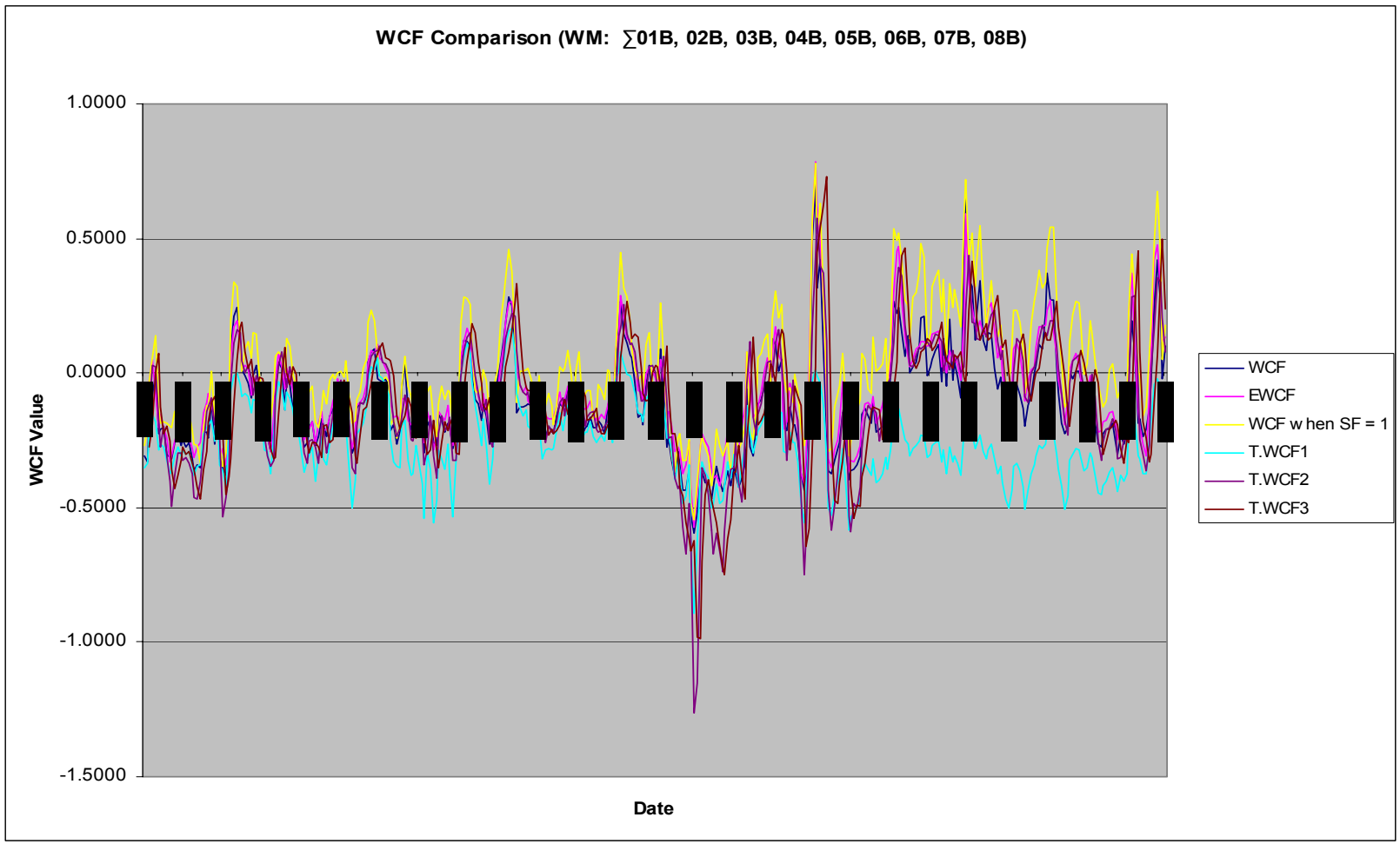
Review Group 176 Update

Feb 2008

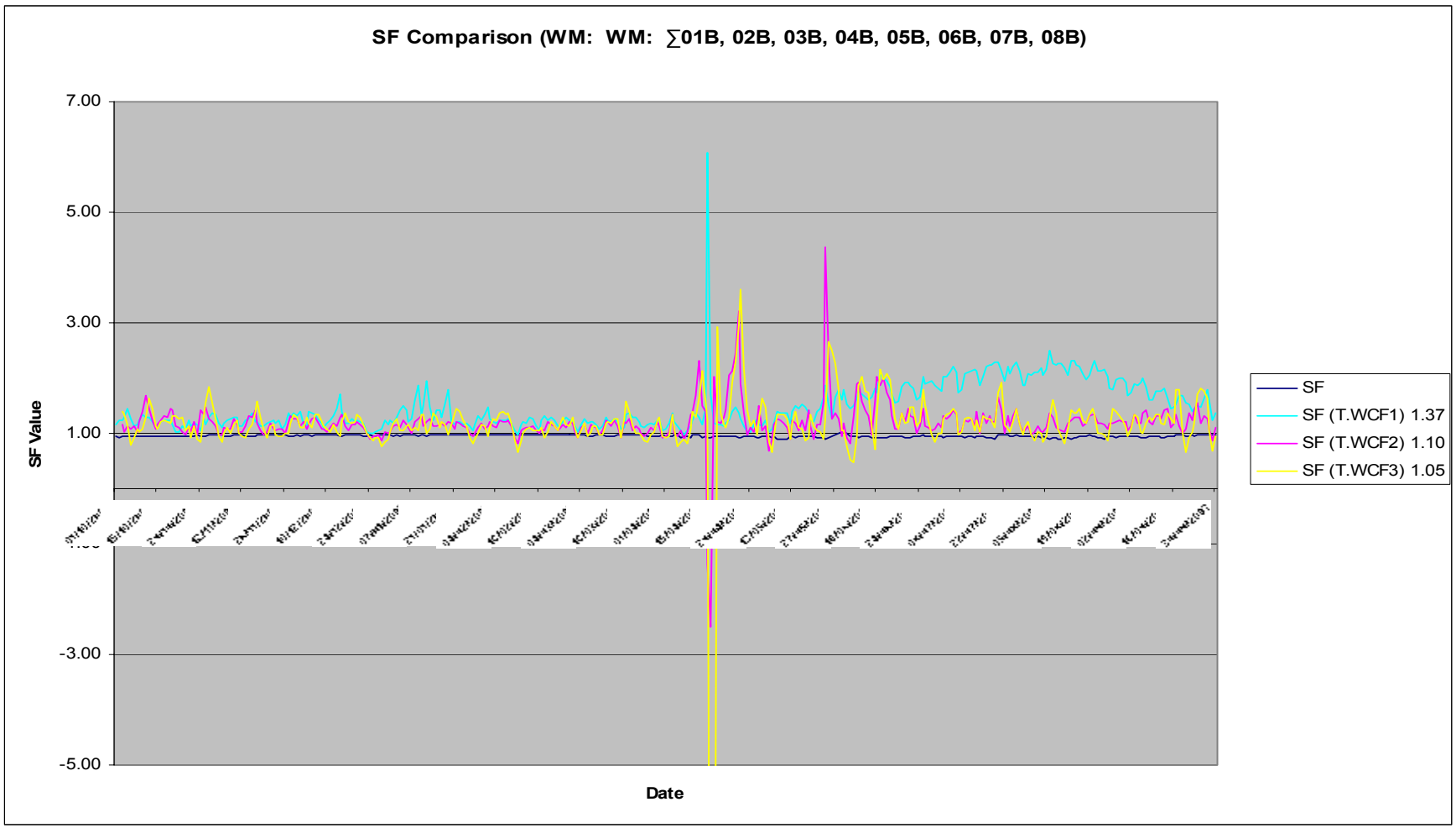
Summary to date

- Reminder on allocation
  - based on the formula defined in UNC H2.2.1
  - SPD = AQ/365 * ALP_t * (1+DAF_t*WCF_t) * SF_t
- The current WCF parameter is defined using
  - WCF_t = (ASD_t – $SNDN_t$) / $SNDN_t$
- The review group was asked to consider alternatives to SND for definition of the WCF parameter
- Two possibilities have been looked at, one using a weather based alternative, one using an AQ based alternative

Gas Year 2006/7 – Weather based WCF.



Gas Year 2006/7 – Implied SF



Issues with weather based replacement

- WCF results in weather based effects being shown in the calculated values. 'Other' effects are highlighted in the SF value which therefore becomes more volatile.

- Are we comfortable as an industry in having a Scaling Factor that varies more than the historical values have?

- LDZ level largely show similar patterns to those observed in the E01B analysis.

