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|------------------------|---|----------------------|-----------------|
| Modification proposal: | Uniform Network Code (UNC) 451V and 451AV: Individual Settlements For Pre-Payment & Smart Meters | | |
| Decision: | The Authority ¹ has decided to reject UNC451V and to accept UNC451AV ² | | |
| Target audience: | The Joint Office, Parties to the UNC and other interested parties | | |
| Date of publication: | 31 January 2014 | Implementation date: | 1 February 2014 |

Background to the modification proposals

Although gas consumers are billed on the basis of their metered consumption, only a few thousand Supply Points currently have the meter read on a daily basis. The vast majority of Supply Points are classified as Non-Daily Metered ('NDM'). Therefore, the daily allocation of gas to more than 20 million Supply Points, together with the subsequent reconciliation and settlement of costs for the relevant Gas Shippers, is based on a series of estimates.

The consumption within a Local Demand Zone ('LDZ') is initially forecast a day ahead of the Gas Day on which it is actually consumed. Gas Shippers nominate the expected demand at Daily Metered ('DM') supply points, whereas NDM supply point consumption is estimated based on the prevailing Annual Quantity ('AQ'). This AQ is an approximation of consumption at each site based on historic reads. As the level of consumption at NDM sites will generally vary throughout the year, the energy usage is profiled. There is a different profile for each End User Category ('EUC') and 33 EUCs for each LDZ.

These estimates will be further refined for up to five days after the relevant Gas Day, by which time the estimates of DM consumption will be replaced with actual reads and the total consumption in the LDZ will be known. These allocations are used for invoicing Gas Shippers for the commodity element of the Transportation charge, as well as any energy imbalance charges. The allocations are subsequently reconciled for Larger Supply Points ('LSPs') with an AQ above 73,200kWh as meter reads for those Supply Points become available. The Smaller Supply Points ('SSPs') that fall below this threshold are not individually reconciled, but subject to the Reconciliation by Difference ('RbD') process.

RbD is the method of reconciling the difference between the initially allocated gas and actual (metered) consumption. Once the metered consumption at DM and LSPs is taken from the amount of gas known to have been put into a given LDZ, the remainder is allocated across the SSP sector, again based upon AQs. RbD was established to manage errors in the allocation of gas to Shippers in the SSP market. To the extent that the residual amount of gas may differ from the initial SSP allocation, RbD may result in a credit or debit to the SSP sector. Such differences may be caused by issues such as theft and unregistered sites.

The modification proposal

UNC451 was raised by Utilita on 27 March 2013. Utilita considers that the usage profile of a pre-payment customer is flatter through the course of a year than that of a standard (typically domestic credit) EUC band 1 ('EUC1') customer. Therefore, there may be an over-allocation of gas to the supply point of a pre-payment consumer during the winter months. Whilst in energy terms this over-allocation may be offset by an under-allocation in summer, the daily System Average Price ('SAP') of gas will typically be higher in the winter months than in the summer. Utilita considers that this disparity in allocated costs as

¹ The terms 'the Authority', 'Ofgem' and 'we' are used interchangeably in this document. Ofgem is the Office of Gas and Electricity Markets.

² This document is notice of the reasons for this decision as required by section 38A of the Gas Act 1986.

compared to the consumption billed to the customer has a detrimental impact upon those Gas Shippers who have an above average proportion of pre-payment customers.

Utilita initially proposed that any Supply Point with a Pre-Payment Meter ('PPM') or Smart meter operating in pre-payment mode that has had a read accepted in any given month would be reconciled against that read. Where no read has been submitted, or submitted but not accepted, the meter would be reconciled under the RbD methodology as currently. Utilita further proposed that UNC451 should have retrospective effect from 1 October 2012, when it considers the over-allocation of gas to have become particularly acute.

Utilita sought urgent status for its modification proposal, indicating that the differential between its allocated and metered volumes of gas increased by over 10% during the winter of 2012/13. We agreed that, if correct, this could represent a significant commercial impact and subsequently granted UNC451 urgent status, enabling it to follow a suitably expedited timetable. We published the reasons for this decision on 26 April 2013³ and required the UNC Panel to submit its report to us by 19 September 2013.

During the development of UNC451 it became apparent to the workgroup that it would not be practicable to introduce individual meter point reconciliation for SSPs ahead of Project Nexus⁴, which is anticipated to be implemented in late 2015. The proposal was subsequently amended so that qualifying PPMs or Smart meters would be reconciled against a newly developed profile rather than the standard EUC1 profile.

