EU Balancing Regulation EU 312/2014

Imbalance Tolerance Review Report

July 2019

GMO Northern Ireland

Contents

1. Introduction

Under the arrangements of EU Balancing Regulation (the "Regulation") 312/2014, the Transporter (the TSOs) may apply tolerances to an imbalance charging regime to incentivise Shippers to balance their portfolios. This is subject to the conditions that Shippers do not have access:

- to a short-term wholesale gas market that has sufficient liquidity;
- to gas required to meet short term fluctuations in gas demand or supply; or
- to sufficient information regarding their inputs and off-takes.

The Regulation envisages and seeks market development towards a state where the imbalance tolerances for all Shippers at all Load Categories are 0% and where a short-term wholesale gas market would provide the necessary gas to meet short term fluctuations in demand or supply allowing Shippers to effectively balance their portfolio in any given day and therefore mitigate against excessive balancing costs on individual Shippers and the Northern Ireland Transmission Network (the "Network") as a whole.

Considering the lack of a fully liquid wholesale gas market in Northern Ireland it is evident that Northern Ireland does not currently fulfil these market characteristics and so there is already substantial justification in continuing to apply tolerance levels under the Regulation which will be explored in more depth later in this report. In the absence of a Northern Ireland Wholesale Gas Market the analysis in this report will seek to explore the ability/inability of network users to manage their imbalance risk with regard to the information available to them.

It should be recognised at this point that the current tolerance design has not been altered since its inception. This is the first report to revisit the tolerance design, therefore the Transporter is seeking responses to the questions posed in the conclusion of this report to enable the Transporter to take the appropriate next steps. This report should be read in conjunction with the Interim Measures Report (published November 2018) and the Forecasting Accuracy Report (published January 2019).

The overall purpose of this report is to assess the suitability of the current imbalance tolerance arrangements and the existence of any indicators to alter the tolerances across all/any load categories to a more optimal level for the balancing of the Network. Tolerances must be low enough to strongly incentivise Shippers to balance their portfolios and yet be large enough to provide relief from inherent imbalance risk.

As per Article 50 of the Regulation tolerance design must;

(a) reflect the transmission network's flexibility and network user's needs;

(b) reflect the level of risk to the network user in managing the balance of its inputs and off-takes;

(c) not undermine the development of the short-term wholesale gas market;

(d) not result in an unduly excessive increase of the transmission system operator's balancing actions' costs (which are ultimately borne by the Shippers.)

Where the tolerance design is found to be inadequate in the fulfilment of any of these goals, the Transporter has made proposals for amendments to the current tolerances.

This report will therefore look at three key areas in analysing the current tolerance design:

1. Current tolerance levels and imbalance prices.
2. Factors affecting tolerance design.
3. Barriers to balancing.

Notes on the Data and Analysis

The analysis presented in this report focuses on the time period between October 2017 and March 2019 unless stated otherwise. This is so that conditions are analysed under the current commercial arrangements and ensures consistency and accuracy from the source of the data. This is to capture recent trends and assess Shippers ability to balance their portfolios both right now and in the immediate future.

To maintain commercial confidentiality Shippers are only defined by type (Distribution, Power Sector or Trading) and where charts are split by Shipper, a letter or number is used to differentiate between each however this assigned letter/number will not necessarily be consistent throughout the entire report.

Shippers that only bring gas to the NIBP and sell it on (Trading Shippers) have been omitted from most of the analysis as their tolerances are already 0% owing to the near certainty of their allocations. There are no tolerances at entry as all Shippers are kept whole with respect to their entry nominations. Trading Shipper's exit allocations are essentially the total sell quantity of their NIBP trade, so a Trading Shipper has almost full control of their own entry and exit allocations.

There are not currently any Downstream Load Category 2 customers in Northern Ireland so this tolerance will remain tied to the Category 1 tolerance.

Daily metered (DM) forecasting is not specifically focussed on in the Regulation and this is mirrored in the analysis although it is included in the figures. Whilst it makes up a sizable proportion of Distribution portfolios, it is a Shipper's responsibility under the Distribution Network Operator (DNO) codes to submit their daily metered forecasts. Whilst the Transporter encourages and hopes to incentivise improvements to forecasting in this area, the Transporter has little sight of what might be considered a realistic future improvement in this space. However, the Transporter takes comfort in the fact that none of the respondents to the questionnaire on Balancing Information Provision indicated a requirement for any additional information from the Transporter or DNOs to aid their DM forecasting.

2. Current Tolerance Levels and Imbalance Prices

In Northern Ireland, Shippers must balance their portfolio within tolerances which are calculated based on their portfolio of demand, using a given percentage for each load type. The

percentages reflect the fact that domestic loads are generally less predictable and more weather dependent than commercial and power generation loads.

The following tables summarise the current imbalance tolerances applicable to each Downstream Load category:

Number identifying Downstream Load Category	Downstream Load Category	Tolerance %
1	Power Generation	3%
2	Downstream consumers whose loads are greater than or equal to 1,465,416,000 kWh/annum, and who are not Power Generation Customers	3%
3	Downstream consumers whose loads are greater than or equal to 733,000 kWh/annum, but less than 1,465,416,000 kWh/annum.	10%
4	Downstream consumers whose loads are less than 733,000kWh/annum.	20%

Table 1: Downstream Load Categories

Power Sector Shippers are wholly Category 1 with the lowest tolerance owing to their ability to control their off-take and monitor their metering. There are no Category 2 customers in NI and so Distribution Shippers portfolios are made up of a combination of Category 3 (Daily Metered DM) and Category 4 customers (Non-Daily Metered NDM) which are assigned higher tolerance percentages due to the greater unpredictability of demand in these customer categories.

The Imbalance Tolerance provides a margin for a Shipper's Imbalance position, within which it is not penalised for being out of balance. Imbalance positions within tolerance are 'cleared' each day at the System Average Price (i.e. the GB SAP). Outside of the tolerance level, marginal prices apply, to provide an incentive on the Shipper to balance its inputs and outputs to within its tolerance. The marginal prices are calculated using the marginal buy and sell prices from Great Britain.

The Imbalance charge arrangements comply with Article 49 (2) of the Balancing Regulation, which describes the use of an administered or proxy market price where there is no short-term commodity market within the balancing zone, and in accordance with Article 49 (3) they seek to satisfy the requirements of Article 22, and in particular Article 22 (6), which describes how imbalance charges should provide an incentive to Shippers to balance their portfolios.

The following table outlines the applicable imbalance charges:

Charge Type	Imbalance Price
First Tier Imbalance	SAP
Negative Second Tier Imbalance	Higher of SAP * 1.5 or SMP Buy
Positive Second Tier Imbalance	Lower of SAP * 0.7 or SMP Sell

Table 2: Imbalance Charge Prices

3. Factors Affecting Tolerance Design

3.1 Network Flexibility

Network flexibility is the ability of the Network to absorb bigger pressure differentials and tolerate larger imbalances without the need for balancing actions to be undertaken. Tolerance design must therefore reflect the flexibility of the Network and from an operational perspective this level of flexibility should set the precedence for what is, considered to be an acceptable imbalance tolerance for each load category on the Network. As it currently stands some Shippers daily imbalance tolerance quantities are as large as balancing gas buy/sell quantities (averages displayed in Table 3).

