Transporters' Response To Representations

NDM Profiling 2010/11

23rd July 2010

Consultation Process: Current Timetable

- Publication of NDM Proposals — by 30th June

- Users to Submit Representations — by 15th July

- Review of Representations / Consultation as appropriate — 16th July to 15th August
  (DESC Meeting 23rd July to consider representations)

- Final Proposals Submitted (date x) — by 15th August

- Transporter or User Application for Disapproval to Ofgem (date y) — by 5 business days of date x

- Ofgem Determination (if required) — by 5 business days of date y

- System users were invited to submit representations on the NDM proposals
  - 3 Representations received – Shipper E.ON, SSE and SCP
  - The points / issues raised within scope of consultation considered in turn
  - Document to be published on J.O website providing more detail

Transporters' Response: Representation Topics

- The scope of the consultation covers the proposed EUC definitions and demand models and their derived factors for the defined EUCs (ALP and DAF profiles and EUC Load Factors)

- This consultation does not cover the methodology used to derive the seasonal normal values of the composite weather variable or any matter not listed above

- <u>In scope:</u>

  - ALP / DAF behaviour around holiday periods
  - SND / WSENS values from agg. NDM demand model
  - Scaling Factor commentary
  - WAR Bands

- <u>Out of Scope:</u>

  - Seasonal Normal Methodology

Transporters' Response: Representation

- **REPRESENTATION:**
  December 20th has a much higher ALP and therefore anticipated load than subsequent days in this week. Given that all these days are in the run up to Christmas it is not expected that there will be such a step change as produced here.

  A similar impact is seen in reverse on January 4th where ALP and DAF levels are low despite this day not being a bank holiday next year

- Transporters Response:
- For EUCs where holiday codes are applied they are based on mechanistic rules (starts 21st December and ends on second new year bank holiday in Scotland)
  - In 2010/11 the holiday codes for Christmas and new year period run from 21st December to the 4th January 2011
    - Holiday Code 1: 25th December, 26th December, 1st January
    - Holiday Code 2: 24th December, 27th December to 31st December, 2nd January
    - Holiday Code 3: 21st, to 23rd December, 3rd January, 4th January

- For this reason some EUC bands show a higher ALP on 20th Dec

- However, please note for the 01B EUCs which comprise approx 74% of the NDM Load, holiday factors are not applied
  - ALPs for 20th Dec are lower than rest of the week and the ALPs for January 4th are similar to those for Jan 5th

Transporters' Response: Representation

- The higher ALP values on Dec 20th compared to subsequent days for non '01B' EUCs are due to the holiday factors for holiday code 3 being applied to those subsequent days.

- No subjective judgement is applied when assigning days to holiday codes each year. Analysis is carried out periodically looking at the rules used to assign days to holiday codes. The rules defined were based on statistical evidence.

- The last time Dec 20th fell on a Monday was in 2004. EUC demand models for that year were used in the analysis from which the current holiday code rules were derived – No evidence was found in that review to assign Dec 20th to a holiday day

- Comparison has been made between the Scaling Factor on Dec 20th 2004 and the average Scaling Factor for days assigned to particular holiday codes and other December non-holiday days

Transporters' Response: Representation

LDZ	December 20th	Holiday Code 1 Average	Holiday Code 2 Average	Holiday Code 3 Average	December Non-Hol Average	December 22nd
SC	1.0333	1.0404	1.0619	1.0504	1.0881	1.0505
NO	1.0216	1.0274	1.0260	1.0155	1.0823	1.0153
NW	1.0064	1.0049	0.9977	0.9902	1.0557	0.9900
NE	0.9820	1.0165	1.0282	1.0047	1.0458	1.0044
EM	1.0157	1.0185	1.0380	1.0232	1.0696	1.0235
WM	1.0046	1.0074	1.0320	1.0130	1.0626	1.0127
WN	1.0913	1.1162	1.1106	1.1059	1.1616	1.1051
WS	1.0066	1.0139	1.0054	0.9952	1.0581	0.9946
EA	1.0233	1.0187	1.0230	1.0045	1.0753	1.0059
NT	0.9981	0.9666	1.0014	0.9876	1.0514	0.9886
SE	0.9839	0.9728	0.9745	0.9754	1.0333	0.9774
SO	1.0386	1.0348	1.0320	1.0239	1.0937	1.0242
SW	1.0009	1.0015	1.0040	0.9900	1.0665	0.9890
AVG	1.0159	1.0184	1.0257	1.0138	1.0726	1.0139

- Note: The green cells represent where the SF for 20th Dec is better than the value in the cell (i.e. closer to 1) and red cells where it is worse (i.e. further away from 1)

- Analysis does not indicate 20th Dec 2004 was treated inappropriately and therefore no indication that changes to holiday codes for 20th Dec 2010 need to be considered. Note: 22nd Dec was the start of the holiday period in the 2004/05 models.

