

Initial Proposals for Gas SO Incentives from April 2009

Industry Workshop 28th November 2008

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Agenda

10.00 **Welcome and Introduction**

Initial Proposals for Incentives

Discussion / Initial Thoughts

Closing Comments

13.00 **Lunch**

Housekeeping

Fire alarm

Car Park

Feedback Forms

Consultation Timetable

25 June 2008 - Industry Workshop

22 August / 2 September 2008 – Consultation documents issued

12 November 2008 – Initial proposals consultation document issued

→ 28 November 2008 – Industry Workshop

19 December 2008 – Deadline for responses

January 2008 – National Grid report to Ofgem

February 2009 – Ofgem issues its Final Proposals and Licence change Notice

April 2009 – Scheme Go-live

Purpose of today - Opportunity for the industry to seek further clarity on the proposals / express any initial thoughts

Overview of System Operation Incentives

Incentives expiring in March 2009

NTS Shrinkage	Cost Minimisation
Operating Margins	
Residual Balancing	Interaction with Market
Demand Forecasting	
Data Publication	
Compressor Venting	Environmental

**The costs associated with these activities accounts for
~50% of the SO commodity charge**



Initial Proposals for Gas SO Incentives from April 2009

Shrinkage

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NTS Shrinkage

National Grid undertakes the role of Shrinkage provider for the community and procures gas (and electricity) for this purpose

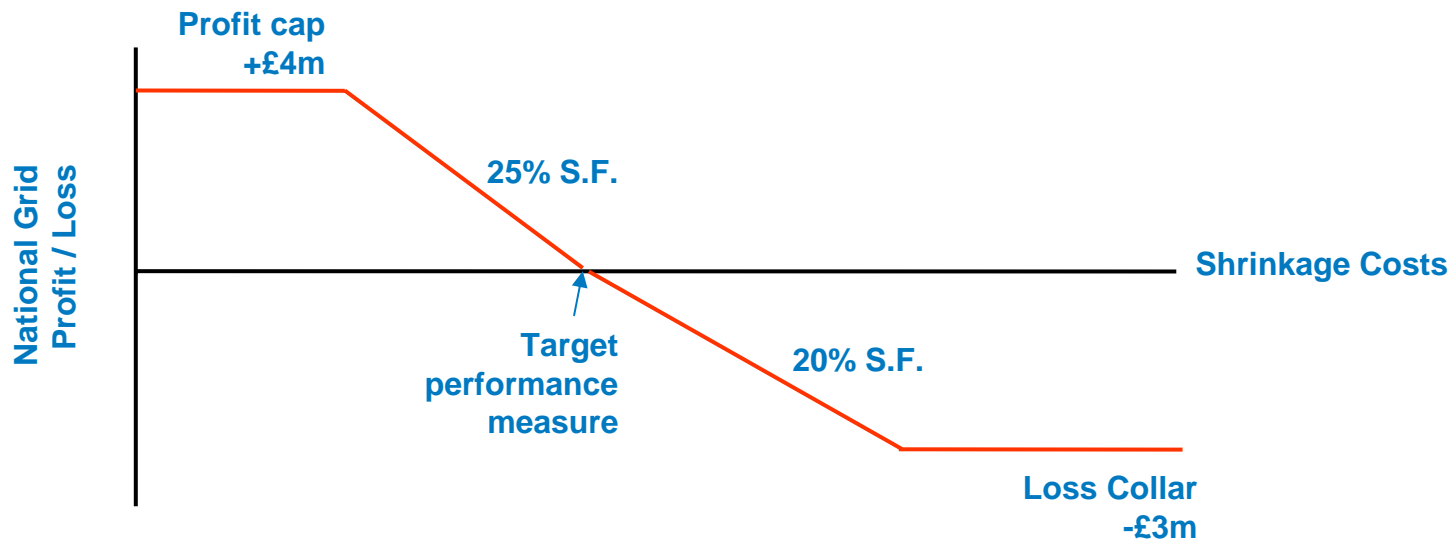
There are 3 distinct components

- ◆ Compression Energy – gas and electricity used to drive compressors to transport gas through the NTS
- ◆ CV Shrinkage – energy that cannot be billed due to application of CV capping for billing purposes under the Gas Regulations
- ◆ Unaccounted for Gas – unallocated volume which remains after all measured inputs and offtakes, linepack, shrinkage have been taken into account, believed to be primarily due to inherent uncertainty in metering
- ◆ Costs around £156m at current market prices

NTS Shrinkage – Existing Incentive

Objective: Minimise Shrinkage costs, which are paid for by Shippers through the SO commodity charge

- ◆ Target Performance Measure is derived from the target volume multiplied by gas and electric reference prices
- ◆ National Grid is incentivised to reduce volumes and adopt procurement strategies to manage price risk and minimise procurement costs



Key themes from the August consultation

The overall objective of the Shrinkage Incentive, particularly in relation to compressor fuel

The form and structure of the incentive, particularly in respect of UAG

Developing the compressor fuel forecast target

Incentivising electricity procurement

Consultation responses showed a near unanimous response that the fundamental objective of the Shrinkage Incentive should be to reduce cost paid by Shippers thorough the SO commodity charge

Incentivising UAG

In line with industry feedback National Grid is proposing a new separate UAG incentive this year

- ◆ Proposed UAG incentive is covered later

Impact on existing Shrinkage Incentive

- ◆ Outturn UAG volumes will still need to be purchased by Shrinkage Provider
- ◆ Proposal to pass the aggregate outturn volumes through the existing incentive to maintain procurement efficiency measures

Shrinkage Incentive

Volume components

- ◆ UAG
- ◆ CFU
- ◆ CVS

Price components

- ◆ GCRP + GCRP Uplift
- ◆ ECRP, electricity retail Uplift and delivery charges

Proposed Incentive Scheme

CFU Forecasting

The August consultation document suggested a number of methodologies that could be used to forecast CFU including improvements to the existing regression model.

- ◆ General support for continued use of a regression model
- ◆ Support for use of Seasonal Normal Demand (SND) and Transporting Britain's Energy (TBE) Base Case supplies
- ◆ Support for using volume drivers to remove influence of external drivers on the target

Regression model improvements

Training of regression model

- ◆ New approach places greater weight on more recent data to reflect current NTS supply behaviours

Milford Haven Regression Coefficient Updated

- ◆ Network Analysis used to determine the relative impact of flows from Milford Haven compared to other entry points
- ◆ Milford Haven Coefficient set to the same value as Isle of Grain

National Grid believe these changes deliver a significant improvement to the forecast