There are several features of the Network which go some way to explaining the requirement to maintain high contractual pressures to deliver the capacity and volumes that are demanded. Some of these features include the Network's relatively low linepack volume and the fact that it only has a single-entry source in operation at the Moffat IP (at present) meaning that it is not back fed from any other source of entry and therefore prone to sharp pressure changes from disparities between what Shippers flow at entry and at exit points. To illustrate this, the average Network linepack energy is 62 million kWh with a typically big daily imbalance representing around 2% of total linepack energy although on average daily imbalances are closer to 0%. The biggest daily imbalance in the date range analysed represented 7% of total linepack energy. As already described, large pressure differentials from within day imbalances necessitate the need for balancing actions to protect the safety and integrity of the Network. However too many balancing actions represent an unduly excessive cost to the Transporter (and ultimately Shippers) and is why the onus of balancing must be transferred as much as possible to Shippers.

	System Buys	System Sells	Total
Quantity mWh	144,500	53,500	198,000
Number of Days	76	35	111
Average daily Quantity mWh	1,901	1,529	1,784
Max Daily Quantity mWh	3,000	2,500	n/a
Share of Activity %	73%	27%	100%
Total Cost £	2,904,204	957,801	3,862,005
Average Price £/mWh	20.10	17.90	n/a
Max Cost £	127,955	47,625	n/a
Balancing Actions % of Demand	0.45%	0.17%	0.62%
Balancing Action % of Total Balancing Quantities	17%	6%	23%

Table 3: Balancing Action Statistics

The need for the onus to be shifted to Shippers is evident in some of the figures presented in the table above. For example, it can be seen that during the period of this analysis residual Transporter balancing actions account for a 23% proportion of the burden of the overall total imbalance volumes on the Network with associated costs of £3.9 million. The observed asymmetry between the share of activity between system buys and system sells also alludes in part to an avoidable Shipper nomination issue which is described later in this report.

Whilst operational reasons are a key driver in setting tolerance levels to incentivise better Shipper balancing and lower the frequency of balancing actions, it is important to weigh this against what balancing performance a Shipper can realistically achieve given the level of risk Shippers have in managing the balance of their inputs and off-takes.

3.2 Shipper Balancing Performance

The Interim Measures Report published in November 2018 concluded that Shipper balancing has been broadly consistent over the last three full Gas Years with the analysis showing a varied range of performances. Chart 1 summarises the Shipper balancing performance by type over the analysis date range of this report:

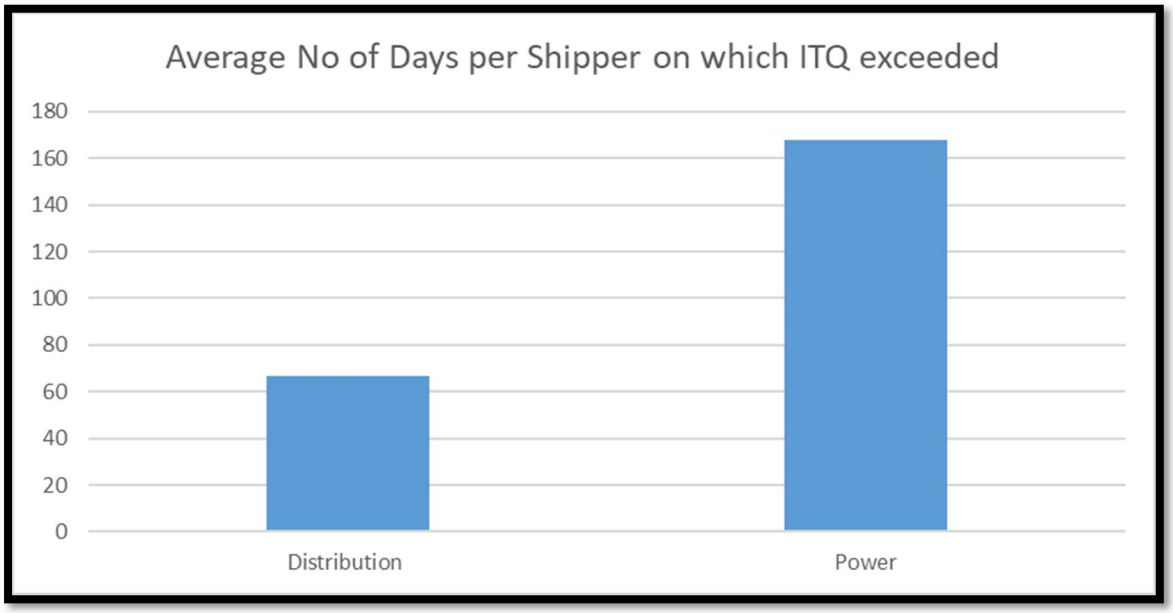

Chart 1: Average number of days Shippers exceeded their Imbalance Tolerance Quantity split per Sector

What can be deducted from Chart 1 is that on average Distribution Shippers are able to balance within their tolerances significantly better than Power Sector Shippers for the amount of days recorded above their Imbalance Tolerance Quantity ("ITQ") due to the higher imbalance tolerances that are assigned to the makeup of their portfolios. This indicates that a degree of comfort exists within Downstream Load Categories 3 and 4 which is explored in the sensitivities below:

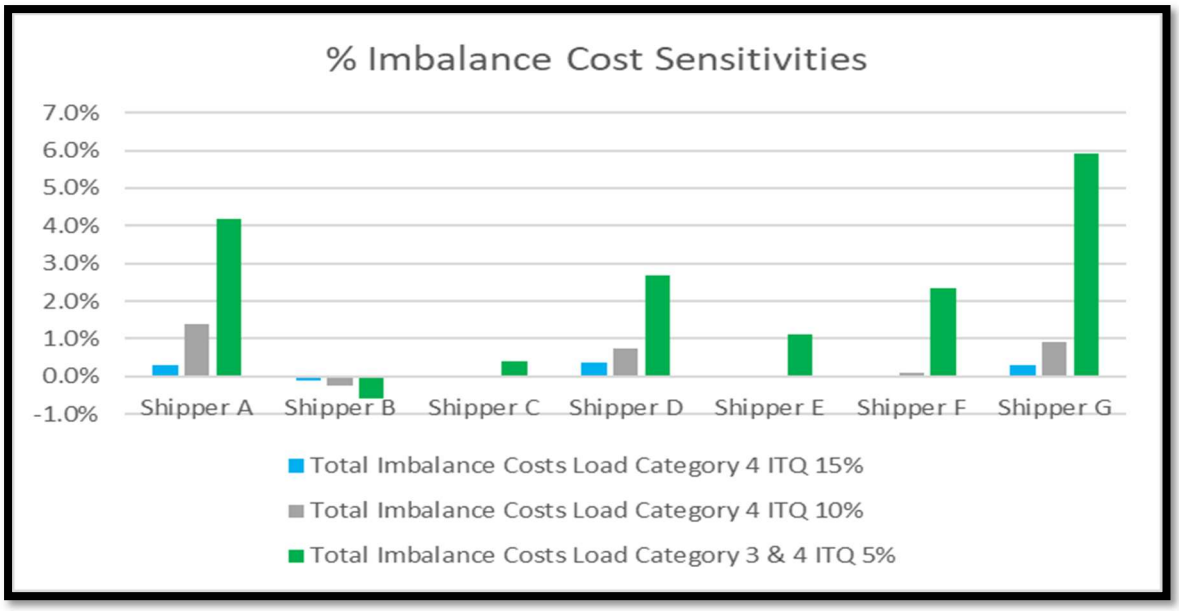

Chart 2: Distribution Shippers % Imbalance Cost Sensitivities

Chart 2 shows the percentage change to current observed imbalance costs associated with changes in the tolerance level assigned to Downstream Load Categories 3 and 4 with gas prices and balancing performance remaining the same. As a reference Shipper D's costs increase by; 0.4% if the Category 4 tolerance is reduced to 15%, 0.7% if the Category 4 category tolerance is reduced to 10% and 2.7% if both Category 3 and 4 tolerances are reduced to 5%. Lowering the Load Category 4 tolerance from 20% to 15% has an almost negligible effect on most Shippers costs. Even a further reduction to 10% only increases average Distribution Shipper imbalance costs by 0.4%. However, a reduction in both Category 3 and 4 tolerance levels to 5% would have a more significant impact with an average increase in total Distribution Shipper imbalance costs of approximately 2.3%.

