

CONCLUSIONS REPORT

**Modification Proposals to the Gas Transmission
Transportation Charging Methodology**

NTS GCM 13R:

April NTS Exit Capacity Price Changes

27th February 2009

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Executive Summary

This document is issued by National Grid in its role as Gas Transporter Licence holder in respect of the NTS (“National Grid”).

This document concludes the consultation regarding an amendment to the Gas Transmission Transportation Charging Methodology (the “Charging Methodology”) in respect of the timing and data used for setting NTS Exit Capacity Prices.

Currently, NTS Exit Capacity Prices (“Exit Prices”) are set each year in October for the following 12 months but the Transportation Owner Maximum Allowed Revenue (TO MAR), defined by the Licence, changes in April of each year. This misalignment of gas year (October – September) and formula year (April – March) can lead to an initial under- or over-recovery for the first six months of the formula year. This in turn can lead to volatile Exit Prices at an aggregate level from year to year as they are set to try and compensate for the initial under- or over-recovery during the first six months of each formula year.

Consultation paper NTS GCM 13 outlined options for addressing Exit Price volatility and sought to gauge industry support for a change to the current Exit Price setting arrangements. It was concluded that Exit Prices, while volatile, are predictable at an aggregate level, which is favourable when agreeing contracts. National Grid stated in the consultation paper that a final proposal would only be raised with industry support.

GCM13 considered four options with regards to Exit Price volatility:

- Option One: Do nothing;
- Option Two: Apply Exit Prices from April to March of formula year t;
- Option Three: One-off Exit Price changes in April, with Exit Prices recalculated using updated supply, demand, network, and target exit revenue data;
- Option Four: One-off Exit Price changes in April, with Exit Prices recalculated without updating supply flow data.

National Grid favoured Option Four for addressing Exit Price volatility, should it occur and should Users show support for the proposal.

National Grid received seven responses to consultation paper NTS GCM 13; two responses were in support and five were not in support. In light of the responses received **National Grid is not raising a final proposal with regard to a change to the Charging Methodology in respect of the timing and data used for setting NTS Exit Capacity Prices.**

Through the GCM13 process it has been recognised that greater importance is placed on individual price stability i.e. how individual prices vary, rather than aggregate price stability i.e. how the average level of prices varies. One of the key areas that influences individual price stability is the supply and demand balancing rules. National Grid is progressing work on supply and demand balancing rules in the Transportation Model and published discussion paper NTS GCD 06 on the 23rd February 2009¹.

¹ Discussion paper NTS GCD 06 can be viewed on the Consultations section of the National Grid website: <http://www.nationalgrid.com/uk/Gas/Charges/consultations/CurrentPapers/>

1 Introduction

- 1.1 This document is issued by National Grid in its role as Gas Transporter Licence holder in respect of the NTS (“National Grid”)
- 1.2 This document concludes the consultation regarding an amendment to the Gas Transmission Transportation Charging Methodology (the “Charging Methodology”) in respect of the timing and data used for setting NTS Exit Capacity Prices.
- 1.3 NTS Exit Capacity Prices (“Exit Prices”) are currently set from October of formula year t to September of formula year $t+1$ in accordance with Standard Special Condition A4 2(a)(ii) of the Gas Transporter Licence in respect of the NTS (the “Licence”).
- 1.4 NTS Transportation Owner Maximum Allowed Revenue (TO MAR) applies for April to March of formula year t as detailed in Special Condition C8B 3(a) of the Licence.
- 1.5 In any formula year t , Exit Prices set in October take into account revenue recovered from April to September and are set at a level to recover the remaining TO MAR in the final six months of the formula year.
- 1.6 The TO MAR will change in April of formula year $t+1$ but Exit Prices will still be set at the rate required to collect the remaining TO MAR for formula year t . National Grid might therefore initially under- or over-recover for the first six months of formula year $t+1$.
- 1.7 In October of formula year $t+1$ Exit Prices will be set at a level to compensate for the initial under- or over-recovery in the first half of the formula year.
- 1.8 In April of formula year $t+2$ the TO MAR will change. If the change in TO MAR is not equal to the level of Exit Prices set in October of formula year $t+1$ National Grid will under- or over-recover.
- 1.9 This misalignment of formula year and gas year can cause volatile Exit Prices.
- 1.10 The main body of the original GCM13 consultation document is included in Appendix A.

2 Terms of the Original Proposal

- 2.1 National Grid believed that Option Four – One-off Exit Price changes in April, recalculating exit prices based on an updated TO Target Exit Revenue value, without updating supply data, would have been the most appropriate option for addressing Exit Price volatility at an aggregate level.
- 2.2 Therefore, through GCM13, National Grid proposed:
- A change to the Charging Methodology to facilitate Option Four - One-off April Exit Price changes with Exit Prices recalculated without updating supply data.
- 2.3 The inputs to the Transportation Model used to calculate the April Exit Prices would therefore have been:
- Network – the network model comprising the nodes and pipe lengths would represent the year of capacity release. The model would represent committed projects as indicated by the Ten Year Statement. Sufficient pipe sections would be included to connect all entry and exit points for which prices were required.
 - Supply Data – the Ten Year Statement used to calculate the Exit Prices effective from the previous October (i.e. the December 2008 Ten Year Statement would be used to calculate the April 2010 Exit Prices)
 - Demand Data – Offtake Capacity Statements (for DN Demand) and Balance Sheets (for DC Demand).
 - Expansion factor – calculated based on the costs of constructing NTS capacity for the gas year.
 - Annuitisation Factor – Implied by the Licence (6.25% rate of return and 45 year annuitisation period)
 - Target revenue – Set to the TO MAR for the formula year.

Implementation

National Grid envisaged implementing the proposal for the 1st October 2009 and consulting the industry before making an April price change should exit price volatility at an aggregate level reoccur.

3 Responses

- 3.1 National Grid NTS received seven responses to its consultation on NTS GCM 13; two were in support of the proposal and five were not in support. None of the responses were marked as confidential and copies of the responses have been published on the Gas Charging section of the National Grid website².

Support for the Proposal

Respondent	Abbreviation	View
Association of Electricity Producers	AEP	Not in Support
British Gas Trading	BGT	In Support
EDF Energy	EDF	Not in Support
E.ON UK	EON	Not in Support
RWE	RWE	In Support
Scotia Gas Networks	SGN	Not in Support
Scottish and Southern Energy	SSE	Not in Support

Summary of Responses by Consultation Question

Q1: Is a one-off April Exit Price change an appropriate way of avoiding future Exit Price volatility?

Respondents' Views

AEP are “less convinced over the appropriateness of changing the charging methodology to allow for the possibility of April price changes when the recent AQ review has led to this not being necessary in April 09 and may not be in future years.”

AEP “feel it would be better to bring this forward in the future when the benefits of its use can be more clearly justified, rather than add complexity to the charging methodology and uncertainty regarding April changes in the future. “

EDF “believes that whilst re-aligning the exit prices in April may reduce some volatility it will not address the underlying issue that is causing significant swings in exit capacity prices.”