For each EUC there is an Annual Load Profile ('ALP') that determines how much of the AQ should be attributed to each day of the year under Seasonal Normal Demand ('SND') conditions, i.e. allocating proportionately more gas to the typically colder days of winter. As weather may not conform to a seasonal norm, a Weather Correction Factor ('WCF') is applied to reflect prevailing conditions. This WCF is itself subject to a further Daily Adjustment Factor ('DAF') that represents the weather sensitivity of demand for each EUC. Finally, a Scaling Factor ('SF') is applied to ensure supply point allocation on aggregate matches LDZ consumption. This is represented in the following demand allocation formula:

$$\text{NDM Supply Point demand} = (\text{AQ}/365) \times \text{ALP} \times (1 + [\text{WCF} \times \text{DAF}]) \times \text{SF}$$

A provisional version of a new PPM profile, with a bespoke ALP and DAF was developed by Xoserve using data submitted to it by Utilita. Despite requests, no other Shipper involved in the workgroup was able to provide equivalent data from their own portfolios.

The group was concerned by the potential for retrospective application of the proposal, though Utilita considered this to be an intrinsic part of its proposal and retained it. E.on therefore raised UNC451A in order to reflect the views of the workgroup regarding the retrospective application of UNC451. It is identical to UNC451 other than it would apply only on a prospective basis. The group acknowledged that Xoserve would not be able to apply revised allocations immediately upon implementation of UNC451A, but that subsequent adjustments could be applied with effect from the implementation date.

UNC Panel⁵ recommendation

At its meeting of 19 September 2013 the UNC Panel voted unanimously to recommend that neither UNC451 nor 451A be implemented. The UNC Panel then proceeded to consider its preference between the two proposals. The UNC Panel again voted unanimously that, if one of the proposals were to be implemented, the absence of the retrospective element meant UNC451A would be the preferred proposal.

³ See: http://www.gasgovernance.co.uk/sites/default/files/UNC451_UD.pdf

⁴ Nexus is the name of the project under which Xoserve will replace its aging UK Link systems.

⁵ The UNC Panel is established and constituted from time to time pursuant to and in accordance with the UNC Modification Rules.

On 16 October 2013 we decided to send the Final Modification Report ('FMR') back to the UNC Panel as the legal text was incomplete⁶. We also sought further details on the likely costs of implementing either proposal. This work was subsequently completed during further workgroup discussions, with the proposals being varied as denoted by the suffix of a 'V' to the reference numbers.

The UNC Panel considered the revised modification report for UNC451V and UNC451AV at its meeting of 10 January 2014, with the result again being a unanimous recommendation to reject both proposals, with a preference between the two for UNC451AV.

The Authority's decision

The Authority has considered its statutory duties and functions in reaching its decision. The Authority has considered the issues raised by the modification proposals and the FMRs dated 19 September 2013 and 17 January 2014. The Authority has considered and taken into account the responses to the Joint Office's consultations on the modification proposals which are attached to the FMRs⁷. The Authority has concluded that:

1. Implementation of UNC451AV will better facilitate the achievement of the relevant objectives of the UNC⁸; and
2. Directing that the UNC451AV be made is consistent with the Authority's principal objective and statutory duties⁹.

Reasons for Authority decision

The proposer, respondents to the Joint Office's consultation and the UNC panel all focused on the potential impacts of UNC451/UNC451A upon effective competition. We concur that these proposals should be assessed against relevant objective d); we consider that they would have a neutral impact upon the other relevant objectives.

Relevant Objective d) securing effective competition between relevant Shippers

We agree with those respondents who suggested that the accurate allocation of costs furthers effective competition. Until such time as smart meters provide near real time consumption information, the energy industry will be reliant to a greater or lesser extent upon the accurate profiling of consumption for both demand allocation and settlement. Therefore, much depends upon the accuracy of those profiles.

However, no matter how accurate those profiles may on the whole be, there will always be a significant proportion of the relevant population that does not conform to the statistical norm. Although there are 33 EUCs for each LDZ, taking into account not only the various consumption thresholds but their associated ALP, sensitivity to weather etc, all SSPs fall under the single EUC1 profile. In the case of the Southern LDZ from which the sample data was drawn the EUC1 profile applies to over 1.5 million supply points.