Transporters' Response: Representation

- 4th Jan 2011 is a bank holiday in Scotland and for reasons stated in Spring Approach document it is necessary for 4th Jan 2011 to be classed as a holiday in all LDZs.

- Requirement for EUC model aggregations is reason for this approach

- 4th January 2005 was the last equivalent occurrence of this pattern of calendar days – i.e. where 4th Jan was end date for holiday period

- A similar comparison has been made between the SF on 4th Jan 2005 and the average SF for days assigned to particular holiday codes

- Table on next slide displays results – Green cells indicate where 4th Jan 2005 is better (closer to 1) than the value in the cell and red where 4th Jan 2005 is worse (further away from 1)

Transporters' Response: Representation

LDZ	January 4th	Holiday Code 1 Average	Holiday Code 2 Average	Holiday Code 3 Average	December Non-Hol Average	January 3rd
SC	1.0503	1.0404	1.0619	1.0504	1.0881	1.0505
NO	1.0157	1.0274	1.0260	1.0155	1.0823	1.0157
NW	0.9905	1.0049	0.9977	0.9902	1.0557	0.9905
NE	1.0042	1.0165	1.0282	1.0047	1.0458	1.0046
EM	1.0243	1.0185	1.0380	1.0232	1.0696	1.0238
WM	1.0132	1.0074	1.0320	1.0130	1.0626	1.0134
WN	1.1065	1.1162	1.1106	1.1059	1.1616	1.1065
WS	0.9950	1.0139	1.0054	0.9952	1.0581	0.9957
EA	1.0056	1.0187	1.0230	1.0045	1.0753	1.0056
NT	0.9890	0.9666	1.0014	0.9876	1.0514	0.9897
SE	0.9764	0.9728	0.9745	0.9754	1.0333	0.9775
SO	1.0247	1.0348	1.0320	1.0239	1.0937	1.0247
SW	0.9896	1.0015	1.0040	0.9900	1.0665	0.9901
AVG	1.0142	1.0184	1.0257	1.0138	1.0726	1.0145

- Analysis does not indicate 4th Jan 2005 was treated inappropriately
- Scaling Factor values for 3rd and 4th Jan 2005 were very similar indicating that it was not inappropriate to give 4th Jan the same holiday code as the 3rd
- No indication that 4th Jan 2010 should also not be treated as a holiday

XOserve

Transporters' Response: Representation

- **REPRESENTATION:**
  Again there are issues with not showing a bank holiday impact for December 27th and 28th, a comment we made for the 28th last year and expected to be improved for this year. We suggest applying a scaling to these days to drop their level compared to the three working days following in ALP and DAF

- Transporters Response:

- A response was given to last years representation with regards to the holiday factors applied to 28th December 2009

- No evidence has been received by the Transporters' to support the claims made about December 28th 2009

- Material published last week addressing Action DE0202 provided analysis of SF for 28th Dec 2009 - Results of this analysis showed:
  - Comparison of SF values on 28th Dec in each LDZ was not materially different
  - Comparison of RMS deviation of SF from 1.0 on 28th December showed on average that results for 28th Dec were better in most LDZs
  - Both sets of results indicate that treatment of 28th Dec 2009 was not inappropriate

Transporters' Response: Representation

- In addition to the analysis carried out for DE0202 a comparison has been made between the SF on 28th Dec 2009 and the average SF for days assigned to particular holiday codes and other non December holiday days

- Results do not indicate December 28th was treated inappropriately

LDZ	December 28th	Holiday Code 1 Average	Holiday Code 2 Average	Holiday Code 3 Average	December Non-Hol Average	December 29th
SC	1.0008	0.9990	1.0002	1.0007	0.9966	1.0009
NO	0.9974	0.9975	0.9974	0.9969	0.9979	0.9973
NW	1.0024	1.0016	1.0028	1.0049	0.9991	1.0028
NE	0.9998	0.9993	0.9999	1.0015	0.9978	1.0000
EM	0.9998	0.9990	1.0000	1.0015	0.9975	1.0002
WM	1.0016	1.0005	1.0014	1.0022	1.0010	1.0017
WN	0.9948	0.9957	0.9947	0.9934	0.9945	0.9944
WS	0.9992	0.9988	0.9991	0.9995	0.9988	0.9992
EA	1.0024	1.0016	1.0025	1.0042	1.0011	1.0027
NT	0.9997	0.9995	0.9997	1.0003	1.0006	0.9996
SE	0.9993	0.9984	0.9992	1.0015	0.9979	0.9995
SO	1.0002	0.9994	1.0001	1.0011	0.9987	1.0002
SW	0.9968	0.9969	0.9967	0.9958	0.9975	0.9967
AVG	0.9996	0.9990	0.9995	1.0003	0.9984	0.9996