EON comments “At this stage, we believe “Option One – Do Nothing” is the most appropriate way forward. Overall, as both a Shipper and a Supplier we value greater predictability of charges rather than reduced volatility and therefore remain unconvinced about the benefits of implementing a change to the current methodology governing exit capacity price setting.”

² Responses to consultation paper NTS GCM 13 can be found at:
<http://www.nationalgrid.com/uk/Gas/Charges/consultations/>

EON “would prefer to see more “enduring” proposals bought forward (if required) after a decision has been made on the future of exit capacity reform and the associated charging methodology implications are understood.”

RWE comments “Nor do we support the principle of implementing one-off NTS exit price changes specifically for the purpose of reducing volatility...”

National Grid’s View

In light of the responses received National Grid is not raising a final proposal with regard to a change to the Charging Methodology to facilitate one-off April Exit Price changes with Exit Prices recalculated without updating supply data. Work is currently being progressed on supply and demand balancing in the Transportation Model and a discussion paper was published on our website on the 23rd February 2009³.

Q2: Should April Price changes only be considered when they can be notified at the same time as the October prices i.e. by the preceding 1st August?

Respondents’ Views

BGT comments “Since this AQ review occurs after August, it may be appropriate to notify of a possible April price change after the 1st of August once more definitive information about exit charge revenue is known.

EDF “believes that there may be a value in developing a charging methodology that allows NGG to set prices on 1 October and 1 April, when they issue their final notice of charges on 1 August. Our support of this proposal would be conditional on the grounds that the charging methodology prevented NGG from re-setting charges for 1 April on 1 February unless under exceptional circumstances. This would provide predictability to Shippers as on 1 August every year they would know what charges would be for the next 14 months – in line with the current arrangements. In addition this would help to reduce volatility and allow NGG to set charges reflective of changes in the allowed revenue.”

National Grid’s View

National Grid can consider the possibility of setting Exit Prices on 1st October and 1st April with final notice for both sets of prices being notified on 1st August as this would not require a change to the Charging Methodology.

Q3: Would recalculating Exit Prices in April without updating supply data be more appropriate than recalculating Exit Prices using updated supply data?

Respondents’ Views

AEP “appreciates NG’s efforts in seeking ways to reduce volatility in charges and agrees that the approach of updating NTS exit charges without updating supply data may have merits.”

BGT “supports GCM13 Option 4 so that a change is made to the charging methodology allowing exit capacity prices to change in April without requiring the most up to date supply information.”

³ The discussion paper can be viewed on the Consultations section of the National Grid website: <http://www.nationalgrid.com/uk/Gas/Charges/consultations/>

EDF comments “Whilst we believe that Option 4 should develop charges that are cost reflective based on the information that is inputted to the model, we would question whether this is more cost reflective than Option 3. We would note that under Option 3 NGG would conduct a full re-calculation of NTS Exit Charges based on the most recent and up to date data. This would appear to be more cost reflective than Option 4 where charges are based on data that is over 2 years old when the charges are calculated.”

EON responded “Option Four would seem the most suitable solution if there was an actual problem to resolve...”

RWE comments “To the extent National Grid does consider it necessary to make one-off NTS Exit price changes outside of the 1 October effective date in future we support these being based on the same network, supply or demand data used for the 1 October change. Using more up to date data introduces the risk of significant and unpredictable mid year price volatility at certain exit points, which is inconsistent with National Grid’s objective to facilitate effective competition.”

SGN “believes that any proposal for an April price change should be consulted on when NG consider it to be required. SGN also consider that the question of whether the change should be based on a full updating of supply and demand data or simply be a single percentage change applied to all exit charges should be part of the consultation at the time.”

SSE comments “In order to ensure cost reflective charges, our preference at this point would be that both supply and demand assumptions should be updated. Option 4 proposes only updating demand assumptions. SSE believes this runs the risk of reducing cost reflectivity and runs the risk of introducing cross subsidy. “

National Grid’s View

National Grid believed that recalculating Exit Prices without updating supply data might have been more appropriate than a full recalculation as it would result in a constant adjustment to all prices rather than causing some prices to increase and others to decrease. This would ensure that Exit Prices are more stable and predictable. Recalculating Exit Prices without updating supply data from that used in the previous October could be more appropriate than a full recalculation as all prices in a gas year would then be set using the same supply data.

Summary of Responses by Relevant Objectives

Reflect the Cost Incurred by the Licensee

Respondents’ Views

EDF “supports cost reflective charges, which is in line with NGG’s Standard Licence Condition B 4A.5. Whilst we believe that Option 4 should develop charges that are cost reflective based on the information that is inputted to the model, we would question whether this is more cost reflective than Option 3. We would note that under Option 3 NGG would conduct a full re-calculation of NTS Exit Charges based on the most recent and up to date data. This would appear to be more cost reflective than Option 4 where charges are based on data that is over 2 years old when the charges are calculated. We recognise that this would require a full re-calculation, however given that the charges developed from the Transportation model need to be scaled up to meet target revenue this would not appear to have an impact on NGG’s cost recovery.”

SSE comments “In order to ensure cost reflective charges, our preference at this point would be that both supply and demand assumptions should be updated. Option 4

proposes only updating demand assumptions. SSE believes this runs the risk of reducing cost reflectivity and runs the risk of introducing cross subsidy.”

National Grid’s View

National Grid raised GCM13 as it believed that it was more in the spirit of setting prices once a year than carrying out a full recalculation of charges. This was on the basis that there would be a constant adjustment to charges rather than the potential for some charges to increase and some to decrease. National Grid recognises that this could have been interpreted as being less cost reflective.

Take Account of Developments in the Transportation Business

Respondents’ Views

AEP “are less convinced over the appropriateness of changing the charging methodology to allow for the possibility of April price changes when the recent AQ review has led to this not being necessary in April 09 and may not be in future years. We feel it would be better to bring this forward in the future when the benefits of its use can be more clearly justified, rather than add complexity to the charging methodology and uncertainty regarding April changes in the future.”

AEP “understand that volatility may be reduced under enduring exit reform if charges are calculated on exit baselines.”

BGT comments “it was noted at the TCMF that Exit Reform could very well erode the large fluctuation in exit capacity prices in 2012, but this would not have effect until the second half of 2012. This may mean that some type of April 2012 revenue adjustment could be needed to clear any remaining effects of exit capacity price volatility before Exit Reform starts.”

EON “would prefer to see more “enduring” proposals bought forward (if required) after a decision has been made on the future of exit capacity reform and the associated charging methodology implications are understood.”

SGN “considers that, in view of the fact that Exit Reform is based on NTS exit capacity being released on a gas year basis, this is not an appropriate time to make a permanent change to the charging arrangements. However longer-term this does need to be considered. There is now a misalignment of charge changing dates between the DNs and the NTS. The DNs now change their charges in April and the NTS changes its exit capacity charges in October. This misalignment needs to be considered before the implementation of Exit Reform when the DNs start paying the exit capacity charges.”

SSE comments “...revenue rebalancing is no longer required as a revision of AQ values returned expected revenues to allowed levels. With the expected implementation of Exit Reform revenues will be based on actual bookings from 2012 onwards which should remove further uncertainty associated with AQ levels. This issue demonstrates why it’s not appropriate to make changes in April without due consideration. Each “application” for a change should be consulted upon and considered on its own merit.”