Modelled approach

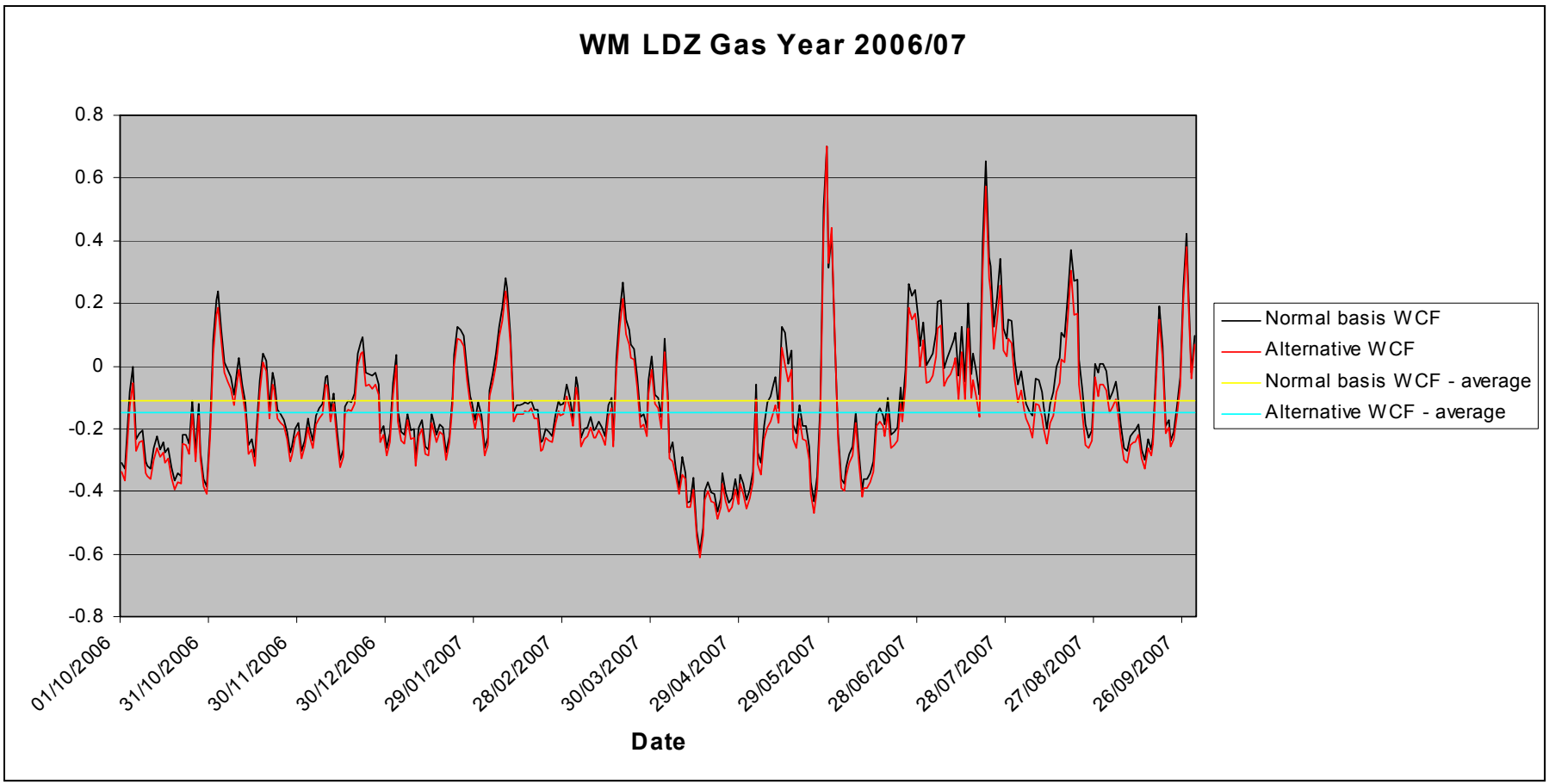
- Use WCF= $\frac{\text{(Actual LDZ NDM Demand} - \Sigma(AQ_{EUC}/365 \times ALP_t)_{LDZ})}{\Sigma(AQ_{EUC}/365 \times ALP_t)_{LDZ}}$

- i.e. Derive an approximation of Seasonal Normal Demand for the LDZ by applying the ALP for the day to total AQ/365 for each EUC