This indicates that even with no expectation of an improvement in Shipper balancing performance it wouldn't be unrealistic to expect Distribution Shippers imbalance costs over the analysed time period to have been very similar with a reduced Downstream Load Category 4 tolerance of 15% or 10%.

On the evidence of the balancing performance summarised in Chart 1 and in direct contrast to Distribution Shippers, it is the Power Sector Shippers that breach their ITQ more frequently with a higher number of days over their Imbalance Tolerance Quantity. This is primarily because Power Generation is assigned to Downstream Load Category 1 and the corresponding lowest tolerance percentage of 3% but this is justified in that Power Stations have sole control of the off-take at their exit points and have visibility of their meter reads so barring operational constraints will have more certainty over their off-take.

3.3 Forecasting Accuracy and Distribution Shipper Nomination Behaviour

According to the Cost Benefit Assessment on Balancing Information Provision the most important piece of balancing information used by Distribution Shippers is the non-daily metered forecasts. Accuracy of these forecasts therefore represents the main element of risk inherent to a Shipper's NDM offtake. The Forecasting Accuracy Report published in January 2019 details the accuracy of the non-daily metered Forecast demand advice at each Distribution Exit Point (DN Exit Point) on the Network for the Gas Year 2017-2018. The Demand Forecast Advice for each DN Exit Point is prepared by the relevant DNO. A summary of a range of different measures of average forecasting accuracy derived from the Forecasting Accuracy Report is as follows:

	Averages	Absolute Averages
Across all DN Exit Points -average of all measurements	1.6%	4.5%
On the whole NI Network on any given day -average of daily total network averages	2.5%	6.8%
Weighted by throughput across all DN Exit Points -average of all measurements weighted by throughput	0.8%	4.8%

Table 4: Summary of Forecasting Accuracy Report Averages

These figures indicate that the NDM forecasts are sufficiently accurate enough for a Distribution Shipper to reliably base their corresponding entry and exit nominations on and give a good indication of the appropriate level of inherent risk in the Category 4 load category which is much lower than 20%. It is acknowledged that although these averages are far below 20% there are occasions where the variance of the forecast has exceeded +/-20% at a meter point (and sometimes far exceeds 20%) but these are exceptions and, in some cases, are attributable to operational issues in TSO metering. The Transporter is also obliged to validate meters periodically and they must be within a 1.1% accuracy level so this may account for a small portion of the error. Nevertheless, the Category 4 tolerance of 20% appears to provide excessive cover to the metering and forecasting error and hence the main inherent risk at all DN Exit Points on most days.

It has been observed that although Shippers manage to balance their entry and exit nominations exactly on the vast majority of days, the fact is that for some Distribution Shippers, submitted nominations very rarely equate to their forecasted advice which has a very distortional effect on the Network. For the most part Shippers (where they haven't nominated to forecast) have under nominated in relation to their forecast advice as per Chart 3:

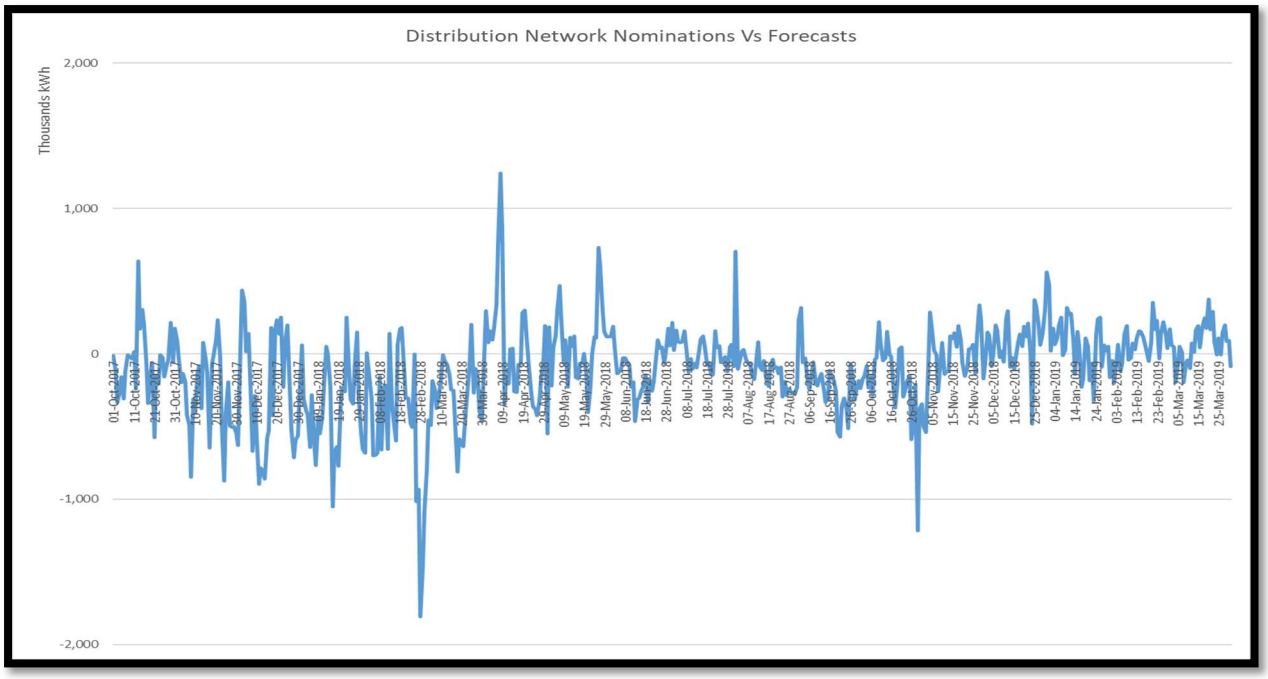

Chart 3: Variation of Nominations to Forecast Advice

Not nominating to forecast advice has several implications for the Network and on imbalances as a result. Firstly, the forecasts represent what needs to flow to DN Exit Points to satisfy demand on any given day so a nomination divergence from the forecast accentuates any imbalances on the Network (despite entry and exit nominations equating) and contributes significantly to Transporter balancing actions particularly balancing buys considering that it is mostly under-nominations with respect to forecasts that have been witnessed. This provides a partial explanation for the corresponding asymmetry of balancing buys and sells shown in Table 1. Secondly, not nominating to forecast distorts individual Shipper exit allocations for pro-rata allocation methodology DN Exit Points (Belfast and West exit points) resulting in poorer balancing performances for all Shippers with a reduced ability to stay within tolerance. An alteration of the tolerance design could incentivise nominations closer to that forecasted which would improve Shipper balancing performance and reduce Transporter balancing actions.

The following charts feature comparisons for the number of days that distribution Shippers exceed their tolerance and the average quantity by which they exceed both with real data and in a modelled scenario whereby each Shipper has nominated at exit exactly as advised by their forecasts and nominated the corresponding equal quantity at entry on every day with all other factors remaining the same.