National Grid’s View

National Grid recognises that Exit Reform could significantly reduce Exit Price volatility, however; we also recognise that investigating methods of dampening price volatility in the transitional period prior to the introduction of Exit Reform could be beneficial.

National Grid acknowledges that there is a misalignment between the gas year and the formula year, and also between the charge setting dates for the DNs and the NTS. Exit Reform is based on an annual product from October each year, which presents difficulties in redefining the gas year from April each year, however, we invite views on this issue through the Gas TCMF meetings.

Facilitate Effective Competition

Respondents' Views

RWE comments "To the extent National Grid does consider it necessary to make one-off NTS Exit price changes outside of the 1 October effective date in future we support these being based on the same network, supply or demand data used for the 1 October change. Using more up to date data introduces the risk of significant and unpredictable mid year price volatility at certain exit points, which is inconsistent with National Grid's objective to facilitate effective competition."

RWE also comments "Whilst National Grid's desire to reduce volatility of transportation charges is well meaning we believe that with the publication of the transportation model, National Grid's licence obligation to change prices typically only once each year and separate entry and exit over/under recovery, shippers are now better able to mitigate their exposure to volatility by making informed predictions of future prices."

National Grid's View

National Grid agrees that the introduction and release of the Transportation Model to the industry does facilitate more effective competition by allowing users to predict their future charges.

4 Final Proposal

- 4.1 In light of the responses received National Grid is not raising a final proposal with regard to a change to the Charging Methodology in respect of the timing and data used for setting NTS Exit Capacity Prices.

Future Proposals

- 4.2 Through the GCM13 process, it has been recognised that greater importance is placed on individual price stability i.e. how individual prices vary, rather than aggregate price stability i.e. how the average level of prices varies. One of the key areas that influences individual price stability is the supply and demand balancing rules. National Grid is progressing work on supply and demand balancing rules in the Transportation Model and published discussion paper NTS GCD 06 on the 23rd February 2009.

Appendix A – The Consultation

1 Background

- 1.1 The calculation of TO MAR in respect of formula year t includes an NTS TO revenue adjustment factor (“revenue adjustment”, “TOKt”) for any under- or over-recovery in formula year t-1.
- 1.2 In formula year 2006/07 National Grid incurred a revenue adjustment, which reduced the TO MAR for 2007/08 by c£11m. This was primarily due to the 2007 Price Control Review.
- 1.3 Therefore, the increase in TO MAR from 2007/08 to 2008/09 was greater than the projected increase from 2008/09 to 2009/10.
- 1.4 As a consequence of paragraphs 1.2 and 1.3:
 - Exit Prices set in October 2007 under-recovered from April 2008 – October 2008;
 - Exit Prices set in October 2008 were set at a higher rate to compensate for this under-recovery;
 - The higher rate from October 2008 will over-recover from April 2009 – October 2009 due to the increase in TO MAR⁴;
 - In October 2009 Exit Prices will have to be reduced to prevent over-recovery.
- 1.5 This will result in unstable Exit Prices.

2 Impact of AQ Review & Clarification

- 2.1 The proposal, NTS GCM 13, was raised because National Grid foresaw volatility in future NTS Exit Prices, i.e. prices would rise and then fall on an annual basis. Based on industry feedback about this type of charge volatility, we looked for ways that this could be dampened i.e. an exit capacity price change from 01 April 2009.
- 2.2 The AQ Review Process is an annual series of events which culminates in the calculation of the annual quantity for all NDM and DM meter points. The NDM SOQs (System Offtake Quantities) are the quantities on which capacity is charged. The outcome of the AQ Review is not known in time to feed into the Exit Capacity Price setting process for prices effective from 01 October each year.
- 2.3 Following the 2008 AQ Review, SOQs have fallen reducing NTS exit charge revenue from 01 October 2008 and hence also reducing charge revenue from 01 April 2009. As a result, National Grid no longer considers an Exit Price reduction from 01 April 2009 to be required as the fall in SOQs will reduce charge revenue and should remove volatility of prices.

⁴ Note that as a consequence of the 2008 AQ Review Exit Charges will no longer over-recover. See Section 2 for more detail.

- 2.4 The term “one-off” was used because at the time of initial publication of GCM13 National Grid did not foresee making regular April Exit Price changes after April 2009, based on anticipated allowed revenue and exit capacity levels. However we recognise that future circumstances may reintroduce exit price volatility, e.g. the start of the next price control from 01 April 2012 or other unforeseen changes in allowed revenue, which may warrant an April price change.
- 2.5 Through discussions at the Gas TCMF it has been identified that an April price change could be notified at the same time as the October price change i.e. by the preceding 1st August. This would be in the spirit of setting exit capacity prices once a year as effectively a single price schedule would be being set.
- 2.6 The proposal, GCM13, was seeking Ofgem’s approval to make a change to the Charging Methodology such that if Exit Prices were changed in any April, the prices could be recalculated without updating the supply data from that used in the previous October. This would result in a constant adjustment to all Exit Prices (except where the minimum price would apply) rather than causing some prices to increase and some to decrease as per the prevailing methodology.

3 Discussion and Issues

Impact of RPI on Exit Prices

- 3.1 Industry concerns were raised at the September 2008 Gas TCMF with regard to the impact of RPI on the setting of NTS Exit Capacity Prices. The industry wanted reassurance that the variability of the RPI, which is used in the calculation of TO allowed revenue, would not undermine the benefits of this proposal (GCM13).
- 3.2 Appendix D contains a presentation given at the October 2008 TCMF, which demonstrates that an April NTS exit capacity price change (as facilitated by GCM13) could reduce exit price volatility given variable RPI over the remainder of the price control. This is based on the assumption that the GCM12 charging proposal, which manages entry and exit under and over recovery (“K”) separately for charging purposes, is implemented⁵.

Options to Address Exit Price Volatility

- 3.3 National Grid considered four options to address Exit Price volatility:
 - Option One: Do nothing;
 - Option Two: Apply Exit Prices from April to March of formula year t;
 - Option Three: One-off Exit Price changes in April, with Exit Prices recalculated using updated supply, demand, network, and target exit revenue data;
 - Option Four: One-off Exit Price changes in April, with Exit Prices recalculated without updating supply data.
- 3.4 Appendix C contains a table that shows the impact of an April Price Change on TO target exit revenue and collected revenue.