The relevant Shipper may lose or gain from the allocation of gas to a given supply point depending on whether the actual metered and subsequently billed consumption is higher or lower than the profiled average. Where Shipper portfolios broadly reflect the same demographics as the profiled population as a whole, a balance could be expected between these relative gains and losses. However, as the market matures and newer entrants

⁶ See: [http://www.gasgovernance.co.uk/sites/default/files/UNC451%20send%20back_icl%20\(4\).pdf](http://www.gasgovernance.co.uk/sites/default/files/UNC451%20send%20back_icl%20(4).pdf)

⁷ UNC modification proposals, modification reports and representations can be viewed on the Joint Office of Gas Transporters website at www.gasgovernance.com

⁸ As set out in Standard Special Condition A11(1) of the Gas Transporters Licence, see: <https://epr.ofgem.gov.uk/Content/Documents/Standard%20Special%20Condition%20-%20PART%20A%20Consolidated%20-%20Current%20Version.pdf>

⁹ The Authority's statutory duties are wider than matters which the Panel must take into consideration and are detailed mainly in the Gas Act 1986.

increasingly target specific sectors, the constitution of their portfolio is less likely to match that of the wider population.

We are therefore sympathetic to the situation of Shippers who may be disadvantaged by the current application of costs based on profiles. In the longer term we consider that the enhanced functionality of systems being developed as part of Project Nexus will allow for the reconciliation of energy costs against actual meter readings for a significantly greater number of supply points. Sites for which a daily meter read remains unavailable or have not been selected by the Shipper for daily reconciliation will benefit from more accurate and up-to-date AQs upon which their energy allocation will be based. However, we welcome any proposals that might offer a more accurate and cost effective allocation ahead of Project Nexus being implemented.

Variance in allocation

A key point in considering the impact of UNC451/451A is the extent to which consumption at supply points with a PPM differs from the standard EUC1 profile. Using three years of data provided to it by the proposer, Xoserve first validated then analysed the data in order to produce a PPM ALP for 2013/14. This was then compared to the proposed EUC1 ALP for the Southern LDZ, which was the source LDZ of the Utilita data. This analysis, which was appended to the FMR and for ease of reference replicated in Appendix 1 to this letter, confirms that under seasonal normal circumstances the winter peaks and summer troughs of the proposed 2013/14 PPM profile are shallower than the prevailing EUC1 profile. Adopting a more targeted PPM profile may therefore result in a reduced allocation of gas to PPM sites during the winter, offset by a greater allocation in summer.

Several respondents commented on this analysis, stating that the sample data from around 450 meters was not sufficiently robust and/or an insufficient sample size on which to base a demand allocation profile. Specific comparisons were drawn with the demand models produced by the Demand Estimation Sub-Committee ('DESC'). Whilst we would also have preferred to see a larger sample of data, Xoserve has confirmed that the sample size is not significantly different to that used for existing LDZ demand estimation and that it will be able to extrapolate that data in order to provide a profile for the remaining LDZs. We also note that this is a draft PPM profile and whilst other Suppliers may have limited access to daily PPM reads, the information they receive on a less frequent basis could nonetheless provide useful corroboration.

However, whilst the analysis appended to the FMR demonstrated the shallower nature of the PPM profile as compared to the EUC1 profile, it was not clear what the impact this would have on charges over the course of a year. Xoserve published further details on 19 September 2013, including a breakdown of the 2013/14 ALP and DAF values for both the draft PPM profile and the EUC1 profile for the Southern LDZ. This is published on Xoserve's secure 'UK Link Documentation' website¹⁰.

Under seasonal normal conditions the EUC1 and draft PPM profile would result in the same aggregate allocation of gas over the course of a full year, i.e. it would still match the prevailing AQ. However, there would be a variance in energy allocation between the two profiles in any given month. A supply point with an AQ of 10,000 kWh could, under the PPM profile, receive a maximum energy reduction of 118kWh in January, with an additional allocation of up to 100 kWh in August, as shown in Appendix 2.

We have used an AQ of 10,000kWh in part for ease of comparison. This sits towards the lower band of our recently revised typical domestic consumption levels¹¹ that we may

¹⁰ The document entitled 'MOD0451Draft Profiles PPM ALPs and DAFs LDZ SO 201314.xls' published at: www.xoserveextranet.com

¹¹ Based on recently revised typical domestic consumption values: www.ofgem.gov.uk/sites/default/files/docs/decisions/tdcv_decision_letter_final_2.pdf

expect PPM consumers to typically occupy. The Xoserve analysis appended to the FMR states that the AQs in the data set provided ranged from 1,611kWh to 23,299kWh.

Whilst we consider that SND may provide a reasonable forward looking basis on which to assess the variance between the two profiles, the difference in shape may be exacerbated by any change from such seasonal normal conditions, i.e. the greater the difference in temperature from the seasonal norm, the greater the variance between the two profiles. Appendix 2 also shows the variance in energy allocation between the Southern LDZ EUC1 profile the proposed PPM profile with actual WCF and SF data for the past four years applied.

