nationalgrid

Stage 02: Workgroup Consultation

Connection and Use of System Code (CUSC)

CMP244

‘Set final TNUoS tariffs at least 15 months ahead of each charging year’

What stage is this document at?

01	Initial Written Assessment
02	Workgroup Consultation
03	Workgroup Report
04	Code Administrator Consultation
05	Draft CUSC Modification Report
06	Final CUSC Modification Report

CMP244 sought to increase the length of the notice period for TNUoS tariffs (currently 2 months) to a suggested period of 15 months.

This document is seeking responses to an *updated* original Proposal put forward by the Proposer – to increase the length of the notice period for TNUoS tariffs (currently 2 months) to a suggested period of 6-8 months.

This document contains the discussion of the Workgroup which formed in June 2015 to develop and assess the proposal. Any interested party is able to make a response in line with the guidance set out in Section 5 of this document.

Published on: **22nd October 2015**
Length of Consultation: **20 Working days**
Responses by: **19th November 2015**

High Impact:
All parties liable for TNUoS and Transmission companies

Medium Impact:

Low Impact:

Contents

Any Questions?

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About this document

This document is a Workgroup consultation which seeks the views of CUSC and interested parties in relation to the issues raised by the Original CMP244 CUSC Modification Proposal which was raised by EDF Energy and developed by the Workgroup. Parties are requested to respond by 5pm on **19th November** to CUSC.team@nationalgrid.com using the Workgroup Consultation Response Proforma which can be found on the following link: http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP244/

Document Control

Version	Date	Author	Change Reference
0.1	02/10/2015	Code Administrator	Draft Workgroup Consultation to Workgroup for comment
0.2	22/10/2015	Code Administrator	Workgroup Consultation to Industry

1 Summary

1.1 CMP244 is a CUSC Modification proposal raised by EDF Energy and submitted to the CUSC Modifications Panel (the Panel) for their consideration in May 2015. A copy of this Proposal is provided in Annex 1. The Proposal first sought to extend the TNUoS tariff notice period to a period of at least 15 months (from the current 2 months). The Panel decided to send the Proposal to a Workgroup to be developed and assessed against the CUSC Applicable Objectives.

1.2 This document describes the Original CMP244 CUSC Modification Proposal (the Proposal), and summarises the deliberations of the Workgroup. The Workgroup first met on 24th June 2015, and have held 5 Workgroup meetings to date. A copy of the Workgroup Terms of Reference is provided in Annex 2.

1.3 The Workgroup discussed the issues raised by the CUSC Modification Proposal and considered the risks and benefits associated with extending the TNUoS tariff notice period to 15 months (from the current 2 months). As a result of these discussions, the Proposer chose to change the original Proposal in September 2015 – to consider a notice period of 6-8 months instead of 15 months.

1.4 *The Workgroup are therefore now considering a 6-8 month notice period prior to the start of each charging year on 1st April for TNUoS tariffs as a more appropriate means to mitigating the identified defect.* The structure of the report therefore lays out the benefits, issues and risks discussed when considering a 15 month notice period, and then section 3 considers how these change when considering a 6-8 month notice period.

1.5 Prior to confirming any alternative proposals, the Workgroup are seeking views on the option they have identified (i.e. that of a 6-8 month notice period for TNUoS tariffs), the best solution to the defect and any other further options that respondents may formally request be considered. *Respondents are therefore asked to respond to all the consultation questions considering the solution of a 6-8 month notice period.*

1.6 Following this Consultation, the Workgroup will consider any responses, vote on the best solution to the defect and report back to the Panel at the December 2015 Panel meeting.

1.7 The remainder of this document is structured as follows:

Section 2: A summary of the Workgroup discussions and issues.

This is structured around several themes identified and considered by the Workgroup:

- Potential benefits of the proposal
- Current CUSC and licence conditions regarding the TNUoS tariff notice period, mid-year tariff changes and TEC changes
- Accuracy of tariffs 15 months ahead of the charging year – potential impact on under / over recovery of TNUoS revenue
- Licence conditions and financing costs associated with under / over recovery
- Increase in predictability of tariffs vs. medium term volatility
- Implications for cost reflectivity
- Increase in TNUoS forecasting accuracy over time
- Implications of a notice period greater than 9-10 months
- Parties best placed to hold risk
- Implications of an Independent System Operator
- Risks associated with the offshore charging regime
- Implications of European Regulation EC 838/2010
- Transition across price control periods
- Publication of company financial information
- Impact on CUSC Modification timescales

Section 3: Other options to address TNUoS volatility, and alternative notice period of 6-8 months

Section 4: Impacts and implementation

- Implementation and transition timescales
- Consequential changes to industry codes and licences

Supporting information can also be found in the annexes to this document.

1.8 This Workgroup Consultation has been prepared in accordance with the terms of the CUSC. An electronic copy can be found on the National Grid Website, http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP244/CMP244_Workgroup_consultation, along with the Modification Proposal Form.

2 Key Issues and Summary of Workgroup Discussions

Original Proposal

2.1 The Original Proposal brought forward by EDF sought to set TNUoS tariffs at least 15 months in advance of the 1st April start of each charging year, rather than the current 2 months notice provided to Transmission users.

2.2 The defect identified by the Proposer was that the current publication of TNUoS charges 2 months ahead of the start of each charging year creates uncertainty that is difficult for Suppliers (or customers on pass-through TNUoS contracts) to manage effectively. The Proposer believes that this uncertainty means that Suppliers include a risk premium when setting prices for longer term fixed contracts – leading to an increase in prices for end consumers - and that this risk would be better centralised and managed by the System Operator. The Proposal also noted that this uncertainty may be more difficult for smaller Suppliers to manage, and hence could reduce competition.

Potential benefits of a 15 month notice period

2.3 The CUSC Proposal submitted by EDF notes that a 15 month notice period would increase predictability of charges for Suppliers, and would eliminate the need to add a risk premium to prices for many fixed term contracts. This would in turn reduce costs to end consumers. The Proposal noted that a longer notice period could increase costs to network companies, due to increased under / over recovery of TNUoS revenue and any associated cash flow / financing costs that this entails – discussed in further detail later in this report. However, the proposal stated that this cost / risk is more efficiently managed by network companies as opposed to Suppliers and customers on pass-through contracts, due to the fact that network companies have a lower cost of capital.

2.4 The proposal also referenced a recent change to the electricity distribution tariff regime (DCP178) which altered the DCUSA such that distribution use of system charges are now set with 15 months notice. A change to transmission charging for electricity to bring it in line with the distribution charging regime would therefore also reduce complexity.

2.5 The Workgroup discussed whether it would be possible to quantify the size of any risk premiums being added by Suppliers to account for TNUoS volatility associated with a 2 month or 15 month notice period. Initially, the Proposer had considered using variations in TNUoS tariff forecasts as a proxy for risk premiums added by Suppliers, but some Workgroup members felt that this was not a helpful process – as some Suppliers will be not pricing / planning solely on the basis of National Grid's numbers, but will substitute their own forecast where they believe this is more accurate.

2.6 The Workgroup discussed whether there may be any merit in Ofgem confidentially collecting information on risk premiums added to prices from Suppliers. However, it was noted that this would not provide full information as to what all industry participants may be charging, due to different parties' view of risk. In addition, it was noted that although Suppliers may have different views on risk, logically in a competitive market they will not necessarily be able to pass these different views through to consumers. So potentially it is the lowest risk premium applied by a Supplier that is influencing consumer costs.

2.7 The Workgroup also noted that the benefit of any extension to the TNUoS tariff notice period would depend on the amount of contracts in the market that are fixed term, and their length. The 2015 Ofgem report on retail energy markets suggests that currently over two-thirds of domestic consumers remain on Standard Variable Tariffs (SVTs), but that the majority of business customers are on fixed-term, fixed-price contracts. The Workgroup also noted that extending the notice period may influence the market towards setting more or longer fixed term tariffs. However, a 15 month notice period could also mean that whilst the risk premiums for years 1 and 2 of a fixed term contract reduce, the risk premium for year 3 of any fixed term contract may increase. Thus a consequence of a longer notice

period could be that it possibly creates an unintended barrier to longer term contracting - but only if the increased risk faced by participants in the final year of a long term contract outweighs the reduction in risk in earlier years.

2.8 As a result of these discussions the Workgroup decided that it would only be able to discuss risk premiums qualitatively rather than attempting to quantify any overall market risk premium. The Workgroup also discussed the fact that Suppliers' customers, particularly those who are heavy energy users, may *themselves* add a risk premium in prices to account for volatility in the cost of energy. The Workgroup noted that whilst the primary purpose of the CUSC process is to consider benefit to GB energy customers, it may be useful to understand this indirect impact on other markets. The Workgroup also agreed that as part of any industry consultation it would be valuable to ask Suppliers' customers about the benefits of tariff certainty from their perspective.

Additional consultation question 5:
Does greater certainty of TNUoS tariffs provide any benefit to you? Is it possible to quantify this benefit in any way? If so, please provide any additional information or evidence.

Current notice period within the CUSC and Transmission Licence

2.9 The current CUSC methodology (section 3.14.3) states that a notice period of not less than two months notice should be given when setting TNUoS tariffs. It is also noted within the Transmission Licence (condition C4.5 paragraph c) that no less than one month's notice would be given. There is hence a discrepancy between the CUSC and the Transmission licence in this regard, leading to National Grid adopting the longer of the two notice periods in order to remain compliant with the transmission licence and its contractual obligations under the CUSC.

2.10 Currently, final tariffs are published by National Grid at the end of January, for the following charging year beginning the following April. Final TNUoS tariffs are preceded by quarterly forecasts and indicative tariffs in December. In addition a 5 year forecast is provided once a year.

2.11 The Workgroup considered whether they would need to change the Year and 5 Working Days' notice given by generator parties for their TEC reductions and agreed that this was out of scope of the Modification and hence would not be changed within the CMP244 proposal.

Mid-year TNUoS tariff changes

2.12 Within the current methodology, National Grid cannot change TNUoS charges within a charging year 'except in so far as the Authority otherwise directs or consents' (Transmission Licence C4.5.b) – and must give the Authority 150 days' notice of this (except where the Authority consents to a shorter period).

2.13 Given the intention of the CMP244 proposal, the Workgroup discussed whether it would be appropriate for this proposal to remove the potential for a mid-year tariff change under a longer notice period. Comparing CMP244 to the related DCUSA Modification DCP178, the new DCUSA legal text is quite clear that tariffs are now set once a year with 15 months' notice, and distribution companies need a derogation from Ofgem to change tariffs after they have been set.

2.14 The Workgroup considered whether it was reasonable to leave current arrangements regarding mid-year tariff changes unchanged, or recommend a removal of the appropriate licence clause so that mid-year changes were no longer possible. In doing so, the Workgroup considered analysis undertaken by the National Grid representative to illustrate

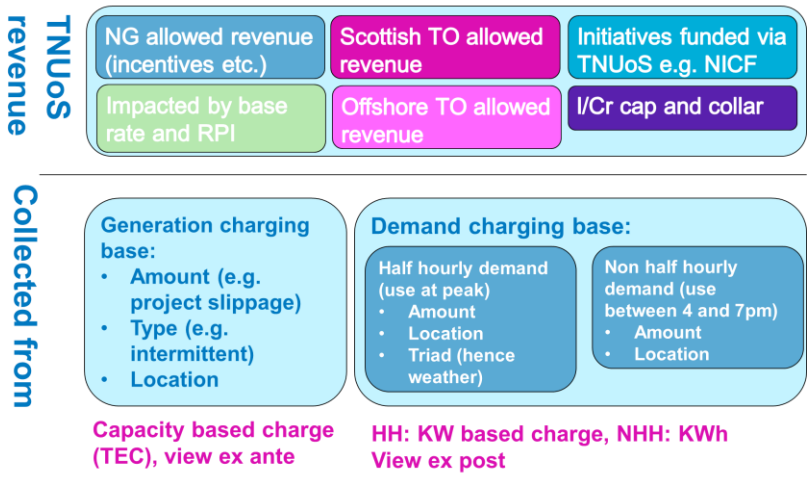
that a longer notice period implies more risk of inaccuracy of tariffs as compared to the status quo (further discussed later in this report). It was noted that National Grid as System Operator holds a unique position in the market – for example in the SO standard Licence condition C24 which looks at the case of licencee actions in the case of energy supply company administration. Furthermore, the Workgroup examined the 'unanticipated events' clause in offshore transmission licences which allow an offshore Transmission Owner to increase its revenue to cover an unanticipated event or emergency. This revenue would need to be paid out by National Grid and recovered via TNUoS charges (further discussed later in this report).

2.15 For all of these reasons, the Workgroup noted that National Grid as System Operator could be left in a position of needing to fund unanticipated or emergency situations at short notice, and hence not allowing a mid-year change in such situations could mean there is no way of recovering this revenue for a long time. The Workgroup clarified that they were not trying to cover all potential market events under this Modification - however any new arrangements under CMP244 would need to be flexible enough to allow for some contingency in exceptional circumstances, as per the current arrangements. As a result of these discussions, the Workgroup agreed that under a longer notice period such as 15 months, the current arrangements regarding mid-year tariff changes should remain unchanged, but the Workgroup noted that mid-year tariff changes are destabilising for the industry and hence should be avoided wherever possible.

Accuracy of setting TNUoS tariffs 15 months ahead: TNUoS revenue recovery

2.16 The Workgroup wanted to understand whether extending the notice period for setting TNUoS tariffs to 15 months ahead would have an impact on the precision of tariffs, and if so, the size of this impact. As part of the terms of reference set for the Workgroup, the Workgroup needed to consider two aspects here – firstly the potential impact on TNUoS revenue recovery (and any associated financing costs), and secondly the impact on cost reflectivity of TNUoS tariffs (discussed in further detail later in this report).

2.17 The National Grid representative explained that at a high level, National Grid are required to forecast a number of datasets to set TNUoS tariffs. Firstly, the allowed revenue to be recovered via TNUoS needs to be forecast. This is made up of National Grid's TO and SO allowed revenue, allowed revenue for other Transmission Owners (Scottish TOs, offshore TOs) and other items – for example innovation funding that is funded via TNUoS, and interconnector schemes. At a simple level, this revenue amount effectively makes up the 'numerator' when considering TNUoS tariffs.