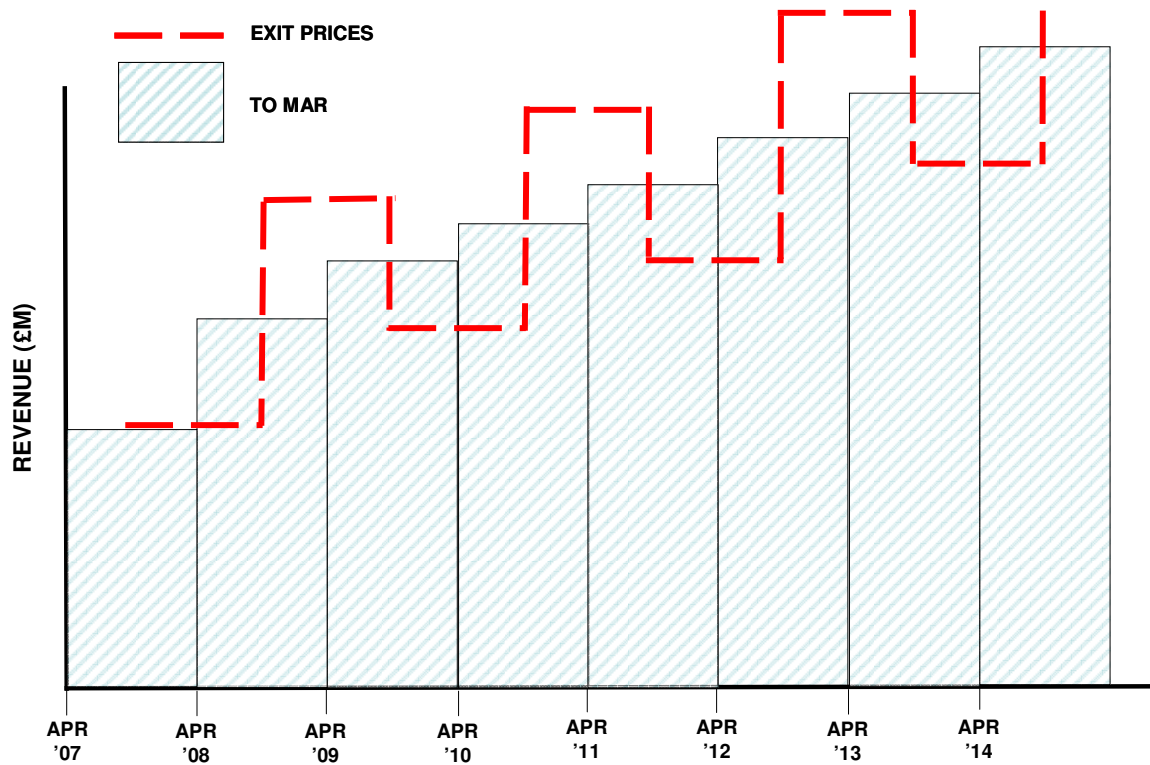
⁵ NTS GCM 12 will be implemented from 01 April 2009 following Ofgem’s decision not to veto the proposal on 19 December 2008

Option One: Do Nothing

3.5 National Grid, through Option One, would have made no change to the current Exit Price setting regime:

- Exit Prices would be aligned with the gas year;
- Final Exit Prices would be set in August using supply data from December and demand data from May;
- There would be the risk of a continuing cycle of unstable Exit Prices.

Option One: Do Nothing

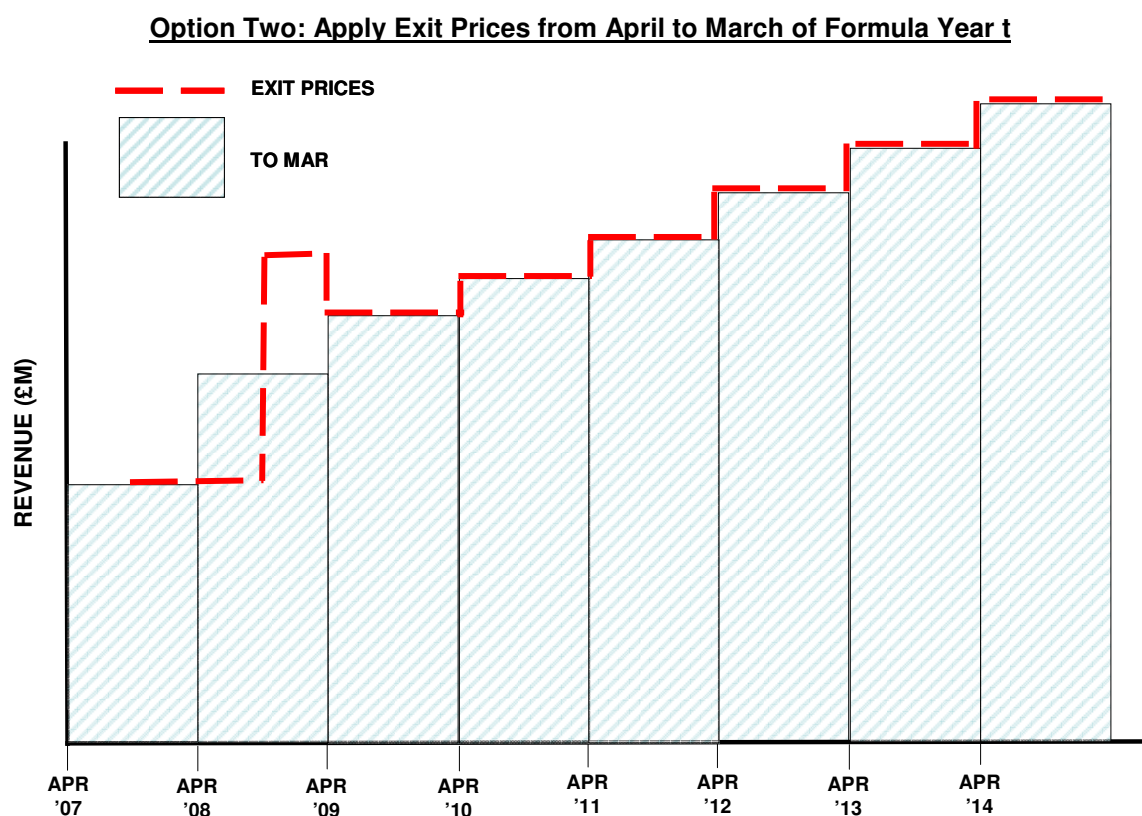


Option Two: Apply Exit Prices from April to March of Formula Year t

3.6 National Grid, through Option Two, would apply Exit Prices from April to March of formula year t, commencing April 2009.

3.7 Differences to Option One include:

- Exit Prices would be aligned with the formula year;
- Final Exit Prices would be set in February (using supply data from December and demand data from May);
- Exit Price setting would be aligned with the proposed March QSEC auction. This would allow National Grid to set all prices using one set of Transportation Models;
- Exit Prices are set using the Transportation Model, which is based on a 1-in-20 peak day demand for the relevant gas year. The proposal would result in Exit Prices being set for the formula year, so Non-Daily Metered (NDM) Exit and annual demand changes, notified in the summer to be effective from October, would not be accounted for;
- This option is incompatible with the Annual Product (from October – September) proposed by Exit Reform;
- The proposal would require a Licence change.