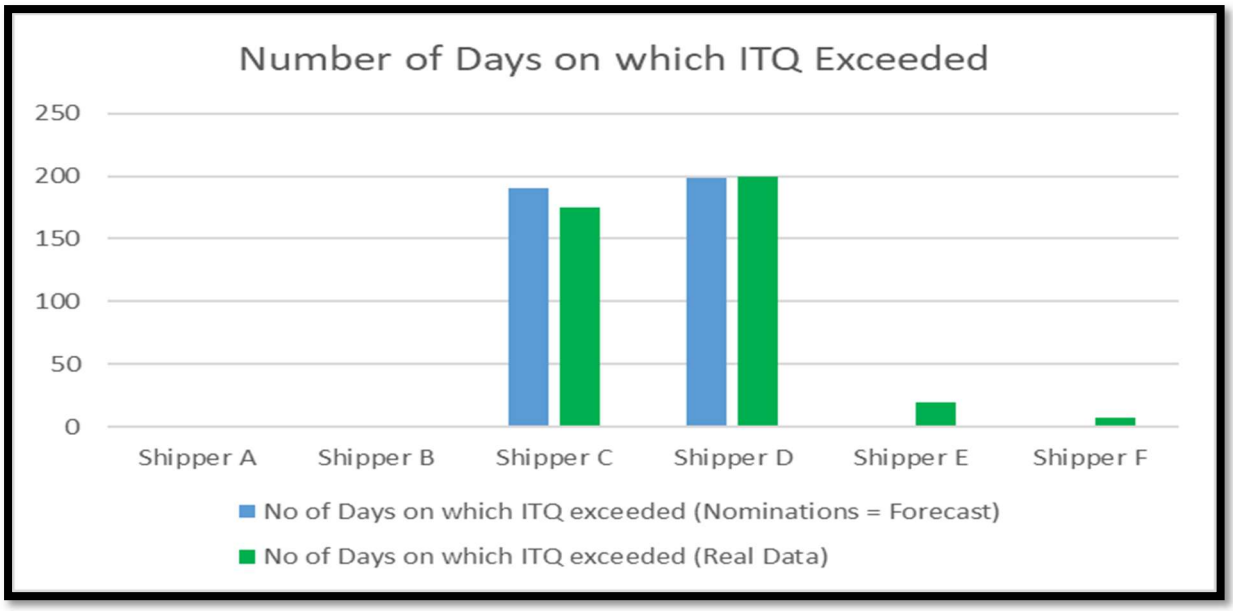

Chart 4: Number of Days on which ITQ exceeded - Real Data vs Nominations = Forecasts

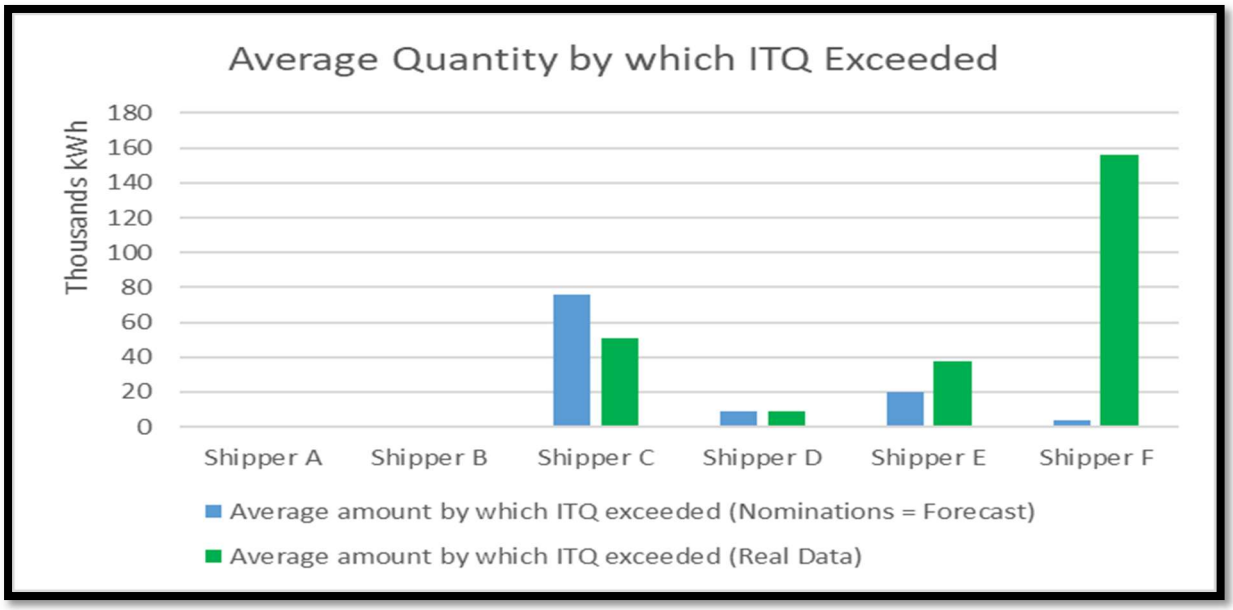

Chart 5: Average daily quantity by which Shippers exceeded their ITQ - Real Data vs Nominations = Forecasts

Nominating in line with forecast advice has virtually eliminated 2nd tier imbalances for another two Distribution Shippers leaving most Shippers operating comfortably within their tolerance levels over a year and a half time period. The two Shippers that still register a high number of days over their imbalance tolerance quantity have portfolios with a significantly higher proportion of daily metered customers. The greater benefit of nominating in line with forecast advice in this scenario can be seen in the dramatic decrease in overall network user's imbalance quantities (down 22%) and imbalance costs (down 23%) which represents an imbalance cost saving of £1.3 million.

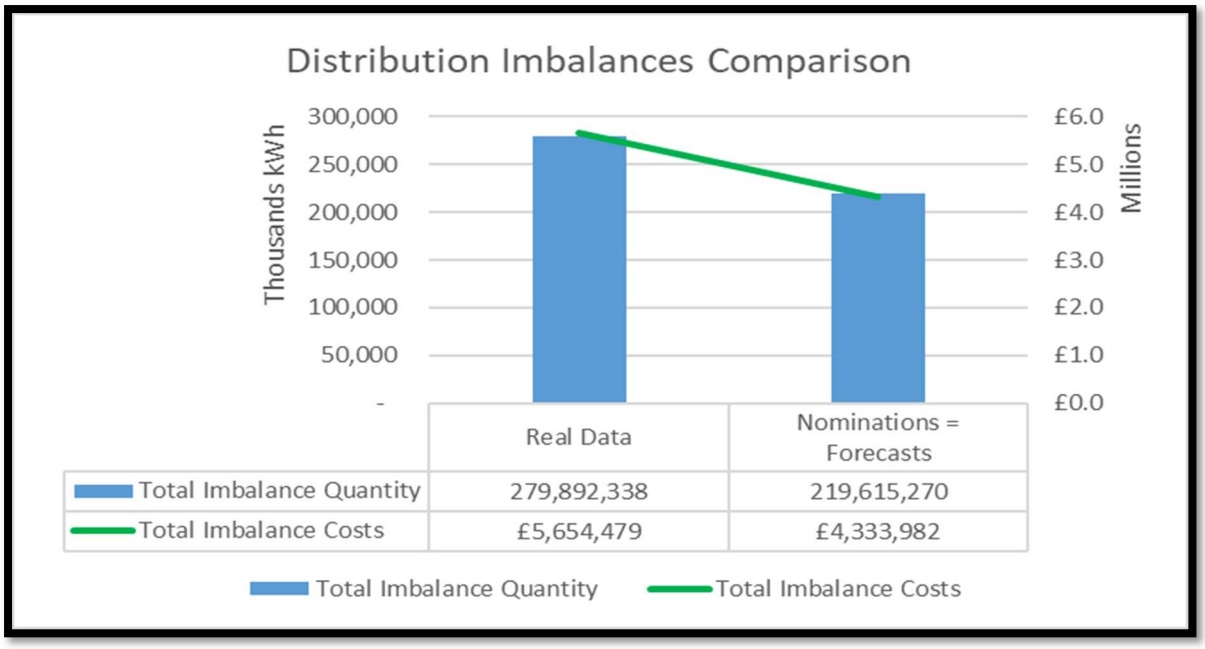

Chart 6: Distribution Imbalance Comparison - Costs and Quantities

The relative effect on each Distribution Shipper is shown by the reduction in almost all Shippers average imbalance percentages. Most Shippers average imbalances in both scenarios are significantly under the current Category 3 and 4 tolerance levels.