CFU target drivers

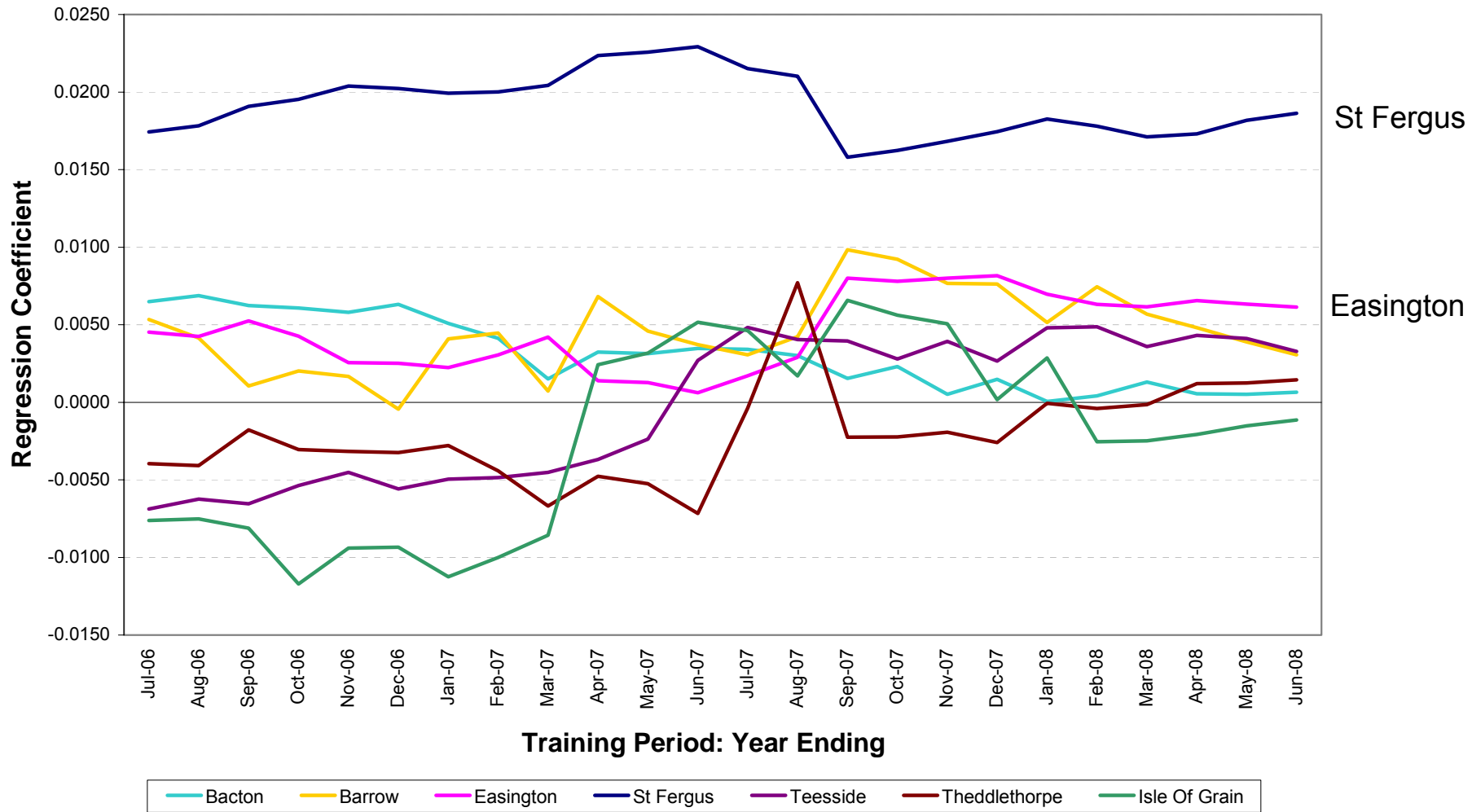
Used to remove the influence of external events on target setting

In the previous 2 years St. Fergus entry flows have been used as the target driver

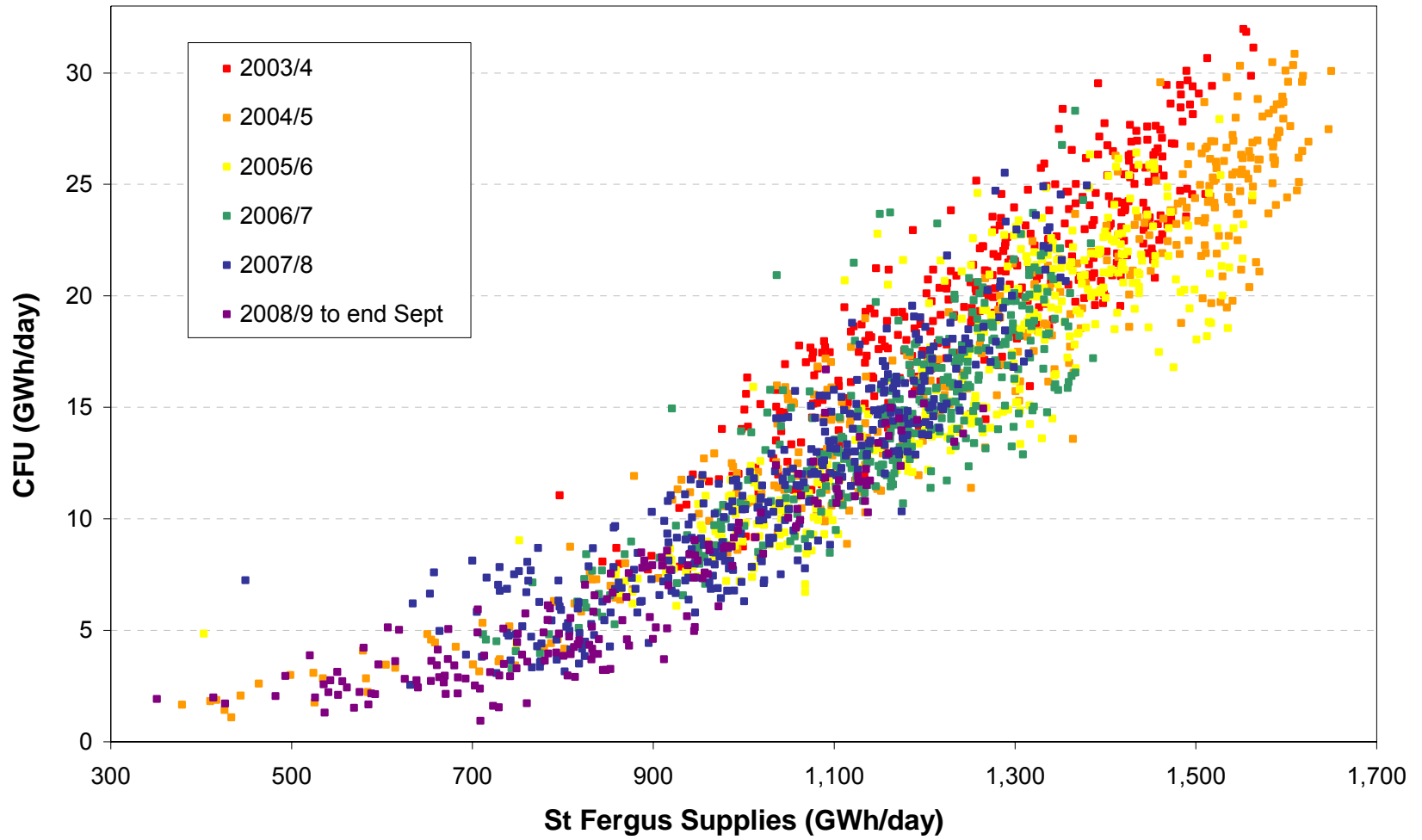
Following industry comments, we have investigated a number of potential target drivers this year