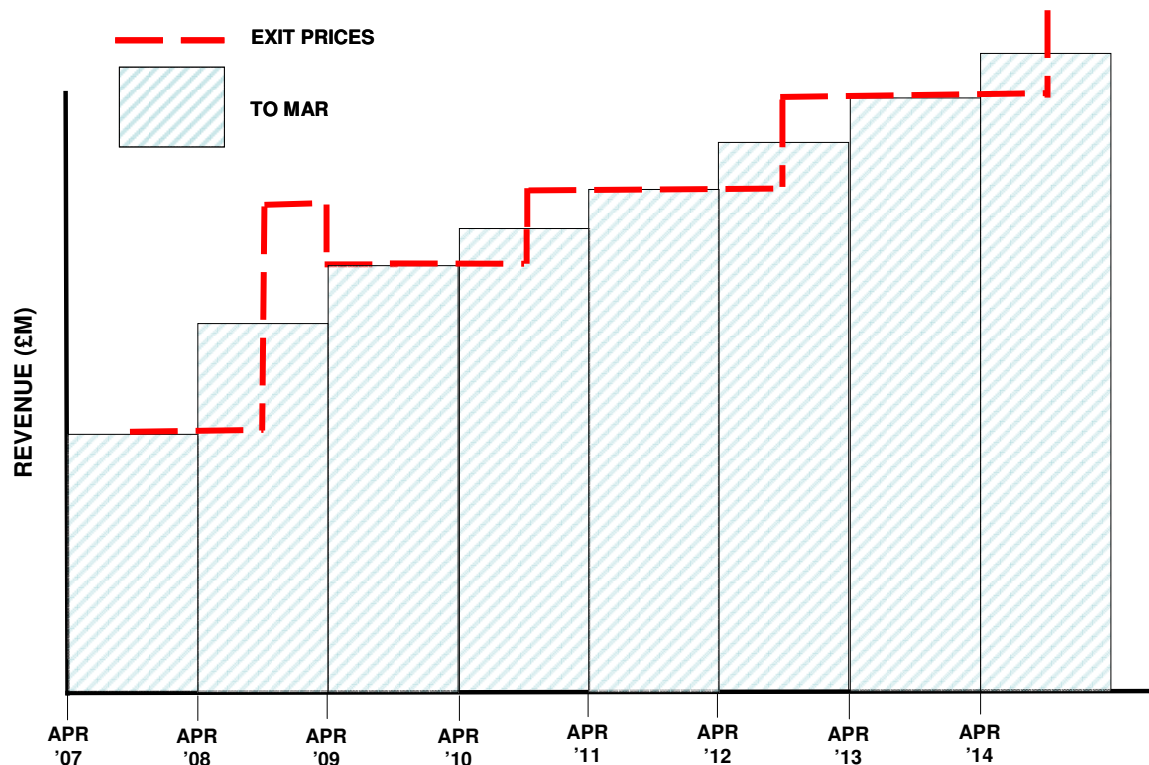
Option Three: One-Off Exit Price Changes in April (full recalculation)

3.8 National Grid, through Option Three, would implement one-off Exit Price changes in April, recalculating Exit Prices using updated supply, demand, network, and target exit revenue data.

3.9 Comparing with Option One:

- The April Exit Prices would be aligned with the formula year;
- Exit Prices effective from 01 April of calendar year Y would be set in February of year Y using supply data from December Y-1 and demand data from May Y-1;
- Two Exit Price changes in six months would facilitate incorporating any within-year changes in TO MAR;
- National Grid would need to produce two sets of Transportation Models using different sets of data;
- The proposal would lead to three Exit Price changes in 18 months. This could cause confusion.

Option Three: One-Off Exit Price Change in April (full recalculation)



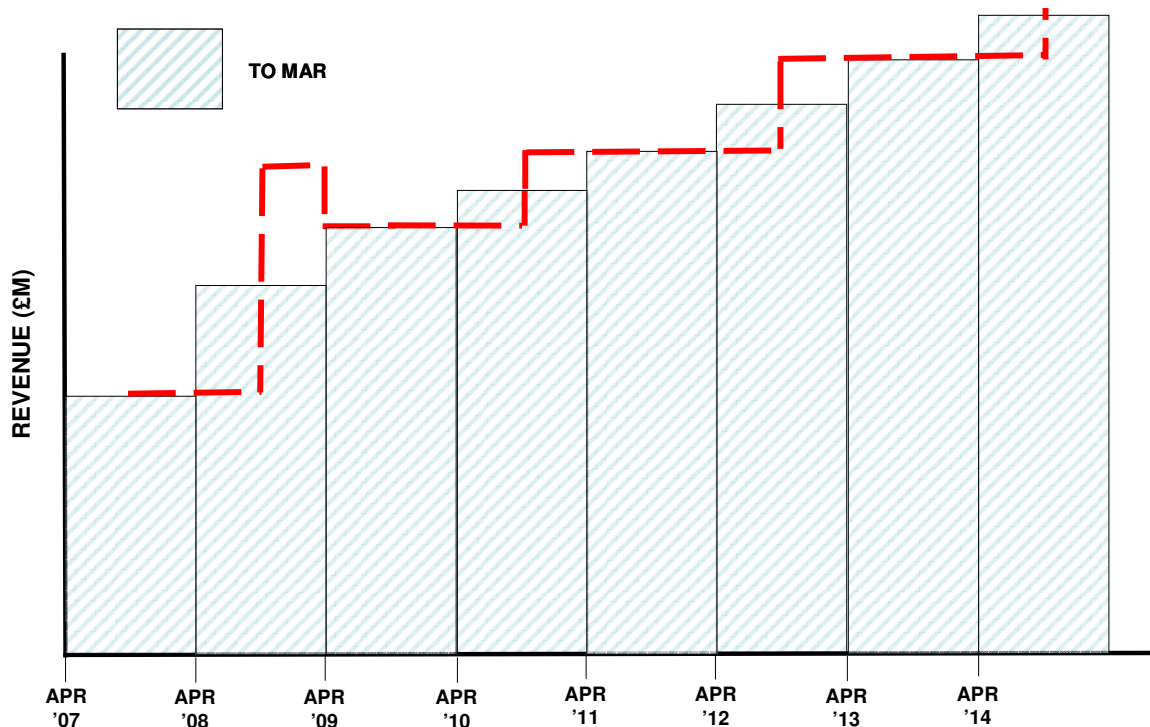
Option Four: One-Off Exit Price Changes in April (recalculating Exit Prices without updating supply data)

3.10 National Grid, through Option Four, would implement one-off Exit Price changes in April, recalculating Exit Prices without updating supply data.

3.11 Differences to Option One include:

- The April Exit Prices would be aligned with the formula year;
- Exit Prices effective from 01 April of calendar year Y would be set in February of year Y using supply data from December Y-2 and demand data from May Y-1 (unchanged from October Y-1 Exit Price setting);
- Two Exit Price changes in six months would facilitate incorporating any within-year changes in TO MAR.
- Exit Prices would be stable:
 - An adjustment would be applied to all Exit Prices in April. The adjustment would be constant except where it would reduce the price below 0.0001p/kWh, in which case the price would be capped at the minimum permitted level of 0.0001p/kWh. DN exit prices are the weighted average of the relevant offtake exit prices and this could also result in a non-constant adjustment.
- The proposal would lead to three Exit Price changes in 18 months. This could cause confusion.
- The proposal would require a change to the Charging Methodology to allow recalculation of Exit Prices without updating the supply data.

Option Four: One-Off Exit Price Change in April (recalculating Exit Prices without updating Supply Data)



Comparison of Option Three and Option Four

3.12 The difference in the resulting Exit Prices for Option Three and Option Four is as follows:

- Option Three would recalculate Exit Prices using updated supply, demand, network and target exit revenue data. This complete recalculation would result in some Exit Prices increasing and some Exit Prices decreasing.
- Option Four would recalculate Exit Prices using updated target exit revenue without updating supply data. This would result in a constant adjustment to all Exit Prices⁶, therefore making them stable.

