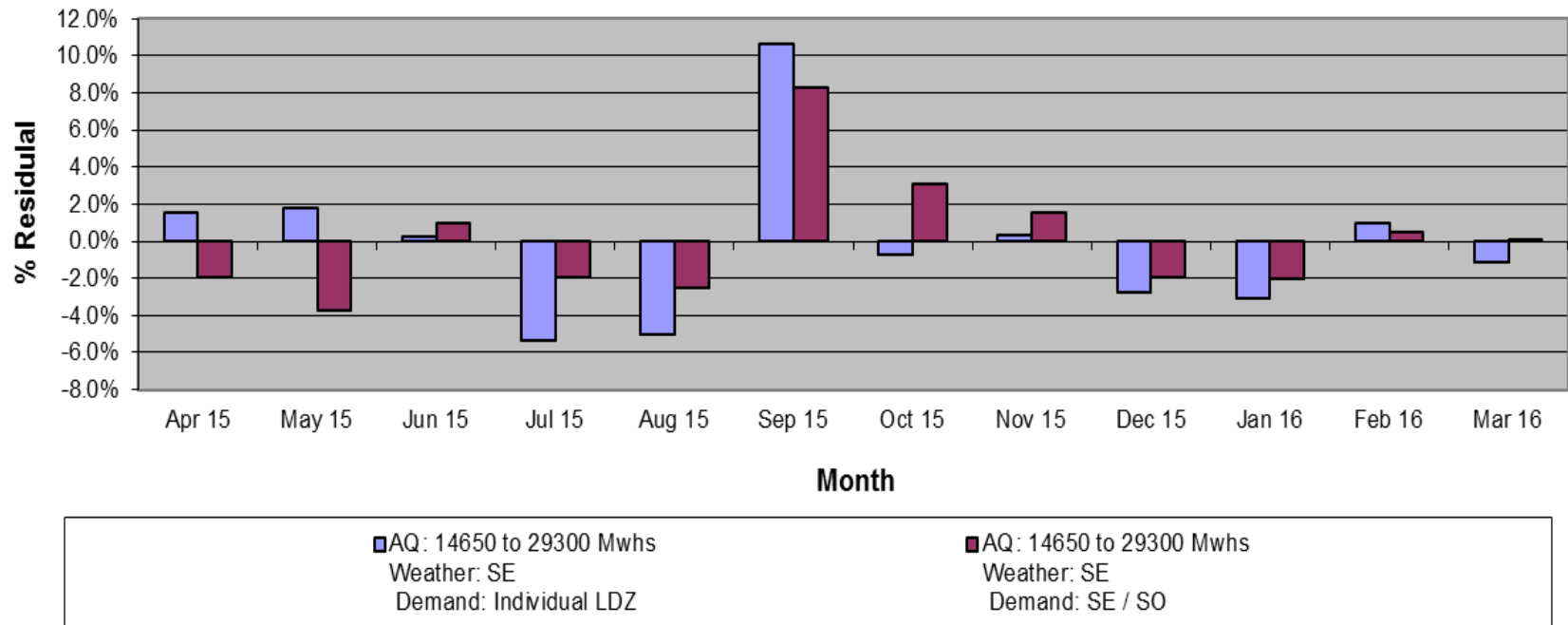


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Large NDM Modelling Results

Comparison: SE LDZ, EUC Band 7&8: 14,650-58,600 MWh pa

SE: 14650 to 58600 Consumption Band - All Days residuals as % of Demand



- Comparison of monthly residuals (all days) for the specified LDZ for the two models tested