2.18 National Grid then needs to look at **who** this revenue will be collected from – the charging base (the volume) which makes up the denominator in the above diagram. This necessitates forecasting generation capacity (TEC) – the overall amount of generation capacity, what type of generation this is (i.e. intermittent or conventional plant), and where

this generation will be. The demand charging bases also need to be forecast – including the type of demand (half hourly vs. non half hourly), the overall amount of demand on the transmission network at relevant times (Triad periods for HH demand and annual demand at 4-7pm for NHH demand), and where this demand is anticipated to be. The generation: demand split of charges also needs to be forecast (see paragraphs 2.55 – 2.61).

2.19 The Workgroup discussed that as the notice period becomes longer (from 2 to 15 months), forecasts further ahead need to be used for each of the above aspects, and these necessarily become more inaccurate as they seek to forecast further ahead in time. In order to understand the impact on forecasting accuracy if the notice period was set to 15 months, the National Grid representative looked at the 5 year forecast reports. These are usually released in January, so looking at the view of, for example, 2014/15 in the 5 year forecast report issued in January 2013 (14 months before) gives a view as to how accurate forecasts might be 15 months ahead. The Workgroup noted that if National Grid had to issue a binding tariff (rather than a long term forecast) at this point, they would put more resource into the production of tariffs - therefore this analysis can only provide an indicative view of the accuracy of tariffs 15 months ahead of the charging year.

2.20 Annex 4 gives a breakdown of the National Grid view of TNUoS revenue and the generation and demand charging bases 14 months ahead of the charging year. This data shows that the tendency in recent years has been towards over forecasting the charging base (partly because generation projects get delayed and hence don't go live in a particular charging year, and also because the rapid growth of embedded generation and changing consumer behaviour have made it more challenging to forecast demand charging bases accurately). As a result, if the charging base (the denominator) is set too high, tariffs are set too low and not enough revenue is recovered. Any under or over recovery of revenue is referred to as 'k' in the CUSC and the transmission licence, and reconciliation of k takes place by adjusting TNUoS tariffs 2 years later; i.e. any under/over recovery for charging year 2016/17 would be recovered in charging year 2018/19.

2.21 The National Grid representative presented the table below. The 2nd column shows the estimated potential under / over recovery of TNUoS revenue, *had charges been set according to the information known approximately 15 months ahead of the charging year*. The 3rd column shows this as a proportion of the overall revenue that needs to be collected via TNUoS. The 4th column shows what under / over recovery of revenue actually was in each of these years, with charges published 2 months in advance. The 'delta' column therefore shows how under / over recovery could change as a result of moving from a 2 month notice period to a 15 month notice period. The price control year was removed from this dataset as it will be addressed separately later in this report.

Year	Estimated under / over recovery 15m notice	As a proportion of TO revenue	Compared to current scenario (2 months notice)	As a proportion of TO revenue	**Delta (2m to 15m)**	**Drivers**
2014/15	-£186.3m	-7.6%	- £99m	-3.8%	**£87.3m**	Demand over forecast (Mild winter / embedded)
2013/14	*[Price control]*	*[Price control]*	- £54m	-2.5%		
2012/13	-£175.3m	-9.2%	£3m	0.1%	**£178.3m**	Rollover year
2011/12	-£89.2m	-5.4%	- £24m	-1.4%	**£65.2m**	
2010/11	-£40.7m	-2.6%	£12m	0.75%	**£52.7m**	Mid year price change

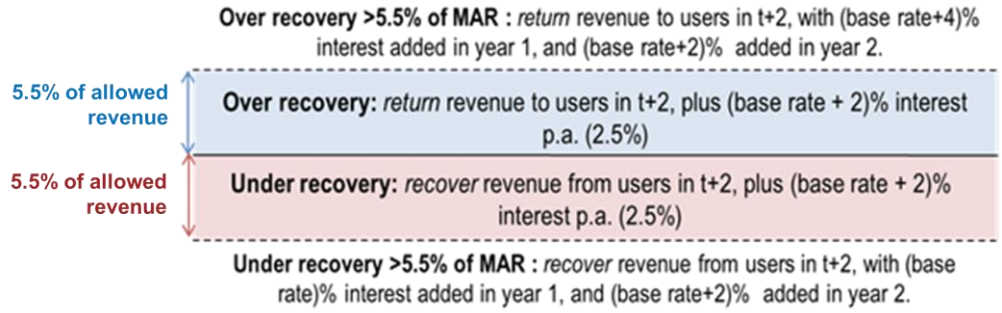
It was noted that in each of the charging years examined, the increase in the notice period from 2 to 15 months would potentially have led to an increase in the under recovery of TNUoS revenue.

Transmission Licence conditions associated with under / over recovery of TNUoS

2.22 The Workgroup then wanted to understand what the implications of this under recovery might be. In order to do this the National Grid representative presented how under and over recovery of revenue is addressed in the Transmission Licence, specifically Special Condition 3A: 14 – 22. This condition states that any under or over recovery of TNUoS revenue is held by National Grid for 2 years. National Grid can either *recover* financing costs (in the case of under recovery), or has to pay back financing costs to transmission users (in the case of over recovery). This takes place via an adjustment to TNUoS tariffs 2 years later (i.e. 2016/17 under or over recovery is factored into 2018/19 TNUoS tariffs).

2.23 The National Grid representative also noted that there is a licence condition (Special Condition 3A: 2) that obliges the licensee to use 'best endeavours' to avoid over recovery – but there is no equivalent condition to avoid under recovery.

2.24 The current conditions in the Transmission Licence state that, as long as under or over recovery of revenue is less than 5.5% of allowed TNUoS revenue, National Grid recovers or pays back financing costs at a rate of 2% plus the Bank of England base rate; i.e. in 2015 this would have been 2+0.5% - a total of 2.5%. If, however, the under or over recovery of revenue exceeds 5.5% of allowed TNUoS revenue, these rates change for the first year that the under / over recovery is held. For an under recovery of revenue greater than 5.5% of allowed revenue, the whole amount of the under recovery is charged back to transmission users at base rate (currently 0.5%) for the first year, and then 2% + base rate (currently 2.5%) for the second year. This therefore has the effect of reducing the allowed financing rates National Grid can recover.



2.25 The National Grid representative undertook some analysis to look at what allowed financing rates would have been for the estimated under recovery at 15 months' notice, and compared this to current allowed financing rates and under / over recovery when tariffs are published at 2 months notice. This can be found in Annex 5. The Workgroup noted that in 2-3 years out of the last 5, it is anticipated that had tariffs been published at 15 months notice, under recovery would have been greater than 5.5% and hence these different financing rates would have applied. It was also noted that in 2014/15 tariffs were published at 2 months' notice and under recovery was 4%, hence already starting to approach the outer limits of this 'bandwidth'.

2.26 The Workgroup noted that under current licence conditions revenue recovery beyond the 'bandwidths' could have a direct impact on the financing of NGET and therefore as a consequence of CMP244 NGET would need to seek to redress this position with Ofgem.

Increase in predictability vs. medium term volatility

2.27 The Workgroup noted that as a result of increased under / over recovery due to a longer notice period, there could be a trade off in short term predictability vs. medium term volatility of TNUoS tariffs. Essentially, setting TNUoS tariffs 15 months ahead of the charging year would give clear predictability of charges for 15 to 27 months.

2.28 However in the longer term, as can be illustrated by the data, the size of any under / over recovery of TNUoS revenue could increase as a result of an increase in the notice period

(from 2 to 15 months). As this under / over recovery, plus any associated financing costs, has to be reconciled via TNUoS tariffs 2 years later, this could lead to increased volatility of TNUoS tariffs in the medium term.

Implications for cost reflectivity

2.29 The Workgroup then considered the implications of a longer notice period for cost reflectivity, which is a stated aim of the Applicable CUSC Charging Objectives. Again, it was noted that as the notice period becomes longer, forecasts further ahead may need to be used in setting TNUoS tariffs and these will necessarily be less cost reflective as assumptions are made further ahead in time. Also, where time lagged data is used in the charging model (for example generators' individual Annual Load Factors), increasing the notice period by 13 months to 15 months is likely to mean that data from a previous year is used, rather than the latest data at the time of TNUoS tariff setting 2 months ahead as is the case currently. Both of these aspects are likely to reduce cost reflectivity.

2.30 The Workgroup noted that the closure or opening of large generation projects, and the building of transmission infrastructure projects were two examples of how cost reflectivity could be reduced under a 15 month notice period. For example, if TNUoS tariffs were set anticipating a large generator to stay open, and it closed between the time of tariff setting 15 months ahead and those tariffs going live, this could lead to a dilution of cost reflectivity in the tariffs. Similarly, if charges were set anticipating that a large infrastructure project would be operational at the time of tariffs going live, and this project was then delayed, the associated charge and locational impact of this project would be included in TNUoS tariffs earlier than it 'should' be, again reducing cost reflectivity.

2.31 The Workgroup asked the National Grid representative to undertake some analysis to look at the impact of a large generator closing or opening in various charging zones, to understand the impact on tariffs. Similarly, the impact of including or not including two large infrastructure projects; namely (i) Caithness-Moray and (ii) the Western HVDC link; in TNUoS tariffs was also modelled. Extracts from this work can be found in Annex 6.

2.32 This analysis shows that in some cases, including an infrastructure project in tariff calculations that was later found not be operational in the charging year in question would lead to some generation tariffs being up to £9/kW higher than they would have been had the project *not* been included. Similarly, some HH demand tariffs decreased by up to £10/kW. The Workgroup noted that generation / demand on the periphery of the network would be more susceptible to these kinds of variations in tariffs, as they were more likely to be affected by changes in power flows when new projects begin or generators open / close. The Workgroup also noted that HVDC projects use project specific rather than generic costs in terms of setting TNUoS tariffs, and at 15 months' notice this would need to be forecast. This could also reduce cost reflectivity as such costs are more difficult to forecast.

2.33 However the Workgroup also discussed the fact that the objective behind setting cost reflective TNUoS tariffs is to ensure that the tariffs act as an accurate price signal, clearly signalling the cost of an incremental increase in capacity being added to the transmission network. This should drive efficient investment decisions in the market. The Workgroup discussed whether the TNUoS tariff should actually be a more forward looking price signal than currently - as it is seeking to drive long term investment decisions. From this perspective, a tariff that uses information that looks further ahead in time could actually be a more useful price signal. However this would need to be weighed against the risk of, e.g. including a large generator that subsequently closes.

2.34 It was agreed to draft a table showing the numerous information items required for cost reflective TNUoS tariffs and at what point in the year these information items are available. This was presented to the Workgroup in the following meeting and is available in Annex 7.

Increase in forecasting accuracy over time

2.35 The Workgroup then wanted to consider how forecasting accuracy might decrease as the notice period for TNUoS tariffs is increased from 2 to 15 months. The National Grid representative presented a series of graphs which illustrated the potential increase in forecasting error when setting TNUoS charges up to 2 years ahead of the charging year. The graphs (reproduced below in Diagrams 1-3) considered the potential forecasting accuracy associated with forecasting (i) TNUoS revenue (ii) the generation charging base and (iii) the demand charging base over time. This was based on discussions with the relevant teams within National Grid that provide information to the TNUoS tariff setting team.

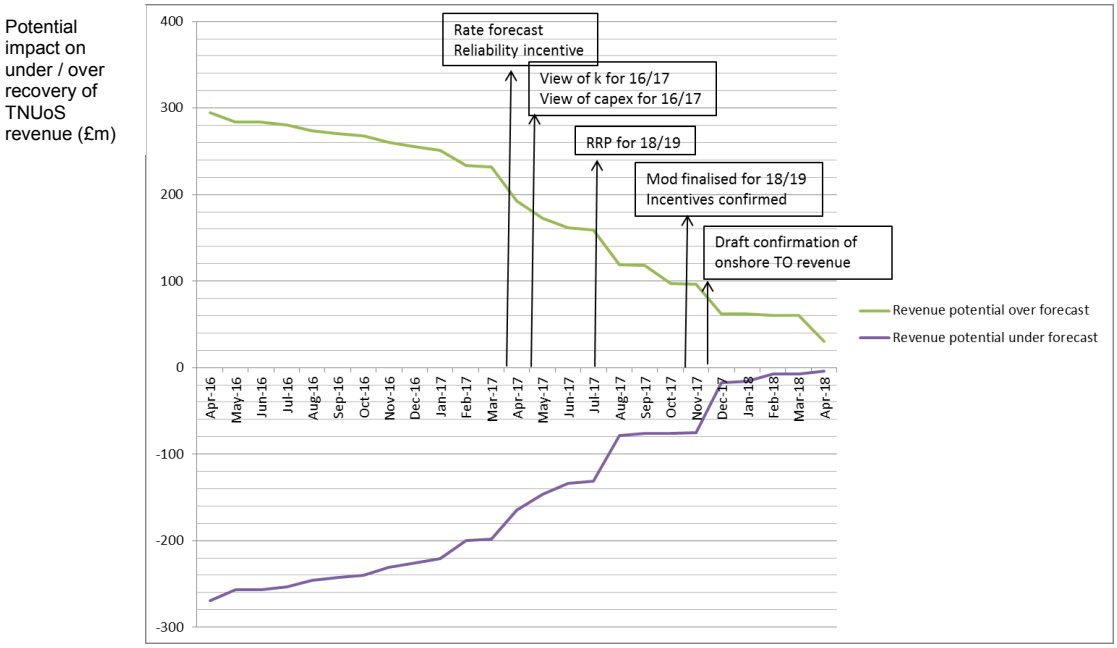


Diagram 1: potential forecasting accuracy over time when forecasting 18/19 TNUoS revenues