Whilst the variance is relatively marginal in energy terms we consider that there will be cash flow implications from this, compounding the Shipper's exposure to relative fluctuations in SAP. In order to assess the materiality of this, we multiplied the daily energy allocation under both the PPM and standard EUC1 profiles by the actual SAP¹² for the corresponding day in each of the four previous Gas Years, 2009/10 to 2012/13¹³. The aggregate position for a 10,000 kWh supply point over these four years is summarised below:

| Aggregate effect over 4 years | | | | |
|-------------------------------|---|--------|--------------|--------------|
| EUC | £ | 793.96 | £ Difference | % Difference |
| PPM | £ | 784.02 | -9.94 | -1.25 |

This suggests that there would be a marginal benefit to Shippers in switching to a PPM profile, though the effects on gas allocation for each year may not be consistent. Adopting the PPM profile could have resulted in an increased allocation of gas in two of the last four years. Whilst the financial impact of this would again be subject to prevailing SAP and may in some cases be netted off, our assessment is that the PPM profile would have resulted in additional costs to the Shipper in the 2009/10 Gas Year, as shown in Appendix 3.

We also note that the two months which stand out (highlighted in Appendix 3) as having the potentially greatest impact are December 2010 and March 2013, which were respectively the coldest December¹⁴ and second coldest March¹⁵ since national records began. We therefore do not consider that the application of historic weather and SAP data is necessarily a reliable indicator of the potential impact of the PPM profile, though our analysis suggests that a Shipper being allocated costs on this basis will, more often than not, benefit from a net reduction in charges over the course of a year.

Whilst to an extent we agree with those respondents who suggested that any reduction in costs for PPM supply points will be offset by an increase in costs to the remaining EUC1 population (or vice versa), the accurate allocation of cost is beneficial to effective competition. We also consider that exposing Shippers to the true extent of imbalance charges during the winter period should drive appropriate incentives to reduce or better manage winter demand. Such improved efficiency should lead to downward pressure on SAP and reduce costs more generally.

Implementation costs

Some respondents considered that the implementation costs of this proposal, which Xoserve revised to a range of £200-£350,000, were disproportionate and/or would be inefficient given the anticipated resolution of this issue as part of Project Nexus. There are

¹² Taken from the National Grid website: <http://marketinformation.natgrid.co.uk/gas/DataItemExplorer.aspx> (Choose 'Prices' > 'SAP' > 'SAP, Actual Day' and select 'latest values' and 'Applicable for' when specifying dates).

¹³ We averaged out the energy allocation and SAP for 28 & 29 February 2012 in order to have a single figure comparable to other years.

¹⁴ www.bbc.co.uk/news/uk-22010852

¹⁵ www.bbc.co.uk/news/science-environment-12119329

around 3 million traditional gas PPMs¹⁶ and this number is growing, as is the number of smart meters capable of operating in PPM mode. If the weather and SAP patterns discussed above were to be repeated over the next four years, the energy costs for Shippers who are servicing those PPM supply points could be reduced by around £30million over that period if this PPM profile is implemented. All else being equal, this should place downward pressure on the tariffs offered to PPM consumers.

Although some consumers opt for a PPM in order to manage a budget or for other reasons, the majority are installed for reasons of debt. As PPM consumers are also typically on lower incomes, any downward pressure on tariffs for this sector of the market is particularly welcome and may have a disproportionate benefit for vulnerable and fuel poor consumers. In this context, we do not consider the estimated implementation costs to be excessive.

Retrospectivity

Most of the respondents raised concerns about the retrospection element of UNC451V, echoing the earlier views of the workgroup. They considered that allowing retrospective adjustments introduces uncertainty and increases the associated perception of risk, both of which are harmful to effective competition. We share these views. However, we consider that there may be exceptional circumstances where a retrospective modification is justified and in previous decisions we have sought to clarify what these circumstances may be. For example, UNC341¹⁷ was rejected in part because the circumstances that had prompted that proposal did not match the criteria laid down in our earlier decision to allow for the retrospective correction of errors in the electricity trading regime¹⁸. Those criteria, which were arrived at by virtue of our public law duty to act reasonably in the exercise of our functions and repeated in published guidance¹⁹, refer to:

- a situation where the fault or error occasioning the loss was directly attributable to central arrangements;
- combinations of circumstances that could not have been reasonably foreseen; or,
- the possibility of retrospective action having been clearly flagged to participants in advance and only the details and process being decided retrospectively.