National Grid's View

3.13 National Grid believes that Option Four would be most appropriate for addressing Exit Price volatility. The main reasons for this are as follows:

- Option One: The option of doing nothing could result in continued volatile Exit Prices year on year.
- Option Two: The 0195AV Modification Proposal, which will introduce NTS Exit Reform is based on an annual product released from 01 October. National Grid therefore considers applying Exit Prices from April – March inappropriate.
- Option Three: Supply and demand data has a significant effect on Exit Prices. Therefore, a one-off Exit Price change in April using updated supply, demand and network data could produce more volatile Exit Prices than those produced by the current regime. National Grid is currently analysing supply and demand balancing within the Transportation Model and published a discussion paper on the 23rd February 2009. Option Four: Recalculating Exit Prices in April, updating the TO target exit revenue without updating supply data, would result in a constant adjustment to all Exit Prices. Exceptions to the constant adjustment would occur where it would reduce the price below 0.0001p/kWh, in which case the Exit Price would be capped at the minimum permitted level of 0.0001p/kWh. DN exit prices are the weighted average of the relevant offtake exit prices and this could also result in a non-constant adjustment.

⁶ The adjustment to Exit Prices would be constant (taking into account rounding within the Transportation Model) except in those cases where such an adjustment would reduce the offtake Exit Price below the minimum permitted level of 0.0001p/kWh. DN exit prices are the weighted average of the relevant offtake exit prices and this could also result in a non-constant adjustment.

Appendix B – Indicative Exit Prices

- The “As-Is” Indicative Exit Prices are taken from the 2008/09 Transportation Model, updated for the addition of Centrax industrial site, for which prices are now required.
- The Option Four Indicative Exit Prices were calculated based on the latest estimate of the 2009/10 formula year target exit revenue, which includes a forecasted adjustment for revenue foregone. [NB these figures do not take into account the impact of the 2008 AQ review and consequential reduction in SOQs which have superseded the requirement for an April 2009 price change]
- The table shows an adjustment to Exit Prices of -0.0003 or -0.0004p/kWh (the two different prices can be explained by rounding within the Transportation Model) except in those cases where such an adjustment would reduce the Exit Price below the minimum permitted level of 0.0001p/kWh.
- In some cases the Exit Prices by DN Zone are adjusted by -0.0001 or -0.0002p/kWh, which is a result of the averaging of the DN Exit Points in the Transportation Model.
- A table showing the impact of GCM13 on TO exit revenue and collected revenue is included in Appendix C.

Table One: Exit Prices by DN Exit Zone

		Indicative Exit Prices (p/kWh/day)		
Network	Exit Zone	“As-Is” (Option One – Do nothing)	Option Four (April Price Change recalculating Exit Prices, without updating supply data)	Difference between Option Four and Option One
East of England	EA1	0.0069	0.0066	-0.0003
	EA2	0.0076	0.0073	-0.0003
	EA3	0.0031	0.0028	-0.0003
	EA4	0.0126	0.0123	-0.0003
	EM1	0.0003	0.0001	-0.0002
	EM2	0.0053	0.0050	-0.0003
	EM3	0.0152	0.0149	-0.0003
	EM4	0.0109	0.0106	-0.0003
North of England	NE1	0.0058	0.0055	-0.0003
	NE2	0.0006	0.0005	-0.0001
	NE3	0.0001	0.0001	0.0000
	NO1	0.0007	0.0005	-0.0002
	NO2	0.0003	0.0003	0.0000
London	NT1	0.0209	0.0206	-0.0003
	NT2	0.0130	0.0127	-0.0003
	NT3	0.0126	0.0123	-0.0003
North West	NW1	0.0097	0.0094	-0.0003
	NW2	0.0146	0.0143	-0.0003
Scotland	SC1	0.0001	0.0001	0.0000
	SC2	0.0001	0.0001	0.0000
	SC4	0.0001	0.0001	0.0000
South of England	SE1	0.0157	0.0154	-0.0003
	SE2	0.0209	0.0206	-0.0003
	SO1	0.0159	0.0156	-0.0003
	SO2	0.0236	0.0233	-0.0003
Wales and the West	SW1	0.0161	0.0158	-0.0003
	SW2	0.0235	0.0232	-0.0003
	SW3	0.0347	0.0344	-0.0003
	WN	0.0187	0.0184	-0.0003
	WS	0.0096	0.0093	-0.0003
West Midlands	WM1	0.0174	0.0171	-0.0003
	WM2	0.0158	0.0155	-0.0003
	WM3	0.0143	0.0140	-0.0003

Table Two: Exit Prices by NTS Site

NTS Site	Indicative Exit Prices (p/kWh/day)		
	“As-Is” (Option One – Do nothing)	Option Four (April Price Change recalculating Exit Prices, without updating supply data)	Difference between Option Four and Option One
AM_PAPER	0.0110	0.0107	-0.0003
BAGLAN_BAY_PG	0.0076	0.0073	-0.0003
BARKING_PG	0.0129	0.0126	-0.0003
TERRA_BILLINGHAM	0.0006	0.0003	-0.0003
BP_GRANGEMOUTH	0.0001	0.0001	0.0000
BP_SALTEND_HP	0.0001	0.0001	0.0000
BRIDGEWATER_PAPER	0.0164	0.0161	-0.0003
BRIGG_PG	0.0042	0.0039	-0.0003
BRIMSDOWN_PG	0.0143	0.0140	-0.0003
BRUNNER_MOND	0.0143	0.0140	-0.0003
CONNAHS_QUAY_PS	0.0160	0.0157	-0.0003
CORBY_PS	0.0108	0.0105	-0.0003
CORYTON_PG	0.0132	0.0129	-0.0003
COTTAM_PG	0.0051	0.0048	-0.0003
DAMHEAD_CREEK	0.0126	0.0123	-0.0003
DEESIDE_PS	0.0163	0.0160	-0.0003
DIDCOT_PS	0.0192	0.0189	-0.0003
TEESSIDE_PG	0.0006	0.0003	-0.0003
GOOLE_GLASS	0.0033	0.0030	-0.0003
GRAIN_GAS	0.0126	0.0123	-0.0003
GREAT_YARMOUTH	0.0009	0.0006	-0.0003
HAYS_CHEMICALS	0.0151	0.0148	-0.0003
ICI_RUNCORN	0.0180	0.0177	-0.0003
IMMINGHAM_PG	0.0003	0.0001	-0.0002
KEADBY_PS	0.0044	0.0041	-0.0003
KEMIRAINCE_CHP	0.0177	0.0174	-0.0003
KINGS_LYNN_PS	0.0061	0.0058	-0.0003
LANGAGE_PG	0.0325	0.0322	-0.0003
LITTLE_BARFORD_PS	0.0122	0.0119	-0.0003
LONGANNET	0.0001	0.0001	0.0000

