

CONSULTATION DOCUMENT

Modification Proposals to the Gas Transmission Transportation Charging Methodology

NTS GCM 12:

Retrospective Negative TO Entry Commodity Charge & Separate Management of K

18th July 2008

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1 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 sets out for consultation a proposal for amending the Gas Transmission Transportation Charging Methodology (the "Charging Methodology") in respect of the introduction of a Retrospective Negative TO Entry Commodity Charge mechanism (as originally proposed in GCM11) and the separate management of under/over recovery (K) for charging purposes. The mechanism would be used to manage TO entry revenue over recovery in the event that there was a residual over recovery amount after any credits from the buy-back offset mechanism and the TO Entry Commodity rebate mechanism (as introduced through GCM10) had been paid i.e. if TO entry over recovery was entirely due to auction revenue. The separate management of K would ensure under or over recovery of entry charges would only affect entry charges in the following formula year and under or over recovery of exit charges would only affect exit charges in the following formula year.

This proposal represents a variation to the GCM11 proposal which was vetoed by the Authority (8th February 2008) on the grounds that it was non-symmetric in its treatment of over and under recovery for entry and exit which might lead to a cross subsidy of Entry Users by Exit Users. This proposal (GCM12) seeks to overcome the reasons for the rejection of GCM11 by the addition of the separate management of K which would remove the risk of Exit Users cross subsidising Entry Users.

The prevailing TO over recovery process involves the buy-back offset and the TO Entry Commodity rebate mechanisms. The buy-back offset mechanism leads to a credit being paid to all Users based on their Monthly System Entry Capacity (MSEC) holdings to offset NTS Entry Capacity buy-back costs. NTS Entry Capacity buy-back costs represent a cost to Users via the Entry Capacity Neutrality charge. Revisions to this mechanism to increase its efficiency were introduced through Charging Proposal NTS GCM 09, however, in the event that buy-back costs are less than the over recovery amount, this mechanism will not redistribute the full over recovery amount. As a consequence, National Grid raised Charging Proposal NTS GCM 10, which introduced the TO Entry Commodity charge rebate mechanism.

This proposal, GCM12, would introduce a retrospective negative TO Entry Commodity charge which would allow over recovery in excess of that managed through the prevailing TO over recovery processes. This should allow for any TO Entry revenue over recovery amount to be managed.

GCM12: National Grid proposes through this consultation document that:

Trigger

- The Retrospective Negative TO Entry Commodity charge (credit) would be used if there remained a residual over recovery amount after taking into account any revenue redistributed via the Entry Capacity buy-back offset TO over recovery mechanism (as revised through GCM09) and the TO Entry Commodity Rebate Mechanism (as described in GCM10)
 - The TO Entry Commodity rebate (GCM10) mechanism would be triggered if there remained a residual over recovery amount after taking into account any revenue redistributed by the buy back offset mechanism (as described in GCM09)
- The mechanism would be triggered even if the buy back offset mechanism (GCM09) or the TO Entry Commodity Rebate Mechanism (GCM10) had not been used
- The mechanism would be triggered at the end of the formula year based on the outcome of all NTS Entry Capacity auctions that represented a TO revenue stream.

Mechanism

- Any residual revenue remaining after taking into account credits resulting from the Entry Capacity buy-back offset (GCM09) and the TO Entry Commodity Rebate (GCM10) mechanisms would be available as a credit to shippers.
- Credits would only be paid based on relevant entry allocations i.e. those allocations that would attract the TO Entry Commodity charge.
- Each Shipper's credit would be calculated as a proportion of the total available credits from the ratio of Shipper relevant entry allocations to total relevant entry allocations over the formula year.
- Credits would only be paid if the residual over recovery was in excess of £1m (this equates to the minimum TO Entry Commodity price of 0.0001 p/kWh)
- Credits would be capped at the level of the SO Entry Commodity charge level such that the combined impact of SO and TO Entry Commodity charges did not represent a credit to Shippers.
- Credits would be paid following the end of the formula year based on relevant entry allocations i.e. those allocations that would attract the TO Entry Commodity charge