Transporters' Response: Representation

- <u>Transporters' Summary:</u>

- Based on the analysis there was no evidence to suggest that the holiday codes have been applied inappropriately

- The sum of ALPs for each EUC needs to add up to 365 and a change to the value of an ALP on one or two days would result in a change to the ALP values on all days.

- Holiday codes are defined in advance of the Spring analysis so holiday factors can be calculated from the demand models. Changes to the holiday codes could result in changes to Monday – Thurs model coefficients from which all weekend and holiday factors are calculated from.

- As requested in representation Transporters will carry out a review of holiday codes in Autumn 2010.
    - Following consultation with DESC any changes to the rules used to assign holiday codes arising from review will be implemented in the Spring 2011 analysis – more details to follow

- For these reasons Transporters do not propose to apply adjustments to the profiles on 20th December 2010, 27th and 28th December 2010 and 4th January 2011

Transporters' Response: Representation Topics

- ## In scope:

  - ALP / DAF behaviour around holiday periods
  - SND / WSENS values from agg. NDM demand model
  - Scaling Factor commentary
  - WAR Bands

- ## Out of Scope:

  - Seasonal Normal Methodology
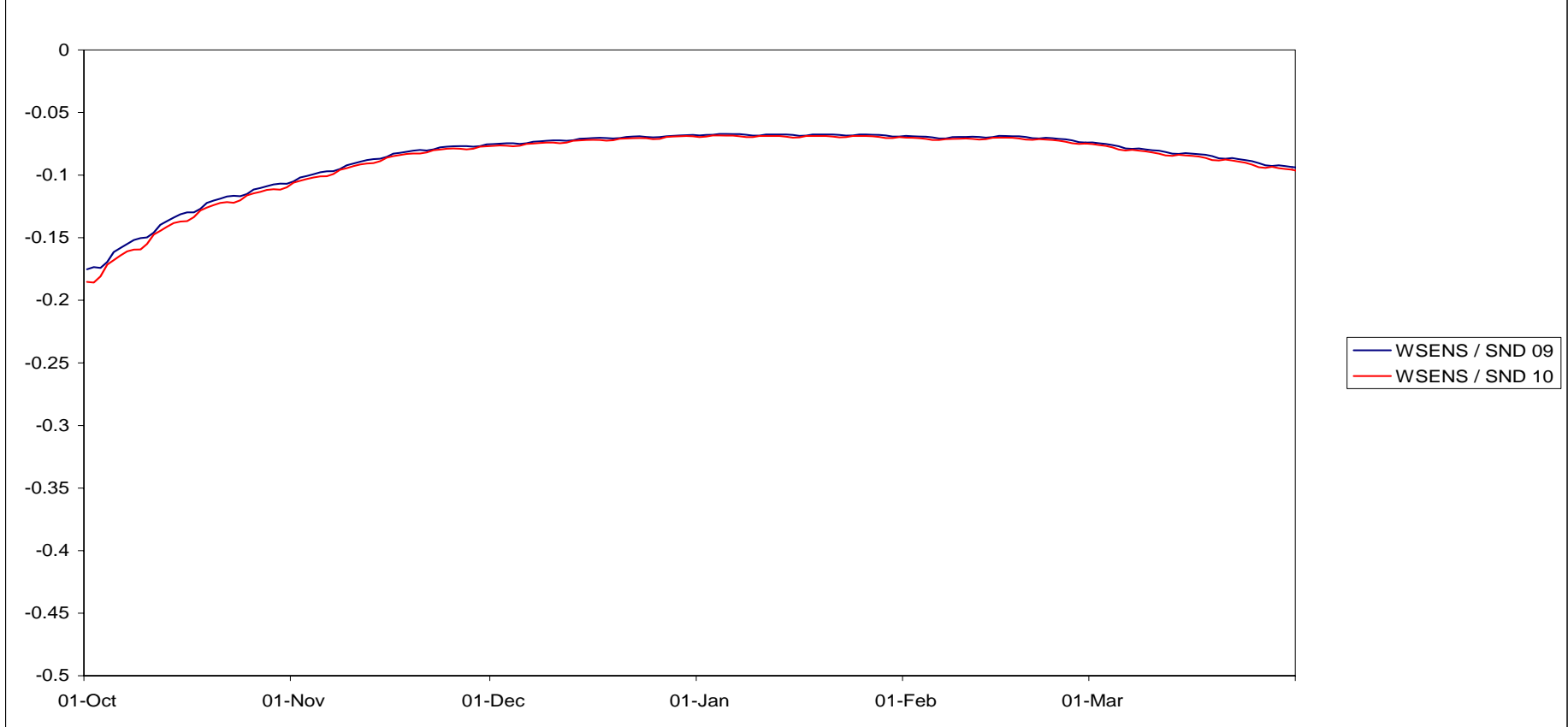
Transporters' Response: Representation