NTS Site	Indicative Exit Prices (p/kWh/day)		
	“As-Is” (Option One – Do nothing)	Option Four (April Price Change recalculating Exit Prices, without updating supply data)	Difference between Option Four and Option One
MARCHWOOD	0.0245	0.0242	-0.0003
MEDWAY_PS	0.0125	0.0122	-0.0003
PETERBOROUGH_PS	0.0080	0.0077	-0.0003
PETERHEAD_PG	0.0001	0.0001	0.0000
PHILLIPS_SEAL_SANDS	0.0001	0.0001	0.0000
ROCKSAVAGE_PG	0.0180	0.0177	-0.0003
ROOSECOTE_PS	0.0018	0.0015	-0.0003
RYE_HOUSE_PS	0.0147	0.0144	-0.0003
SALTEND	0.0001	0.0001	0.0000
SAPPAPERMILLCHP	0.0098	0.0095	-0.0003
SEABANK_POWER	0.0225	0.0222	-0.0003
SEABANK_POWER_II	0.0242	0.0239	-0.0003
SELLAFIELD_PS	0.0001	0.0001	0.0000
TERRA_SEVERNSIDE	0.0241	0.0238	-0.0003
SHOTTON_PAPER	0.0161	0.0158	-0.0003
SPALDING_PG	0.0065	0.0062	-0.0003
STALLINGBOROUGH_PS	0.0012	0.0008	-0.0004
STAYTHORPE	0.0028	0.0025	-0.0003
SUTTON_BRIDGE_PS	0.0073	0.0070	-0.0003
TEESSIDE_BASF	0.0001	0.0001	0.0000
TEESSIDE_HYDROGEN	0.0001	0.0001	0.0000
THORNTON_CURTIS_PG	0.0003	0.0001	-0.0002
ZENECA	0.0006	0.0003	-0.0003
CENTRAX	0.0338	0.0335	-0.0003

Table Three: Interconnector Exit Prices

	Indicative Exit Prices (p/kWh/day)		
	“As-Is” (Option One – Do nothing)	Option Four (April Price Change recalculating Exit Prices, without updating supply data)	Difference between Option Four and Option One
Interconnector			
Bacton Interconnector	0.0009	0.0006	-0.0003
Moffat	0.0001	0.0001	0.0000

Table Four: Exit Prices by NTS Storage Site

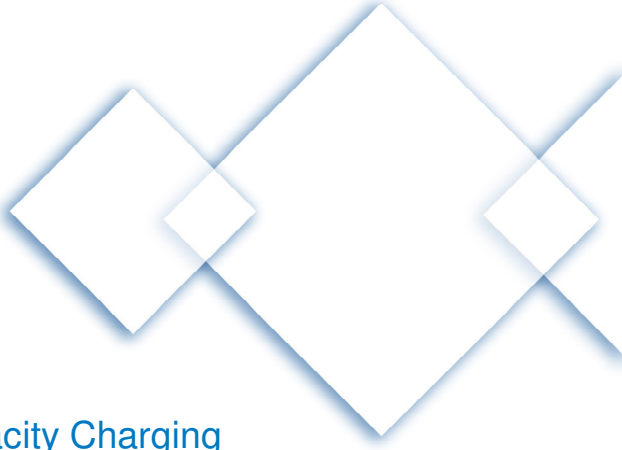
Storage Site	Indicative Exit Prices (p/kWh/day)		
	“As-Is” (Option One – Do nothing)	Option Four (April Price Change recalculating Exit Prices, without updating supply data)	Difference between Option Four and Option One
AVONMOUTH_LNG	0.0241	0.0238	-0.0003
BARTON_STACEY_(MRS)	0.0228	0.0225	-0.0003
CHESHIRE	0.0139	0.0136	-0.0003
DYNEVOR_ARMS_LNG	0.0093	0.0090	-0.0003
GARTON_(MRS)	0.0001	0.0001	0.0000
GLENMAVIS	0.0001	0.0001	0.0000
HATFIELD_MOOR_(MRS)	0.0038	0.0035	-0.0003
HOLEHOUSE_FARM_(MRS)	0.0151	0.0148	-0.0003
HORNSEA_(MRS)	0.0001	0.0001	0.0000
PARTINGTON	0.0137	0.0134	-0.0003
ROUGH	0.0001	0.0001	0.0000

Appendix C – Impact of GCM13 on TO Target Exit Revenue and Collected Revenue

		2008/09	2009/10
A	TO Allowed Revenue (April - March)	£561.9m	£590.5m
B	DN Pensions	£26.5m	£26.5m
C	Metering	£1.0m	£1.0m
D	TO Allowed Revenue - DN Pensions - Metering (A - B - C)	£534.4m	£563.0m
E	TO Exit Allowed (Target) Revenue 50% (April - March) (D / 2)	£267.2m	£281.5m
F	Revenue Foregone	£54.1m	£55.3m
G	TO Exit Capacity Target Revenue (April - March) (E - F)	£213.1m	£226.2m
H	Forecast Collected TO Exit Revenue (October - September)	£231.7m	£220.7m
I	Incremental Amount Assumed In October	£6.8m	£6.8m
J	Target Exit Revenue used in Transportation Model to Calculate October Prices (H + I)	£238.5m	£227.5m
K	TO Exit Capacity Target Revenue (April - March)		£226.2m
L	Incremental Amount Assumed In October		£6.8m
M	Target Exit Revenue used in Transportation Model to Calculate April Prices (K + L)		£233.0m
	Change in Target Exit Revenue used in Transportation Model from October 2008 to October 2009 (2008/09 H - 2009/10 H)		-£11.0m
	Change in Target Exit Revenue used in Transportation Model from October 2008 to April 2009 (GCM13) (2008/09 H - 2009/10 G)		-£5.5m

i.e. a 1st April 2009 price reduction of £5.5m will lead to a 1st October 2010 increase of £14m whereas waiting until 1st October 2009 would result in a £11m reduction followed by a 1st October 2010 increase of £25m. This summary is the key driver for GCM13. [NB these figures do not take into account the impact of the 2008 AQ review and consequential reduction in SOQs which will lead to lower exit charge revenue from 1st October 2008 and hence under recovery for the 2008/9 formula year.]

Appendix D – Impact of RPI on Exit Capacity Prices



**NTS Exit Capacity Charging
April Price Changes**

Gas TCMF 2nd October 2008
Eddie Blackburn

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Introduction

Draft Consultation Paper GCM13 “April NTS Exit Capacity Price Changes” was discussed at the September Gas TCMF as a means of reducing exit capacity price variability.

Concerns were raised that the variability of the RPI, which is used in the calculation of TO allowed revenue, would undermine the benefits of the proposal.