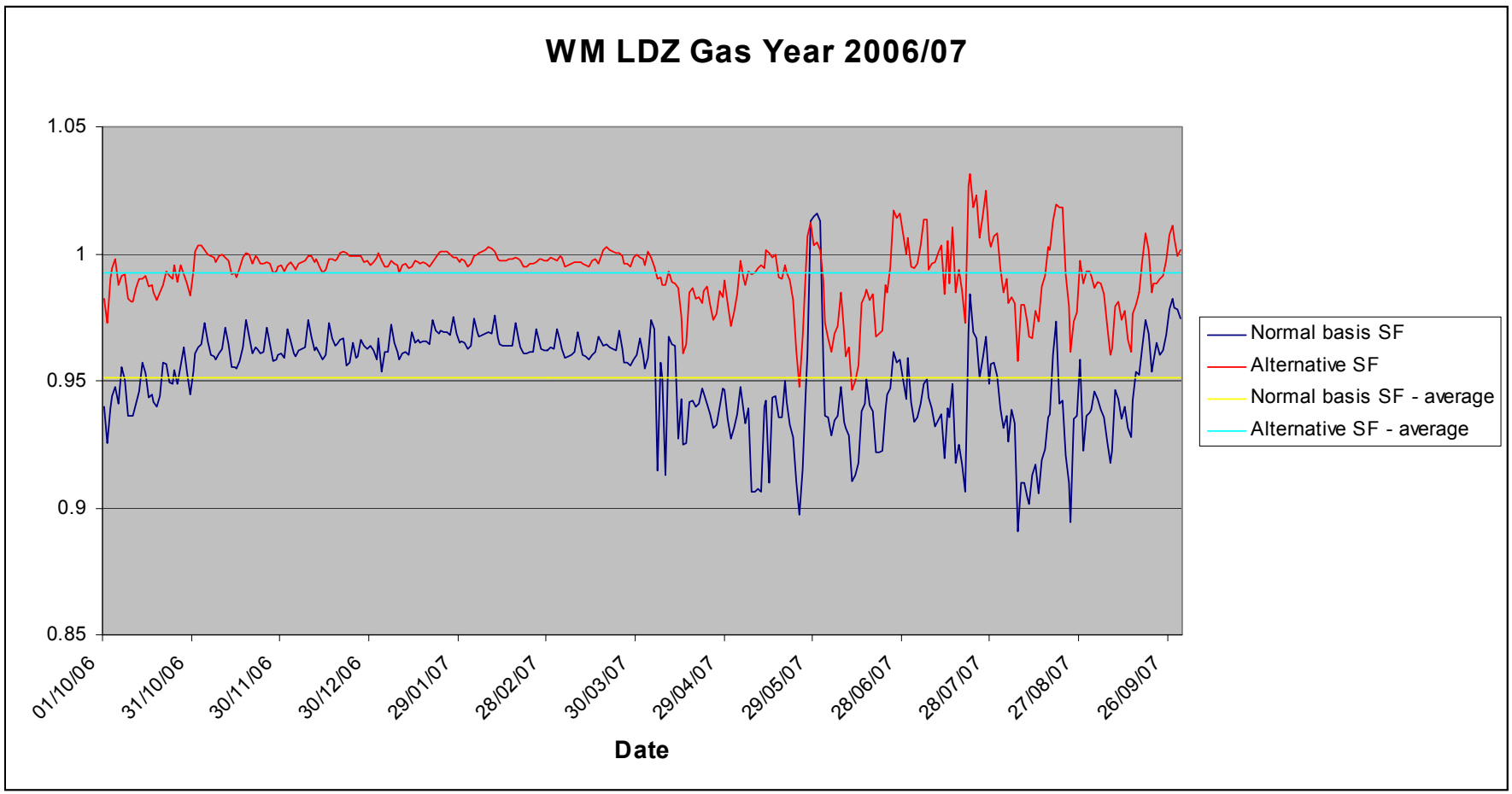
- No change made to daily DAF for this simulation

- Revised daily WCF and SF calculated using alternative view of a “normal demand”