- **REPRESENTATION:**
  WN seems to be missing Christmas shape at all, and a number of LDZ are not showing an anticipated bank holiday effect for 3rd Jan which should be evident

- Transporters Response:

- This comment relates to the aggregate NDM demand models – the approach taken is similar to that applied to EUC demand modelling – the data reflects the values of the holiday factors derived

- The historical demand modelling process came out with holiday factors for holiday codes 2 and 3 statistically not different from 1.0 for WN LDZ

- Holiday factor for holiday code 1 was below 1.0 for WN resulting in reductions in SND and WSENS for 25th,26thDecember and 1st January.

- In 3 other LDZs (SC, NO and SW) the holiday factor for holiday code 3 was also not different from 1.0

- These results could be due to the predominant effect of domestic demand – which does not display reductions in demand in holiday periods.

Transporters' Response: Representation

- Overall the aggregate NDM demand models have little impact on demand attribution – they are required for the denominator of the DAF formula only

- The WSENS and SND values from these models have no significance apart from their use in computing DAFs – it is only the ratio that is required

- WSENS is proportional to SND (not independent of SND) and the value of the winter holiday factor applied on a particular day makes little difference to the <u>ratio</u> of WSENS/SND on that day

- The following chart compares the ratio WSENS / SND for WN LDZ over the winter period for this years aggregate NDM model with the ratio from last years model (adjusted to the revised weather basis)

- Chart also provided for NW LDZ where historical model from aggregate NDM demand resulted in a reduction for holiday codes 1,2 and 3.

Transporters' Response: Representation

Ratio WSENS / SND for models for GY 2009/10 (on new weather basis) and GY 2010/11 for WN LDZ

- It can be seen that the ratio for this year is very similar to last years and that there is little difference in the ratio between holiday and non-holiday days