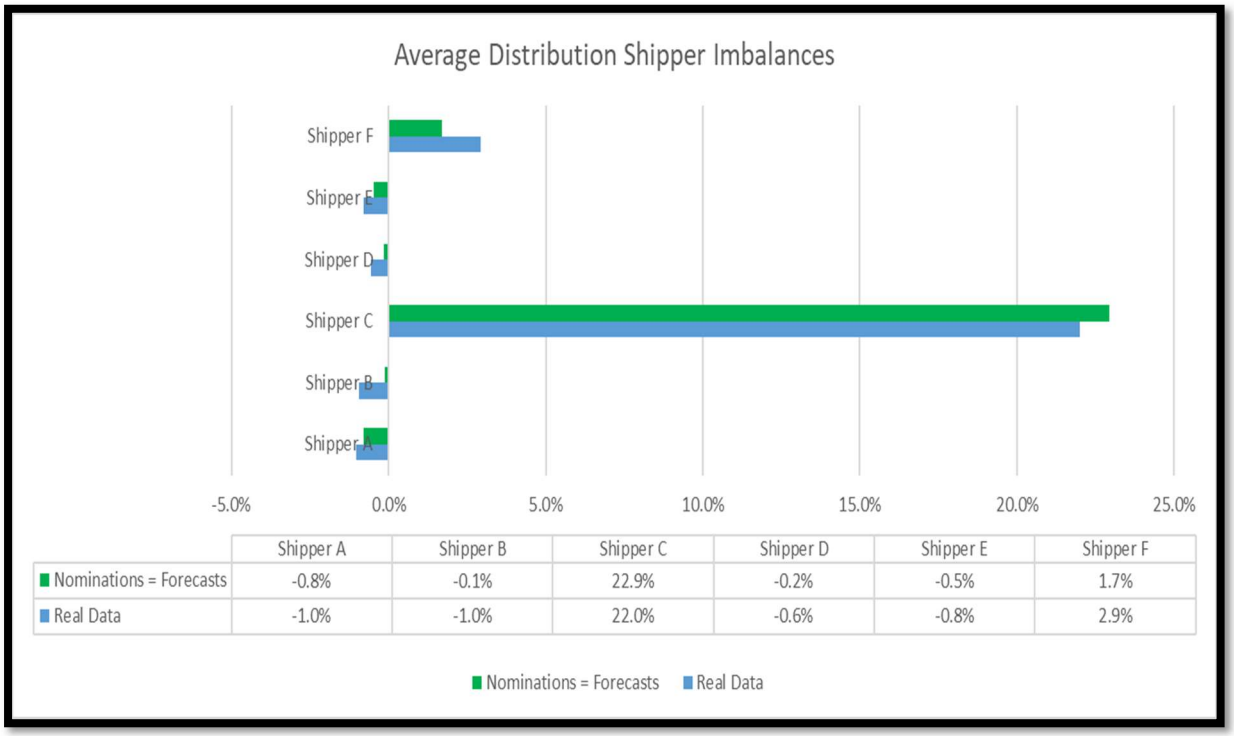

Chart 7: Average Distribution Shipper Imbalance Percentages Comparison

Further cost savings would be realised in the reduced number of balancing actions that would occur in this scenario. If in this scenario where Shippers have nominated exactly as per forecasts, the same amount of residual balancing gas was transacted per kWh of Network imbalance then the value of balancing transactions would fall by approximately £0.6 million or 15% of the total balancing action costs in Table 3. This is a very conservative estimate of the potential savings because smaller imbalances would inevitably mean that fewer residual balancing actions would have been necessary. The true extent of exactly just how many fewer balancing actions is hard to definitively say as there are many factors that contribute to balancing actions as well as end of day imbalances, but this estimated saving is a good indication of the potential minimum cost saving to the Network.

A summary of the illustrative potential savings is as follows:

	Real Data	Nominations = Forecasts	Saving	% Saving
Distribution Imbalance Costs	£5,654,479	£4,333,982	£1,320,496	23%
Residual Balancing Costs	£3,862,005	£3,279,646	£582,359	15%
Total	**£9,516,484**	**£7,613,628**	**£1,902,855**	**20%**

Table 5: Illustrative Nomination = Forecast Savings

This analysis demonstrates that it is hypothetically possible for Distribution Shippers to maintain a better control over their imbalances and hence exercise a greater ability to stay within their tolerance quantities by nominating according to forecasts and this could represent a potential total saving for the Network up to £1.9 million over a year and a half, however the analysis is limited by a number of factors which might inhibit the full realisation of these improvements in reality. Firstly, in this scenario it is simple to re-calculate all Shippers allocations at the Belfast and West DN Exit Points according to exit nominations due to the use of the pro-rata allocation methodology however it is difficult to quantify the benefits of nominating according to forecast at the Ten Towns DN Exit Point as reallocations can't be predicted based on forecasts and aggregate meter information alone. It is therefore assumed that the Ten Towns allocations have remained the same in the Nominations Equal Forecasts scenario. It is also unrealistic at this stage to believe every Shipper would/could nominate exactly according to forecast every day.

Timely and accurate forecasting information represents the most useful provision of information a Distribution Shipper receives regarding their inputs and outputs as supported in the findings of the Cost Benefit Analysis on balancing information provision. Since the non-daily metered forecast advice is sufficiently accurate with respect to the total metered exit quantities on the vast majority of days, it could be better utilised by some Shippers to balance their portfolios and its accuracy should form the basis on which to link the tolerance level to nominating to forecast for this category however the adoption of two different allocations methodologies complicates this and makes it more difficult to incentivise nominating in this fashion. Whilst it is outside the scope of this report, further measures may be needed to aid this behaviour.

4. Barriers to Balancing

4.1 Distribution Exit Point Allocation Methodology Uncertainty

In the NI Transmission regime, DN Exit Points are considered as Shared Exit Points due to multiple Shippers off taking gas at those points. At Shared Exit Points, the default allocation rule is that the metered quantity is allocated pro rata to the individual Shipper's exit nominations. The arrangements also allow the relevant DNO to reallocate the metered quantity. The two methodologies are applied in NI as follows:

Exit Point	Methodology
Belfast	Pro Rata to Nominations
Ten Towns	Reallocations
West	Pro Rata to Nominations

Table 6: Applicable Allocation Methodologies at DN Exit Points

Article 50 of the Balancing regulation specifies how the imbalance tolerance level can include a component calculated considering the deviation of the forecast of a network user's non-daily metered off takes with the allocation for that off-take. Although we can analyse the accuracy of forecasts at an aggregate meter level as per the previous section, with two different exit allocation methodologies it is difficult to calculate a standard definitive component level of risk a Shipper is exposed to with respect to their allocation deviation even if a Shipper were to nominate exactly as per their forecast advice. This is because at pro rata allocation method exit points a Shipper's allocation can be affected by every other Shipper's nominations and at a reallocation method exit point, allocations can vary significantly from that initially expected due to corrections for metering/telemetry issues leading to unpredictable imbalance quantities and associated costs.

