

NTS SO Storage Commodity Charge – next steps towards further consultation

5th April 2007

Gas TCMF

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Background - SO Incentive scheme & interaction with Commodity Charge

Incentive Scheme	Cost Revenue Recovery (SOIC)	2006/7 SO Cost Allowance
Exit Capacity Investment (inc. CLNG)	SO Commodity Charge	£5.2m
System Balancing - Gas Cost (Shrinkage)	SO Commodity Charge	£102.4m
System Balancing - Reserves (Operating Margins)	SO Commodity Charge	£67.8m
Internal Costs	SO Commodity Charge	£61.6m
Incentive Scheme Revenue Recovery (SOIR)	SO Commodity Charge	£5.3m
TOTAL		£230.2m
Entry Capacity Investment	NTS Entry Charges	n/a
Capacity Buybacks	NTS Entry Charges	n/a
Residual Gas Balancing	Energy Balancing Charges	n/a
Demand Forecasting	n/a	n/a
Information Provision	n/a	n/a

Current rate = 0.0136 p/kWh

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Allocation of SO Costs to Storage Charge ; Proposed in GCM 03 – updated for 2007/8

	2006/7 SO Allowable Costs, £m	2007/8 SO Allowable Costs, £m	Included in storage Charge ?	Assumed Cost Driver	2006/7 costs allocated to storage ¹ , £m	2007/8 costs allocated to storage ¹ , £m
Compressor costs	116	90.3	×	-	0.00	0.00
Unaccounted for gas	32	12.2	✓	Throughput	1.24	0.53
Internal Costs	58	61.6	✓	Throughput	2.24	2.65
Operating Margins	21	40	×	-	0.00	0.00
Exit Capacity TO costs	57	5.2	✓	-	2.20	-
Deemed Interruption		57		Throughput		2.46
Forecast 'K' from previous year	-15.6	0.0	✓	Throughput	-0.60	0.00
Incentive Profits /losses	-6.7	5.3	×	-	0.00	0.00
Totals	262				5.08	5.64

1 - Cost Allocation based on storage throughput
v. total system throughput (4%)

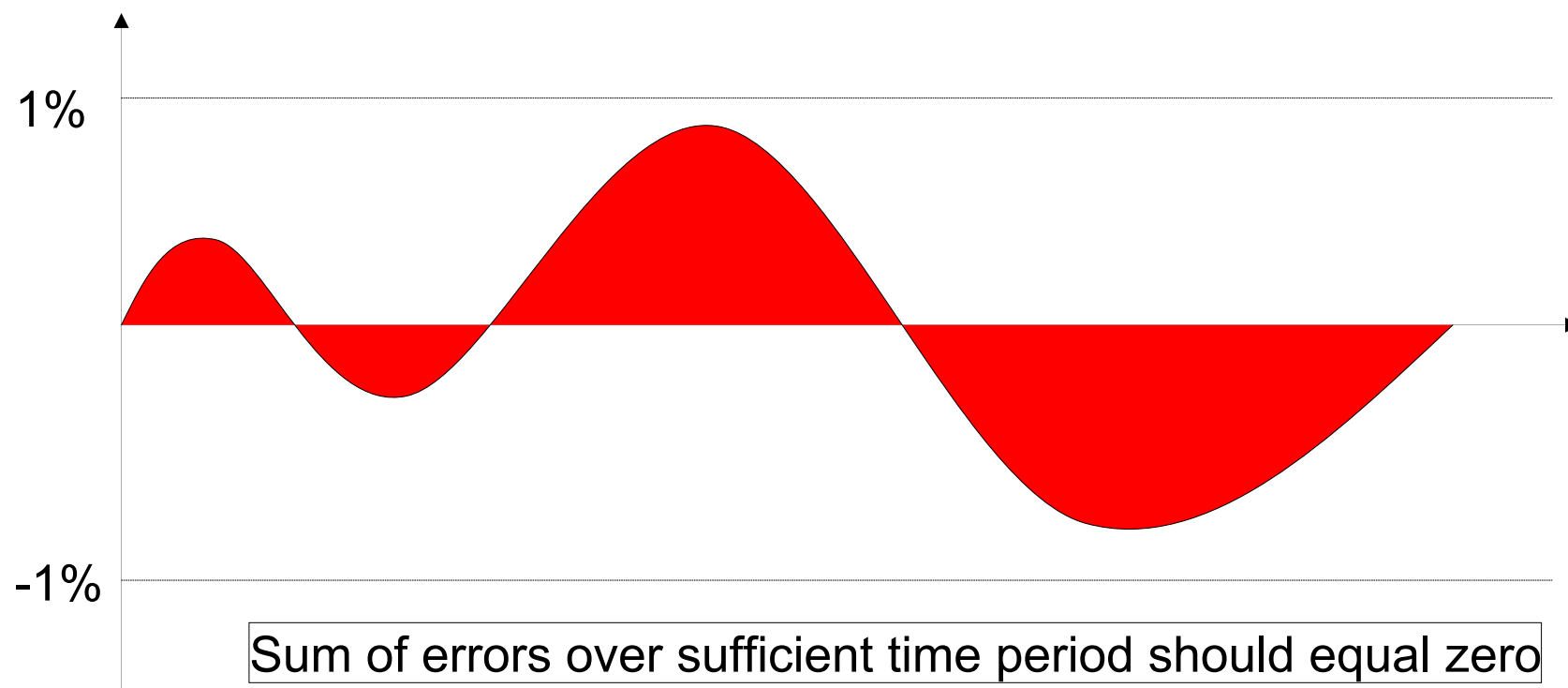
Allocation of SO Costs to Storage Charge