- ◆ St. Fergus Flows
- ◆ National Demand
- ◆ Easington Flows

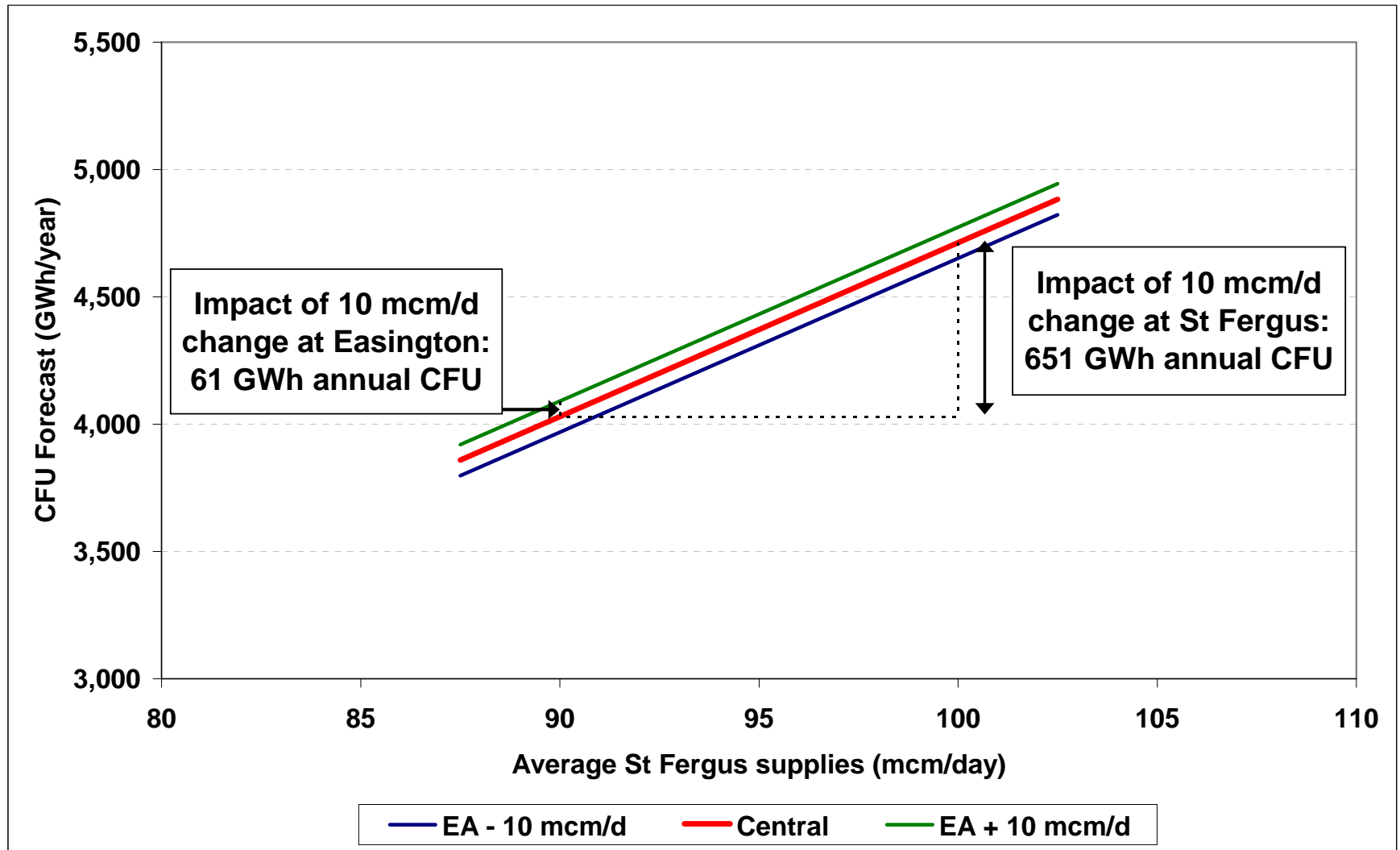
Regression Model Coefficients



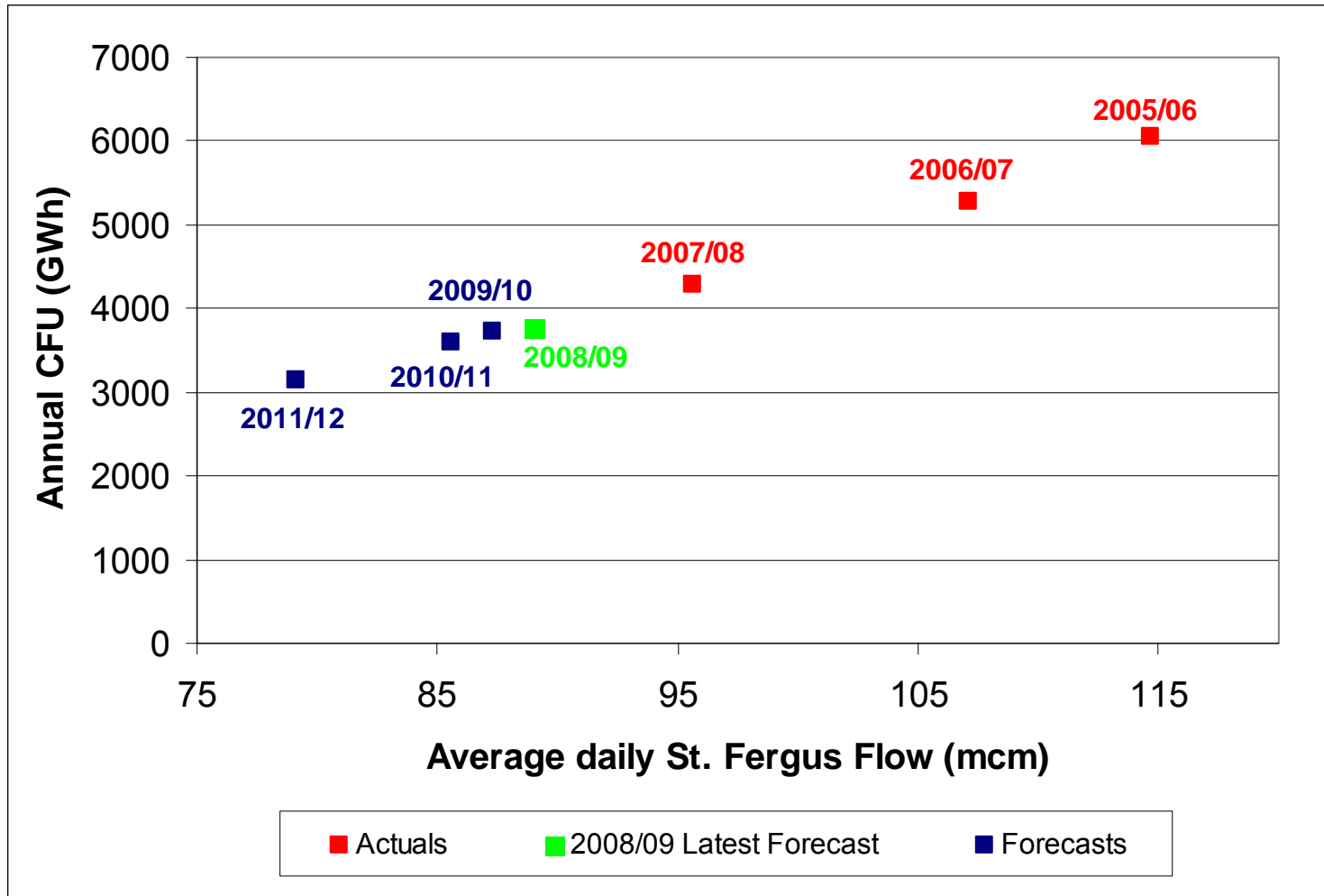
Relationship between St. Fergus and CFU