Treatment of K

- The Licence defined TOKt ('K') term would be split into separate Entry and Exit K components for the purposes of setting charges
- The applicable interest rate used to calculate K within the Licence depends on whether there has been over or under recovery. The rules used to calculate the entry and exit specific K components, which ensure that the sum of the two components equals the Licence K calculation, are laid out in appendix B. Examples of how these rules would be applied are laid out in appendix C.
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Implementation

It is proposed that these arrangements are implemented with effect from 1st April 2009 for the 2009/10 formula year.

Future Proposals

This proposal represents the final step in addressing TO Entry over recovery following on from GCM09 and GCM10. National Grid anticipate that further TO Entry over recovery proposals might only be required should this proposal be vetoed or in response to further changes to the UNC.

The closing date for submission of your responses to this consultation is **Friday 12th September 2008**

2 Introduction

- 2.1 The prevailing TO revenue over recovery mechanism is in two parts.
- 2.2 Firstly, subject to implied revenue indicating that the Licence defined revenue over recovery limits¹ would otherwise be breached, the buy-back offset mechanism leads to a credit being paid to all Users based on their Monthly System Entry Capacity (MSEC) holdings to offset NTS Entry Capacity buy-back costs. NTS Entry Capacity buy-back costs represent a cost to Users via the Entry Capacity Neutrality charge. Revisions to this mechanism to increase its efficiency have been introduced through Charging Proposal NTS GCM 09, however, in the event that buy-back costs are less than the over recovery amount, this mechanism does not redistribute the full over recovery amount.
- 2.3 Secondly, subject to implied revenue indicating that over recovery would otherwise be in excess of £1m, rebates are paid based on the TO Commodity Charge.
- 2.4 If there were no TO entry commodity charges to rebate or the over recovery amount was in excess of the TO entry commodity charges paid then the residual over recovery would be entirely due to auction revenue and there would be no further mechanism to manage this scenario.
- 2.5 GCM11 was raised to manage exactly this scenario however, the GCM11 proposal was vetoed by the Authority (8th February 2008) on the grounds that it was non-symmetric in its treatment of over and under recovery for entry and exit Users and as a consequence it might lead to a cross subsidy of Entry Users by Exit Users.

3 Background

- 3.1 Entry and Exit TO revenue are managed separately in that TO charges are set such that 50% of TO allowed revenue, other than that revenue collected through the DN Pensions charge, is collected from Entry and 50% from Exit.
- 3.2 TO Exit Capacity charges are based on administered prices which are designed to collect all TO Exit allowed revenue.
- 3.3 TO Entry Capacity charges are based on pay-as-bid auctions and any forecast under recovery is managed by setting the TO Entry commodity charge.
- 3.4 The TO Entry Commodity charge cannot currently be used as an over recovery mechanism for Entry over recovery and hence the TO Entry Commodity price cannot be set to have a negative value.

¹ The Licence places restrictions on National Grid should TO over recovery represents 4% in one year or 6% over two years.

4 Discussion and Issues

Issues Regarding the Prevailing TO Over Recovery Mechanism

- 4.1 There remains a risk that the two TO Entry revenue over recovery mechanisms will not redistribute the full over recovery amount. This scenario would occur if over recovery was entirely due to entry auction revenue. (i.e. If there were no TO entry commodity charges to rebate or the over recovery amount was in excess of the TO entry commodity charges paid) In this scenario, excess revenue would flow into the 'K' mechanism. Excess revenue from one formula period results in reduced allowed revenue in the following formula period. This may lead to excess revenue collected from Entry Users being effectively redistributed on a fifty-fifty basis between Entry and Exit Users in the following formula period.
- 4.2 The risk of this over recovery scenario remains and this could be over come by allowing the TO Entry Commodity charge to be negative.