Transporters' Response: Representation

Ratio WSENS / SND for models for GY 2009/10 (on new weather basis) and GY 2010/11 for NW LDZ
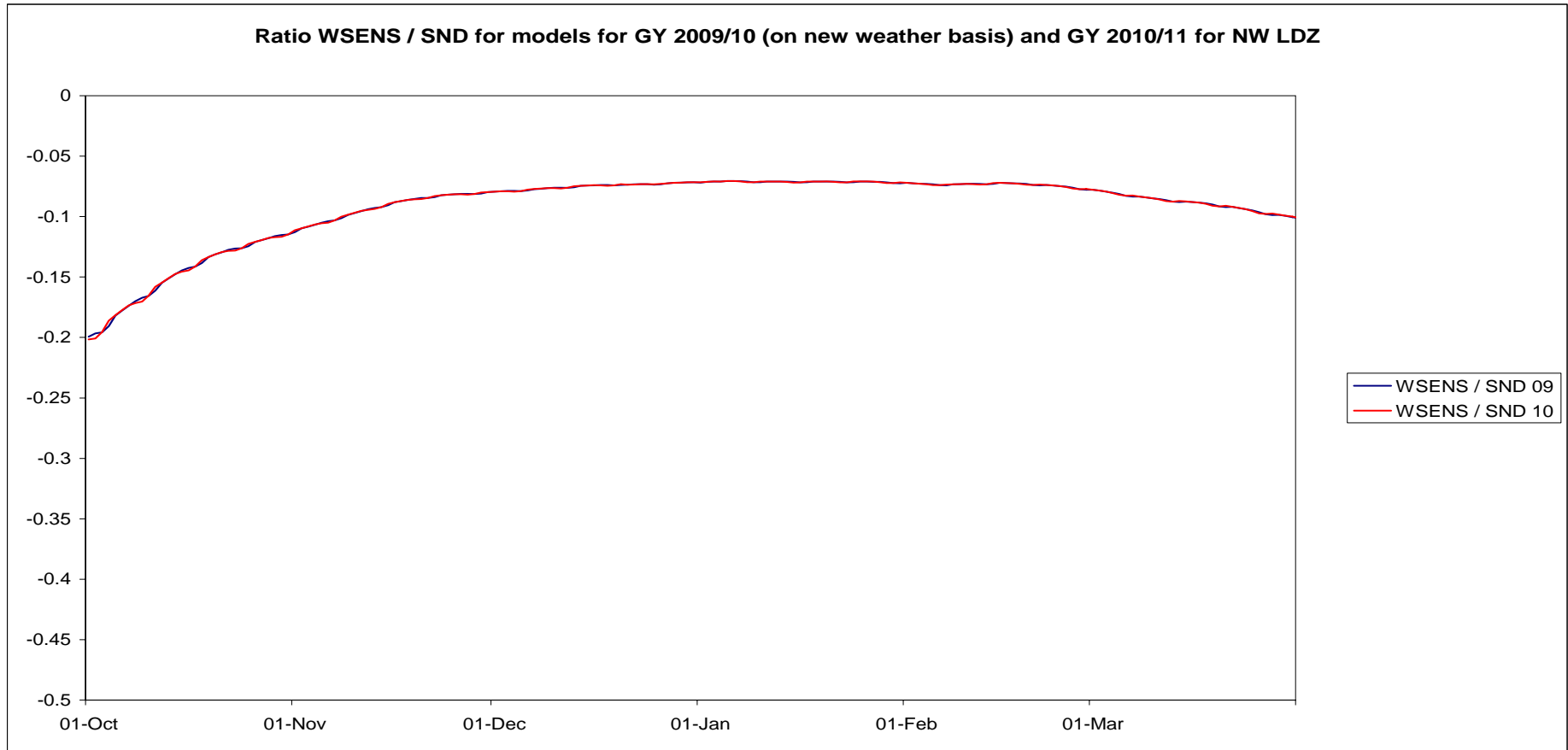
- This chart represents the ratio for NW where holiday reductions exist for codes 1, 2 and 3
- It can be seen that the ratio for this year is very similar to last years and that there is little difference in the ratio between holiday and non-holiday days

Transporters' Response: Representation

- **REPRESENTATION:**
  Late May bank holiday is not present in a greater number of LDZ than we queried last year. Given the poor behaviour of profiles during May we would expect greater sensitivity of the analysis in this area to try and make improvements. Last year the feedback stated the impact was not present in the national data. Our concern is that the behaviour is evident in the ALP and should therefore be present consistently. If behaviour is evident in the sample but not the population this throws doubt on the applicability of the sample which would be a significant cause for concern

- <u>Transporters Response:</u>

- This comment relates to the aggregate NDM demand models – the historical demand modelling process came out with holiday factors for holiday code 9 that were statistically not different from 1.0 for 9 LDZs and for holiday code 10 not different from 1.0 for 1 LDZ.
    - Holiday Code 9: 29th and 30th May, 4th June
    - Holiday Code 10: 31st May, 1st to 3rd June