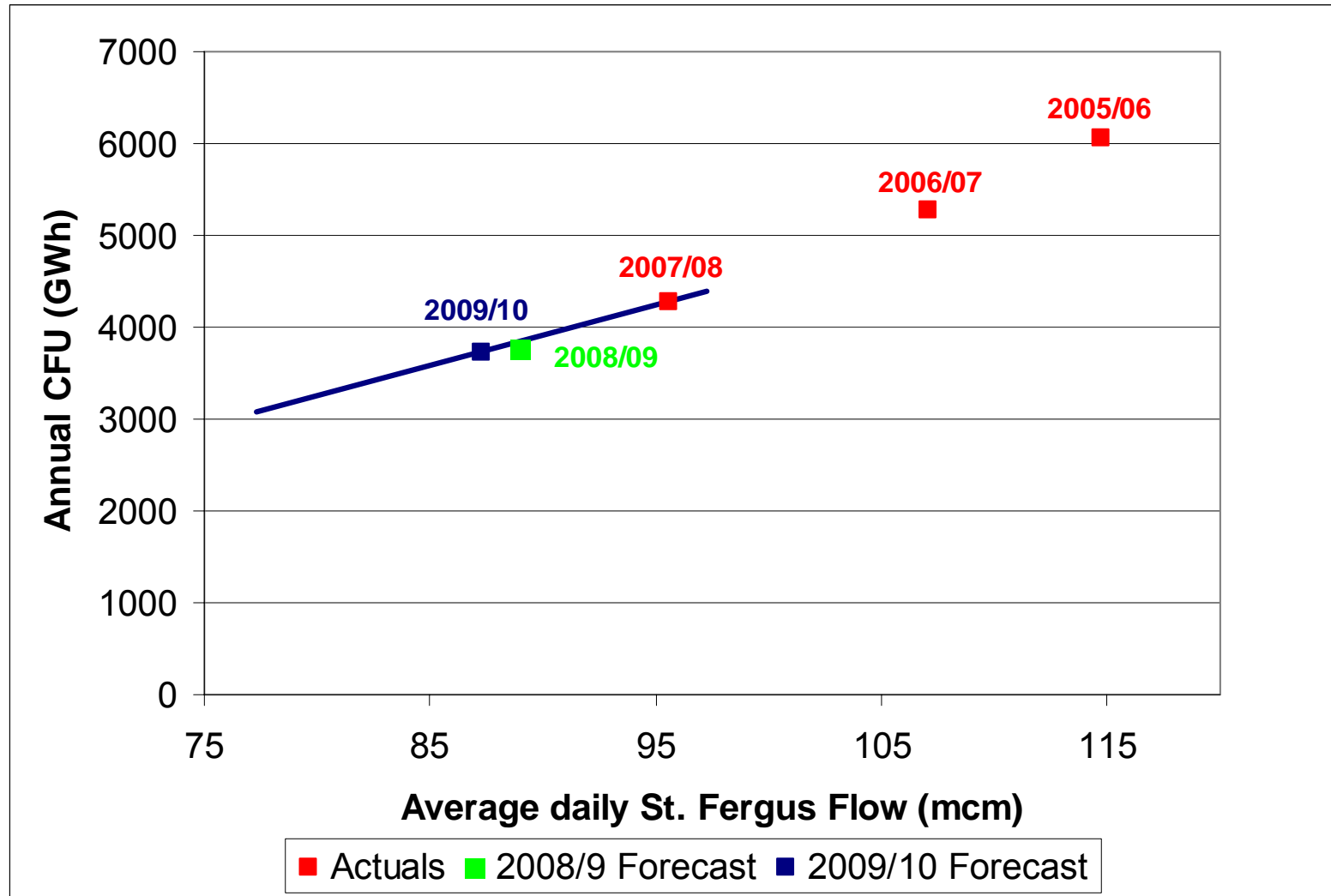
The impact of an adjustment for Easington is small



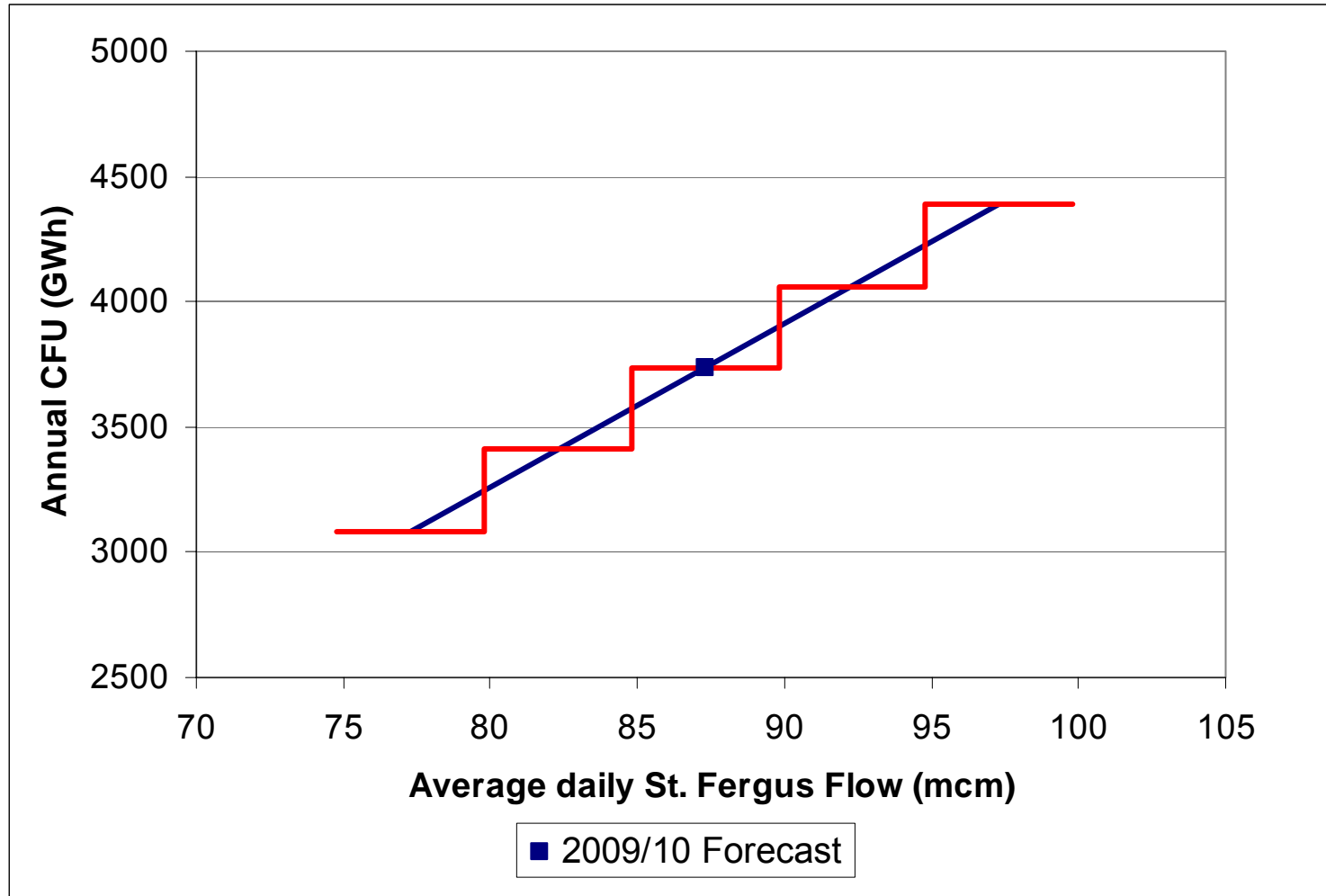
CFU Annual Forecast



2009/10 CFU with St. Fergus target driver



Use of bands in the target driver?