TO Entry Commodity Charge Issues

- 4.3 Proposals have been raised in the past to introduce a negative TO Entry Commodity charge to manage over recovery
- firstly to compliment the buy-back offset mechanism,
 - secondly as a primary over recovery mechanism, and
 - finally as a retrospective mechanism (GCM11)
- 4.4 All three proposals were vetoed by the Authority. The history of revenue over recovery mechanism charging proposals is outlined in appendix A.
- 4.5 The difficulty with a negative TO entry commodity charge in combination with the TO entry buy-back offset mechanism is that both buy-back costs and over recovery revenue must be forecast to set the commodity rate and this is far from a simple or transparent process. This appears to have been the key to the Authority's rejection of previous proposals.
- 4.6 Even if appropriate forecasting processes could be defined, there remains the scenario that over recovery is triggered at a time that does not allow a negative commodity rate to be set within the formula year given the charge notice requirements within the Licence and the UNC. These issues could be addressed by applying the charge retrospectively as proposed through GCM11.

Retrospective TO Entry Commodity Charge

- 4.7 A retrospective negative TO Entry Commodity charge would allow over recovery to be managed without needing to forecast entry revenue or buy-back costs.
- 4.8 Concerns have been expressed that a negative commodity charge may affect Shipper incentives to flow gas. Shippers are however exposed to the net SO and TO Entry Commodity charge and hence there would be no change in the incentive properties of the net NTS Commodity charge (SO plus TO) if the TO component were to be negative unless this resulted in the net commodity charge being negative.
- 4.9 Shippers can already calculate the approximate impact on their net entry commodity charge of the cost of any entry capacity they purchase and this would not change should the TO component be negative. Every £1M spent on entry capacity will result in a 0.0001 p/kWh reduction in the TO Entry Commodity charge over a 12 month period. There should therefore be no change in capacity bidding behaviour as a result of this proposal.

Mechanism Trigger

4.10 The GCM11 over recovery management process would have operated at the end of the formula year based on the outcome of all auctions representing a TO revenue stream, TO Entry commodity revenue and any credits paid as a result of the buy-back offset mechanism and the TO Entry Commodity Rebate mechanism (as introduced through the implementation of NTS GCM10).

Mechanism

4.11 The proposal would have represent retrospectively setting the TO Entry Commodity rate to a negative value. Credits might therefore only be paid if the residual over recovery was in excess of £1M as this equates to the minimum negative TO Entry Commodity price of -0.0001 p/kWh. This same approach has been included within the charging methodology as a result of the implementation of the TO Entry Commodity rebate mechanism (as introduced through the implementation of NTS GCM10).

4.12 Credits would also have been capped at the level of the SO Entry Commodity charge level such that the combined impact of SO and TO Entry Commodity charges did not represent a credit to Shippers.

Veto of GCM11 – Separate K Management for Entry & Exit

4.13 GCM11 was vetoed by the Authority on the grounds that it was non-symmetric in its treatment of over and under recovery for entry and exit. Other than the £1m threshold, GCM11 would have removed the risk of TO Entry over recovery which would have prevented revenue flows from Entry to Exit however there remains the risk of revenue flows from exit to entry if exit revenue represented over recovery and entry represented under recovery. The asymmetry of this risk might lead to a cross subsidy of Entry Users by Exit Users and hence was deemed to be discriminatory.

4.14 This proposal (GCM12) seeks to overcome the reasons for the rejection of GCM11 by the addition of the separate management of K which would remove the risk of Exit Users cross subsidising Entry Users as entry over or under recovery would only affect entry users in the following year and exit over or under recovery would only affect exit users in the following year.

4.15 As a higher interest rate applies to over recovery compared to under recovery this would have to be taken account of if there were a net over recovery but either entry or exit represented an under recovery. The calculation of entry and exit K components would need to ensure that the sum of the two equalled the Licence K figure.

4.16 In such an over recovery scenario, the higher interest rate would be applied to calculate K, the lower interest rate would be used to calculate the K component that had under recovered and the other K component would be calculated as the difference between the two. In this way, the entry K component plus the exit k component would equal the Licence K component. Examples are shown in appendix C.