Whilst we are not bound by this set of criteria, we consider they provide a good basis on which to assess the reasonableness of any decision in relation to retrospectivity. We do not consider that UNC451V meets any of these criteria. Whilst we consider that there may be merit in introducing a further profile that more closely matches the consumption pattern of PPM consumers, we do not consider that this constitutes an error with the existing EUC1 profile. This is an enhancement to the existing process rather than correction of an error.

In our decision to grant urgent status to UNC451 we noted that there was nothing in the proposal to indicate the relevance of 1 October 2012, though Utilita subsequently suggested that the commercial impact of its perceived over allocation of gas had become particularly acute from that date. No further justification for retrospective application or the selection of 1 October 2012 was provided to the workgroup or in response to the consultation. Whilst revised Aqs were given effect from 1 October 2012, as they do at the start of each Gas Year, the arrangements pertaining to the allocation of gas based on EUC1 profiling did not change. Indeed the arrangements that these proposals seek to modify have applied in their current form for several years.

As there is insufficient justification for retrospective application and in view of the detrimental impacts such actions can have on market confidence and effective competition

¹⁶ See: 'Domestic suppliers' social obligations 2012 annual report' – published 13 November 2013. www.ofgem.gov.uk/ofgem-publications/84390/domestic-suppliers-social-obligations-2012-annual-report.pdf

¹⁷ UNC341: 'Manifest errors in entry capacity overruns'

¹⁸ BSC modification proposal P37: 'To provide for the remedy of past errors in Energy Contract Volume Notifications and in Metered Volume Reallocation Notifications'

¹⁹ See: '[Ofgem's Guidance on Modification Urgency Criteria](#)'.

more generally, we consider that UNC451V would be detrimental to relevant objectives d) and should not be implemented.

Further consideration

The UNC modification rules require that where an urgent modification is implemented it will be added to the agenda for the next meeting of the UNC Panel, at which the subject matter of the modification may be referred to a workgroup. This allows for a fuller consideration of issues than may have been practicable under the original urgent timetable. We consider that such a review would be appropriate in this instance. Whilst it would be for the UNC Panel to determine the terms of reference for such a group, we consider that it could, for instance, allow the DESC to consider the profile to be applied to PPM sites for at least the 2014/5 Gas Year.

We acknowledge the concerns raised by some respondents regarding the rigour of validation currently applied to the *PPM flag* that will be used by Xoserve in order to produce the initial register of PPM supply points in scope of this proposal. We do not consider that it was necessarily within scope of this proposal and certainly not the responsibility of the proposers to address such issues of data integrity. However, we note that the Xoserve register is only intended to be a first pass, and Shippers are required to individually validate this data on a monthly basis. We consider that this is appropriate because Shippers are in a better position to confirm the current status of the supply point. We will also receive reports on the operation of this modification. Ultimately, it is for UNC Parties to satisfy themselves of the integrity of this data and we would welcome the accuracy of the *PPM flag* being part of the terms of references for any group set up by the UNC Panel, and/or as part of Xoserve's work on data quality more generally.

Conclusion

We consider that substantive improvements to gas allocation and settlements will be offered by the new systems being developed as part of Project Nexus and therefore look forward to its timely implementation. However, this does not preclude cost effective improvements being made in the meantime. We are sympathetic to some of the concerns raised by respondents regarding the implementation of a PPM profile, but do not consider that these issues are insurmountable.

These proposals have highlighted the problems with grouping over 20 million supply points within a single profile and allocating gas on that basis. We therefore consider that the implementation of UNC451AV would further effective competition in the short term. We would also expect further consideration of the role such targeted profiles may have post-Project Nexus, given that both profiles and AQs will still be needed for the initial allocation of gas, even if subsequent reconciliation mitigates the financial impact of their imprecision.

Decision notice

In accordance with Standard Special Condition A11 of the Gas Transporters Licence, the Authority hereby directs that modification proposal UNC451AV: '*Individual Settlements for Pre-Payment & Smart Meters*' be made.