Electric Drive Compressors

Split of CFU into gas (OUG) and electric (ECE) requirements

- ◆ Existing installed compression
- ◆ Commissioning schedule for the new electric drive compressors

Site	Commissioning Target date
Felindre	Jan 09
Kirriemuir	Jul 09
Churchover	Sept 09
St. Fergus	Dec 09
Hatton	Oct 11
Peterborough	Oct 12

Compressor Forecasts

Incentive year	Daily flow through St. Fergus (mcm)	CFU (GWh)	OUG (GWh)	ECE (GWh)
2009/10	87.3	3735	2826	307
2010/11	85.6	3598	2082	509
2011/12	79.1	3139	1498	551

Adjusted up or down depending on outturn St. Fergus flows

Shrinkage Incentive

Volume components

- ◆ UAG
- ◆ CFU
- ◆ CVS

Price components

- ◆ GCRP + GCRP Uplift
- ◆ ECRP, electricity retail Uplift and delivery charges

Proposed Incentive Scheme

CV Shrinkage Volume forecasts

Specific low probability, high impact CV risks, for which there were no economic means for the SO to manage were carved out of the incentive last year.

- ◆ Proposal that this carve out should remain

Network Analysis carried out to forecast inherent risks

- ◆ CV Shrinkage forecast of 142GWh for 2009/10 (150 GWh 2008/9).

Shrinkage Incentive

Volume components

- ◆ UAG
- ◆ CFU
- ◆ CVS

Price components

- ◆ GCRP + GCRP Uplift
- ◆ ECRP, electricity retail Uplift and delivery charges

Proposed Incentive Scheme

The GCRP and GCRP Uplift

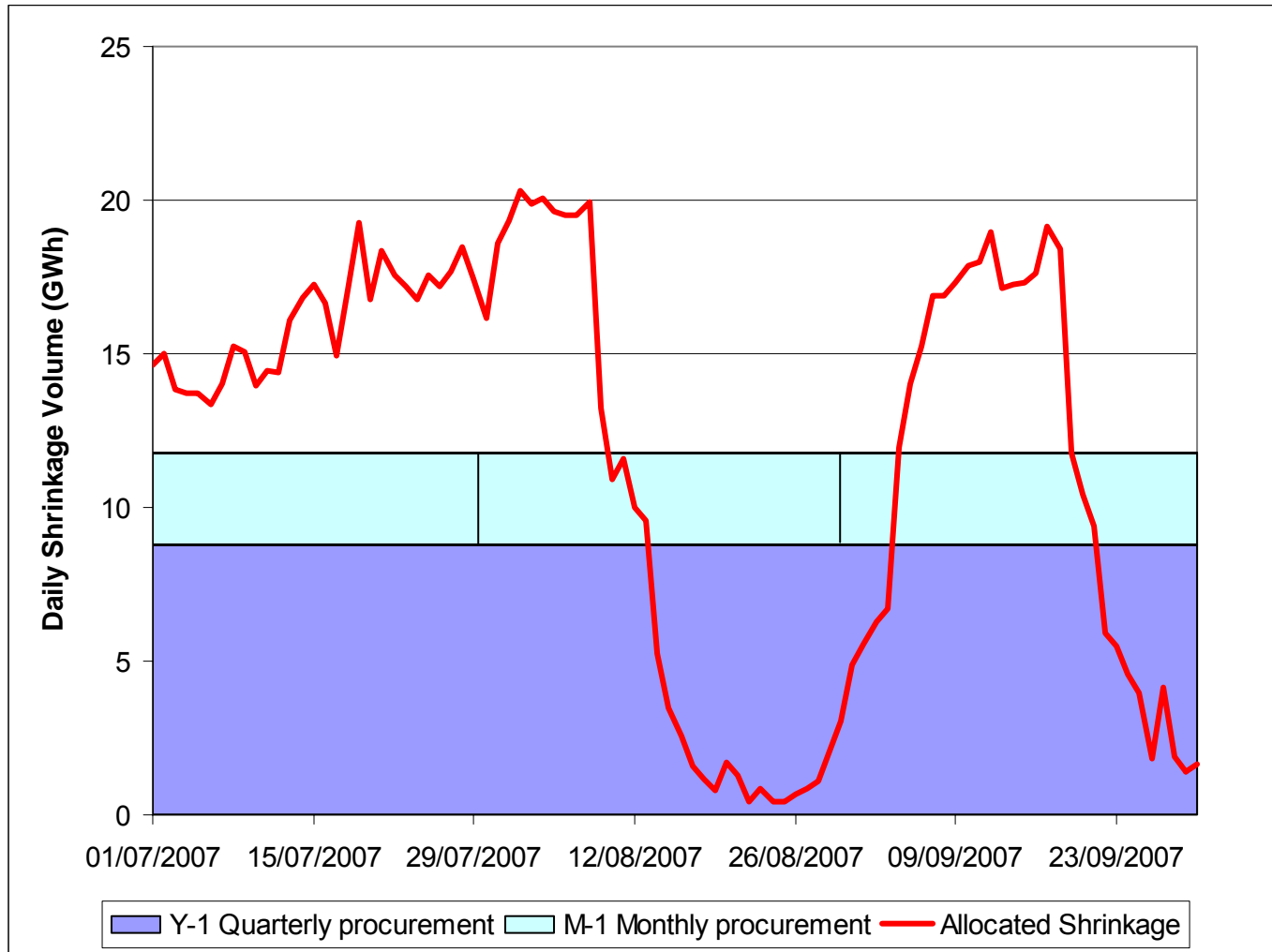
Last year a GCRP methodology was set up to 2012

- ◆ This methodology provides a cost reference price for an assumed flat shrinkage profile