Implementation

- 4.17 The outcome of the 2008 AMSEC auction implies a requirement to set a TO Entry Commodity rate of 0.0094 p/kWh and that over recovery would need to be in excess of approximately £90m plus buy-back costs before the prevailing entry over recovery management mechanisms would be insufficient for formula year 2008/9. This forecast, however, assumes that revenues from the RMTTSEC auctions (as introduced via UNC Modification proposal 0187A) would be similar to those received from the one-off 2007 TTSEC auction (as introduced via UNC Modification proposal 0169A). This may not be the case.
- 4.18 Based on the support for GCM11 it would seem prudent to raise a further variant of this proposal to ensure a holistic over recovery mechanism for TO entry revenue. System functionality for GCM10 and GCM11 has already been specified within the summer 2008 release of Gemini. The cost and risk associated with removing the GCM11 functionality was investigated on the veto of GCM11 however the economic and efficient solution was to leave the functionality within the release as unused functionality. As a consequence there would be no implementation costs associated with the implementation of the proposal covered by this document as the K management aspects also incur no system costs.

5 National Grid's Proposal

5.1 National Grid proposes that:

K Management

- The Licence defined TOK_t ('K') term would be split into separate Entry and Exit K components for the purposes of setting charges
- The applicable interest rate used to calculate K within the Licence depends on whether there has been over or under recovery. The rules used to calculate the entry and exit specific K components, which ensure that the sum of the two components equals the Licence K calculation, are laid out in appendix B. Examples of how these rules would be applied are laid out in appendix C.

Trigger

- The Retrospective Negative TO Entry Commodity charge would be used if there remained a residual over recovery amount after taking into account any revenue redistributed via the TO Entry Commodity Rebate Mechanism (as described in GCM10)
 - The TO Entry Commodity rebate (GCM10) mechanism would be triggered if there remained a residual over recovery amount after taking into account any revenue redistributed by the buy back offset mechanism (as described in GCM09)
- The mechanism would be triggered even if the buy back offset mechanism (GCM09) or the TO Entry Commodity Rebate Mechanism (GCM10) had not been triggered
- The mechanism would be triggered at the end of the formula year based on the outcome of all NTS Entry Capacity auctions that represented a TO revenue stream.

Mechanism

- Any residual TO entry revenue remaining after taking into account credits resulting from the Entry Capacity buy-back offset (GCM09) and the TO Entry Commodity Rebate (GCM10) mechanisms would be available as a credit to shippers .
 - As specified by GCM09, any residual over recovery at the end of the formula year would first be used to offset buy backs costs in those months within the formula period when buy-back costs had occurred and no credit had been paid or where the credit was less than the buy-back cost.
 - As specified by GCM10, any residual over recovery at the end of the formula year would secondly be used to rebate TO Entry Commodity charges paid within the formula period.
- Credits would only be paid based on relevant entry allocations i.e. those allocations that would attract the TO Entry Commodity charge.
- Each Shipper's credit would be calculated as a proportion of the total available credits from the ratio of Shipper relevant entry allocations to total relevant entry allocations over the formula year.

- Credits would only be paid if the residual over recovery was in excess of £1m (this equates to the minimum TO Entry Commodity price of -0.0001 p/kWh)
- Credits would be capped at the level of the SO Entry Commodity charge such that the combined impact of SO and TO Entry Commodity charges did not represent a credit to Shippers.
- Credits would be paid following the end of the formula year based on relevant entry allocations i.e. those allocations that would attract the TO Entry Commodity charge

Implementation

It is proposed that these arrangements are implemented with effect for the 2009/10 formula year and hence from 1st April 2009.

Future Proposals

This proposal represents the final step in addressing TO Entry over recovery following on from GCM09 and GCM10. National Grid anticipate that further proposals might only be required should GCM12 be vetoed or in response to further changes to the UNC.