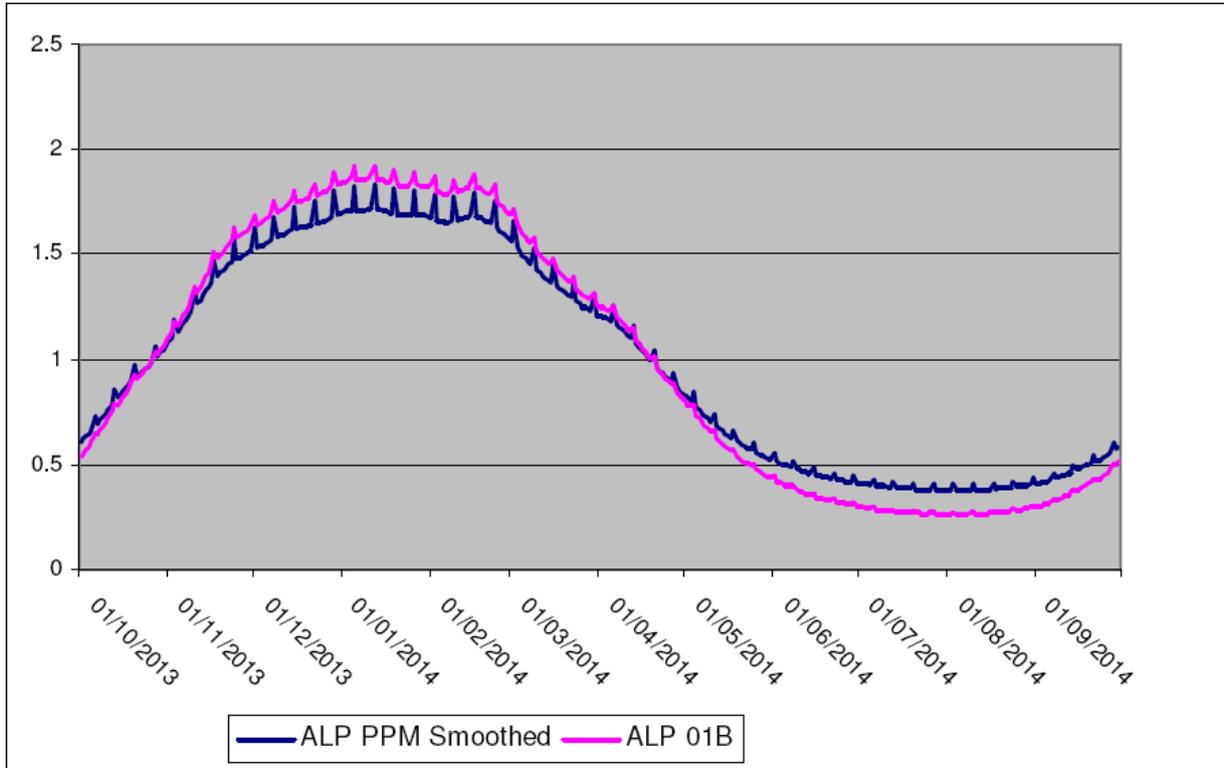
Rob Church

Associate Partner, Smart Metering and Smarter Markets

Signed on behalf of the Authority and authorised for that purpose.

Appendix 1: Variance in profiles

The graph below, which is taken from the appendix of the UNC451/A FMR, shows the proposed 2013-14 EUC1 ALP for the Southern LDZ, compared to Xoserve's calculated PPM ALP for the same LDZ.