- UAG costs

- ◆ Un-accounted for Gas (UAG)
 - ◆ Arises from metering uncertainty
 - ◆ Any known biases or systematic errors are accounted for and therefore not deemed as UAG
 - ◆ Level of UAG has shown a decrease over recent years as level of understanding improves and any errors resolved more quickly
 - ◆ Due to nature of UAG being metering uncertainty, there is no evidence to suggest any “netting-off” effect at bi-directional sites with single metering.

Meter Accuracies and UAG

No meter 100% accurate and all contribute to UAG. Meters should have no bias and an uncertainty within limits specified in NEXA/NEA/SCA.



Breakdown of SO Internal Costs

<u>NTS SO Internal Costs</u>	£m
Forecast for 2007/8,	
Departmental Costs (predominately staff costs) (Network Ops, Commercial etc)	18.0
Contribution to Fixed/Sustaining Costs (e.g Property, IS, HR)	21.6
Regulatory Depreciation & ROA (Based on relevant proportion of RAV, e.g IS)	22.0
Total	61.6

How have Gas SO Internal Costs been determined ?

- ◆ Departmental Costs (principally staff) :
Total Staff costs apportioned to those categories as required by Regulatory Forms of Control , i.e GTO,GSO,ETO,ESO, LNG/Other Projects, depending on activities undertaken by each member of staff
- ◆ Contribution to Fixed Costs :
Appropriate contribution to fixed costs based on headcount of staff employed on GSO activities
- ◆ Regulatory Depreciation/R.O.A :
Based on capital spend of new & replacement computer systems required for Gas SO part of business
- ◆ No further activity analysis undertaken below level required for compliance with Regulatory Forms of Control (i.e, TO/SO, unregulated) . Activity Based Cost (ABC) approach replaced by Allocation Methodology in 2004, with Regulatory Approval

SO Activities and Obligations associated with NTS Offtakes

NTS Direct Connects only	Both	NTS / DN Offtakes only
<ul style="list-style-type: none">♦Measurements♦Allocations♦(for both charging & energy balancing of shipper portfolios)♦Assessment of Overruns♦Meter Point Activity<ul style="list-style-type: none">♦Creating / amending logical meters♦Shipper transfers♦Shipper registration♦Nominations & Scheduling	<ul style="list-style-type: none">♦Measurements (=> Demand Attribution)♦Daily OPNs inputted to IGMS	<ul style="list-style-type: none">♦Monitor/revise AOPs (wrt OCS)♦Provision of Shrinkage Nom's (by DNOs) into Gemini

SO Internal Costs associated with NTS Offtakes

- Based on assessment of share of manpower & systems costs arising from SO activities related to NTS/DN offtakes, approximate split of SO Internal Costs (£61.6m) across the different offtakes :

Type of Offtake	Level of SO cost	Level of SO Cost relevant for Supply Pts/CSEPs
NTS/DN Offtakes	10% x £61.6m	£0 m
Both (NTS/DN offtakes & DC's)	10% x £61.6 m = £6.16m	£2.7 m ¹
NTS D.C's	80% x £61.6m = £49.3 m	£49.3 m
Total		<u>£52.0 m</u>

1- derived from
83/190 x £6.16m

Revised SO Internal Costs , excluding activities relating to NTS/DN Offtakes

- ◆ Apportion remaining SO costs (£52m) according to :

Option 1 - Number of accounting meters

(i.e storage meters : all entry & exit meters) .. $18/83 \times £52m \Rightarrow$
£11.28m

Option 2 - Throughput

(i.e. storage flows : total system flows) $4.3 \% \times £52m \Rightarrow$
£2.24m

Allocation of SO Costs to Storage Charge – SO Costs not driven by storage operation, hence excluded