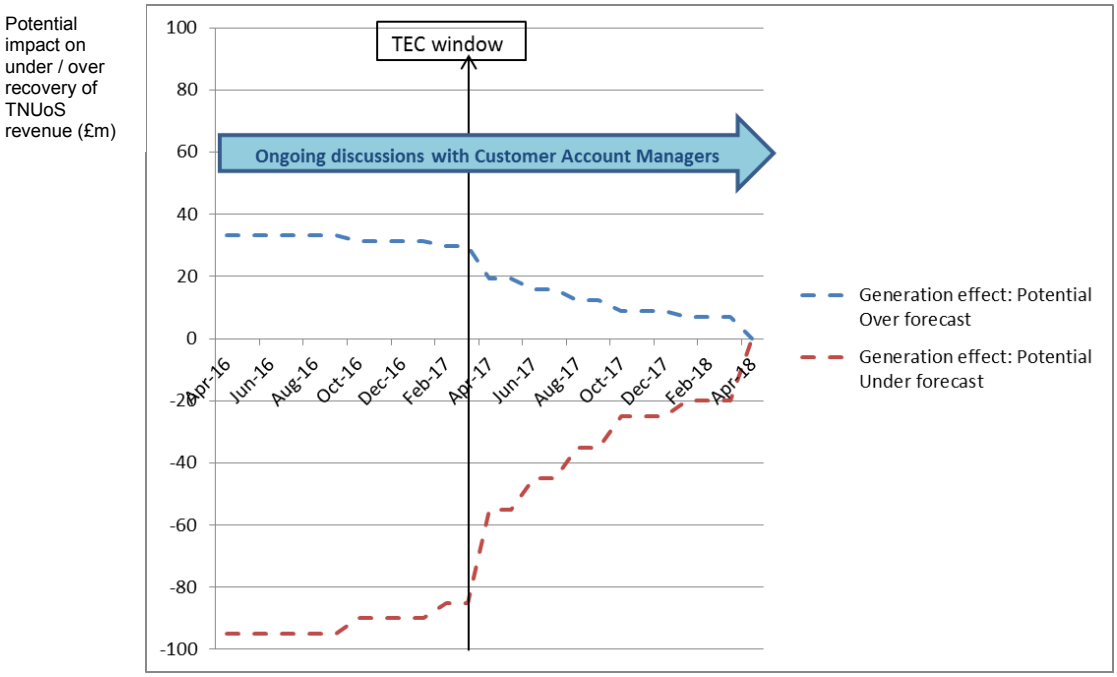


Diagram 2: potential forecasting accuracy over time when forecasting 18/19 generation charging base

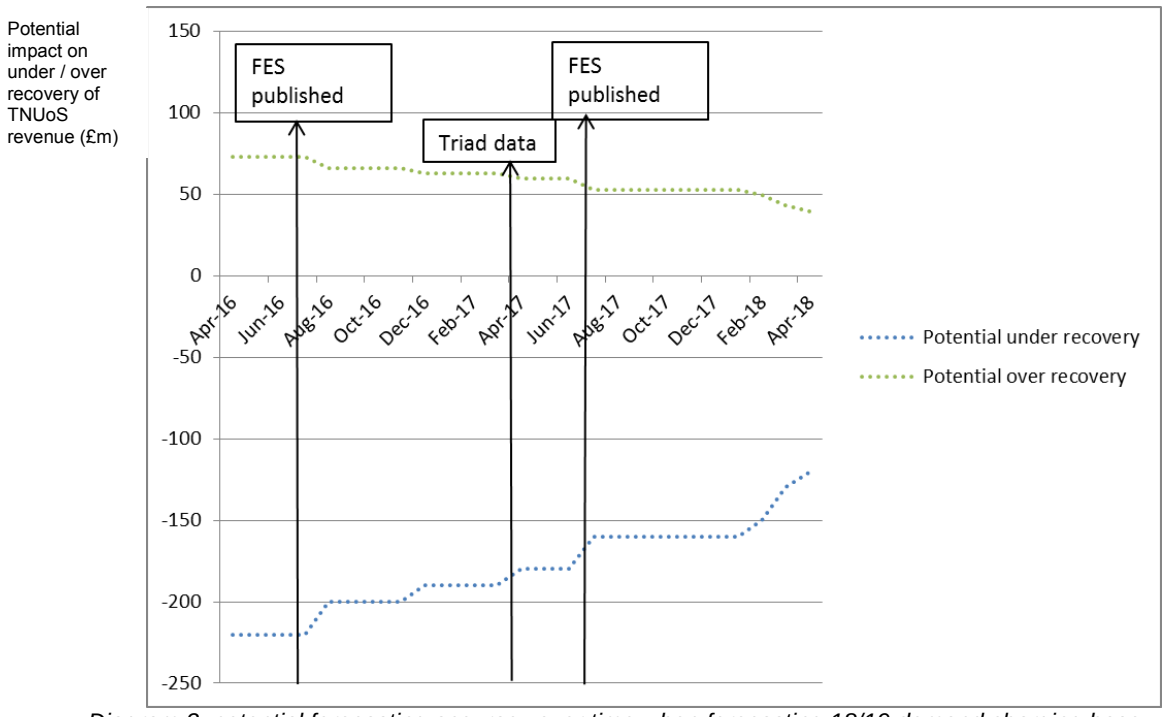


Diagram 3: potential forecasting accuracy over time when forecasting 18/19 demand charging base

2.36 The graphs showed some 'step changes' in the accuracy of forecasting TNUoS tariffs (and the associated impact on under / over recovery of revenue) over time. The National Grid representative noted that there are more than 50 components that feed into this diagram and that these step changes are due to events in time (like information only being available from a given date) where National Grid will have a better view of what the TNUoS tariffs will be.

2.37 For example, the National Grid representative explained the 'MOD' process to the Workgroup. This is the mechanism by which many of the larger moving parts in the price control flow through to allowed TO revenues each year, and includes significant items. National Grid and other onshore Transmission Owners submit a pack (the Regulatory Reporting Pack or RRP) to Ofgem each year in July with performance information to evidence that year's MOD allocation, and Ofgem make a final decision on the allocation each November. Therefore both July and November are key points in each year when TO revenues can be forecast with greater accuracy than previously.

2.38 Similarly, it was noted that for forecasting, for example, the generation base, the TEC cancellation notices (submitted by mid/late March each year) are a key piece of information, and once this is received by National Grid a more accurate forecast of the generation base for the subsequent charging year is possible. It was less easy to identify particular points in the year that demand information becomes more accurate, partly because until recently the demand charging base has been quite stable and hence frequent updates were seen as unnecessary. However winter data (e.g. availability of Triads) and the publication of the Future Energy Scenarios were noted as important data points in terms of forecasting demand.

2.39 It was estimated that the potential range of under / over recovery of TNUoS revenue under a 15 month notice period (as a result of the forecasting error on the inputs used to calculate tariffs, illustrated in diagrams 1, 2 and 3) could be in the region of +£150m to -£380m (worst case). However the National Grid representative stressed that this was purely an estimate, based on current possible forecasting errors for different components of TNUoS tariffs - and that changes in the industry (for example the growth of offshore generation) could change these margins. She stressed that the most important piece of information to focus on was the time period in which pieces of data become available. The Workgroup agreed and asked the National Grid representative to list the key pieces of information influencing the accuracy of tariffs, and to show when these were received by National Grid. This is available in Annex 7, and lists key pieces of information that influence the accuracy of the

forecast of TO revenues, generation, HH and NHH demand and that influence cost reflectivity.

2.40 The Workgroup noted that with regards to under and over recovery of TNUoS revenue discussed above, the key driver for this was the forecast of TO revenues as this is a primary input. In terms of an error in, for example, the generation charging base it was noted that as this only makes up c. 20% of the overall charging base, any errors in forecasting the generation charging base element are diluted – a 10% error in generation charging base forecasting only leads to a c. 2% change in under / over recovery of revenue for example. In contrast, any error in forecasting TO revenues translates directly into an under / over recovery of revenue. However it is important to make the distinction here that whilst an error in forecasting the demand and generation charging bases has less of an impact on revenue recovery, it could in some circumstances have significant implications for cost reflectivity and therefore for individual generator or supplier charges.

Forecasting under / over recovery with a notice period of greater than 9-10 months

2.41 As part of the analysis above, the Workgroup discussed the specific implications of setting a notice period greater than 9-10 months. It was noted that as financial reconciliation for each charging year takes some two months to be completed, the under / over recovery (known as the 'k' factor) for any given charging year ending on 31st March is not usually known until the end of May. However for any notice period of greater than 9-10 months, TNUoS tariffs would have been set before this point and so it would be necessary either to forecast 'k' (and reconcile this later), *or* to increase the time lag in which 'k' is reconciled (e.g. to three charging years). The latter could potentially increase financing costs as any under recovery would need to be financed for an additional charging year. The Workgroup therefore agreed that a pragmatic option to address this issue would be to forecast 'k' and reconcile this later. However it was noted that this could increase the overall error in forecasting (thereby increasing the risk of under / over recovery of revenue) and may necessitate formulae changes in the CUSC / Transmission Licence.

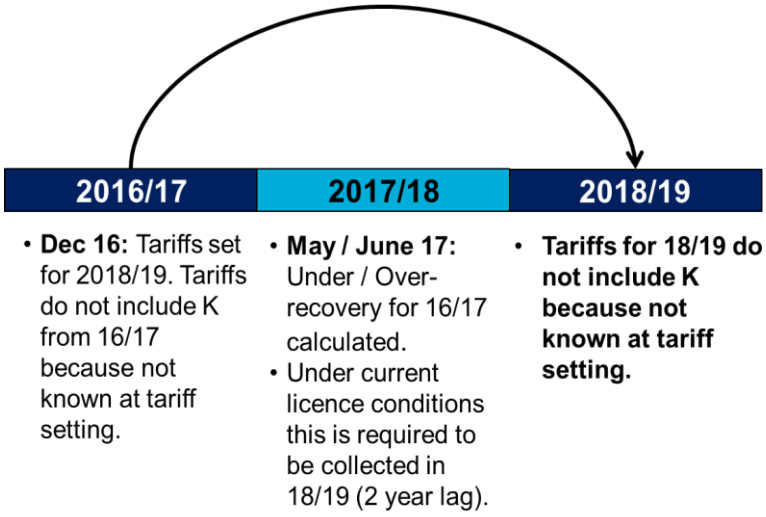


Diagram 4: Implications of a 15 month notice period – forecasting under / over recovery

Parties best placed to hold risks

2.42 In considering the process of forecasting TO revenues, the National Grid representative noted that a number of pieces of information are submitted to National Grid (as SO) by other parties in order for National Grid (as SO) to forecast the overall revenue to be collected via TNUoS tariffs. For example, all Transmission Owners are currently required to submit a final revenue forecast to National Grid (SO) ten weeks ahead of each charging year. This requirement is codified in the STC. National Grid (SO) uses this information to

set TNUoS tariffs and then pays all Transmission Owners exactly what they asked for ten weeks ahead of charging (even if their view of revenue changes after this point). As such, all Transmission Owners bear their own forecasting risk from this point onwards.

2.43 The additional risk for National Grid as System Operator is that any under or over recovery of TNUoS revenue is wholly borne by National Grid as SO.

2.44 In considering an extension of the TNUoS tariff notice period, the Workgroup discussed who should be the best placed party to bear any increased forecasting risk. The Workgroup agreed that wherever possible, the party with the most influence over a risk should be the party that bears that risk. This could require changing the STC so that all Transmission Owners are required to submit final revenue requirements to National Grid (SO) 15.5 months ahead of each charging year (in the case of a 15 month notice period). This would be a separate STC Modification raised by National Grid, and is discussed further in section 4.5 of this report - 'Impact on core industry documents'.

2.45 The Workgroup agreed that where it was not possible for a party with the most influence over a risk to hold this risk, the party that ends up bearing the risk should not be worse off as a result. For instance, where NGET as SO was holding a risk on behalf of the industry, it would not be unreasonable for NGET to be 'held whole'.

Additional consultation question 6:
Do you think that OFTOs and the onshore TOs should bear their own forecasting risk by providing a binding revenue forecast to National Grid ahead of TNUoS tariffs being set? If not, are there alternative ways for this risk to be managed?

Implications for an Independent System Operator

2.46 The Workgroup discussed the implications of a longer notice period for an Independent System Operator. It was noted that an Independent System Operator (ISO) is likely to have a higher cost of capital than NGET, as it would not have a large asset base to borrow against. Hence the financing costs of managing under / over recovery of TNUoS revenue would increase with an Independent System Operator. This in turn could increase volatility of TNUoS in the medium term.

Risks associated with the offshore charging regime

2.47 As part of the Workgroup discussion on parties holding risks, the offshore charging regime was discussed. The National Grid representative explained that there were two areas of particular risk with National Grid's role as collector of OFTO revenues. The first related to the first year of OFTO revenues and the timing of OFTO transfer. For generator 'own build' offshore projects, the generator will build the generation aspects of the project and the associated offshore transmission network, and then begin generation. It will not pay any local circuit charges for use of this offshore transmission network at this point (as it owns the offshore transmission network) however it will pay the wider locational tariff.

2.48 Within 18 months of generation beginning, EU Regulation states that the transmission network must be transferred to a separate owner (as the same party cannot own generation and transmission). This necessitates a tender process to be run by Ofgem, an offshore Transmission Owner to be identified and a contract value agreed. The contract value then influences both the revenue stream that is paid to the OFTO (recovered from TNUoS by National Grid, then paid to the OFTO) and the local circuit and offshore substation charges that are derived (paid by the generator to National Grid).

2.49 This 18 month window means that 15 months ahead of TNUoS tariffs going live, National Grid may know that an offshore project is likely to go live within the next 18 months, but

does not know exactly when this will happen or the final contract value. Hence it does not know the revenue stream that needs to be included in TNUoS revenue, or when this will need to start being paid to the OFTO. Furthermore, because the value of an offshore generator's local circuit charges depend on the contract value of an offshore project, these could not be set with any certainty 15 months in advance.

2.50 The Workgroup discussed various mitigating actions for this problem. One suggestion was that Ofgem could give an anticipated contract value to National Grid ahead of the tender being finalised. This would give greater certainty of OFTO revenue forecasts and the associated local circuit tariffs, and these could be included in the TNUoS revenue forecasts (and thus be reflected in the TNUoS tariffs set 15 months ahead). A further option was also discussed, which was to make offshore local circuit charges exempt from any increased notice period in the first 1-2 years of an offshore project going live.

2.51 The second risk identified by the National Grid representative with regards to offshore charging was that of fluctuations in an OFTO's revenue stream. In particular, the Workgroup discussed the 'income adjusting events' clause in OFTO licences, and other moving parts in OFTO revenue streams such as the OFTO availability incentive and pass through terms. OFTO revenues can fluctuate from one year to the next as a result of these terms, but local circuit charges for the offshore generator are indexed by inflation for the duration of the price control. This may result in a differential between these two amounts going into the overall TNUoS 'pot', which must be recovered via the residual.

2.52 Under a 15 month notice any large, unanticipated change in the OFTO revenue stream would therefore lead to under / over recovery of TNUoS revenue – as the updated OFTO revenue is paid out to the OFTO, but tariffs cannot be updated to accommodate this. It was noted that this is similar to any kind of allowed unexpected event happening to an onshore TO that changes their revenue requirement after tariffs are set – essentially the issue is that National Grid must pay out revenue associated with the event but is unable to adjust TNUoS tariffs accordingly to collect the revenue.