Appendix 2: Variance in energy allocation²⁰

| AQ 10,000 kWh | | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Total | PPM/EUC % | |
|---------------|------------|-----------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|----------|-----------|--------|
| SND | EUC1 (SO) | 694.03 | 1159.78 | 1490.66 | 1575.90 | 1381.15 | 1236.56 | 871.98 | 505.78 | 294.67 | 236.43 | 233.82 | 319.23 | 10000.00 | | |
| | PPM | 718.87 | 1104.41 | 1388.11 | 1457.93 | 1281.93 | 1174.57 | 863.61 | 560.96 | 380.36 | 335.30 | 333.57 | 400.38 | 10000.00 | 0.00% | |
| 2009/10 | WCF only | EUC1 (SO) | 556.66 | 968.29 | 1597.40 | 1877.06 | 1397.60 | 1144.34 | 650.47 | 506.69 | 235.00 | 204.50 | 243.53 | 299.57 | 9681.10 | |
| | | PPM | 603.71 | 943.81 | 1477.91 | 1710.37 | 1295.74 | 1097.33 | 677.76 | 561.78 | 330.40 | 308.54 | 341.69 | 383.79 | 9732.82 | 0.53% |
| | SF only | EUC1 (SO) | 689.61 | 1155.51 | 1489.53 | 1576.72 | 1378.11 | 1227.83 | 860.56 | 499.95 | 288.58 | 232.27 | 233.47 | 316.03 | 9948.17 | |
| | | PPM | 714.30 | 1100.34 | 1387.05 | 1458.69 | 1279.11 | 1166.26 | 852.23 | 554.27 | 372.48 | 329.43 | 333.04 | 396.31 | 9943.51 | -0.05% |
| | WCF and SF | EUC1 (SO) | 553.69 | 965.05 | 1596.68 | 1878.38 | 1394.72 | 1136.76 | 642.46 | 502.71 | 230.45 | 201.01 | 243.31 | 296.90 | 9642.12 | |
| | | PPM | 600.36 | 940.61 | 1477.20 | 1711.54 | 1293.05 | 1089.98 | 669.25 | 556.64 | 323.80 | 303.23 | 341.27 | 380.16 | 9687.10 | 0.47% |
| 2010/11 | WCF only | EUC1 (SO) | 770.80 | 1369.20 | 2138.06 | 1731.44 | 1317.70 | 1246.82 | 553.82 | 411.09 | 329.95 | 263.31 | 257.93 | 300.62 | 10690.73 | |
| | | PPM | 783.21 | 1279.61 | 1931.26 | 1588.11 | 1228.61 | 1183.13 | 596.98 | 481.58 | 409.95 | 357.86 | 353.75 | 384.78 | 10578.84 | -1.05% |
| | SF only | EUC1 (SO) | 695.24 | 1161.36 | 1494.85 | 1571.02 | 1371.55 | 1226.96 | 841.78 | 492.54 | 294.12 | 239.32 | 236.20 | 315.55 | 9940.47 | |
| | | PPM | 720.02 | 1273.01 | 1392.02 | 1453.41 | 1273.01 | 1165.39 | 833.49 | 546.54 | 379.75 | 339.43 | 336.93 | 396.10 | 10109.09 | 1.70% |
| | WCF and SF | EUC1 (SO) | 774.10 | 1372.84 | 2144.97 | 1726.97 | 1308.98 | 1238.44 | 537.21 | 401.58 | 330.38 | 266.76 | 260.87 | 298.37 | 10661.48 | |
| | | PPM | 786.12 | 1282.76 | 1937.46 | 1583.94 | 1220.44 | 1174.97 | 578.26 | 470.29 | 410.16 | 362.46 | 357.58 | 381.70 | 10546.13 | -1.08% |
| 2011/12 | WCF only | EUC1 (SO) | 552.81 | 902.81 | 1436.96 | 1499.43 | 1554.16 | 1038.59 | 971.46 | 597.30 | 349.70 | 267.94 | 224.32 | 364.30 | 9759.78 | |
| | | PPM | 600.72 | 888.76 | 1342.70 | 1393.54 | 1426.79 | 1008.50 | 946.82 | 637.75 | 426.46 | 360.19 | 325.60 | 438.16 | 9795.99 | 0.37% |
| | SF only | EUC1 (SO) | 675.29 | 1138.81 | 1484.26 | 1562.26 | 1373.39 | 1212.29 | 868.60 | 500.83 | 297.23 | 241.01 | 230.78 | 321.42 | 9906.17 | |
| | | PPM | 698.97 | 1084.34 | 1378.37 | 1445.30 | 1274.70 | 1151.41 | 860.40 | 554.68 | 383.65 | 341.72 | 329.19 | 402.73 | 9905.46 | -0.01% |
| | WCF and SF | EUC1 (SO) | 541.51 | 887.26 | 1428.25 | 1487.88 | 1549.56 | 1021.05 | 969.45 | 599.46 | 355.15 | 274.20 | 221.72 | 368.46 | 9703.96 | |
| | | PPM | 587.06 | 873.25 | 1334.42 | 1382.66 | 1422.21 | 990.97 | 944.76 | 637.44 | 432.16 | 369.52 | 321.61 | 442.17 | 9738.23 | 0.35% |
| 2012/13 | WCF only | EUC1 (SO) | 832.68 | 1272.14 | 1612.71 | 1744.30 | 1660.94 | 1778.00 | 1108.02 | 622.36 | 331.40 | 216.57 | 221.66 | 351.15 | 11751.92 | |
| | | PPM | 835.53 | 1198.42 | 1490.35 | 1599.06 | 1516.59 | 1628.59 | 1061.56 | 658.61 | 411.21 | 318.66 | 323.43 | 427.20 | 11469.21 | -2.41% |
| | SF only | EUC1 (SO) | 700.28 | 1162.12 | 1489.39 | 1571.94 | 1380.56 | 1240.42 | 870.47 | 509.05 | 295.94 | 232.57 | 231.27 | 317.64 | 10001.67 | |
| | | PPM | 725.48 | 1106.70 | 1386.94 | 1454.26 | 1281.38 | 1178.28 | 862.02 | 564.99 | 382.04 | 329.78 | 329.97 | 398.44 | 10000.29 | -0.01% |
| | WCF and SF | EUC1 (SO) | 841.33 | 1276.07 | 1613.26 | 1742.35 | 1660.90 | 1785.87 | 1108.87 | 630.48 | 333.37 | 213.43 | 219.37 | 351.48 | 11776.76 | |
| | | PPM | 844.16 | 1202.04 | 1490.71 | 1597.08 | 1516.49 | 1635.66 | 1061.94 | 666.68 | 413.48 | 313.75 | 320.04 | 426.86 | 11488.88 | -2.44% |