<u>SO Cost</u>	<u>Explanation of cost</u>	<u>Why excluded?</u>
Compression	Costs from operation and maintenance of NTS compressors	Use of compression a function of distance gas travelled. Gas “parked” in storage travels no greater distance from entering the system to exiting the system, than gas that has bypassed storage.
Op’s Margins	The provision and use of Op’s Margins to support firm load and safe “run-down” of system in the event of supply emergency	NTS storage is deemed interruptible
TO Exit Capacity Cost (CLNG)	Use of CLNG to support firm load ;	NTS storage is deemed interruptible
Outcome of Incentive Scheme	Costs / Revenues that arise from SO performance under its incentive scheme	Considered more appropriate and consistent to recover through standard rate (which recovers revenues not collected through cost-reflective commodity charges) ; no clear linkage with storage and would therefore weaken cost-reflectivity of storage charge nationalgrid

Allocation of SO Costs to Storage Charge – SO Costs driven by storage operation, hence included

<u>SO Cost</u>	<u>Explanation of cost</u>	<u>Why included?</u>
Unaccounted for gas	Arises from metering inaccuracies and uncertainties from all system entry and exit points.	A share of these metering inaccuracies/uncertainty will have arisen from metering at NTS storage facilities. Where single metering installed, due to lack of bias/systematic error, no evidence to suggest any “netting off”.
Internal Costs	Arise from support of IS and administrative processes associated with data and transactions at all system entry & exit points, and daily operation of the NTS. (split between 1. Dept.Costs (inc staff), 2. Depreciation of IS costs, 3. Share of sustaining costs/overheads)	No difference in administration of NTS storage sites compared to any other NTS supply point / CSEP, therefore a share of these costs will have arisen at NTS storage facilities. 15% of costs excluded as arise from activities related to NTS/DN offtakes.

Allocation of SO Costs to Storage Charge – SO Costs driven by storage operation, hence included

<u>SO Cost</u>	<u>Explanation of cost</u>	<u>Why included?</u>
Revenue foregone from deemed interruption	Represents revenue not collected through TO control at interruptible sites, due to capacity charges not being levied. This revenue foregone is treated as an SO cost, and recovered through the SO commodity charge.	A share of this SO cost will arise from NTS storage sites as they are treated as interruptible.
Forecast 'K' from previous year	'K' represents difference between SO MAR and revenue collected from all SO commodity charges, which arises from forecasting errors in expected revenue and allowable SO costs.	As an element of the amount of 'K' will arise from the proposed SO storage commodity charge, then a portion of the forecast 'K' figure should be included in the storage charge (which may be positive or negative).

Allocation of SO Costs to Storage Charge ; SO Costs driven by storage operation – how should we cost target ?

<u>SO Cost</u>	Cost Drivers		
	Actual	Option 1	Other Options ?
Unaccounted for gas	Throughput; size of metering	Throughput	
Internal Costs	None / Fixed ?	No. of accounting meters	Throughput ; no. of registered Users
Revenue foregone from deemed interruption	Registered Peak Flow capability, or I(SOQ)	Registered Peak Flow capability, or I(SOQ)	Throughput; no. of storage sites
Forecast 'K' from previous year	Many (e.g. revenue, forecast of costs v actuals, throughput)	Throughput	Generated Revenue

Summary - Allocation of SO Costs to Storage Charge, based on revised options

	2007/8 SO Allowable Costs, £m	2007/8 SO Allowable Costs, % of Total	Included in storage Charge ?	Cost Driver	Costs allocated to storage ¹ , £m	Costs allocated to storage, £m, based on GCM03 approach
Compressor costs	90.3	30.2%	×	Flow-km	0.00	0.00
Unaccounted for gas	12.2	4.1%	✓	Flow	0.53	0.53
Internal Costs	61.6	20.5%	✓	no. of meters	11.28 ²	2.65
Operating Margins	67.8	22.6%	×	peak flow (firm)	0.00	0.00
Exit Capacity TO costs	5.2	1.8%	×	None	0.00	0.00
Deemed interruption	57.0	19.0%	✓	peak flow (Interrup.)	10.66	2.46
Forecast 'K' from previous year	0.0	0.0%	✓	None	0.17	0.17
Incentive Profits /losses	5.3	1.8%	×	None	0.00	0.00
Totals	299.4	100.0%			24.70	5.81

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1 – Based on Option 1 ; 2 – based on approach described in Slide 11

Way Forward

- ◆ Comments from Gas TCMF meetings have been taken into account, specifically :
 - ◆ Which SO costs to be included ?
 - ◆ How should these costs be apportioned to storage ?
 - ◆ Options for application of charge to gas allocations (basis of UNC mod)
- ◆ Views will assist National Grid in developing its storage charging proposals
- ◆ Suggest raising a subsequent Pricing Discussion Paper in April/May that will include options for cost drivers and approaches for application of charge to physical/commercial flows