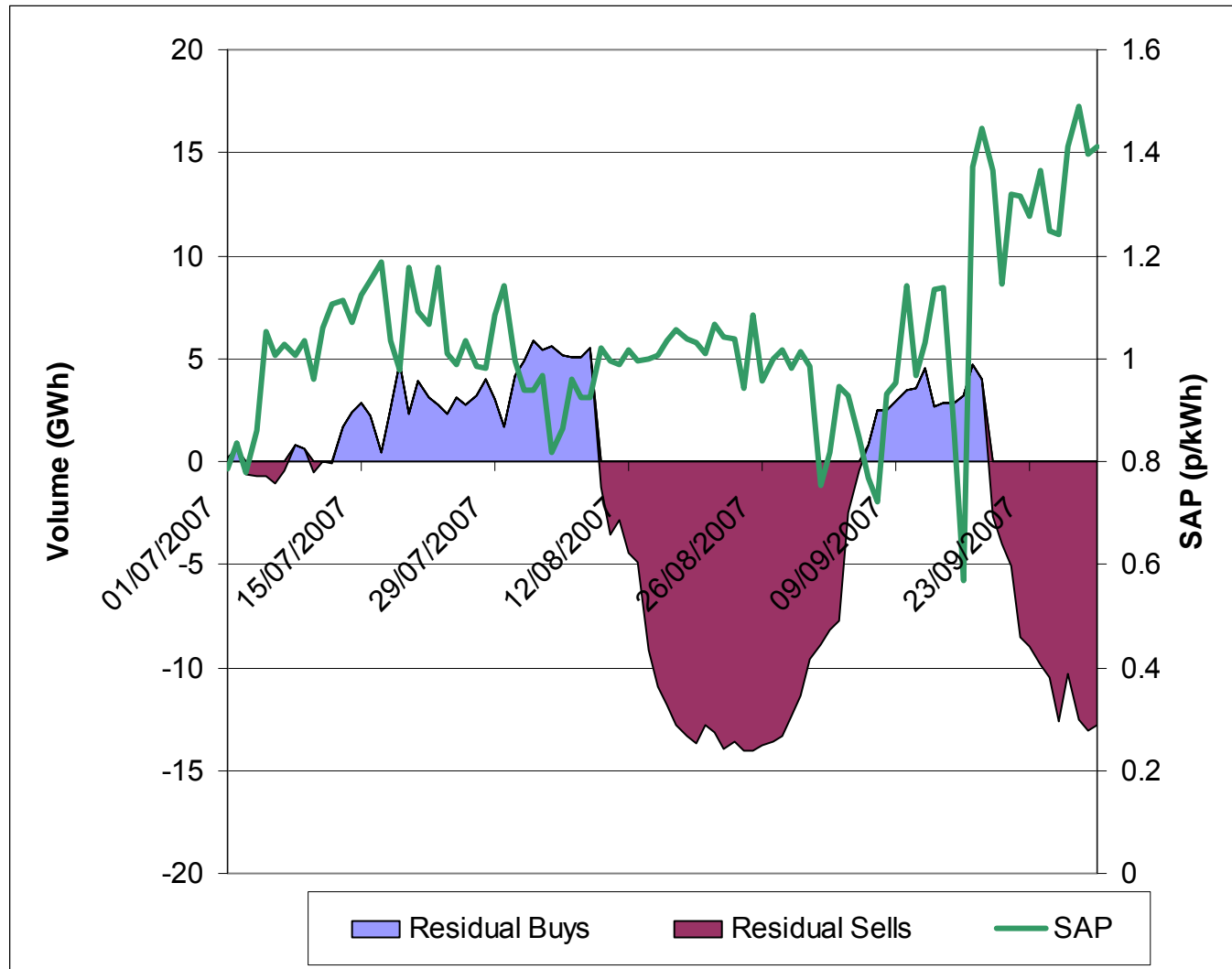
On a daily basis National Grid enters into buy or sell actions to fine tune the procurement position to meet the daily shrinkage allocation.

- ◆ The costs/revenues associated with managing this swing volume are captured through the GCRP Uplift
- ◆ GCRP uplift was set in 2001 at 0.055p/kWh, based on Rough Storage service costs at the time

2007 Q3 – Shrinkage Outturn & GCRP assumed procurement



2007 Q3 – Shrinkage Outturn & GCRP assumed procurement



Options for updating the GCRP Uplift

Ex-Ante storage basis

- ◆ Use previous approach, updated with current storage prices to provide a cost target for managing swing

Ex-Post market prices

- ◆ Set a methodology which would calculate ex-post an estimate of the cost of managing swing by trading in the within day market

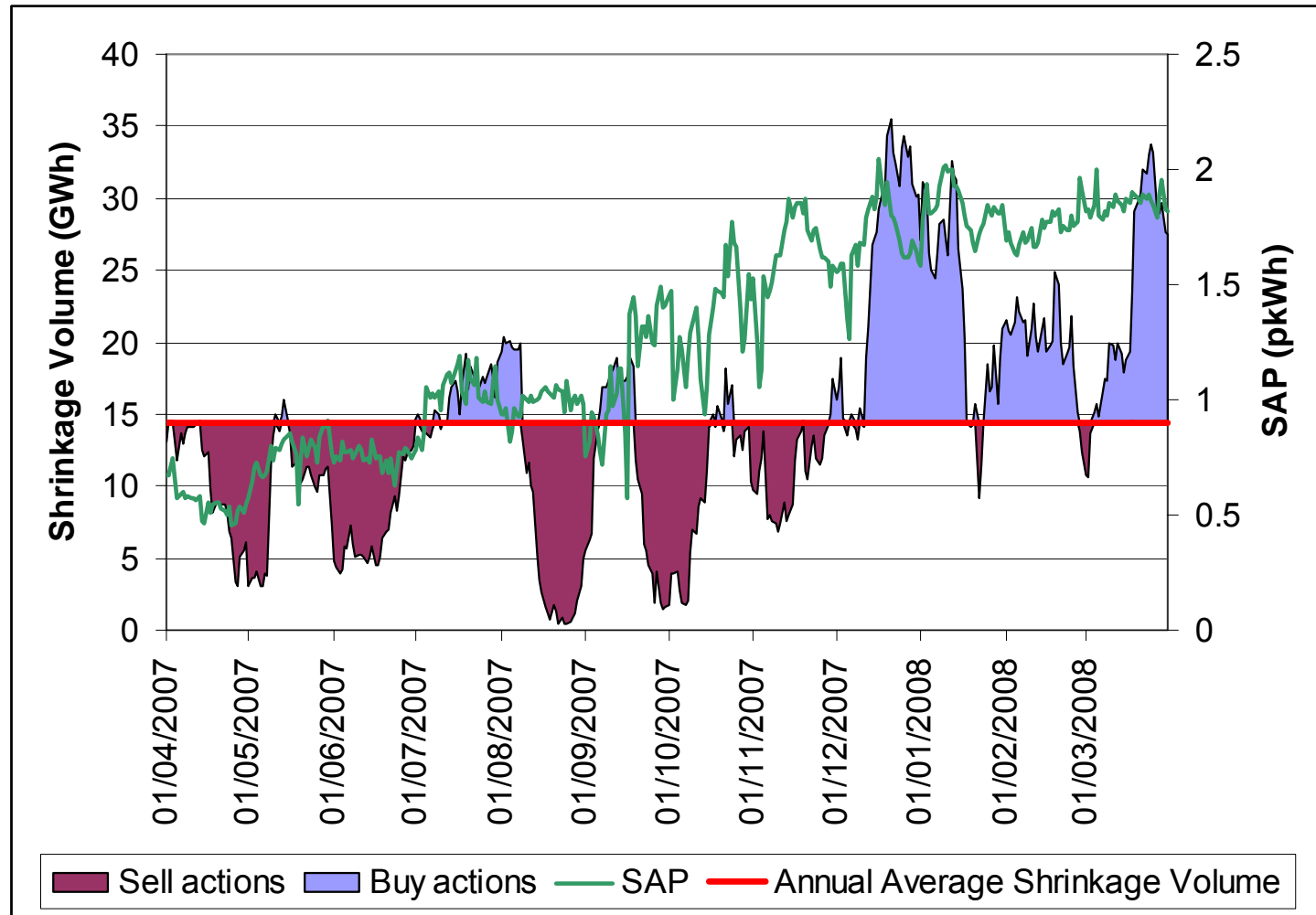
GCRP Uplift on an Ex-Ante Storage Basis

Update to existing methodology using published Rough storage prices for 2009/10

- ◆ 21GWh of storage deliverability required (based on 2007/08 swing volumes)
- ◆ Rough costs of 55.1p/kWh/day of deliverability
- ◆ Aggregate Shrinkage volume of 5285 GWh (2007/8)