Comparison of current WCF and proposed WCF



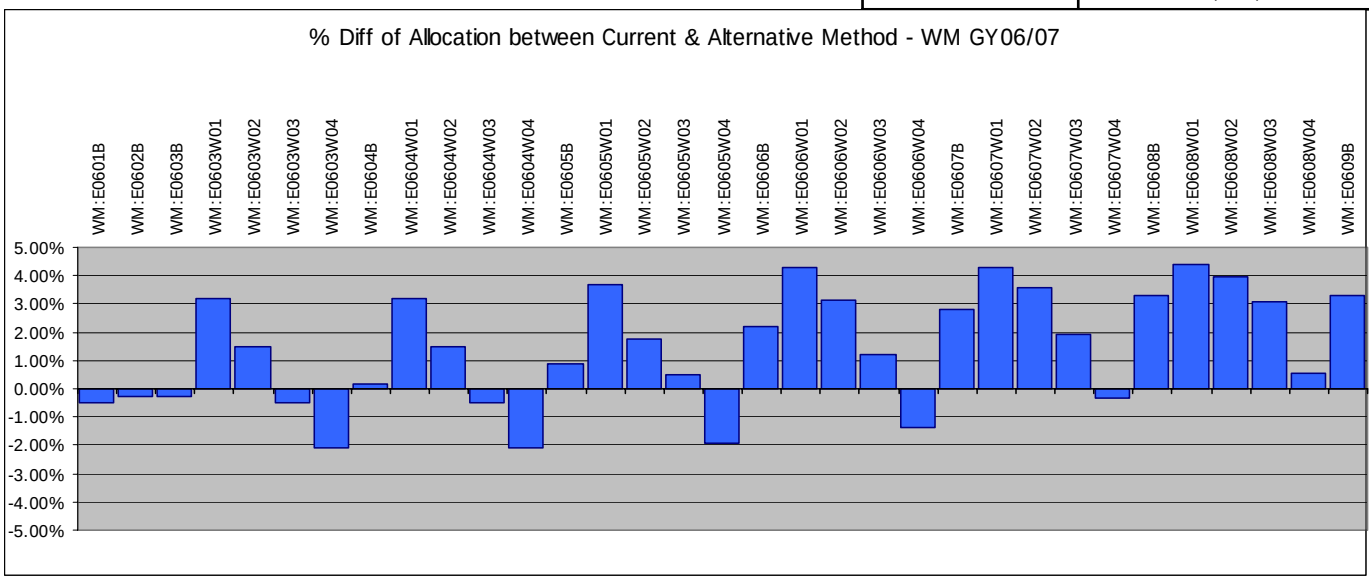
Comparison of SF under current and proposed conditions



Impact on allocation

- Figures based on WM for 2006/7

	Alternative-current	
EUC	KWh	% change
1	-145,411,352	-0.47%
2	-7,952,891	-0.29%
3	822,669	0.12%
4	7,497,935	1.07%
5	23,075,106	3.40%
6	35,624,144	5.55%
7	38,430,281	6.43%
8	38,932,418	6.73%
9	8,981,692	3.30%



Extending the analysis to look at national results

Table 1					
Consumption Range (MWh pa)	**Band**	**% Difference 2004/5 gas year**	**% Difference 2005/6 gas year**	**% Difference 2006/7 gas year**	**Average % Difference**
0 - 73.2	1	0.16%	0.09%	-0.30%	-0.02%
73.2 - 293	2	0.10%	0.00%	-0.03%	0.02%
293 - 732	3	-0.20%	-0.13%	0.32%	-0.01%
732 - 2196	4	-0.32%	-0.19%	0.52%	0.00%
2196 - 5860	5	-0.53%	-0.29%	1.03%	0.07%
5860 - 14650	6	-0.79%	-0.41%	1.57%	0.12%
14650 - 29300	7	-0.95%	-0.46%	1.94%	0.18%
29300 - 58600	8	-1.25%	-0.54%	2.46%	0.22%
Avg SF		1.02	1.01	0.95	

Way forward

- Weather only alternative emphasises the impact on demand for factors other than weather
- Scaling factor (one of the main monitors of allocation) would be increasingly variable