- These results could be due to the predominant effect of domestic demand which does not display reductions in demand in holiday periods
- For the domestic EUCs there is no reduction applied to holiday periods
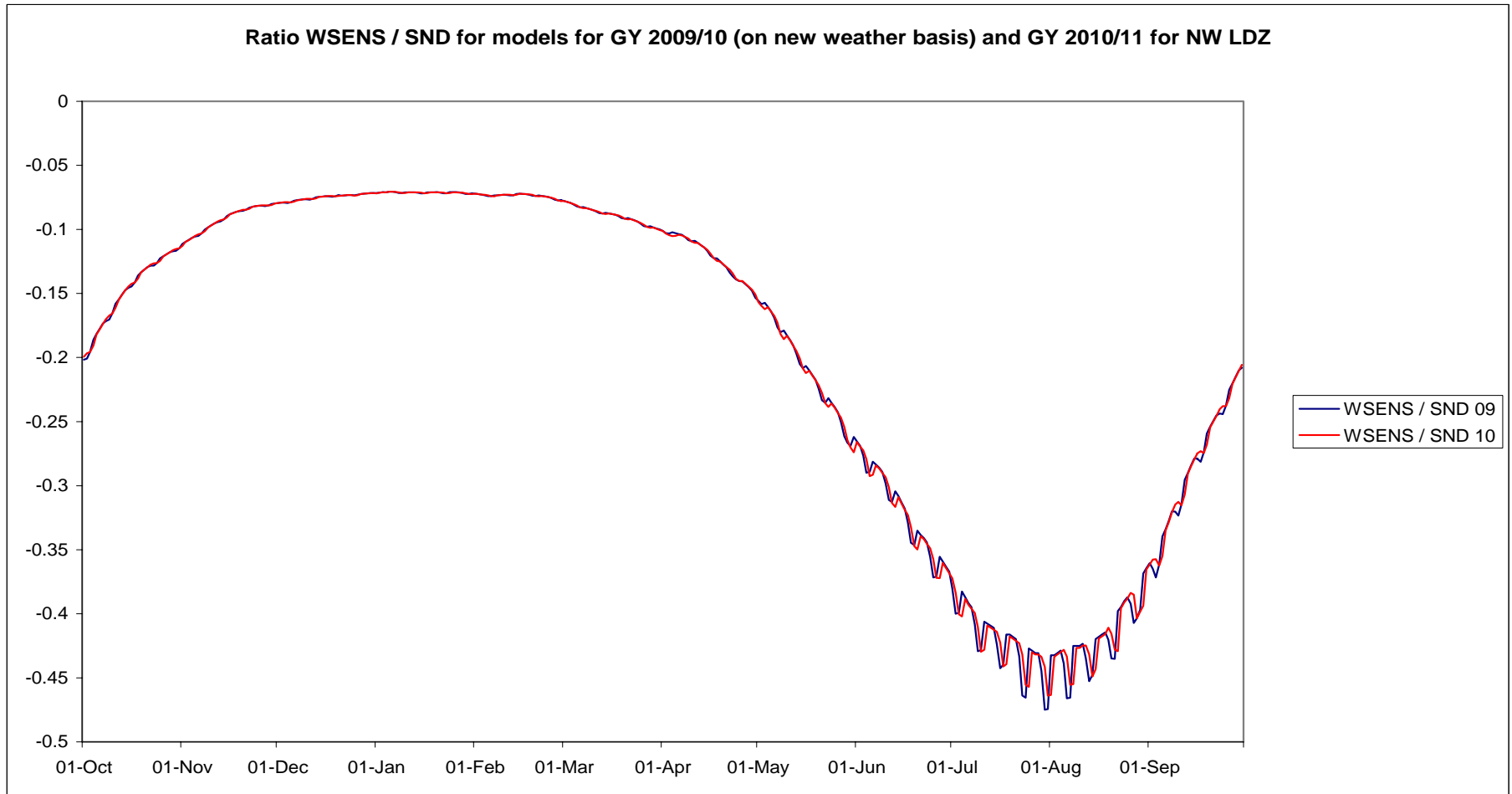
Transporters' Response: Representation

- As noted in the rep, the non '01B' EUC models do display holiday reductions over the late May period which are reflected in the ALPs for those EUCs

- As 01B accounts for 74% of the NDM load (where reduction in demand on holiday days is not observed) when the aggregate NDM demand modelling is performed the impacts of holidays is not always so evident

- As mentioned, the aggregate NDM demand models have little impact on demand attribution: they are required for the denominator of the DAF formula only

- The WSENS and SND values (for 2010/11) from these models have no significance apart from their use in computing DAFs.

Transporters' Response: Representation

- **REPRESENTATION:**
  Summer behaviour across the WSENS looks odd. There is very little change across the year for a number of LDZ which seems strange. Using NW as an example there was a 2% difference between October to June in the 2009 profiles and 0% this year – is there an underlying modelling change that would produce this ?

- Transporters Response:

- This comment relates to the aggregate NDM demand models

- There was no underlying change in the methodology used to model NDM demand, but there was a change in the CWV definitions and seasonal normal basis. Therefore the models for last year and this year are not directly comparable

- WSENS is proportional to SND (not independent of SND) and hence the value of the holiday factor applied on a particular day makes little difference to the ratio of WSENS / SND on that day.

- The following chart compares the ratio of WSENS / SND for NW LDZ over the gas year for this years aggregate NDM model with the ratio from last years model adjusted to the revised weather basis

Transporters' Response: Representation

- It can be seen that the ratio for this year is very similar to last years on the revised weather basis

Ratio WSENS / SND for models for GY 2009/10 (on new weather basis) and GY 2010/11 for NW LDZ

Transporters' Response: Representation

- <u>Transporters' Summary:</u>

- The data from the 3 historic years of aggregate NDM demand determine the modelling parameters to be used for the forthcoming gas year.

- The aggregate NDM demand models have little impact on demand attribution – they are required for the denominator of the DAF formula only.