Updated unit cost of 0.219 p/kWh/day

Estimation of GCRP Uplift using Ex-Post Market Prices



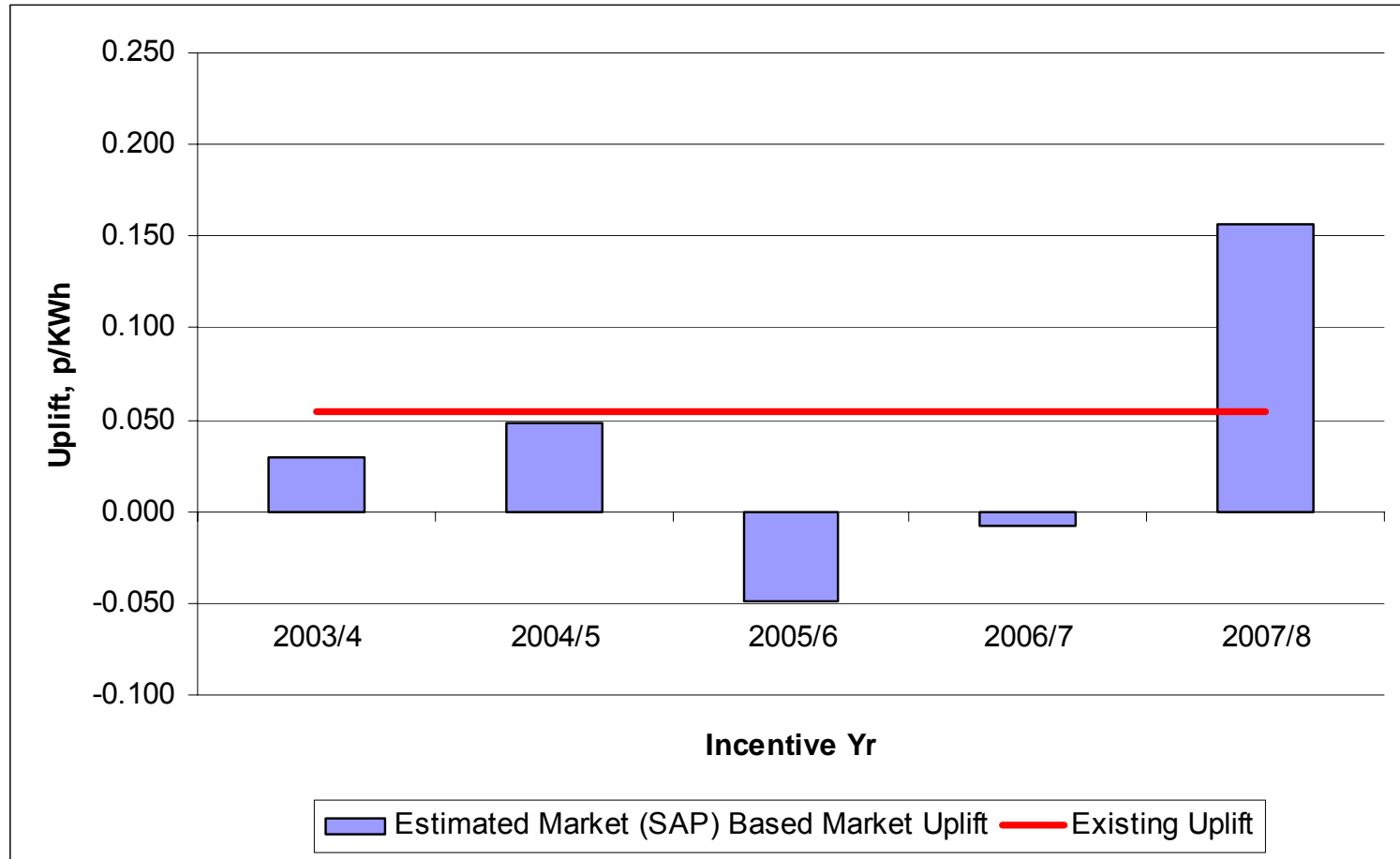
Estimation of GCRP Uplift using Ex-Post Market Prices

Daily Buys @ SAP incur costs

Daily Sells @ SAP generate revenue

$$\text{Estimated GCRP Uplift (p/kWh)} = \frac{\text{Total of daily costs and revenues}}{\text{Annual Shrinkage Volume}}$$

Estimated Market Based Uplift



Consultation question on GCRP Uplift

On what basis should the GCRP Uplift be set for 2009/10?

Ex-Ante storage based

- ◆ The current approach
- ◆ Provides a fixed cost target

Ex-Post market price

- ◆ Subject to profile of swing volume and market prices
- ◆ On average lower price than storage but not always (e.g. 2007/8)

Shrinkage Incentive

Volume components

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Price components

- ◆ GCRP + GCRP Uplift
- ◆ ECRP, electricity retail Uplift and delivery charges

Proposed Incentive Scheme

Electricity Purchasing for the electric drive compressors

Energy purchased on a retail basis

- ◆ No appropriate retail benchmark is readily available
- ◆ Wholesale reference prices need uplifting to reflect retail prices
- ◆ Delivery charges (DUoS & TNUoS) need to be included

Existing ECRP methodology only set for one year (2008/9)

Responses to industry consultation showed opposition to National Grid setting up as an Electricity Supplier