6 Justification

Assessment against Licence Objectives

- 6.1 The National Grid plc Gas Transporter Licence in respect of the NTS requires that proposed changes to the Charging Methodology shall achieve the relevant methodology objectives.
- 6.2 Where transportation prices are not established through an auction, prices calculated in accordance with the methodology should:
- 1) Reflect the costs incurred by the licensee in its transportation business;
 - 2) So far as is consistent with (1) properly take account of developments in the transportation business;
 - 3) So far as is consistent with (1) and (2) facilitate effective competition between gas shippers and between gas suppliers.
- 6.3 National Grid believes that GCM12 would satisfy the relevant objectives as, in improving the efficiency of the TO Entry Commodity process, the likelihood of over recovery is reduced and hence the aggregate of all entry and exit charges would more closely reflect the costs incurred within the formula year.
- 6.4 GCM12 should prevent cross subsidies between entry and exit Users and hence should facilitate effective competition between gas shippers and between gas suppliers through more stable and transparent charges.
- 6.5 The proposal modifies the TO Over recovery mechanism to take into account past and potential future changes to the NTS Entry Capacity regime and hence “takes into account developments in the transportation business”. This proposal is consistent with enduring entry trade and transfer arrangements and with the potential for more variable exit revenue which may be a consequence of exit reform.

Assessment against EU Gas Regulations

- 6.6 EC Regulation 1775/2005 on conditions for access to the natural gas transmission networks (binding from 1 July 2006) are summarised below. The principles for network access tariffs or the methodologies used to calculate them shall:
- Be transparent
 - Take into account the need for system integrity and its improvement
 - Reflect actual costs incurred for an efficient and structurally comparable network operator
 - Be applied in a non-discriminatory manner
 - Facilitate efficient gas trade and competition
 - Avoid cross-subsidies between network users
 - Provide incentives for investment and maintaining or creating interoperability for transmission networks
 - Not restrict market liquidity
 - Not distort trade across borders of different transmission systems.

6.7 National Grid believes that GCM12 is consistent with the principles listed above, specifically the amended methodology should;

- Be transparent
- Reflect actual costs incurred for an efficient and structurally comparable network operator
- Be applied in a non-discriminatory manner
- Avoid cross-subsidies between network users
- Not restrict market liquidity
- Not distort trade across borders of different transmission systems.

7 Questions for Consultation

7.1 National Grid invites views on whether the proposed changes to our Gas Transmission Transportation Charging Methodology meet National Grid Gas's relevant GT Licence objectives, specifically that:

Separate K Management for Entry & Exit

- The Licence defined TOKt term would be split into separate Entry and Exit K components for the purposes of setting charges
- The rules used to calculate the entry and exit specific K components, which ensure that the sum of the two equals the Licence K calculation, are as laid out in appendix B. Examples of how these rules would be applied are laid out in appendix C.

Trigger

- The TO Entry Commodity rebate mechanism would be triggered if there remained a residual over recovery amount after taking into account any revenue redistributed by the buy back offset mechanism and the TO Entry Commodity Charge Rebate mechanism
- The process would be triggered at the end of the formula year based on the outcome of all NTS Entry Capacity auctions that represent a TO revenue stream.

Mechanism

- Any residual TO entry revenue remaining after taking into account credits resulting from the Entry Capacity buy-back offset (GCM09) and the TO Entry Commodity Rebate (GCM10) mechanisms would be available as a credit to shippers .
- Credits would only be paid if the residual over recovery was in excess of £1m (this equates to the minimum TO Entry Commodity price of -0.0001 p/kWh).
- Credits would be capped at the level of the SO Entry Commodity charge such that the combined impact of SO and TO Entry Commodity charges did not represent a credit to Shippers.
- Credits would be paid following the end of the formula year based on relevant entry allocations i.e. those allocations that would attract the TO Entry Commodity charge

Implementation

- These arrangements are implemented with effect for the 2009/10 formula year and hence from 1st April 2009.