This presentation demonstrates the impact that the RPI has on the setting of NTS Exit Capacity prices and has been produced to further inform the debate regarding GCM13

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Base NTS TO Allowed Revenue (TOZt)

In respect of any formula year commencing on 1 April 2008 or on 1 April in any subsequent formula year:

$$TOZ_t = TOZ_{t-1} \times \left[1 + \left(\frac{RPI_t - X}{100} \right) \right]$$

Where X =0

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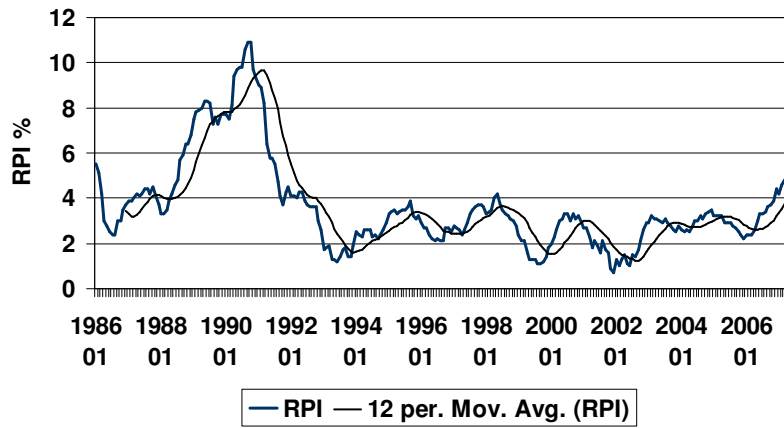
RPI Calculation

RPI_t means the percentage change (whether of a positive or a negative value) in the arithmetic average of the retail prices index published or determined with respect to each of the six months from July to December (both inclusive) in formula year t-1 and the arithmetic average of the retail prices index numbers published or determined with respect to the same months in formula year t-2

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RPI Data



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Impact of RPI Changes on NTS Exit Capacity Prices

Four Scenarios Investigated

1. No GCM13 – No April Price Change – RPI Constant*
2. No GCM13 – No April Price Change – RPI Variable**
3. GCM13 – April Price Change – RPI Constant*
4. GCM13 – April Price Change – RPI Variable**

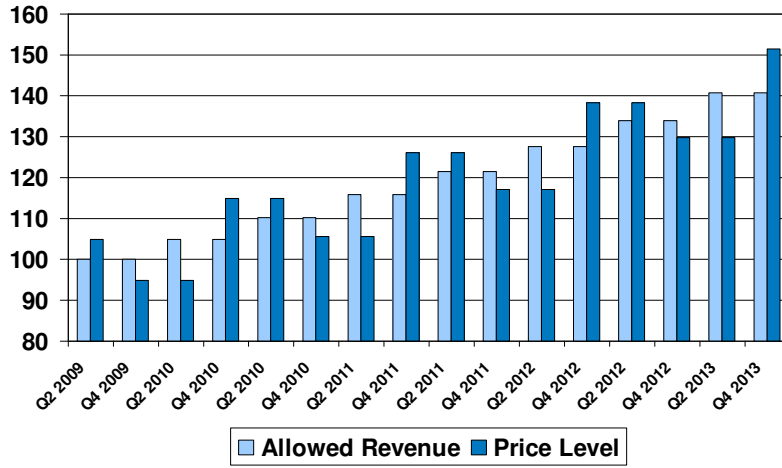
Results presented relative to the 2008/9 Price Level

- Constant 5%
- Variable RPI 4%/6% alternating annually

6

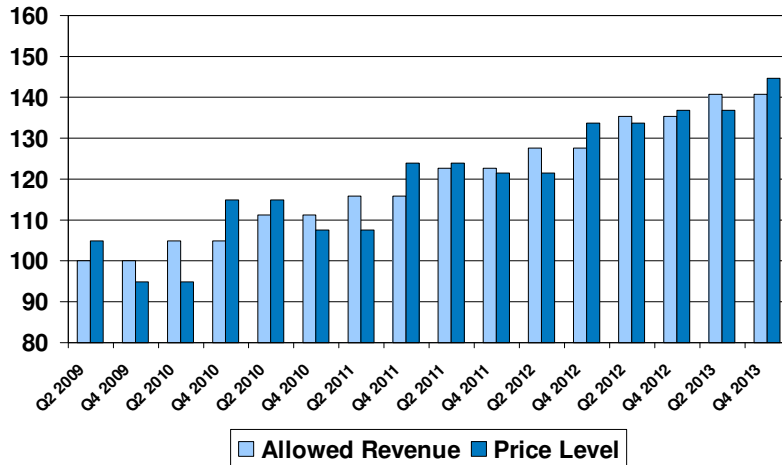
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Allowed & Collected Revenue No GCM13 - Constant RPI



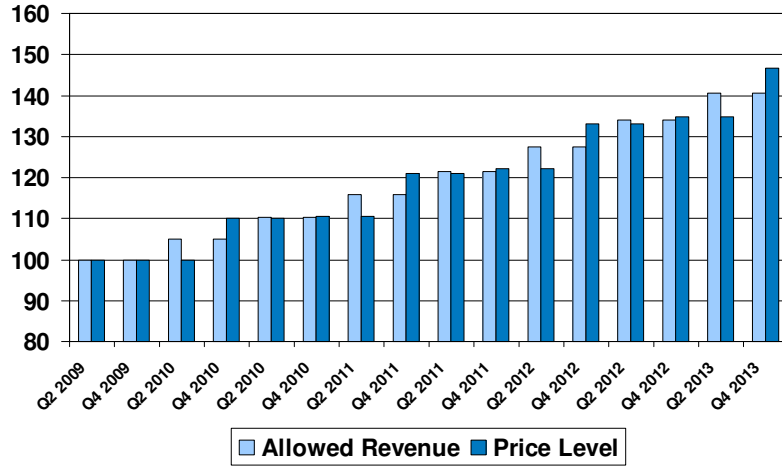
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Allowed & Collected Revenue No GCM13 - RPI Variable



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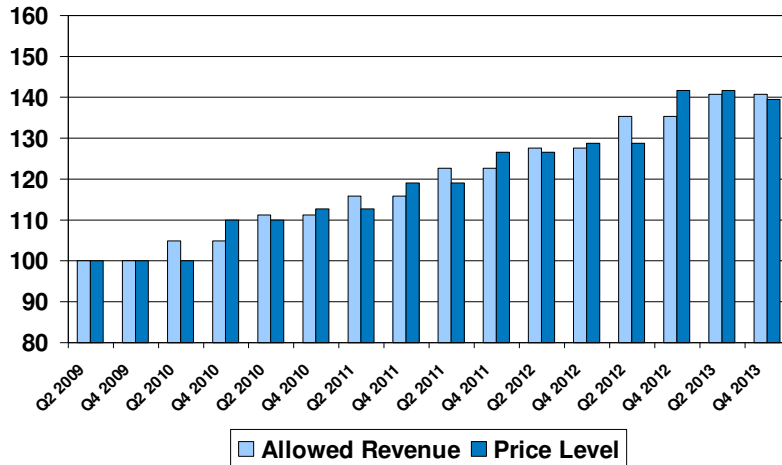
Allowed & Collected Revenue GCM13 - Constant RPI



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Allowed & Collected Revenue GCM13 - RPI Variable



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Summary

The results indicate that an April NTS exit capacity price change (as facilitated by GCM13) would reduce exit price volatility given variable RPI over the remainder of the price control

- ◆ **This assumes that the separate management of K (GCM12) has been implemented**
- ◆ **NB ~ NTS TO Exit is 100% capacity and hence not subject to the demand uncertainty variability that has previously affected DN charges.**

While this may not be an enduring solution it may be an appropriate short-term solution while other options are identified

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