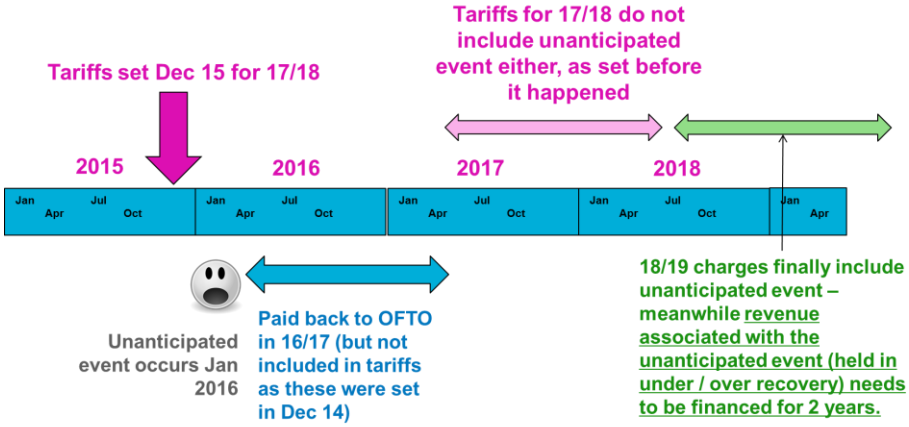


Diagram 6: Implications of a 15 month notice period for OFTO 'unanticipated events'

2.53 To understand the size of this risk for offshore Transmission Owners, the National Grid representative presented an extract from the Dec 14 OFTO revenue report written by Ofgem, which showed that the size of some pass through items for offshore Transmission Owners has been sizeable, and also explained that the OFTO availability incentive could lead to a fluctuation in the OFTO revenue stream of up to +5% to -10% of an OFTO's revenue in any one year. Moreover it was noted that the income adjusting event in OFTO licences does not have an explicit limit and could cover a number of eventualities.

2.54 With regards to who would be best placed to bear this forecasting risk, the Workgroup noted that OFTOs would be the party in the best position to forecast their own revenues, and hence should bear the risk, albeit noting the difficulties associated with the first year of OFTO operation which might require a transition arrangement. It was noted that a change to the STC as discussed previously could require OFTOs and onshore TOs to give a binding revenue forecast before tariffs are finalised. It was noted that it may not be possible

to pass on this risk to OFTOs as their debt arrangements may not accommodate this. However the National Grid representative noted that to require some Transmission Owners to give a binding revenue forecast and not others could constitute discrimination between TOs.

Additional consultation question 7:
If the TNUoS tariff notice period was extended, do you think that in the first 2 years after asset transfer to an OFTO, the generator's local circuit TNUoS tariff should remain on a 2 month notice period? If not, why?

Implications of European Regulation EC 838/2010 under a GB 15 month notice period

2.55 Under EU Regulation EC 838/2010, the amount that can be charged to GB generation for use of the GB transmission system is capped – average annual generation charges cannot exceed €2.5 / MWh. Within the CMP224 CUSC Modification, an 'error margin' to take account of previous forecasting errors was introduced in TNUoS tariff setting to ensure that tariffs always stay below the €2.5 / MWh cap. The 'error margin' agreed as part of CMP224 was 7% for TNUoS tariffs set 2 months in advance of the charging year (i.e. set charges to meet €2.33). Analysis was also done as part of CMP224 that suggested an 'error margin' of 14% would be needed for TNUoS tariffs set 12 months in advance of the charging year (i.e. set tariffs to meet €2.15).

2.56 The 'error margin' set under CMP224 did not seek to account for any £/€ exchange rate fluctuation, but rather it was agreed that the UK Government's Office for Budget Responsibility (OBR) exchange rate forecast produced for the Chancellor's spring Budget in the year before charges went live would be used to set TNUoS tariffs. Under a 15 month notice period this would therefore need to change, either to the OBR spring Budget forecast in the year TNUoS tariffs are set (i.e. 2 years ahead of tariffs going live), or to the latest available OBR forecast at the time of TNUoS tariff setting (which may depend on the timing of the Chancellor's Autumn Statement).

2.57 The Workgroup noted that the CMP224 7% 'error margin' would need to be reviewed under a 15 month notice period, as the potential risk of both greater forecasting error and greater volatility in exchange rates would be likely under a 15 month notice period. The National Grid representative stated that the National Grid charging team would be reviewing the CMP224 7% 'error margin' later this year. It was also noted that in August 2015 a CUSC Modification Proposal (CMP251) was proposed to move to a post year reconciliation of generator charges to ensure compliance with the EC Regulation 838/2010. This Modification would remove the 7% 'error margin' introduced by CMP224 and hence would mean that a greater 'error margin' was not required if the notice period was to increase from 2 to 15 months. However, it would lead to reconciliation payments to / from generators shortly after the end of each charging year, and such payments would not be subject to any 15 month notice period. The Workgroup noted this was a separate Modification (CMP251) and hence should not be discussed as part of CMP244. Lastly it was noted that the ACER opinion published in April 2014 made a number of suggestions relating to TNUoS tariffs across Europe and that the European Commission has asked ACER to examine this in more detail.

2.58 As a result of this ongoing work on the harmonisation of TNUoS structures across Europe the Workgroup did not seek to calculate a new 'error margin' to ensure GB compliance with EC 838/2010 under a 15 month notice period. Rather, it was noted that a greater 'error margin' than the current 7% could be necessary to accommodate a longer notice period and this would have the effect of reducing generator tariffs, and increasing demand tariffs.

Increase in risk when transitioning across transmission price controls

2.59 The Workgroup discussed the fact that when Transmission Owners move from one price control period to another, there is increased difficulty in forecasting Transmission Owner revenue – as incentives etc., are in the process of being negotiated between the TOs and Ofgem. This could then have a consequential impact on the accuracy of TNUoS tariff setting. The National Grid representative presented the example of 2013/14, which was the first year of the RIIO T1 price control. In that case, 15 months ahead of the start of that charging year, the National Grid forecast of allowed revenue for all Transmission Owners was 16% (c. £300m) higher than the final allowed revenues agreed at the end of the price control process. Had TNUoS tariffs been set 15 months ahead, they would therefore have been inaccurate, as they would have been based on inaccurate TO revenue forecasts.

2.60 The National Grid representative added that they had spoken to their RIIO finance team who suggested that 15 months ahead of the start of a new transmission price control period, National Grid revenues alone could be inaccurate by up to £400m. The error margin for other Transmission Owners would need to be added to this. Therefore the extent to which TNUoS revenues could be inaccurate ahead of a price control process being finalised could, in future price controls, be significantly greater than the previously observed £300m error forecast under a 15 month scenario for charging year 2013/14. This could lead to volatility in subsequent charging years two years later when any under / over recovery (plus associated financing costs) is reconciled via TNUoS tariffs.

2.61 Given the large potential forecasting error here, and the consequential impact on TNUoS tariffs, the Workgroup suggested that charging year(s) where there is a transition between two transmission price control regimes would need to be treated differently, as a 15 month notice period could lead to an unacceptable inaccuracy of TNUoS tariffs.

Additional consultation question 8:
Currently the electricity transmission price control period lasts for 8 years, and the next price control is due to begin in April 2021. How do you think the additional uncertainty around tariff setting in the year before a new price control should best be addressed?

Publication of company financial information

2.62 The National Grid representative noted that publicly traded companies such as the three onshore Transmission Owners need to manage release of company information to the stock market(s). For National Grid, for example, key dates include the release of Stakeholder documents in September each year, providing information and narrative about the following financial (i.e. TNUoS charging) year, and the publication of financial results in November, again providing a view of the following financial (charging) year. Under a 15 month notice period, the publication of TNUoS tariffs ahead of the release of company information presents an issue, as it is possible to 'back work' TNUoS tariffs to get a view of company performance well ahead of any such information being released by that company to the stock market.

2.63 The National Grid representative noted that this issue could be dealt with in two ways. Firstly, any individual TO revenue information not yet released to the stock market could not be included in the calculation of TNUoS tariffs – however this would have an impact on the accuracy of those tariffs, and hence the under / over recovery of TNUoS revenue. Secondly, National Grid could 'black box' all assumptions made in the calculation of TNUoS tariffs, and not provide to CUSC parties any breakdown of, for example, of any of the three onshore TO revenue forecasts. The Workgroup noted that being able to 'test' the assumptions being made in calculating TNUoS tariffs charging is primarily of value for tariff forecasts (so that customers can take their own view of how their tariff might move). Once the final TNUoS tariffs are published there is less value in doing this. Hence 'black boxing'

the individual onshore TO revenue assumptions in the publication 15 months ahead of the final TNUoS tariffs should not be an issue - as long as that TO revenue information was made available to CUSC parties as soon as practicable after it had been released to the stock market.

CUSC charging methodology and impact on CUSC Modifications timescale

2.64 The National Grid representative noted that if the notice period for TNUoS tariffs was extended from 2 to 15 months, there would be a consequential impact on Modifications to the charging methodology within the CUSC. Essentially, a version of the CUSC would have to be frozen for the setting of TNUoS tariffs, and the version of the CUSC used for each set of charges clearly identified. In addition, any changes to the charging methodology would take longer to feed through to TNUoS tariffs. For example, a CUSC Modification raised in November 2015 may not affect tariffs until charging year 2018/19, as illustrated below:

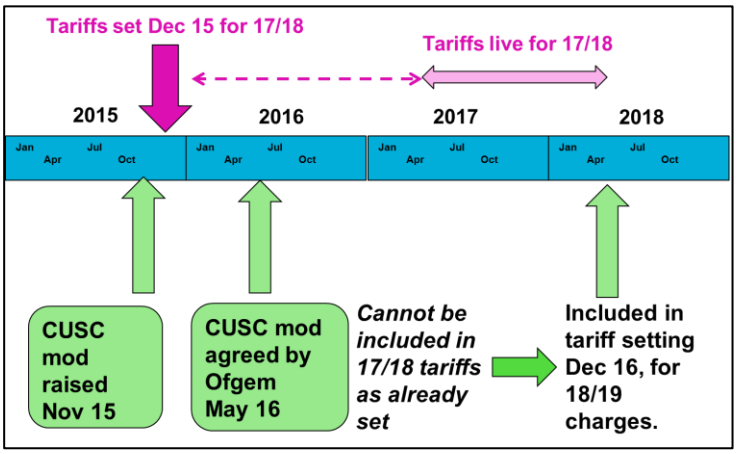


Diagram 7: Implications of a 15 month notice period for the CUSC charging methodology

3 Other potential Workgroup options to address TNUoS volatility, and a possible alternative notice period of 6-8 months

3.1 Having considered the costs, benefits, risks and issues associated with a move to a 15 month notice period, the Workgroup decided to 'take stock' of the analysis to date and consider any alternative solutions to the defect aside from a 15 month notice period.

3.2 Some Workgroup members suggested that instead of fixing TNUoS tariffs 15 months ahead, certain *elements* of those tariffs could be fixed, thus reducing volatility of tariffs whilst allowing greater predictability of tariffs, without some of the risks associated with freezing tariffs completely at 15 months ahead. For example, one Workgroup member suggested that the G:D split could be set further in advance. However the Workgroup had some concerns about this option – in the case of the G:D split for example, this could lead to a greater risk of non-compliance with EU Regulation 838/2010 and / or use of a larger 'error margin', as discussed previously. It was also noted that potentially only the more predictable elements of the TNUoS tariffs could be 'frozen', hence this option would be of limited use in reducing volatility.

3.3 Another Workgroup member suggested that a 15 month notice period could go ahead but as an optional notice period. In this scenario, Suppliers could choose between either (i) the 'status quo' 2 month notice period or (ii) the CMP244 15 month notice period, giving Suppliers the opportunity to align TNUoS tariffs with their majority customer base. This could potentially facilitate competition by allowing those Suppliers who wished to compete on the basis of their view of TNUoS.

3.4 The National Grid representative noted that there would be a number of practical challenges to be overcome to make such an option possible, and that in her view this option was likely to enhance the defect rather than solve it. This is because part of the defect as described in the proposal was that smaller suppliers have less ability to forecast tariffs and hence are more affected by TNUoS volatility. Introducing a 2 month / 15 month optionality means that Suppliers now need to be able to take a view on (a) how tariffs might change between 15 months and 2 months and (b) whether 15 months or 2 months is more beneficial for their business. The defect as discussed in the CMP244 Proposal would suggest that smaller Suppliers are less likely to be able to make this as an informed decision. Therefore, in the view of the National Grid representative, this option could reduce competition rather than improve it.

3.5 Another Workgroup member suggested the option of reconciling any generator charge over €2.5/MWh at the end of the charging year to ensure the charges never exceeded this amount to remain compliant with EC Regulation 838/2010. The Workgroup agreed that this was out of scope for CMP244, and this was later developed into a separate CUSC Modification proposal (CMP251).

3.6 The Workgroup discussed Diagrams 1-3 that looked at potential forecasting error over time. It was noted that at certain points in each year, predictability of TNUoS tariffs become much more accurate due to particular sets of information becoming available. It was suggested that it may be a good idea to set TNUoS tariffs at one of these points where it is clearly demonstrated that forecasts become more accurate.

3.7 Having considered the Workgroup discussions, the Proposer at this stage confirmed that they believed that a TNUoS tariff notice period of 6-8 months was a better solution than their initial suggestion of 15 months. The reason for considering this timescale was because it was noted that key pieces of data become available just before this time, specifically:

- A view of the previous charging year's performance for each Transmission Owner (available end of May, 10 months ahead of the following charging year)
- A view of under / over recovery of TNUoS revenue for the previous charging year is also available end of May (see issues discussed under 'Forecasting under / over recovery with a notice period of more than 9/10 months')

- The latest industry forecast of demand is published in the Future Energy Scenarios mid-July (8.5 months ahead of the following charging year)
- The Regulatory Reporting Packs (RRPs) are submitted to Ofgem by Transmission Owners on 31st July each year (8 months ahead of the following charging year)

3.8 The Proposer noted that October is a key contracting round for half hourly customers in particular, therefore a TNUoS tariff notice period that fell between information being available at the end of the July and the start of October should be considered to obtain the best trade-off between the benefit to industry and accuracy of TNUoS tariffs. A 6 month notice period would be 1st October, an 8 month notice period would be 1st August – hence the new proposition for the CMP244 solution to consider a notice period of 6-8 months. A Workgroup representative noted that for Suppliers to use published tariffs in the October contracting round they would need to be available before 1st October. The National Grid representative also noted that if the notice period was set to 1st August it is likely that there would not be enough time for the RRP information to be fed into tariffs, nor the full FES information.