- Modelled approach using AQ is no more variable than current SND basis

- AQ is in the control of Shippers and is transparent in its calculation

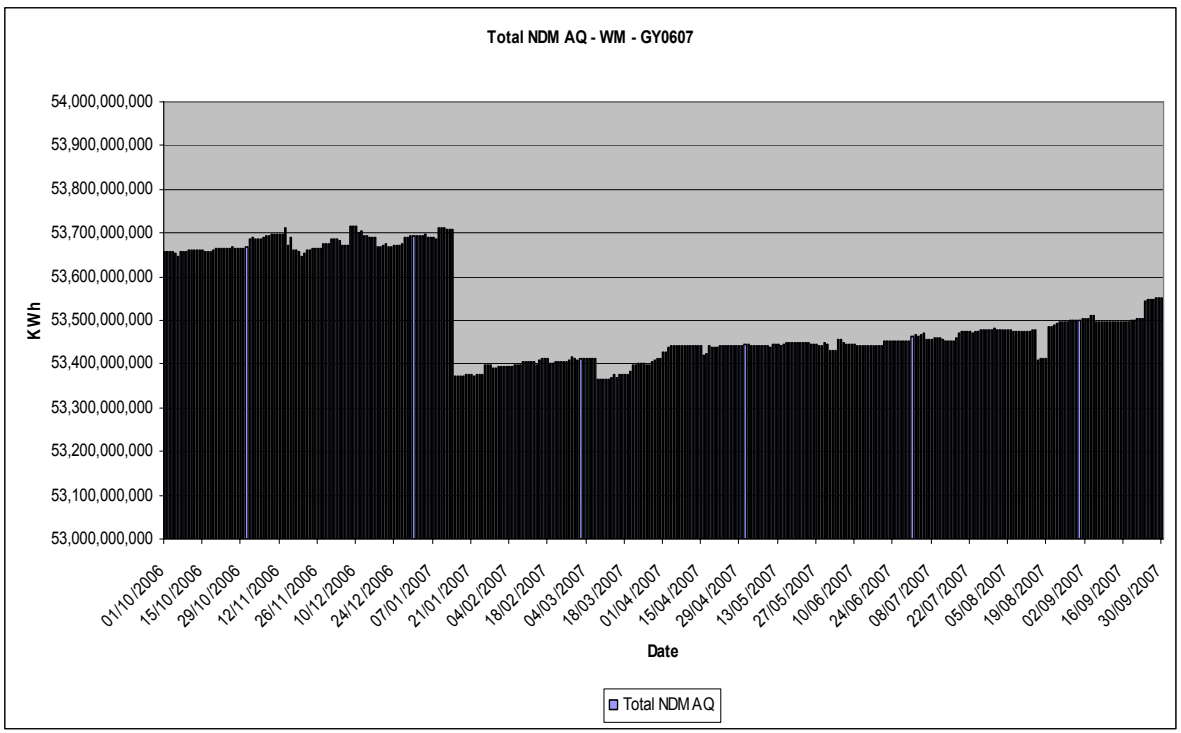
- Some questions remain on how this may be implemented…

Which AQ to use and when to update

- If WCF is redefined we need to consider whether the AQ used is updated through the year
  - Do we update the AQ values?
  - What frequency
  - Is a tolerance applied
- Although WCF cannot be published before actual demand is known DAF can be calculated and fixed
- EWCF is used in AQ calculations