The £1.9 million difference summarised in Table 5 essentially represents the magnitude of the adverse financial effects of the pro rata methodology on total Distribution Shippers imbalance costs and the wider effects on all Shippers through balancing actions.

The full extent of the difference across each methodology is captured in Chart 8 which shows the average change in daily imbalance charges for Shippers operating at the Ten Towns DN Exit point between charges calculated using pro rata allocations (as given in the daily published allocation statements) and the charges that eventually stand on a monthly code invoice based on the reallocation's method being applied to the Ten Towns Exit Point.

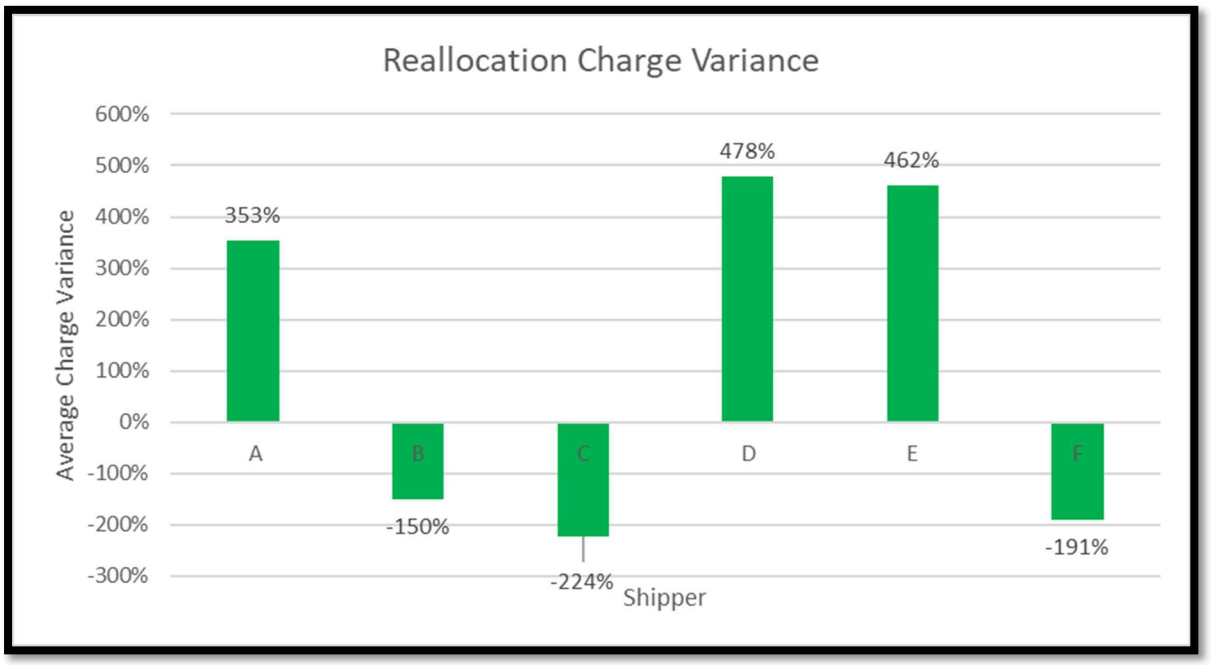

Chart 8: Average Allocation Method Charge Variance

The reallocation method, therefore, when applied can alter a Shipper's imbalances on any given day from first tier to second tier quantities and from positive to negative making imbalance costs highly uncertain to predict. These are very significant daily differences and in aggregation account for large monetary sums in a monthly invoice.

Each allocation methodology carries the inherent risk that a Shipper's final exit allocations could vary significantly from their exit nominations through no fault on the part of the individual Shipper. Consequently, these allocation method uncertainties necessitate the need to maintain an adequate level of tolerance to provide a level of protection from any adverse financial effects they might have.

4.2 Power Sector ISEM Uncertainty

Power Sector nominations display a far greater degree of variability than Distribution Sector nominations but the recent introduction of the ISEM market arrangements on the 1st of October 2018 has brought about significant changes in electricity TSO dispatch information flows with more uncertainty regarding the timings and quantity of dispatches and the creation of more volatility in gas nomination behaviour as a consequence.

Despite the increased volatility around nominations, the diagrams below showing the variation in the relative differences between Power Station's entry allocations and their resulting exit allocations both pre and within ISEM arrangements suggests that ISEM has not had a large detrimental effect on Power Sector Shipper's ability to stay within tolerance quantity. Power Station 2 shows almost mirrored results across periods with the mean and median difference

values remaining close to zero and the interquartile range falling clearly within the +/-3% tolerance quantity. The Power Station 1 results differ slightly in that under ISEM the mean average imbalance (denoted by the small x) has diverged further from zero although the imbalances appear less negatively skewed.