3.9 The Workgroup agreed to pursue a proposition for the CMP244 solution of a notice period of 6-8 months. It was agreed that this would be put forward for industry consultation without any Workgroup potential alternatives as the Workgroup members who had suggested (i) optionality of 15 months / 2 months and (ii) freezing certain elements of TNUoS tariffs agreed that a 6-8 month notice period would be a better option than either of these two approaches at this stage. The Chair of the Workgroup, after consulting with the CUSC Panel, agreed that the Proposer could adopt 6-8 months as the basis of the solution for the Original Proposal.

3.10 One Workgroup member asked for further clarity on the impact of setting TNUoS tariffs before the Ofgem MOD term was determined for each of the Transmission Owners, and wanted to understand what kind of elements of TO revenue could change between a MOD term based on the TO Regulatory Reporting Pack data as submitted to Ofgem each July, and the Ofgem MOD determination in the November. The National Grid representative explained that a key difference which could arise between the TOs July forecast and final determination relate to the annual cost of debt index and pension elements that are re-calculated every 3 years, which are finalised during this period. However the National Grid representative noted that the specific 're-opener' windows in the transmission price control (in 2015 and 2018) may also significantly impact the variance between forecast and determined MOD. In these years, Transmission Owners submit information around re-opener issues in May to Ofgem, and the allowances relating to these are determined at the end of September of the relevant years.

3.11 One Workgroup member asked for further clarity on how the data used to calculate TNUoS tariffs would change with a 6-8 month notice period as compared to the current process of tariff setting at 2 months notice, to better understand the change in risk implied when moving from a 2 month to a 6-8 month notice period. The National Grid representative drew up the following table to explain how some data items would change, based on the information in Annex 7:

	2 month tariff setting	**6-8 month tariff setting**
View of previous year's under / over recovery	Actual included	Actual included– no change
Satisfaction incentive payments and capex for previous year	Actual included	Actual included– no change
RRP forecast of MOD determination, impacting TO revenues	Included	Included *if* notice period set at 6 or 7 months.
Actual MOD determination	Included	Not included – risk explained above

	2 month tariff setting	6-8 month tariff setting
Generation forecast information and TEC freezing	TEC used in locational model 'frozen' in the October before the applicable charging year (5 months before). Additional information from account managers (re: closing / opening of generation) added until the December.	TEC used in locational model would be 'frozen' in the April before the charging year (12 months before). Any information from account managers could be added up until June / July.
FES information from year before tariff setting	Included	Fully included *if* notice period set at 6 or 7 months.
NHH forecasts		NHH forecasts use actual data to create coefficients / trends. Less recent actual data (and not the most recent winter data) will be available.
Triad data (impacting HH forecast)	When setting tariffs in January, 1 or 2 Triads have usually occurred from the most recent Winter.	Triad data from most recent winter before charging year could not be included as would not have occurred. Additional risk for first 1-2 years: as part of P272 meters are moving from NHH to HH – 6+ months' notice means that NG will have no actual data on how customers perform over Triads before TNUoS tariffs are set.
Week 24 data	Currently week 24 data from t-1 included	Week 24 data from t-1 included– no change.
Transmission circuit data	Currently circuit data updated in the October before the charging year – 5 months before.	TBC – may be able to use same data as for 2 month notice period, but depends on processing timescales
Generator Annual Load Factor data	Currently ALF data from t-1 to t-6 used	ALF data from t-2 to t-7 would be used.
Engagement incentive	Actual included	Would not be known– forecast required
NICF allocation	Actual included	Would not be known – forecast required
Inflation forecast	Currently inflation forecast 4 months ahead of charging year used – this is reconciled after the charging year	Inflation forecast 8-10 months ahead of charging year used – this would be reconciled after the charging year
Other TO revenues	Final forecast included (what is then paid to TOs)	Final forecast included (what is then paid to TOs) *if* STC change taken forward (see section 4)
Offshore information – new projects	Data about potential transfer dates, contract values etc. added up until tariff setting.	Data could only be added up until July.

3.12 A proposed potential forecasting timetable under 6-8 months can be found in Annex 8. The Workgroup noted that as any draft TNUoS tariffs would need to take place before the RRP process had been finalised on July 31st each year, they would be of limited value under this new 6-8 month notice period, and so proposed they be dropped.

Additional consultation question 9:
Is there any material difference for you between a 6, 7 or 8 month notice period and if so, could you quantify this / provide justification? For example, which of your contracts would benefit from 6, 7 or 8 month TNUoS notice period and can you quantify what proportion of total customer contracts would benefit?

Issues and assumptions from previous Workgroup discussions

3.13 The Workgroup then discussed what issues and assumptions from their previous discussions would still stand in the case of a 6-8 month notice period. It was clarified that:

- The risk of greater under / over recovery of TNUoS revenue associated with a longer notice period is still valid, but this risk is reduced with a 6-8 month notice period compared to 15 months, as illustrated by the analysis examining improved accuracy of forecasting tariffs over time (see paragraphs 2.35 – 2.40). It was estimated that the potential range of under / over recovery of TNUoS revenue under a 15 month notice period could be in the region of +£150m to -£380m (worst case) as discussed in paragraph 2.39. Using the same method of analysis this error range potentially reduces to +£100m to -£250m for a 7 month notice period. However the National Grid representative again stressed that this was an estimate, and that these margins could change according to industry developments.
- This reduction in the potential forecasting error for TNUoS tariff components, and the consequent reduction in potential under / over recovery of revenue impacts on the trade-off discussed between short term predictability and medium term volatility discussed in paragraphs 2.27 and 2.28. A 6-8 month notice period reduces predictability of tariffs compared to a 15 month notice period – but as the risk of under / over recovery of revenue is reduced, the potential for greater medium term tariff volatility also decreases.
- There would be some impact on cost reflectivity (see discussions in paragraphs 2.29 – 2.34) but this is likely to be a smaller impact than for a 15 month notice period.
- There would be no need to forecast previous years' under / over recovery with a 6-8 month notice period, as this would be known (see paragraph 2.41).
- Decisions regarding mid-year tariff changes and the window for TEC reduction would not change, i.e. that there would be no change to these terms under a 6-8 month notice period. Similarly the principle that parties best placed to influence risks should hold these risks wherever possible (see paragraphs 2.42 – 2.45).
- With regards to EC Regulation 838/2010 (the GB €2.5/MWh cap on average generator charges), there is a smaller risk of forecasting error and £/€ exchange rate volatility as compared to a 15 month notice period – but a greater risk as compared to the current 2 month notice period (see discussions in paragraphs 2.55 – 2.58). Therefore it is likely that the 7% 'error margin' developed under CMP224 would have to increase, or another method found to deal with the risk of breaching the Regulation.
- The issue of increased risk when transitioning from one price control period to another still stands, although the revenue forecasting risk is reduced as compared to a 15 month notice period (see paragraphs 2.59 to 2.61).
- The Workgroup agreed that for a 6-8 month notice period; i.e. publication of TNUoS tariffs between 1st August and 1st October, the generation TEC for the transport model would be frozen as at the April of that year.
- There could still be an issue with regards to publication of TNUoS tariffs ahead of the onshore TOs company financial information, depending on the exact notice period chosen – for example for National Grid the Stakeholder document is released at the end of September, so a 7 or 8 month notice period would still imply publishing TNUoS tariffs ahead of this information (see paragraphs 2.62 – 2.63).
- There would be a similar issue as already identified with regards to timescales for CUSC Modifications; i.e. a version of the CUSC would need to be 'frozen' and TNUoS tariffs set and published according to this (see paragraph 2.64). Under a 6-8 month notice period, there could be a delay of up to 20 months for CUSC

Modifications to go live (for any CUSC Modifications agreed after the charging year in question's TNUoS tariffs had been published).

Additional consultation question 10:
Do you think that the Workgroup have identified and fully considered all the risks and issues associated with extending the TNUoS tariff notice period to 6-8 months? If not, please give further details.

4 Impacts and Implementation

Proposed Implementation and Transition

4.1 It is proposed to make the amendment to the charging methodology as soon as practically possible, namely ten working days after receipt of an Authority decision. However the Workgroup recognise that moving to a 6-8 month notice period for the charging year 2017/18 (i.e. publishing sometime between July and September 2016) may pose timing challenges depending on the timing of the Authority decision in 2016, and also depending on whether the Authority decides that a Regulatory Impact Assessment is necessary for this CMP244 Modification.

4.2 The Workgroup therefore accepted that some transitional arrangements may need to be in place for the first charging year of implementation, and that potentially a shorter notice period than 6-8 months may need to occur for the first charging year of implementation, depending on the progress of any consequential code / licence changes arising from this CMP244 Modification, and also on the timescale of any Regulatory Impact Assessment.

Impact on the CUSC

4.3 The Workgroup then considered what changes to the CUSC may be necessary to implement a 6-8 month notice period for TNUoS tariff publication, and created the following list:

CUSC	3.14.3	" The Company shall give the User not less than 2 months prior written notice of any revised Transmission Network Use of System charges"
	3.15.1	Definition of tariff forecast timetable
	Section 11	Definition of tariff forecast timetable: requirement to publish 4 quarterly forecasts in t-1
	14.14.10	"The Company will typically calculate TNUoS tariffs annually, publishing final tariffs in respect of a Financial Year by the end of the preceding January".
	14.15.6 to 8	Reference to October update of 7 year statement
	14.15.17	Refers to 31st December as a cut-off date for changes to the transport model following payment of one off charges as per 14.15.13
	14.19.1 and 14.19.2	Timings of TEC forecasts and generation forecasts
	14.28	Predictability of tariffs section "The Company is required …. to give Users 2 months written notice of any revised charges".

Impact on Greenhouse Gas Emissions

4.4 None identified.

Impact on Core Industry Documents

Changes to the System Operator / Transmission Owner Code (STC)

4.5 The Workgroup discussed that in order to accommodate a longer TNUoS tariff notice period, a consequential change to the STC could be required. Currently Transmission Owners give a final revenue requirement to National Grid on 25th January each year, ten weeks prior to the charging year starting on 1st April. This final revenue requirement is paid by National Grid to the Transmission Owners as asked, despite any under / over recovery of revenue via TNUoS. The Workgroup recognised that if this arrangement was not

changed, any error in forecasting made by the Transmission Owners would be borne by National Grid in under / over recovery of TNUoS revenue. Therefore the Workgroup recommended that an STC change would be needed to require all Transmission Owners to submit a binding revenue forecast ahead of TNUoS tariffs being published, so that the appropriate party bears their own forecasting risk.

STC	STCP14-1	Data exchange for charge setting (requirement for TOs to submit revenue requirements to the SO)
	STCP13-1	Timing of invoicing and billing between NGET and other Transmission Owners
	STCP24-1	Provision of information for 5 year forecasting reports

4.6 The Workgroup recognised that there may be some practical issues for parties to submit binding revenue forecasts earlier in the financial year, however these were outside of scope for CMP244 and would need to be discussed as part of any STC Modification process.

Changes to Transmission Owner licences

4.7 The Workgroup discussed potential changes that may need to take place in the Transmission Owner licences to reflect the greater risk of under / over recovery of TNUoS revenue and timing of revenue forecasts. The following industry documents were identified as possibly requiring consequential changes:

TO licences National Grid Special Conditions	3A.7	Inflation forecast used in calculation of TNUoS tariffs – currently refers to HM Government forecast for November of t-1. (GRPIFc)
	3A.14 and 3A.17	Financing costs and allowed 'bandwidth' associated with under / over recovery (5.5% symmetrical bandwidth)
	3A.20 and 3A.22	Requirement to inform Ofgem of under / over recovery greater than 9.5% of allowed revenue

TO licences Onshore TOs Special Conditions	2N	Provision of information to the System Operator
	3A.7	Inflation forecast used in calculation of TNUoS tariffs – currently refers to HM Government forecast for November of t-1. (GRPIFc)
	3A.14 and 3A.17	Financing costs and allowed 'bandwidth' associated with under / over recovery (4% symmetrical bandwidth)
	3A.20 and 3A.22	Requirement to inform Ofgem of under / over recovery greater than 8% of allowed revenue

TO licences Offshore TOs Special Conditions	Standard condition E12-J2	Treatment of k term and allowed financing rates
	Standard condition E12-J5	Restriction of transmission revenue adjustments
	Standard condition E12-J6	Provision of information to the System Operator

4.8 The Ofgem representative confirmed that the discussion and negotiation of these changes lay outside the scope of the CMP244 Workgroup.

Impact on other Industry Documents

4.9 None identified.

Additional consultation question 11:
Are there any other Code, licence or industry changes that may be needed to ensure the implementation of this Proposal, and to ensure its objectives are achieved?

5 How to respond to the consultation

5.1 This Workgroup is seeking the views of CUSC Parties and other interested parties in relation to the issues noted in this document, and specifically in response to the questions highlighted in the report and summarised below:

Standard Workgroup Consultation questions:

Q1: Do you believe that CMP244 proposal (a 6 – 8 month notice period for publication of TNUoS tariffs) better facilitates the Applicable CUSC Objectives?

Q2: Do you support the proposed implementation approach?

Q3: Do you have any other comments?

Q4: Do you wish to raise a Workgroup Consultation Alternative request for the Workgroup to consider? Please see 5.3.

Specific CMP244 Workgroup Consultation questions:

Q5: Does greater certainty of TNUoS tariffs provide any benefit to you? Is it possible to quantify this benefit in any way? If so, please provide any additional information or evidence.

Q6: Do you think that OFTOs and the onshore TOs should bear their own forecasting risk by providing a binding revenue forecast to National Grid ahead of TNUoS tariffs being set? If not, are there alternative ways for this risk to be managed?

Q7: If the TNUoS tariff notice period was extended, do you think that in the first 2 years after asset transfer to an OFTO, the generator's local circuit TNUoS tariff should remain on a 2 month notice period? If not, why?

Q8: Currently the electricity transmission price control period lasts for 8 years, and the next price control is due to begin in April 2021. How do you think the additional uncertainty around tariff setting in the year before a new price control should best be addressed?