The closing date for submission of your responses is **Friday 12th September 2008**. Your response should be e-mailed to:

box.transmissioncapacityandcharging@uk.ngrid.com

or alternatively sent by post to

Eddie Blackburn, Regulatory Frameworks, National Grid, National Grid House, Gallows Hill, Warwick, CV34 6DA.

If you wish to discuss any matter relating to this charge methodology consultation then please call Eddie Blackburn ☎ 01926 656022 or Debra Hawkin ☎ 01926 656317.

Responses to this consultation will be incorporated within National Grid's conclusion report. If you wish your response to be treated as confidential then please mark it clearly to that effect.

Appendix A – History of TO Over/Under Recovery NTS Charging Methodology Proposals

The following table outlines the history of the development of the TO over and under recovery mechanisms. The table gives the relevant Pricing Consultation paper number and title along with a brief summary of the proposal and the Authority decision.

Number	Title	Proposal	Decision
PC65	Alternative Methods of Funding Entry Capacity Constraint Management	If auction implied revenue is more than 10% above the target TO allowable revenue, this excess is divided into monthly amounts and is used to pay a credit which offsets the capacity neutrality entry capacity buy-back costs	Not vetoed
PC66	Transportation Charge adjustment following Entry Capacity Auctions	Any under recovery would be accounted for through the generality of transportation charges rather than just the NTS Commodity charge	Not vetoed
PC67	Technical Adjustment to PC65 Mechanism	Technical adjustment that allowed the credit to be greater than the entry charges paid by an individual shipper	Not vetoed
PC75	NTS TO Commodity Charge	Introduction of an NTS TO Commodity charge (that may be negative) to supersede PC65 (compliment PC65 in final proposal)	Vetoed
PD17	Setting of NTS Transportation Charges	Consideration of whether the charging methodology is consistent with auction uncertainty	N/A
PC77	NTS TO Commodity Charge	Introduction of an NTS TO Commodity charge (that may be negative) as the primary over/under recovery mechanism with PC65/67 as the secondary mechanism	Vetoed
PC78	NTS TO Commodity Charge (NTS TO Under Recovery)	Introduction of an NTS TO commodity charge as a mechanism for dealing with the under recovery of NTS TO revenue only.	Not vetoed
GCM09	TO Over Recovery Mechanism	Revise the buy-back offset mechanism to; <ul style="list-style-type: none"> ○ make the full over recovery amount available in the first month ○ make retrospective credits in relation to any buy-back costs incurred earlier within the formula year, ○ make credits up to the buy-back cost rather than up to the net buy-back cost, ○ clarify that the mechanism can be triggered by any NTS Entry Capacity auction that represents a TO revenue 	Not vetoed
GCM10	TO Entry Commodity Rebate	Revise the TO entry over recovery mechanism by; <ul style="list-style-type: none"> ○ introducing a TO Entry Commodity Charge rebate mechanism in relation to TO Entry Commodity charges paid earlier in the year 	Not vetoed
GCM11	Negative TO Entry Commodity	Revise the TO entry over recovery mechanism by; <ul style="list-style-type: none"> ○ introducing a TO Entry Commodity rebate mechanism representing a negative TO Entry Commodity charge having applied over the full formula year 	vetoed

Appendix B – Calculation of Separate Entry and Exit TOK for NTS Charging Purposes

The following table defines the calculations that would be used to calculate separate entry and exit K from the reported TOK_t term defined within the national Grid Licence in respect of the NTS.