- The WSENS and SND values for 2010/11 from these models have no significance apart from their use in computing DAFs

- It is the ratio of WSENS/SND that is important in the calculation of the DAFs and not the values of WSENS or SND alone

- The values of WSENS and SND used to compute the DAFs for each day are provided as background information only

- For these reasons Transporters do not propose to apply adjustments to the results of the aggregate NDM demand model

Transporters' Response: Representation Topics

- ## In scope:

  - ALP / DAF behaviour around holiday periods
  - SND / WSENS values from agg. NDM demand model
  - Scaling Factor commentary
  - WAR Bands

- ## Out of Scope:

  - Seasonal Normal Methodology

Transporters' Response: Representation

- **REPRESENTATION:**
  The NDM report, Appendix 13 stated on page 2, bullet 2 that a number of LDZs had worse SF behaviour over the winter. As this is peak demand we are concerned at this behaviour and would like to know what the Transporters see as the potential cause of this behaviour to ensure corrections flow into future profiles.

- Transporters Response:

- Over all LDZs, the average values of SF during winter (Oct to Mar) was the same to 3 decimal places for both years. This does not suggest an overall deterioration in SF behaviour

- Weather experienced in winter of 2009/10 should be considered when comparing SF analysis. Oct to mid Dec much warmer than SN and mid Dec to mid Mar much colder than SN – further details to be provided in document

- In general, the small deviation of the Scaling Factor from 1.0 in winter 2009/10 was more pronounced on days where the weather was the most different from seasonal normal

- Despite the extreme variation in the weather experienced during the 6 month winter period overall there was not a worsening in SF behaviour compared to 2008/09

Transporters' Response: Representation

- **REPRESENTATION:**
  We are not sure that bullet 3 on the same page is an accurate representation of potential summer behaviour given April and May have seen weather greatly removed from seasonal normal. In particular we would question the comparison to a full summer in the previous year.

- <u>Transporters Response:</u>

- Over the summer period of the current gas year to date (April and May) SF behaviour was mixed. For 8 of the 13 LDZs and overall for all LDZs, average values of SF were closer to the ideal value of 1.0 than over the full summer period

- A comparison between scaling factors for April and May 2010 and April and May 2009 yields very similar conclusions to the comparison with the full summer period in the previous year:

  - For 7 of the 13 LDZs (namely EM, WM, WS, EA, NT, SE and SW) and overall for all LDZs, average values of SF for April and May 2010 were closer to the ideal value of 1.0 than over the same period in 2009.

Transporters' Response: Representation

- The table below shows the comparison between the April and May average SF values for 2009 and 2010 together with the differences from Appendix 13 in the NDM report.

Average Scaling Factor Differences

LDZ	Average Scaling Factor Summer 09	Average Scaling Factor Apr/May 09	Average Scaling Factor Apr/May 10	Apr / May Differences in Average SF Deviation from 1	NDM Report Summer Differences in Average SF Deviation from 1
SC	0.990	0.995	0.978	-0.017	-0.012
NO	1.004	1.006	0.994	0.000	-0.002
NW	0.983	0.990	0.979	-0.011	-0.004
NE	0.986	0.992	0.989	-0.003	0.003
EM	0.960	0.967	0.978	0.011	0.018
WM	0.960	0.974	0.990	0.016	0.030
WN	1.006	1.005	0.986	-0.009	-0.008
WS	0.988	0.989	0.997	0.008	0.009
EA	0.960	0.963	0.994	0.031	0.034
NT	0.982	0.983	1.001	0.016	0.017
SE	0.980	0.985	0.989	0.004	0.009
SO	0.993	0.997	0.987	-0.010	-0.006
SW	0.983	0.979	0.991	0.012	0.008
AVG	0.983	0.987	0.989	0.002	0.006

Transporters' Response: Representation

- **REPRESENTATION:**
  We appreciate the increased scale on the SF/WCF-EWCF chart as this more clearly identifies the significant issues with profiles over the summer. We would like to hear the Transporter views on what is causing this volatility and how we may adjust the profiles to minimise this effect

- Transporters Response:
- The SF changes over summer are small and are exaggerated by the change in the scale of SF charts

- Compared to several years ago, summer SF volatility has reduced and the analysis of April and May indicates a slight overall improvement for 2010 compared to 2009 for these months

- Appendix 13 (page 95) offers a number of comments relating to the cause of summer SF volatility. In addition, analysis has been carried out to help explain some of the reasons for volatility – to be provided in document

- Transporters are hopeful that the revised CWVs and SNCWVs effective from October 2010 and the revised AQs and profiles will have an impact in reducing summer SF volatility.