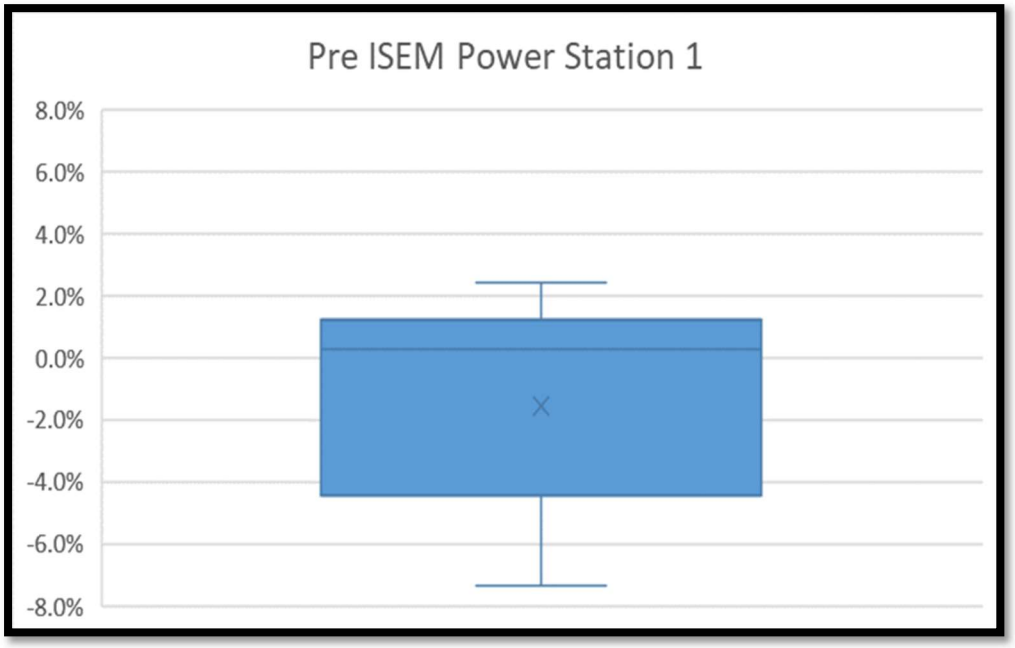

Chart 9: Pre-ISEM Power Station 1 Imbalances Diagram

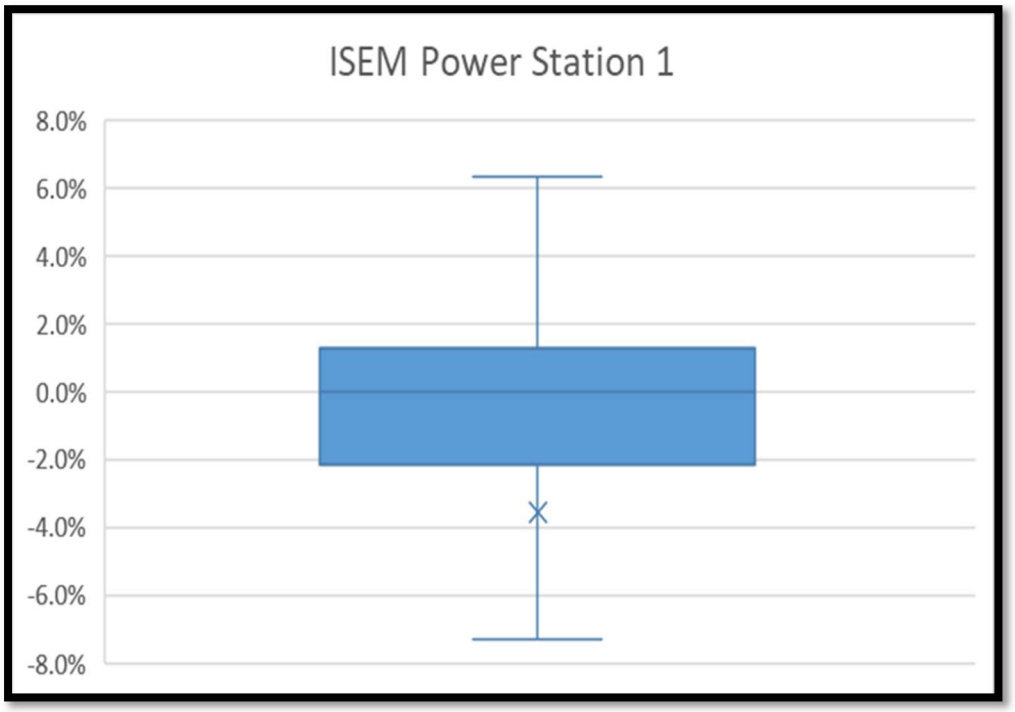

Chart 10: ISEM Power Station 1 Imbalances Diagram

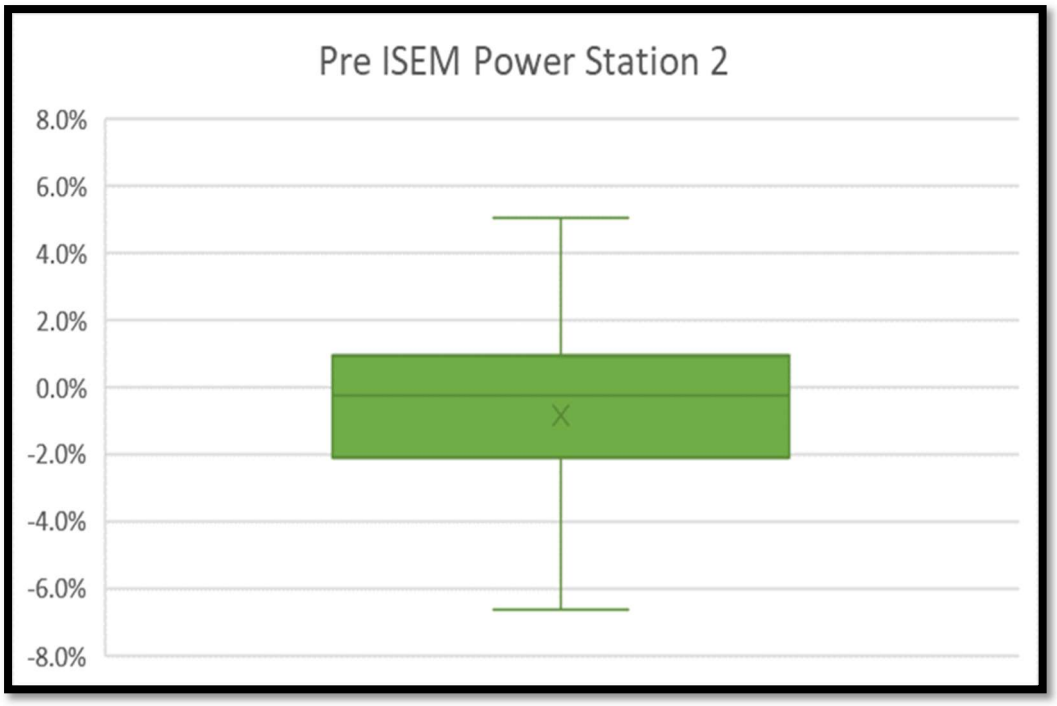

Chart 11: Pre-ISEM Power Station 2 Imbalances Diagram

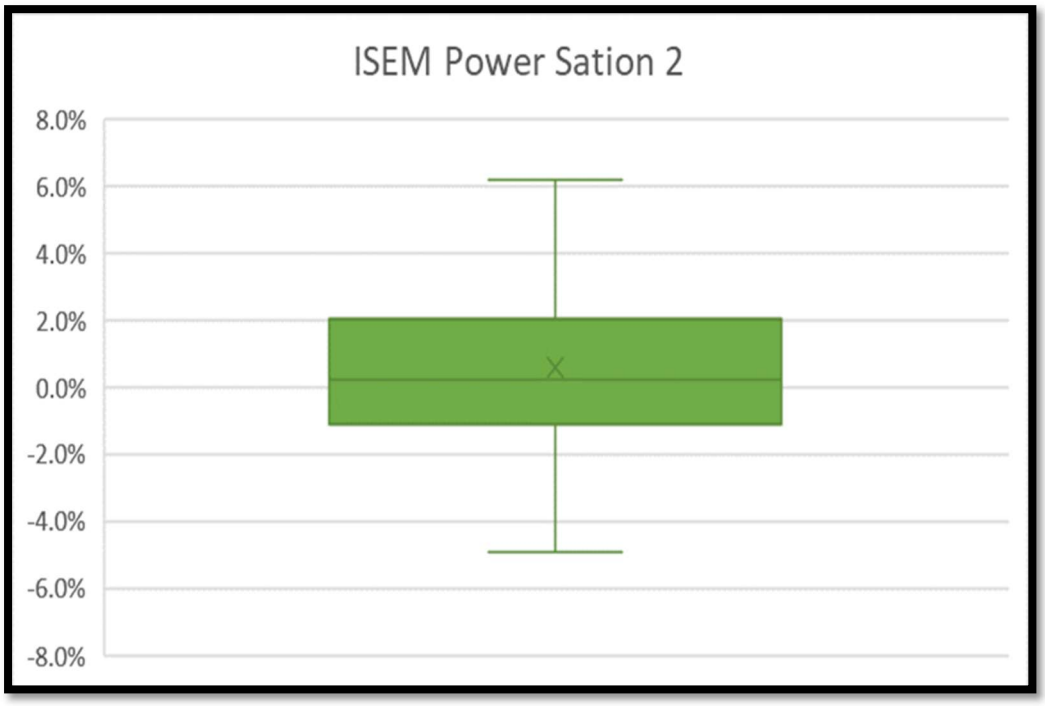

Chart 12: ISEM Power Station 2 Imbalances Diagram

However, this analysis would then also signify that although ISEM arrangements do not seem to have had a massively detrimental effect on balancing performance, neither do they seem to have obviously improved the Power Sector Shippers ability to balance in any way. It should be noted that despite these observations the data is severely limited in that it only reflects 6 months of ISEM arrangements versus a year of pre ISEM arrangements so perhaps more time is needed to gather further evidence and gain a better understanding on the impacts of ISEM (on both the Power Generation Sector as a whole and on each Power Station individually) on

balancing (if any) before a more definitive conclusion on Power Sector tolerances can be formulated.