Net Position	Exit	Entry	Calculation
Net Over Recovery	Exit Over-recovery	Entry Under-recovery	$\text{TOKEnt} = (\text{TOREnt}_{t-1} - \text{TOMAREnt}_{t-1}) \times (1 + \text{IRt}/100)$ $\text{TOKExt} = \text{TOKt} - \text{TOKEnt}$
	Exit Under-recovery	Entry Over-recovery	$\text{TOKExt} = (\text{TORExt}_{t-1} - \text{TOMARExt}_{t-1}) \times (1 + \text{IRt}/100)$ $\text{TOKEnt} = \text{TOKt} - \text{TOKExt}$
	Over Recovery		$\text{TOKExt} = (\text{TORExt}_{t-1} - \text{TOMARExt}_{t-1}) \times (1 + (\text{IRt} + \text{Plt})/100)$ $\text{TOKEnt} = (\text{TOREnt}_{t-1} - \text{TOMAREnt}_{t-1}) \times (1 + (\text{IRt} + \text{Plt})/100)$
Net Under Recovery (or zero)	Exit Over-recovery	Entry Under-recovery	$\text{TOKExt} = (\text{TORExt}_{t-1} - \text{TOMARExt}_{t-1}) \times (1 + \text{IRt}/100)$ $\text{TOKEnt} = (\text{TOREnt}_{t-1} - \text{TOMAREnt}_{t-1}) \times (1 + \text{IRt}/100)$
	Exit Under-recovery	Entry Over-recovery	
	Under Recovery		
<p>Where</p> <p>TOK_{Ent} ~ TO Entry Revenue adjustment factor in respect of formula year t for charging purposes</p> <p>TORE_{Ent-1} ~ TO Entry Revenue collected in year t-1</p> <p>TOMARE_{Ent t-1} ~ TO Maximum Allowed Revenue allocated to Entry in the Charging Methodology</p> <p>IR_t ~ Percentage interest rate in respect of formula year t [Licence Special Condition C8B (3)(d)]</p> <p>Pl_t ~ Penalty interest rate in respect of formula year t [Licence Special Condition C8B (3)(d)]</p> <p>TOK_t ~ Revenue adjustment factor in respect of formula year t [Licence Special Condition C8B (3)(d)]</p> <p>TOKE_{Ext} ~ TO Exit Revenue adjustment factor in respect of formula year t for charging purposes</p> <p>TORE_{Ext-1} ~ TO Exit Revenue collected in year t-1</p> <p>TOMARE_{Ext t-1} ~ TO Maximum Allowed Revenue allocated to Exit in the Charging Methodology</p>			

Appendix C – Examples of Separate Entry and Exit TOK for NTS Charging Purposes

The following table includes examples of the calculation of separate entry and exit K from the reported TOK_i based on the methodology set out in appendix B.

Example	Entry After GCM10/11 payments	Exit	Total	Licence K	Existing	Proposed	
					Entry & Exit K	Entry K	Exit K
1.	-£1m	-£1m	-£2m	-£2.1m	-1.05m	-£1.05m	-£1.05m
2.	-£1m	£0.5m	-£0.5m	-£0.525m	0.2625m	-£1.05m	£0.525m
3.	-£1m	£1m	0	0	0	-£1.05m	£1.05m
4.	-£1m	£1.5m	£0.5m	£0.54m	0.27m	-£1.05m	£1.59m
5.	0	-£1m	-£1m	-£1.05m	-0.525m	0	-£1.05m
6.	0	£1m	£1m	£1.08m	0.54m	0	£1.08m
7	£0.5m	-£1.5m	-£1m	-£1.05m	-0.5025m	£0.525m	-£1.575m
8.	£0.5m	-£0.5m	0	0	0	£0.525m	-£0.525m
9.	£0.5m	-£0.4m	£0.1m	£0.108m	£0.054m	£0.528m	-£0.42m
10.	£0.5m	£0.5m	£1m	£1.08m	£0.54m	£0.54m	£0.54m

K = Actual minus Allowed Revenue. (Positive = Over recovery, Negative=under-recovery, K is subtracted from allowed revenue in the following year)

Interest rate assumed for the purposes of these examples ~ 5.00% under-recovery, 8% over recovery.

- In examples 1, 2, 3, 5, 7 & 8 there is either a zero or net under recovery and the lower rate applies to both entry and exit.
- In examples 4, 6 & 9 there is a net over recovery but with one of the components under recovering. In these examples the lower interest rate is applied to the component that has under recovered with the over recovery component K figure being calculated as the Licence K figure minus the under recovery component.
- In example 10 both entry and exit represent over recovery and the higher rate applies to both entry and exit.