²⁰ Source: National Grid's website - <http://marketinformation.natgrid.co.uk/gas/DataItemExplorer.aspx>, and Xoserve's extranet site - www.xoserveextranet.com/uklinkdocs/default.asp

Appendix 3: Monthly impact of variance in SAP²¹

| AQ 10,000 kWh | | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Total | PPM/EUC | |
|---------------|------------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|-------|---------|---------|
| 2009/10 | Weather adjusted | EUC1 (SO) | 4.78 | 8.81 | 17.05 | 25.88 | 16.95 | 12.55 | 7.17 | 6.93 | 3.29 | 3.17 | 3.55 | 4.16 | 114.30 | £ 1.27 |
| | | PPM | 5.14 | 8.57 | 15.75 | 23.55 | 15.71 | 12.02 | 7.47 | 7.65 | 4.62 | 4.79 | 4.98 | 5.31 | 115.57 | |
| 2010/11 | Weather adjusted | EUC1 (SO) | 12.22 | 23.85 | 45.17 | 33.24 | 24.08 | 25.43 | 10.31 | 7.84 | 6.59 | 5.02 | 4.87 | 5.35 | 203.97 | -£ 2.77 |
| | | PPM | 12.36 | 22.23 | 40.80 | 30.47 | 22.45 | 24.14 | 11.05 | 9.19 | 8.17 | 6.82 | 6.67 | 6.84 | 201.20 | |
| 2011/12 | Weather adjusted | EUC1 (SO) | 10.54 | 17.61 | 27.44 | 27.59 | 35.59 | 20.25 | 19.86 | 11.75 | 6.72 | 5.20 | 4.13 | 7.66 | 194.34 | -£ 0.06 |
| | | PPM | 11.34 | 17.32 | 25.62 | 25.62 | 32.59 | 19.63 | 19.35 | 12.45 | 8.17 | 7.01 | 5.99 | 9.19 | 194.28 | |
| 2012/13 | Weather adjusted | EUC1 (SO) | 18.43 | 28.48 | 36.24 | 39.63 | 39.66 | 53.22 | 27.28 | 14.22 | 6.72 | 4.75 | 4.82 | 7.88 | 281.35 | -£ 8.37 |
| | | PPM | 18.48 | 26.83 | 33.48 | 36.30 | 36.20 | 48.70 | 26.03 | 15.03 | 8.33 | 6.99 | 7.04 | 9.57 | 272.98 | |

| Scale of £ adjustment | | | | | | | | | | | | | | |
|-----------------------|--------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|--|
| AQ 10,000kWh | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Total | |
| 2009/10 | -£0.36 | £0.23 | £1.29 | £2.34 | £1.24 | £0.53 | -£0.30 | -£0.72 | -£1.34 | -£1.62 | -£1.43 | -£1.15 | -1.27 | |
| 2010/11 | -£0.14 | £1.62 | £4.38 | £2.76 | £1.63 | £1.29 | -£0.74 | -£1.34 | -£1.59 | -£1.80 | -£1.80 | -£1.50 | 2.77 | |
| 2011/12 | -£0.80 | £0.29 | £1.81 | £1.97 | £3.00 | £0.62 | £0.51 | -£0.70 | -£1.45 | -£1.80 | -£1.86 | -£1.53 | 0.06 | |
| 2012/13 | -£0.05 | £1.66 | £2.77 | £3.33 | £3.46 | £4.52 | £1.25 | -£0.81 | -£1.61 | -£2.23 | -£2.22 | -£1.68 | 8.37 | |
| Average credit/debit | -£0.34 | £0.95 | £2.56 | £2.60 | £2.33 | £1.74 | £0.18 | -£0.89 | -£1.50 | -£1.86 | -£1.83 | -£1.46 | £9.94 | |

²¹ Source: National Grid's website - <http://marketinformation.natgrid.co.uk/gas/DataItemExplorer.aspx>, and Xoserve's extranet site - www.xoserveextranet.com/uklinkdocs/default.asp