4.3 Risk of Curtailment

Within the transportation agreement between PTL and GNI(UK) for upstream operating arrangements to the SNIP there are operational constraints on the pipeline between Moffat and Twynholm consisting of parameters that govern the rate of change of flow of gas into the pipe. If the aggregate nominations in an hour bar breach the parameters, then nominations are curtailed. This may lead to a different entry allocation than the nominated quantity desired by the curtailed Shipper(s). The consequence is that the affected Shipper(s) may be left more out of balance than normal. A Shipper can minimise their likelihood of being curtailed by keeping their entry nominations as accurate and up to date as possible throughout the gas day and renominating in a timely fashion and as early as possible, before the end of the gas day Therefore, the tolerance levels can alleviate the cost of curtailment. Curtailments have affected Shippers on 20% of the days covered in the date range of this report.

5. Conclusions & Proposals

5.1 Distribution Shippers

The Transporter believes a reduction in the Downstream Load Category 3 and 4 tolerances to the levels detailed in Tables 7 and 8 are necessary and justifiable under Article 50 of the Regulation:

(a) It has been demonstrated through balancing performance that most Distribution Shippers already operate comfortably within their existing tolerance level (Charts 4 and 5) showing that realistically there is adequate scope to lower the tolerance levels of Categories 3 and 4 and so it is deemed that **the tolerance levels in place currently are not fit for purpose**. The imbalance cost sensitivities of Chart 2 reveal that lowering these tolerances would not be excessively financially punitive if the reductions were implemented. From a Network flexibility perspective this lower tolerance would also prevent any Shippers having daily imbalance tolerance quantities that represent significant proportions of linepack energy.

(b) **The current tolerance levels are not considered to be a realistic reflection of the level of risk to the network user** in managing the balance of its inputs and off-takes with regard to Category 3 and 4 customers. There is a necessity to maintain a sufficient tolerance level to mitigate inherent risk, but the main risk from forecasting accuracy represents just a small variation from metered quantities on average as summarised in Table 4. Accounting for occasional larger deviations in forecasting accuracy at DN Exit points, adverse effects from either allocation methodology and occasional curtailments, the current levels are still considered excessive, especially as the actual average imbalance percentage Shippers manage to achieve in Chart 7 is mostly under 5%. Nominating to forecast advice would further lower these average imbalances if adhered to.

(c) A reduction **would not undermine the development of a short-term wholesale gas market** and in fact could incentivise Shippers to scrutinise their portfolios more thoroughly.

(d) A reduction in these tolerance levels **would not result in an unduly excessive increase of the Transmission System Operator's balancing actions' costs**, but in fact would have the opposite effect as these actions should actually reduce. If Shippers nominate according to their forecast advice more consistently, then a significant portion of the £0.6 million residual balancing savings detailed in Table 5 could be realised over a similar timeframe.

5.2 Power Sector Shippers

The Transporter believes the Downstream Load Category 1 and 2 tolerance should remain at its current level with only a slight reduction in the future as per Tables 7 and 8 under Article 50 of the Regulation:

(a) Power Sector balancing performance to date shows that generally Power Station shippers exceed their tolerance level far more frequently than Distribution Shippers (Chart 1) and with the tolerance level for this category already low the Transporter is cautious about drastically lowering further without more time to monitor under the ISEM arrangements so hence the **2%-3% range is needed**. This is further supported in Charts 9-12 which shows that the majority of imbalances generally fall within the +/-2% range for both PowerStation's. Whilst Power Sector imbalances can be large with respect to linepack energy their actual low tolerance quantities do not usually represent large proportions of linepack energy themselves.

(b**) 2%-3% is currently considered to reflect the level of risk to the network user in managing the balance of its inputs and off-takes** in respect of Power Station users. Since a Power Sector Shipper is in control of its off-takes the inherent risk stems from operational factors. As per Section 4.2 the introduction of ISEM is not thought to be conclusively detrimental to balancing ability at this stage. The pre-ISEM vs ISEM comparison analysis is limited to what can be directly observed with end of day allocations and these won't provide any specific insight accounting for the effects of factors such as electrical TSO dispatch timings however, regardless of the new timings or quantity of dispatches the mechanics remain the same so the Power Station Shipper still maintains a very high degree of control over their off-takes. With the findings of the Cost Benefit analysis on information provision concluding that Power Sector Shippers are generally satisfied with the balancing information available to them then it can be assumed balancing performance will in all likelihood remain similar going forward. It is clear that without another means to mitigate inherent imbalance risk the 2%-3% range is essential to continue to incentivise better balancing but also provide an adequate measure of financial protection.

(c) The Category 1 proposals **would not undermine the development of a short-term wholesale gas market.**

(d) The Category 1 proposals **would not result in an unduly excessive increase of the Transmission System Operator's balancing actions' costs** from current balancing costs.

5.3 Proposals

The Transporter proposes introducing the following tolerance changes in a two-phase process to allow for a smoother transition to the new tolerances with Phase 1 beginning during the upcoming Gas Year 2019/2020 and Phase 2 beginning the following Gas Year 2020/2021.

- Phase 1 – During Gas Year 2019/2020:

Number identifying Downstream Load Category	Downstream Load Category	Tolerance %
1	Power Generation	3%
2	Downstream consumers whose loads are greater than or equal to 1,465,416,000 kWh/annum, and who are not Power Generation Customers	3%
3	Downstream consumers whose loads are greater than or equal to 733,000 kWh/annum, but less than 1,465,416,000 kWh/annum.	5%
4	Downstream consumers whose loads are less than 733,000kWh/annum.	10%

Table 7: Downstream Load Categories Proposal Gas Year 2019/2020

- Phase 2 – Gas Year 2020/2021:

Number identifying Downstream Load Category	Downstream Load Category	Tolerance %
1	Power Generation	2%
2	Downstream consumers whose loads are greater than or equal to 1,465,416,000 kWh/annum, and who are not Power Generation Customers	2%
3	Downstream consumers whose loads are greater than or equal to 733,000 kWh/annum, but less than 1,465,416,000 kWh/annum.	3%
4	Downstream consumers whose loads are less than 733,000kWh/annum.	5%

Table 8: Downstream Load Categories Proposal Gas Year 2020/2021

5.4 Consultation Questions

Shippers and other interested parties are invited to give their views on any aspects of the Tolerance Review. In particular, the Transporter would particularly welcome responses to the following questions:

1. What does the respondent think is an appropriate tolerance level for each Downstream Load Category of customer and why?

2. Does the respondent believe the current customer Downstream Load Categories are still appropriate?

3. Does the respondent believe they would have the ability to manage their portfolio with a lower imbalance tolerance? What are the obstacles if not?

4. What does the respondent believe is a suitable timeframe for introducing changes to any tolerance levels?

5. Does the respondent think that changing the tolerance design to link tolerances to nominating as per forecast advice or a different mechanism altogether would represent a significant improvement on the current arrangements?

All responses should be sent to shippercommunications@gmo-ni.com by close of business on Friday the 30th of August 2019.

The Transporter will consider all submitted responses before publishing final decisions on the proposals outlined in this paper.

Appendix

Tables

Charts