Transporters' Response: Representation Topics

- ## In scope:

  - ALP / DAF behaviour around holiday periods
  - SND / WSENS values from agg. NDM demand model
  - Scaling Factor behaviour
  - WAR Bands

- ## Out of Scope:

  - Seasonal Normal Methodology

Transporters' Response: Representation

- **REPRESENTATION:**
  Finally, the WAR bands have shifted considerably this year as a direct result of the cold weather experienced over the winter. Given the smoothing in other areas to minimise impacts from single extreme years we would like to raise the question as to whether this approach should be considered for WAR band breakpoints too

- Transporters Response:

- In each consumption range, WAR Band EUCs sub divide the range in to subsets of different weather sensitivity

- When setting WAR band limits, the approach adopted is to aim for a 20%:30%:30%:20% split of sample numbers on a national basis

- This is subject to the practical limitations due to the actual distribution of the WAR values of the sample points in the consumption band and the requirement to have robust sample sizes in the ensuing data sets

- Although WAR band limits have increased this year, the approximate splits of sample numbers has been maintained

Transporters' Response: Representation

- WAR values are not weather corrected and hence are affected by the December to March weather experienced: 2009/10 was very cold, 2008/09 was average, 2007/08 was very warm

- In addition, for this year only, reduced AQ values in the sample, due to the new seasonal normal basis, have caused WAR values to increase.

- Consequently, WAR band limits in the most recent year's data sets have in most cases moved towards 1.0 (compared to last year and the year before)

- EUC WAR band limits need to be based on the most recent year's sample WAR values because the WAR values on the live system are computed using this most recent winter's consumption.

- If the values are based on smoothed values the distribution of population supply points will not follow a 20%:30%:30%:20% split and the load factors calculated from sample data may not be appropriate.

Transporters' Response: Representation Topics

- ## In scope:

  - ALP / DAF behaviour around holiday periods
  - SND / WSENS values from agg. NDM demand model
  - Scaling Factor behaviour
  - WAR Bands

- ## Out of Scope:

  - Seasonal Normal Methodology

Transporters' Response: Representation

- **REPRESENTATION**
  General comments made by E.ON, SSE and SCP regarding the new Seasonal Normal methodology include:

- 1) 'Shape' of Seasonal normal values
- 2) Smoothing method
- 3) Historic weather data and filling in methods
- 4) Transparency of data
- 5) Reassurance from Transporters that an update to SN will be progressed
- 6) Option of disallowal still being considered on this years NDM proposals

- Transporters Response:
- Seasonal Normal basis falls outside of the scope of this consultation on the NDM proposals for 2010/11
- Document responding to all of the points raised in more detail to be published…

Transporters' Response: Representation

- Transporters have made progress in making all data available to shippers to replicate the SNCWV values

- Transporters have engaged with the Met Office to discuss the possibility of variable increments which they advised would not produce a materially different outcome for the industry

- Transporters invited the Met Office to June DESC who at the meeting proposed a way forward

- Transporters have stated at DESC on 4th June 2010 they would be prepared to update the revised SN basis within the 5 year timeframe if and when an agreed industry methodology became available

- It would be beneficial to both Transporters and Shippers to be part of industry discussions in this area to ensure an outcome suitable to all parties

Transporters' Response: Representation

- UNC Section H 1.9.2 states in the event of a disallowal of the Transporters proposals, then the EUC Demand models and derived factors from last years modelling would have to be applied (altered for day of the week movement) – these are referred to as 'fallback' proposals

- This includes:
    - Derived Factors - ALPs, DAFs, Load Factors and EUC definitions - which this year would be based on the 09/10 models (including their WAR bands limits).

- This does not include:
    - The seasonal normal basis, composite weather variables and AQ review

- Use of 'fallback' proposals in gas year 2010/11 would introduce a number of inconsistencies within key processes

Transporters' Response: Representation

- Demand Attribution:

  - AQs effective from 1st October 2010 calculated on new Seasonal Normal (SN) basis

  - ALPs and DAFs effective from 1st October 2010 calculated on old SN basis

  - Pseudo SNDs used in WCF calculations based on AQs on new SN basis and ALPs/DAFs on old SN basis

- AQ calculations:

  - WAALPs from 1st October 2010 will be calculated with SNCWV on new SN basis and ALP, DAF, agg.SND and agg.WENS on old SN basis

  - EUC WAR band limits would be based on winter 2008/09 values while the WAR values on the live systems would be calculated from 2009/10 consumptions