Q9: Is there any material difference for you between a 6, 7 or 8 month notice period and if so, could you quantify this / provide justification? For example, which of your contracts would benefit from 6, 7 or 8 month TNUoS notice period and can you quantify what proportion of total customer contracts would benefit?

Q10: Do you think that the Workgroup have identified and fully considered all the risks and issues associated with extending the TNUoS tariff notice period to 6-8 months? If not, please give further details.

Q11: Are there any other Code, licence or industry changes that may be needed to ensure the implementation of this Proposal, and to ensure its objectives are achieved?

5.2 Please send your response using the response proforma which can be found on the National Grid website via the following link: http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP244/

5.3 In accordance with Section 8 of the CUSC, CUSC Parties, BSC Parties, the Citizens Advice and the Citizens Advice Scotland may also raise a Workgroup Consultation Alternative Request. If you wish to raise such a request, please use the relevant form available at the weblink below:

http://www.nationalgrid.com/uk/Electricity/Codes/systemcode/amendments/forms_guidance/

Views are invited upon the proposals outlined in this report, which should be received by **5pm** on **Thursday 19th November 2015.** Your formal responses may be emailed to: cusc.team@nationalgrid.com

5.4 If you wish to submit a confidential response, please note that information provided in response to this consultation will be published on National Grid's website unless the response is clearly marked "Private & Confidential", we will contact you to establish the extent of the confidentiality. A response market "Private & Confidential" will be disclosed to the Authority in full but, unless agreed otherwise, will not be shared with the CUSC Modifications Panel or the industry and may therefore not influence the debate to the same extent as a non-confidential response.

5.5 Please note an automatic confidentiality disclaimer generated by your IT System will not in itself, mean that your response is treated as if it had been marked "Private and Confidential".

Annex 1 – CMP244 CUSC Modification Proposal Form

Title of the CUSC Modification Proposal
Set final TNUoS tariffs at least 15 months ahead of each charging year
Submission Date
19th May 2015
Description of the Issue or Defect that the CUSC Modification Proposal seeks to address

At present, TNUoS tariffs are finalised just two months ahead of each charging year – said charging year beginning on the 1st of each April. This adds uncertainty for CUSC parties which have to pay TNUoS, as they do not know charges very far in advance. It also adds uncertainty for those customers with TNUoS pass-through arrangements in their supply contracts. Suppliers, in particular, are likely to have to add a risk premium into their tariffs to end consumers; Suppliers cannot manage this risk or finance it cheaply, so this feature of baseline is not in consumers' interests.

Therefore, given the existing and growing volume of fixed price retail contracts and the inability of Suppliers to hedge network charges, there is an implied cost to customers due to the uncertainty that is created by today's short-notice annual TNUoS tariffs. Most contracts to supply non-domestic customers are from one to two years in duration; a growing proportion of domestic tariffs are fixed, often for a given term.

National Grid has recognised the value CUSC parties place in advanced forecasts by agreeing to provide quarterly updates in the year ahead of final charging. These updates have been useful; however, the volatility of the inputs that feed the models which creates tariffs generally only becomes more stable approximately one additional month from the publication of final tariffs.

It seems inefficient for Suppliers to compete for business on the basis of Transmission tariff uncertainty. This uncertainty could be more disadvantageous for smaller Suppliers, as they may need to add larger risk premia. The uncertainty is generally hard for all Suppliers, or (where passed-through) customers, to manage.

The energy and climate change select committee noted in its recent report[1] that "market conditions can be improved if … the 40-day notification period for price changes is increased to 15 months"

[1] http://www.publications.parliament.uk/pa/cm201415/cmselect/cmenergy/386/38601.html

Conversations we have had with larger customers, who (although some do have such contracts) do not have the ability to easily support some of the more complicated contracts with "pass through" clauses in relation to TNUoS, show they would welcome the increase in budget certainty – they have a pressing need for certainty of the elements of their electricity purchase costs.

The greater certainty of network charges that this modification proposal would bring, would reduce costs to suppliers, and while it may increase costs to the network companies (due to cash flow costs), the overall net benefit to consumers will be positive due to network companies having lower cost of capital. This issue is not unique to TNUoS; there has recently been an approval of the same general form as this CUSC Mod, for a change (DCP 178) to Distribution Use of System (DUoS) charges under the DCUSA :
https://www.ofgem.gov.uk/ofgem-publications/93572/dcp178d.pdf
Approving this modification will thus, as an incidental benefit, assist in inter-code consistency – one of the themes in recent CMA documents – making comprehending and using the industry arrangements that little bit easier for small and new entrant type CUSC parties.

Description of the CUSC Modification Proposal

The proposal is to increase the length of the notice period for final TNUoS tariffs (currently 2 months) – to, for example 15+ months. This would provide greater certainty of TNUoS tariffs over a longer time period, reducing the risk premium that suppliers would have needed to otherwise add to consumer prices to address uncertainty of TNUoS tariffs.

The workgroup will need to consider the practicalities of both OFTOs and onshore TOs forecasting their revenues 15 months ahead, and of the way that EC regulation EC 838/2010 can be made to work in the context of a longer notice period. It will also need to address the issue of demand and generation forecasts being made further ahead, and the implications and cost reflectivity on the collection of TNUoS revenue that this longer forecast period will pose.

Furthermore the workgroup will need to consider other components of the charging model that may need to be requested further ahead – for example the Ofgem 'mod' process for TOs, the interconnector cap and collar regime and notice that users provide to National Grid that could affect TNUoS recovery (e.g. closure / delay within this period) and / or affect the cost reflectivity of the charge. The Workgroup will also need to consider whether / how an extended notice period would operate across 2 price control periods.

Should Ofgem decide to approve this modification, it may require other code changes and licence changes for Transmission Owners that are outside the CUSC.

Impacts on the CUSC

Section 3.14.3 needs alteration if this mod is passed; currently it says, "The Company shall give the User not less than 2 months prior written notice of any revised charges ". The workgroup may consider with Code Administrator's advice whether any other parts of the CUSC need amendment.

Section 14.14.10 needs alteration if this mod is passed; currently it says, "The Company will typically calculate TNUoS tariffs annually, publishing final tariffs in respect of a Financial Year by the end of the preceding January".

Section 14.28 (on predictability of tariffs) would need alteration if this mod were passed; currently it says, "The Company is required …. to give Users 2 months written notice of any revised charges".

In addition to the above we expect further alterations to Section 3 and Section 14 of the CUSC if any such are identified.

Do you believe the CUSC Modification Proposal will have a material impact on Greenhouse Gas Emissions? Yes / No

No

Impact on Core Industry Documentation. Please tick the relevant boxes and provide any supporting information

BSC **N**

Grid Code **N**

STC **Y –** The STC will need a simple parallel amendment to specify that transmission owners give necessary information to National Grid's charging team in sufficient time.

Other **Y :** It is possible that Ofgem may review some of the parameters in the RIIO-T1 price control to ensure that TOs can efficiently finance themselves given the need to stabilise revenues collected by TNUoS 15 months ahead.

Urgency Recommended: Yes / No

No

Justification for Urgency Recommendation

n/a

Self-Governance Recommended: Yes / No

No

Justification for Self-Governance Recommendation

n/a

Should this CUSC Modification Proposal be considered exempt from any ongoing Significant Code Reviews?

There are no relevant SCRs in process.

Impact on Computer Systems and Processes used by CUSC Parties:

No impact

Details of any related modification proposal you have raised to other industry codes

None

Justification for CUSC Modification Proposal with Reference to Applicable CUSC Objectives for Charging:

Please tick the relevant boxes to show where the proposal better meets that objective than baseline, and then provide justification.

☑ (a) that compliance with the use of system charging methodology facilitates effective competition in the generation and supply of electricity and (so far as is consistent therewith) facilitates competition in the sale, distribution and purchase of electricity;

☐ (b) that compliance with the use of system charging methodology results in charges which reflect, as far as is reasonably practicable, the costs incurred by transmission licensees in their transmission businesses

☐ (c) that, so far as is consistent with sub-paragraphs (a) and (b), the use of system charging methodology, as far as is reasonably practicable, properly takes account of the developments in transmission licensees' transmission businesses.

☐ (d) compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or ACER.

Suppliers offer contract terms to customers in advance of the final Transmission Charges being known. This creates a financial risk that the supplier must value, which is ultimately passed onto the customer. By having longer advanced notice of Transmission network tariffs, suppliers will be able to eliminate this risk premia from quotations to customers, or fixed price domestic contracts, for the length of time the charges are fixed. Generators will be able to strike forward contracts that are more keenly priced without the risk created by TNUoS charge uncertainty.

This maps onto the first of the applicable charging objectives above : the net system cost should be lower as Suppliers cannot very economically finance TNUoS risk into their quotes to end customers, so this modification, if passed, would help CUSC parties, particularly Suppliers, to price their business operations more keenly, better facilitating competition (applicable charging objective A).

The consistency that would be created with the notice period for DUoS tariffs in the DCUSA (as updated by DCP 178) enhances the ease of understanding and access of these codes for all parties, including newcomers – again, this can be beneficial for competition.

Additional details

Details of Proposer: (Organisation Name)	Binoy Dharsi, EDF Energy
Capacity in which the CUSC Modification Proposal is being proposed: (i.e. CUSC Party, BSC Party or "National Consumer Council")	CUSC Party
Details of Proposer's Representative: Name: Organisation: Telephone Number: Email Address:	Binoy Dharsi, EDF Energy, 020 3126 2165, 07790 893 373, Binoy.Dharsi@edfenergy.com
Details of Representative's Alternate: Name: Organisation: Telephone Number: Email Address:	Paul Mott, EDF Energy, 0203 126 2314, Paul.Mott@edfenergy.com

Attachments (Yes/No):
If Yes, Title and No. of pages of each Attachment:

Contact Us

If you have any questions or need any advice on how to fill in this form please contact the Panel Secretary:

E-mail cusc.team@nationalgrid.com

Phone: 01926 653606

For examples of recent CUSC Modifications Proposals that have been raised please visit the National Grid Website at http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/Current/

Submitting the Proposal

Once you have completed this form, please return to the Panel Secretary, either by email to jade.clarke@nationalgrid.com and copied to cusc.team@nationalgrid.com, or by post to:

Jade Clarke
CUSC Modifications Panel Secretary, TNS
National Grid Electricity Transmission plc
National Grid House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

If no more information is required, we will contact you with a Modification Proposal number and the date the Proposal will be considered by the Panel. If, in the opinion of the Panel Secretary, the form fails to provide the information required in the CUSC, the Proposal can be rejected. You will be informed of the rejection and the Panel will discuss the issue at the next meeting. The Panel can reverse the Panel Secretary's decision and if this happens the Panel Secretary will inform you.

Annex 2 – CMP244 Terms of Reference

nationalgrid

Workgroup Terms of Reference and Membership
TERMS OF REFERENCE FOR CMP244 WORKGROUP

CMP244 seeks to increase the length of the notice period for TNUoS tariffs (currently 2 months) to a suggested period of 15 months.

Responsibilities

1. The Workgroup is responsible for assisting the CUSC Modifications Panel in the evaluation of CUSC Modification Proposal **244** '**Set final TNUoS tariffs at least 15 months ahead of each charging year'** tabled by EDF Energy at the CUSC Modifications Panel meeting on 29th May 2015.

2. The proposal must be evaluated to consider whether it better facilitates achievement of the Applicable CUSC Objectives. These can be summarised as follows:

Use of System Charging Methodology

(a) that compliance with the use of system charging methodology facilitates effective competition in the generation and supply of electricity and (so far as is consistent therewith) facilitates competition in the sale, distribution and purchase of electricity;

(b) that compliance with the use of system charging methodology results in charges which reflect, as far as is reasonably practicable, the costs (excluding any payments between transmission licensees which are made under and in accordance with the STC) incurred by transmission licensees in their transmission businesses and which are compatible with standard condition C26 (Requirements of a connect and manage connection);

(c) that, so far as is consistent with sub-paragraphs (a) and (b), the use of system charging methodology, as far as is reasonably practicable, properly takes account of the developments in transmission licensees' transmission businesses.

(d) compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency.
These are defined within the National Grid Electricity Transmission plc Licence under Standard Condition C10, paragraph 1.

Objective (d) refers specifically to European Regulation 2009/714/EC. Reference to the Agency is to the Agency for the Cooperation of Energy Regulators (ACER).

3. It should be noted that additional provisions apply where it is proposed to modify the CUSC Modification provisions, and generally reference should be made to the Transmission Licence for the full definition of the term.

Scope of work

4. The Workgroup must consider the issues raised by the Modification Proposal and consider if the proposal identified better facilitates achievement of the Applicable CUSC Objectives.

5. In addition to the overriding requirement of paragraph 4, the Workgroup shall consider and report on the following specific issues:

   a) *What impact will CMP244 have on mid-year tariff changes?*
   b) *Consider impact on €2.5/MWh limit within EC Regulation 838/2010.*
   c) *Transition to 15 months' notice*
   d) *Consider any risks and identify parties who will face these risks.*
   e) *Measure longer notice periods against increased volatility of tariffs.*
   f) *TEC Reductions – could notice period / cancellation charge be extended?*
   g) *Consider interaction with any licence changes.*
   h) *What would happen if costs fell (and they were not passed onto consumers within 15 months)*
   i) *Consider large TO investment and possible delays.*
   j) *Securities and liabilities for generators*
   k) *Should the 15 month notice period only apply to demand TNUoS tariffs, or both demand and generation?*
   l) *Should it be optional for Suppliers to remain on 2 months' notice?*
   m) *Under and over recovery, how should the consequence of the risk be financed?*
   n) *What would the situation be with an independent System Operator.*
   o) *Consider the impact on locational tariffs applied to other generators arising from the delay in commissioning/cancellation of generation projects, particularly in tariff zones sensitive to major changes in modelled power flows.*
   p) *Consider the interaction of the calculation and publication of Annualised Load Factors, by 25 December, t-1, with the publication of final TNUoS tariffs at least 15 months ahead of the Charging Year.*
   q) *Implementation*
   r) *Review draft legal text*

6. The Workgroup is responsible for the formulation and evaluation of any Workgroup Alternative CUSC Modifications (WACMs) arising from Group discussions which would, as compared with the Modification Proposal or the current version of the CUSC, better facilitate achieving the Applicable CUSC Objectives in relation to the issue or defect identified.