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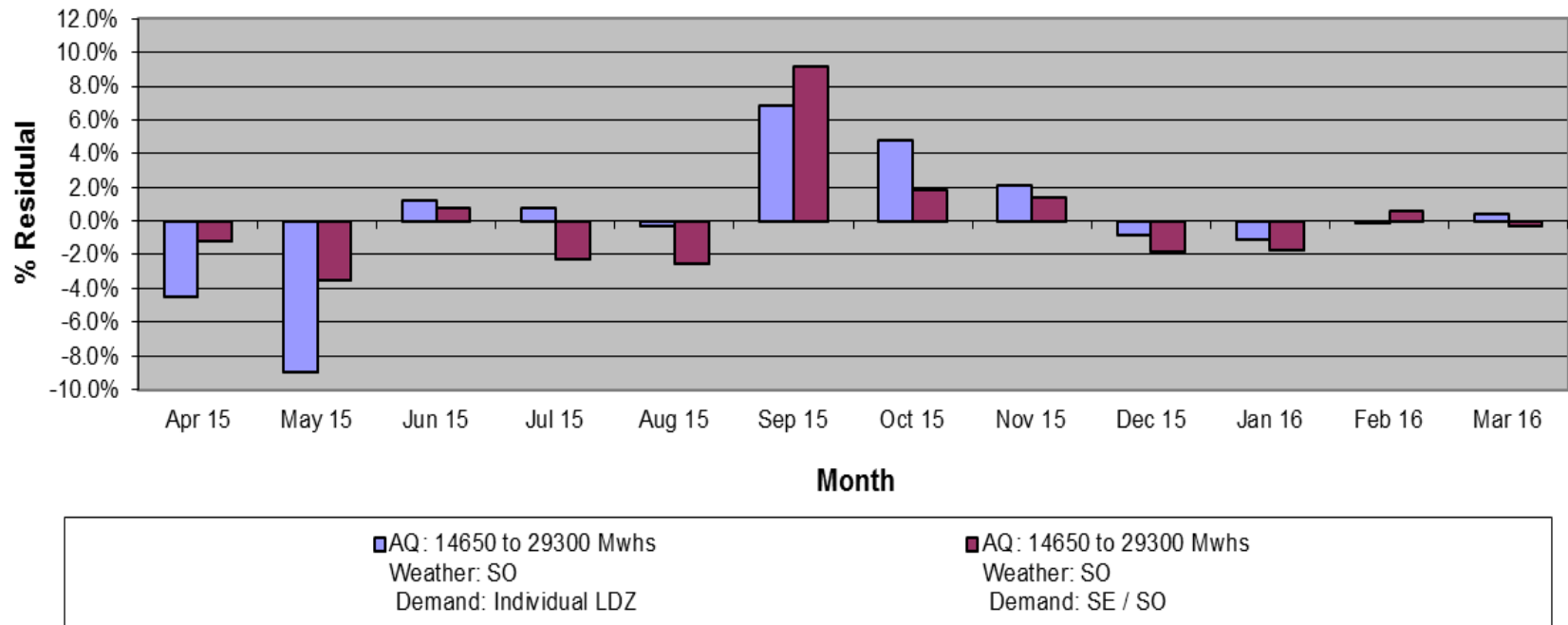


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Large NDM Modelling Results

Comparison: SO LDZ, EUC Band 7&8: 14,650-58,600 MWh pa

SO: 14650 to 58600 Consumption Band - All Days residuals as % of Demand



- Comparison of monthly residuals (all days) for the specified LDZ for the two models tested

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Options for TWG for EUC Bands 7 and 8

- Do nothing – retain results from all validated supply points
- Select model(s) for SE with rogue supply point removed from dataset

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Large NDM Modelling Results

WAR Band Analysis: 14,650 - 58,600 MWh pa

Consumption Band 7 & 8:

3 LDZ Aggregations Applied

	WAR Banding											
	0.00 – 0.318			0.318 – 0.356			0.356 – 0.431			0.431 – 1.00		
SC/NO/NW/WN	96%	63%	31	79%	87%	44	61%	92%	64	37%	96%	35
NE/EM/WM	87%	90%	50	71%	95%	91	57%	94%	60	34%	95%	34
WS/EANT/SE/SO/SW	97%	67%	42	69%	86%	45	53%	91%	60	31%	96%	53
	96%	64%	43									

Indicative Load Factor (ILF) : R² Multiple Correlation Coefficient (All days) : Sample Size (Supply Points)

- Rogue supply point was in WAR Band 1 pot – highlighted results
- Sample numbers were sufficient for a 3 LDZ group model to be run
- ILFs show clear distinction across WAR bands for all LDZs
- No TWG decision required for this EUC Band

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