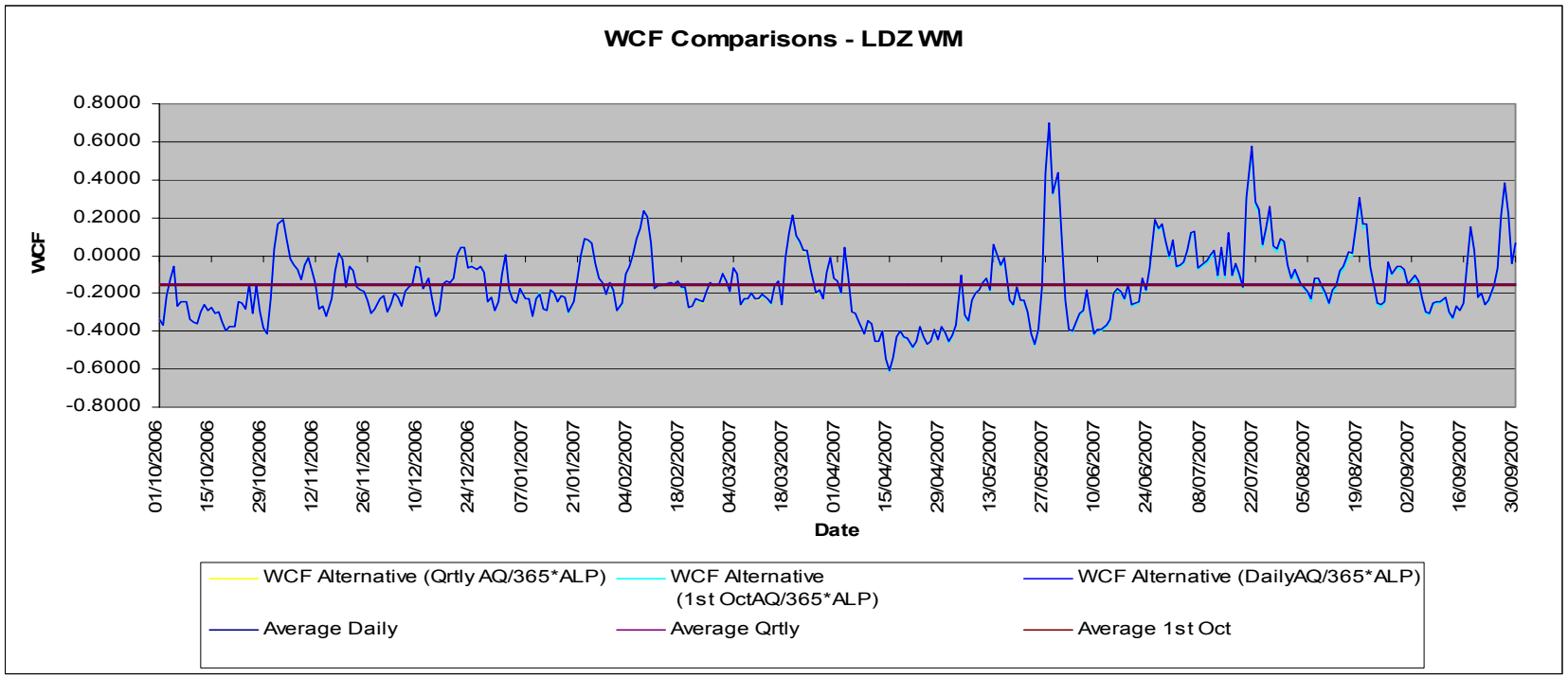
Looking at aggregate AQ changes..

- Changes are all less than 0.5% in total
- Suggest less frequent changes will not be inaccurate



	% change to 1st Oct
01/10/2006	
01/11/2006	0.05%
01/12/2006	0.05%
01/01/2007	0.07%
01/02/2007	-0.49%
01/03/2007	-0.46%
01/04/2007	-0.43%
01/05/2007	-0.40%
01/06/2007	-0.42%
01/07/2007	-0.36%
01/08/2007	-0.34%
01/09/2007	-0.28%
30/09/2007	-0.20%

How frequently to update



- Supports view updates need not be frequent
- Suggest quarterly review with update only if AQ changes are greater than 1%

Current code timescales

- H1.8.1 (b) Transporters will publish not later than 30th June Derived Factors
  - H 1.9.3 defines Derived Factors as ALP, DAF, peak load factor and peak load scaling factor

- H1.9.1 Transporters will submit to the authority the final proposals (including Derived Factors) not later than 15th August

- H1.9.2 states that the models and Derived Factors used in a gas year will be those submitted under 1.9.1

DAF Impacts

- DAF is defined as $\frac{WSENS_{EUC} / SND_{EUC}}{WSENS_{LDZ} / SND_{LDZ}}$

- would have to be recalculated in time for publication as per H1.9.3
- WSENS and SND in these cases are used from the sample and relate to known demand levels

- Historically the EUC and LDZ models are scaled to ensure they sum to the Network forecasts – this would not be done but should impact numerator and denominator equally removing the need to change the DAF

Recommendations to be agreed

- Move to using AQ/365 * ALP basis for WCF within allocation for the 2008/9 gas year
- Update WCF using AQ live on 1st October during September as “psuedo SND” within UKLink systems – no system change required
- Review AQ changes on a quarterly basis and amend the “psuedo SND” if aggregate AQ changes by more than 1% within an LDZ
- Calculate DAF using sample data but no scaling to Network forecast and fix for the year

Code Changes

- Only one reference will need changes in section H

- **H2.5**

  Amend WCF formula as

$$WCF_t = \frac{ASD_t - (\sum AQ_{EUC} / 365 * ALP_t)_{LDZ}}{(\sum AQ_{EUC} / 365 * ALP_t)_{LDZ}}$$

  Where for Day t:

  AQ_{EUC} is the aggregate Annual Quantity for the End User Category, fixed at 1st October for the relevant gas year and amended by quarterly review where the total AQ within the EUC changes by more than 1%

  $\sum_{LDZ}$ is the summation over the relevant LDZ

  Remove reference to $SNDN_t$