7. The Workgroup should become conversant with the definition of Workgroup Alternative CUSC Modification which appears in Section 11 (Interpretation and Definitions) of the CUSC. The definition entitles the Group and/or an individual member of the Workgroup to put forward a WACM if the member(s) genuinely believes the WACM would better facilitate the achievement of the Applicable CUSC Objectives, as compared with the Modification Proposal or the current version of the CUSC. The extent of the support for the Modification Proposal or any WACM arising from the Workgroup's discussions should be clearly described in the final Workgroup Report to the CUSC Modifications Panel.

8. Workgroup members should be mindful of efficiency and propose the fewest number of WACMs possible.

9. All proposed WACMs should include the Proposer(s)'s details within the final Workgroup report, for the avoidance of doubt this includes WACMs which are proposed by the entire Workgroup or subset of members.

10. There is an obligation on the Workgroup to undertake a period of Consultation in accordance with CUSC 8.20. The Workgroup Consultation period shall be for a period of 3 weeks as determined by the Modifications Panel.

11. Following the Consultation period the Workgroup is required to consider all responses including any WG Consultation Alternative Requests. In undertaking an assessment of any WG Consultation Alternative Request, the Workgroup should consider whether it better facilitates the Applicable CUSC Objectives than the current version of the CUSC.

    As appropriate, the Workgroup will be required to undertake any further analysis and update the original Modification Proposal and/or WACMs. All responses including any WG Consultation Alternative Requests shall be included within the final report including a summary of the Workgroup's deliberations and conclusions. The report should make it clear where and why the Workgroup chairman has exercised his right under the CUSC to progress a WG Consultation Alternative Request or a WACM against the majority views of Workgroup members. It should also be explicitly stated where, under these circumstances, the Workgroup chairman is employed by the same organisation who submitted the WG Consultation Alternative Request.

12. The Workgroup is to submit its final report to the Modifications Panel Secretary on 16th November 2015 for circulation to Panel Members. The final report conclusions will be presented to the CUSC Modifications Panel meeting on 27th November 2015.

Membership

13. It is recommended that the Workgroup has the following members:

Role	Name	Representing
Chairman	Patrick Hynes	Code Administrator
*National Grid Representative**	Juliette Richards	National Grid
*Industry Representatives**	Binoy Dharsi	EDF Energy
	Garth Graham	SSE
	James Anderson	Scottish Power
	William Chilvers	ESB
	Karl Maryon	Haven Power
	Jon Wisdom	N Power
	Christopher Granby	Infinis
	Joe Underwood	Drax Power
	Guy Phillips	EON
	Andy Manning	British Gas

Authority Representatives	Dena Barasi	Ofgem
Technical secretary	Jade Clarke	Code Administrator
Observers		

NB: A Workgroup must comprise at least 5 members (who may be Panel Members). The roles identified with an asterisk in the table above contribute toward the required quorum, determined in accordance with paragraph 14 below.

14. The Chairman of the Workgroup and the Modifications Panel Chairman must agree a number that will be quorum for each Workgroup meeting. The agreed figure for CMP244 is that at least 5 Workgroup members must participate in a meeting for quorum to be met.

15. A vote is to take place by all eligible Workgroup members on the Modification Proposal and each WACM. The vote shall be decided by simple majority of those present at the meeting at which the vote takes place (whether in person or by teleconference). The Workgroup chairman shall not have a vote, casting or otherwise. There may be up to three rounds of voting, as follows:

- Vote 1: whether each proposal better facilitates the Applicable CUSC Objectives;
- Vote 2: where one or more WACMs exist, whether each WACM better facilitates the Applicable CUSC Objectives than the original Modification Proposal*;*
- Vote 3: which option is considered to BEST facilitate achievement of the Applicable CUSC Objectives. For the avoidance of doubt, this vote should include the existing CUSC baseline as an option.

The results from the vote and the reasons for such voting shall be recorded in the Workgroup report in as much detail as practicable.

16. It is expected that Workgroup members would only abstain from voting under limited circumstances, for example where a member feels that a proposal has been insufficiently developed. Where a member has such concerns, they should raise these with the Workgroup chairman at the earliest possible opportunity and certainly before the Workgroup vote takes place. Where abstention occurs, the reason should be recorded in the Workgroup report.

17. Workgroup members or their appointed alternate are required to attend a minimum of 50% of the Workgroup meetings to be eligible to participate in the Workgroup vote.

18. The Technical Secretary shall keep an Attendance Record for the Workgroup meetings and circulate the Attendance Record with the Action Notes after each meeting. This will be attached to the final Workgroup report.

19. The Workgroup membership can be amended from time to time by the CUSC Modifications Panel.

Appendix 1 – Indicative Workgroup Timetable

The following timetable is indicative for CMP244

5th June 2015	Deadline for comments on Terms of Reference / nominations for Workgroup membership
W/C 15th June 2015	Workgroup meeting 1
W/C 29th June 2015	Workgroup meeting 2
W/C 6th July 2015	Workgroup meeting 3
14th July 2015	Workgroup Consultation issued for 1 week Workgroup comment
21st July 2015	Deadline for comment
23rd July 2015	Workgroup Consultation published
20th August 2015	Deadline for responses
W/C 24th August2015	Workgroup meeting 4
W/C 31st August 2015	Workgroup meeting 5
W/C 14th September 2015	Workgroup meeting 6
9th November 2015	Circulate draft Workgroup Report
16th November 2015	Deadline for comment
22nd November 2015	Submit final Workgroup Report to Panel
27th November 2015	Present Workgroup Report at CUSC Modifications Panel

Post Workgroup modification process

2nd December 2015	Code-Administrator Consultation published
31st December 2015	Deadline for responses
6th January 2016	Draft FMR published
13th January 2016	Deadline for comments
21st January 2016	Draft FMR issued to CUSC Panel
29th January 2016	CUSC Panel Recommendation vote
11th February 2016	Final CUSC Modification Report submitted to Authority

Annex 3 – Workgroup attendance register

A – Attended
X – Absent
O – Alternate
D – Dial-in

Name	Organisation	Role	24/06/15	07/07/15	04/08/15	17/08/15	16/09/15
Patrick Hynes	National Grid	Chair	A	A	A	A	A
Jade Clarke	Code Administrator	Technical Secretary	A	A	A	A	O
Binoy Dharsi	EDF Energy	Proposer	A	A	A	A	A
Juliette Richards	National Grid	Workgroup member	A	A	A	A	A
Guy Phillips	E.ON	Workgroup member	X	O	O	O	O
Joseph Underwood	Drax Power	Workgroup member	A	A	A	A	A
Christopher Granby	Infinis	Workgroup member	X	A	A	A	A
Jon Wisdom	N Power	Workgroup member	A	A	A	A	A
Karl Maryon	Haven Power	Workgroup member	A	A	A	O	A
William Chilvers	ESB	Workgroup member	A	A	A	X	A
James Anderson	Scottish Power	Workgroup member	A	X	A`	A	A
Garth Graham	SSE	Workgroup member	D	A	A	A	A
Andy Manning	British Gas	Workgroup member	X	A	O	O	X

Annex 4 – Forecasts of TNUoS revenue and generation / demand charging bases

Forecast of allowed TNUoS revenue used to forecast / set TNUoS tariffs (TNUoS revenue, no pre-vesting)

£m Nominal	Initial View report (14m ahead)	Tariff Setting (2m ahead)	Final allowed revenue	Error margin for forecast 14m ahead
2015/16	2,650	2,637	2,625	+1.0%
2014/15	2,433	2,477	2,428	+0.2%
2013/14	Price control	2,153	2,100	N/A
2012/13	1,813	1,949	1,914	-5.3%
2011/12	1,727	1,724	1,642	+5.2%
2010/11	1,603	1,600	1,551	+3.4%

Generation forecasts used to forecast / set TNUoS tariffs

GW	Initial View (14m ahead)	Tariff Setting (2m ahead)	Actual	Error margin for 14m forecast*
2015/16	75.288	71.464		
2014/15	81.252	73.031	72.40	+12.23%
2013/14	80.606	75.141	76.21	+5.76%
2012/13	93.435	83.338	82.69	+12.99%
2011/12	91.088	83.158	82.57	+10.31%
2010/11	89.196	84.780	79.80	+11.78%

**Over forecasting the generation base leads to the denominator in TNUoS tariffs being set too high – hence leads to under recovery of revenue. All initial view reports based on contracted generation except for the 15/16 initial view report which was based on a best view of generation.*

Demand forecasts used to forecast / set TNUoS tariffs – Half hourly

MW	Initial View	Tariff Setting	Actual	Error margin*
2015/16	15,899	14,987		
2014/15	16,100	15,899	14,319	+12.44%
2013/14	16,100	16,100	14,810	+8.71%
2012/13	17,167	16,100	15,940	+7.70%
2011/12	19,063	16,100	15,238	+25.10%**
2010/11	18,578	16,000	16,330	+13.77%

**Over forecasting the demand base leads to the denominator in TNUoS tariffs being set too high – hence leads to under recovery of revenue.*

*** Due to a CUSC Modification changing how interconnectors were charged TNUoS.*

Demand forecasts used to forecast / set TNUoS tariffs – Non half hourly

TWh	Initial View	Tariff Setting	Actual	Error margin
2015/16	28.600	27.390		
2014/15	28.600	28.600	27.10	+5.53%
2013/14	28.451	28.600	27.61	+3.04%
2012/13	28.900	28.451	28.99	-0.31%
2011/12	29.500	29.100	27.96	+5.51%
2010/11	29.500	28.900	29.17	+1.13%

Annex 5 – Analysis of under / over recovery of TNUoS revenue and associated financing rates, had tariffs been set based on information known 15 months in advance

The table below seeks to illustrate what under / over recovery of TNUoS revenue would have been, had tariffs been set with the information available 14-15 months in advance (column 2).

According to the current Transmission Licence conditions, the financing rates (that are recovered from, or repaid to transmission users in t+2 to account for under / over recovery) change once under / over recovery exceeds the 'bandwidth' of 5.5% of allowed revenue. The table below shows that had TNUoS tariffs been set 14 months in advance, it is likely that this 5.5% bandwidth would have been breached in 2-3 of the last 5 years (*column 2 – breaches shown in red, pink text indicates close to breach of the bandwidth*). Column 3 shows the financing rate and costs that would have been recovered from transmission users in t+2 to account for the under recovery – under current licence conditions that impose different rates once the 5.5% bandwidth has been breached. Column 4 shows what the financing rates would have been if the bandwidth had not been applied.

Columns 5 and 6 shaded in purple then contrast this to the under / over recovery, and associated financing costs that were actually experienced when tariffs were set at 2 months' notice.

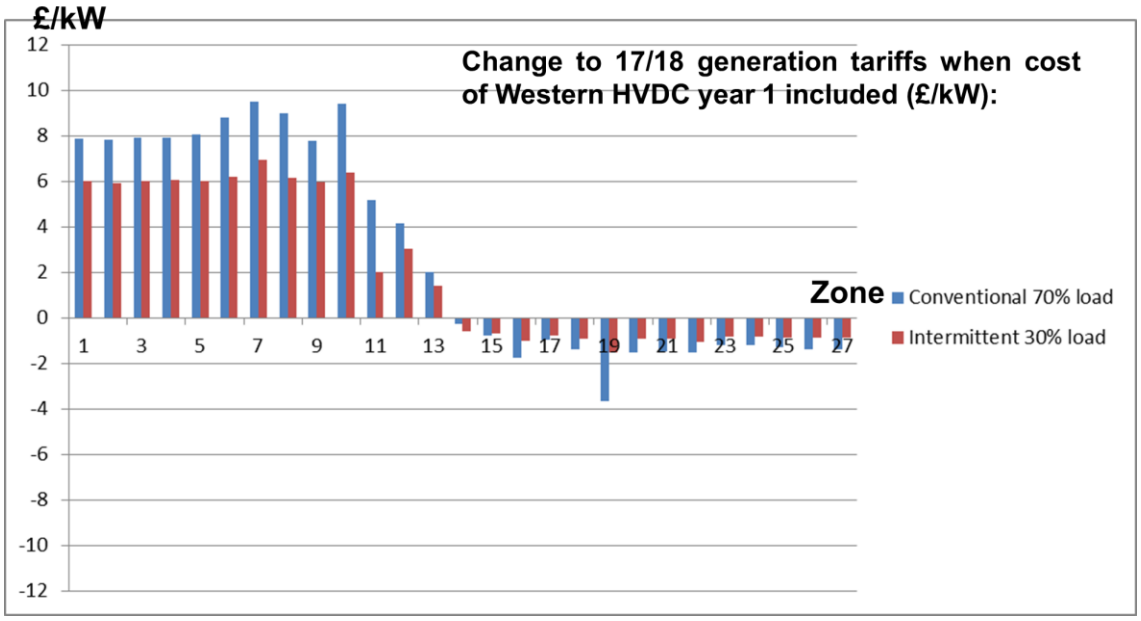
Year	Estimated under / over recovery 15m ahead	Cumulative financing costs added to TNUoS in t+2* (current licence conditions)	Financing costs if bandwidth not applied	Under / over recovery with 2m notice	Financing costs added / *repaid to* TNUoS (all 5.1%)
2014/15	-£186.3m (-7.6%)	3% **£5.59m**	£9.50m	- £99m	**£5.05m**
2013/14	Price control	Price control		- £54m	**£2.75m**
2012/13	-£175.3m (-9%)	3% **£5.25m**	£8.94m	£3m	***£0.15m***
2011/12	-£89.2m (-5.4%)	5.1% **£4.55m**	£4.55m (same)	- £24m	**£1.22m**
2010/11	-£40.7m (-2.6%)	5.1% **£2.08m**	£2.08m (same)	£12m	***£0.61m***

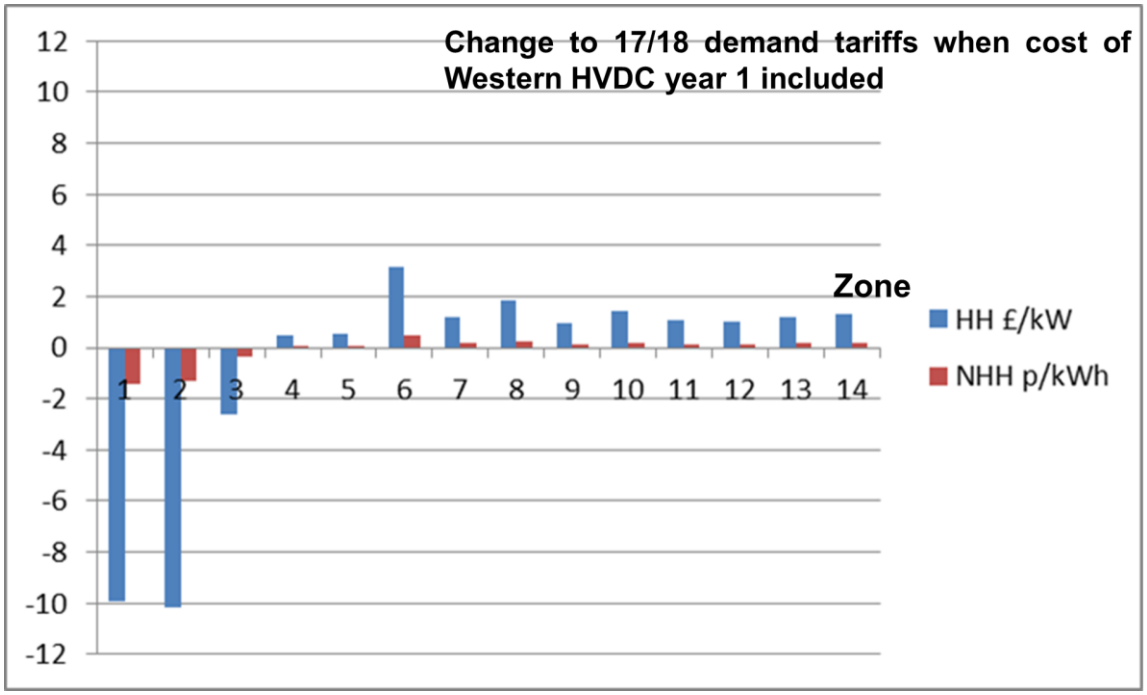
The Workgroup noted that this analysis can only provide an indicative view of the accuracy of tariffs (and hence associated under / over recovery of revenue) 15 months ahead of the charging year (see paragraph 2.19).

Annex 6 – Analysis to consider impact of generation closing / opening under a 15 month notice period, and major transmission projects delaying

Impact on tariffs of infrastructure changes: Western HVDC

The example below looks at the change to TNUoS tariffs as a result of including the Western HVDC project into TNUoS revenue and the transport model. The implication here is that if that project was delayed, but its costs and the locational impact had been included in TNUoS tariffs set 15 months ahead (and before it was known that the project had delayed) there would be a loss of cost reflectivity in those tariffs.



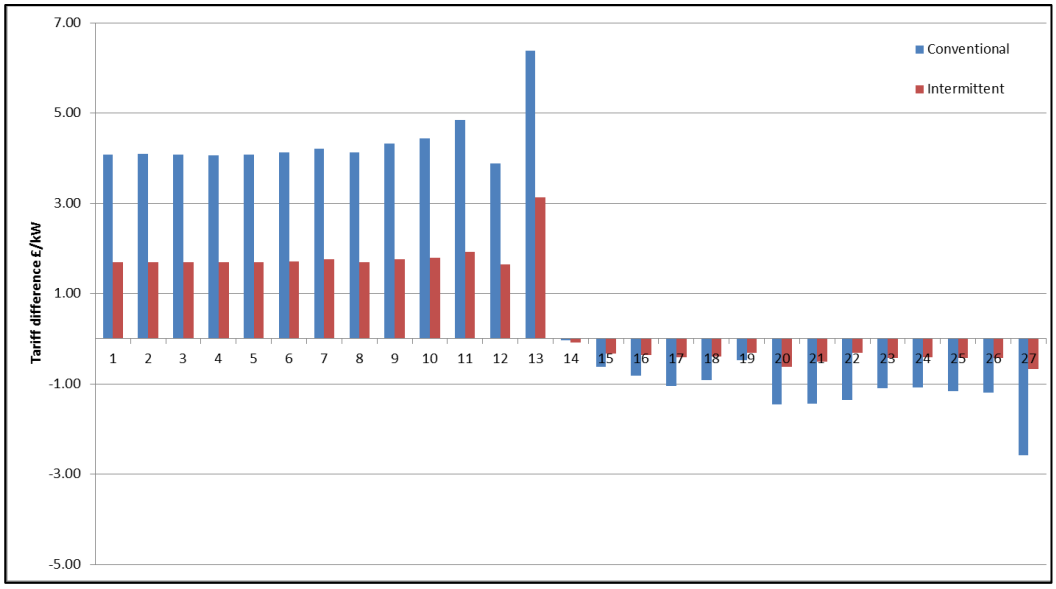


Similarly the Workgroup wanted to understand the impact on cost reflectivity of TNUoS tariffs if a generator decided to open or close after those tariffs had been set. To do this the National Grid representative modelled the change to generation and demand tariffs under a number of different scenarios, looking at the impact of different sizes and types of plant increasing or reducing TEC in

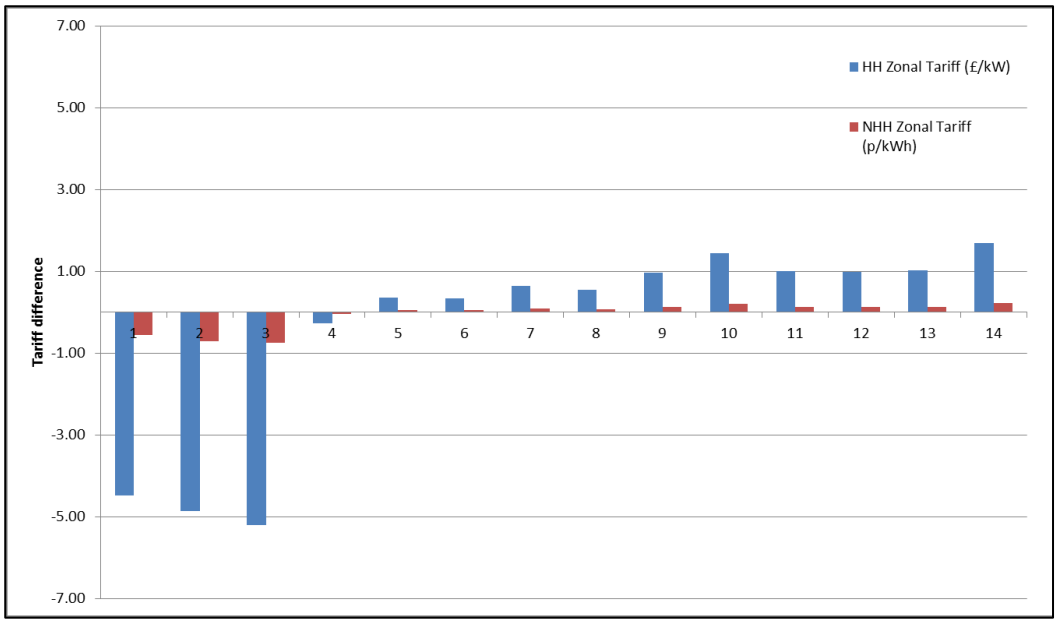
different TNUoS charging zones. Some extracts of this work are shown below (all modelled using best view of the 2016/17 charging base):

Increasing conventional generation in zone 13 by 1207MW – impact on tariffs

Generation tariffs:

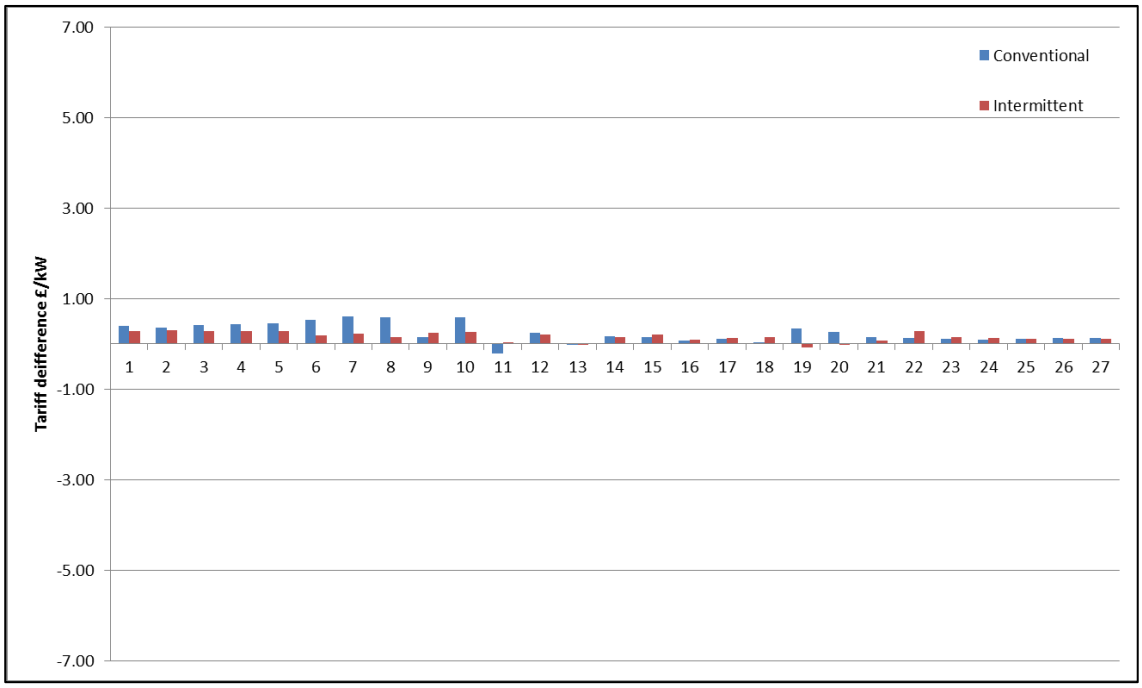


Demand tariffs:

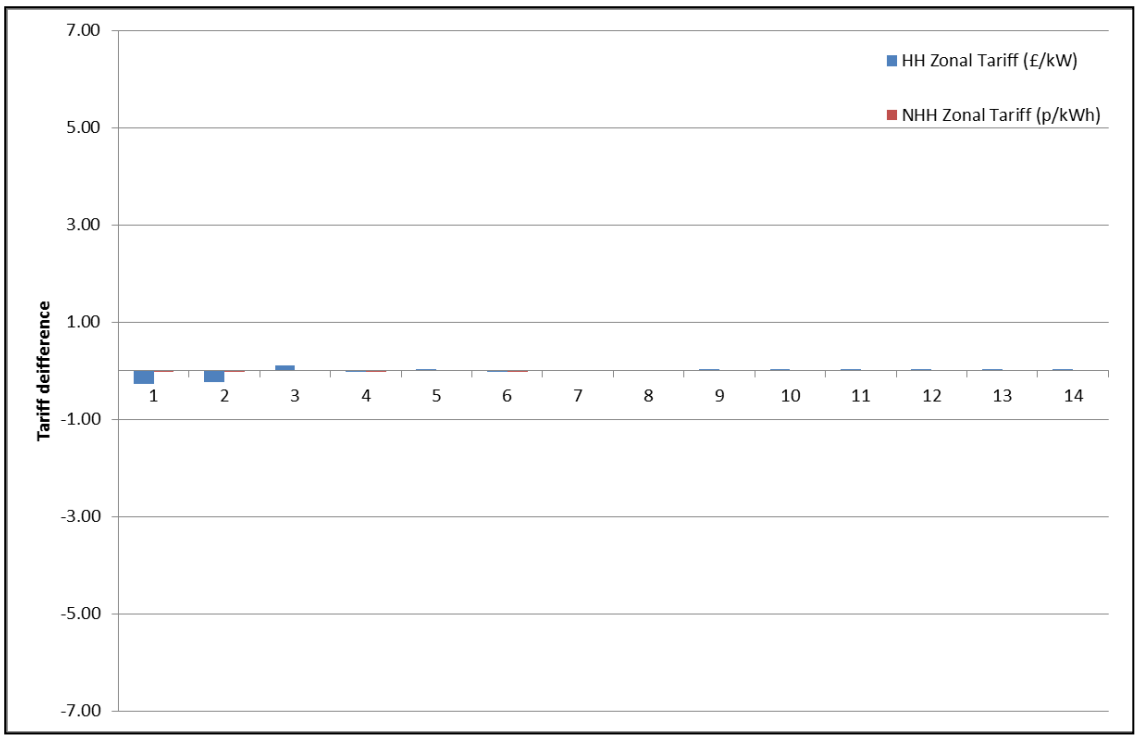


Reducing conventional generation in zone 15 by 1940MW – impact on tariffs

Generation tariffs:



Demand tariffs



Increasing intermittent generation (onshore) in zone 21 by 228MW – <u>no discernible impact</u> on generation or demand tariffs

The Workgroup noted that larger changes in TNUoS tariffs (and hence a greater potential change in cost reflectivity) take place when:

- A transmission circuit changes direction due to change in flows.
- Transmission circuits at the periphery of the transmission network are changed.
- A change in flows causes a transmission circuit to be re-classified from Year Round to Peak Security or vice versa.
- There is a change in the ratio of intermittent to conventional generation in a TNUoS charging zone. When intermittent generation exceeds conventional generation in a zone, all Year Round costs in that zone become non-shared. This would have the effect of increasing intermittent charges relative to conventional, as shared costs are scaled by the generation Annual Load Factor, but non-shared are not.

Annex 7 – Timeline of key information used in setting TNUoS tariffs

Information impacting:	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Revenue forecast			Initial view of previous charging year's 'k'		Final view of previous charging year's 'k' Satisfaction incentive for previous charging year known Capex (for previous charging year) known		RRP submitted to Ofgem – better view of MOD allocation SF6 performance for previous charging year (linked to incentive payment) known.				MOD finalised Inflation forecast to be use is published NG engagement incentive confirmed.	NICF allocation confirmed Onshore TOs provide revenue forecast for following charging year
Generation base forecast (how much and what kind)	Throughout the year, Customer Account Managers will inform team of project changes. Generators may also receive ancillary / other contracts.											
HH demand forecast				View of previous winter's Triads			April - July, NG internal work to analyse demand data which is then published in the FES in July					

Information impacting:	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
NHH demand forecast							April to July, NG internal work to analyse demand data which is then published in the FES in July					
Cost reflectivity			Generation TEC notification (indication of location of generation)						Week 24 data – impacts forecast of locational flows	Circuit data Confirmation of infrastructure timings		ALFs published

Annex 8 – Potential forecasting timetable under a 6-8 month notice period