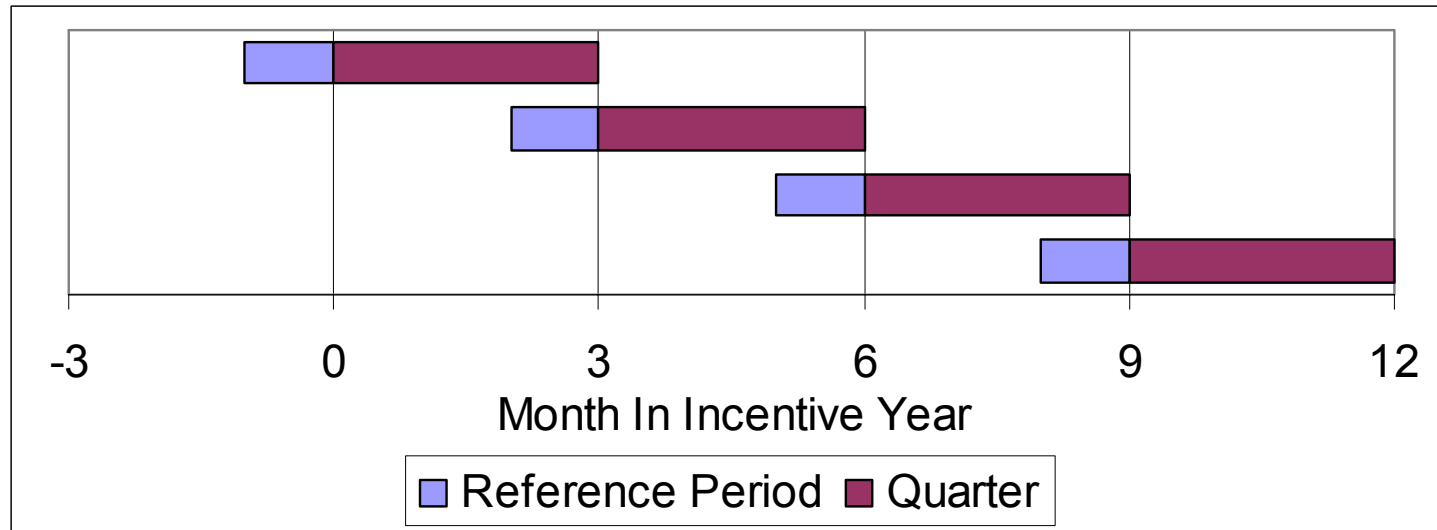
- ◆ Opposition to National Grid setting up as an Electricity Supplier
- ◆ Support for continuation a reference price methodology based on wholesale prices uplifted to retail prices

ECRP Proposals

Change to reference periods to reflect purchasing strategy

Retain retail uplift

Update delivery charges - Indicative costs £3.9m (awaiting new tariffs)



Shrinkage Incentive

Volume components

- ◆ UAG
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Price components

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Proposed Incentive Scheme

Incentive Scheme Design Options

Caps and collars

- ◆ The proposed changes reduce the chance of windfall profits/losses due to external factors. Shrinkage outturn should therefore better represent a direct measure of our performance
- ◆ Stretch performance under all areas under our control suggest an increase to the caps/collars

Revert back to an annual financial scheme?

- ◆ Overall objective is to minimise annual SO Commodity charge

Multi year?

- ◆ Given the suggested changes to UAG and the adjustment of the CFU target, we believe that a multi year scheme is possible

NTS Shrinkage Incentive – Proposed Scheme Options

	Upside share	downside share	Q Cap (£m)	Q Collar (£m)	Annual Cap (£m)	Annual Collar (£m)
Current	25%	20%	0.8 (S) 1.2 (W)	-0.6 (S) -0.9 (W)	[4]	[-3]
Option 1 <i>Annual Scheme</i>	25%	20%	-	-	5	-4
Option 2 <i>Quarterly Scheme with overall Annual Cap/Collar</i>	25%	20%	1.5 (S) 2 (W)	-1.5 (S) -2 (W)	5	-4

(S) = Q1, Q2 (W) = Q3, Q4



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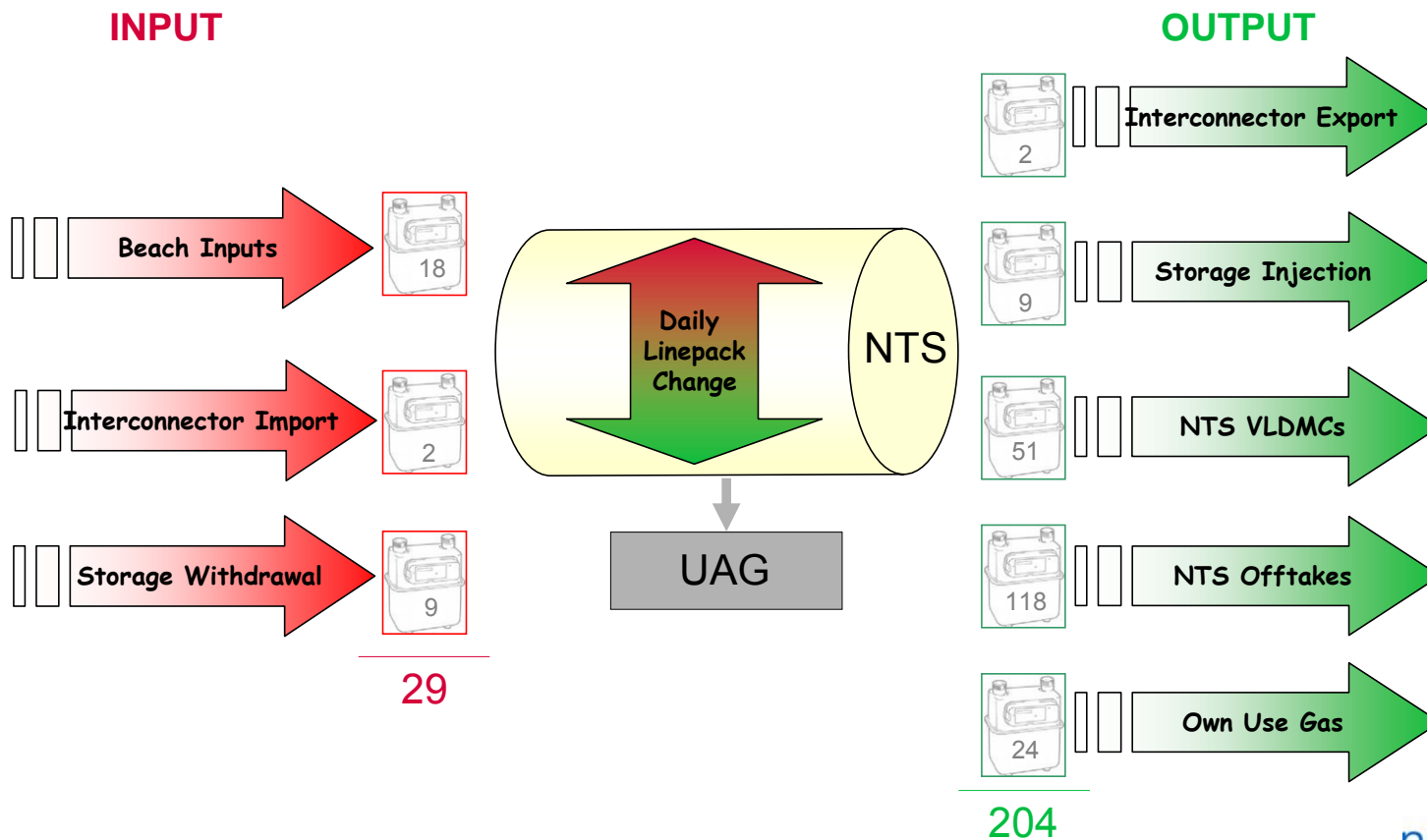
Unaccounted For Gas (UAG)

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Unaccounted For Gas (UAG)

UAG is that energy which remains unallocated after accounting for all measured inputs and outputs from the NTS, Own Use Gas consumption, CV shrinkage and the change in NTS linepack.



Unaccounted for Gas - causes

UAG has a number of causes, and currently in our view the key ones are :

- ◆ Cumulative metering uncertainty
 - No metering system is perfect although standards require that they should operate without systematic bias

- ◆ Variance in metering standards and management regimes
 - Entry and exit points use different standards, as do old and new exit points
 - The metering installations associated with different types of site are maintained, validated and audited in different ways

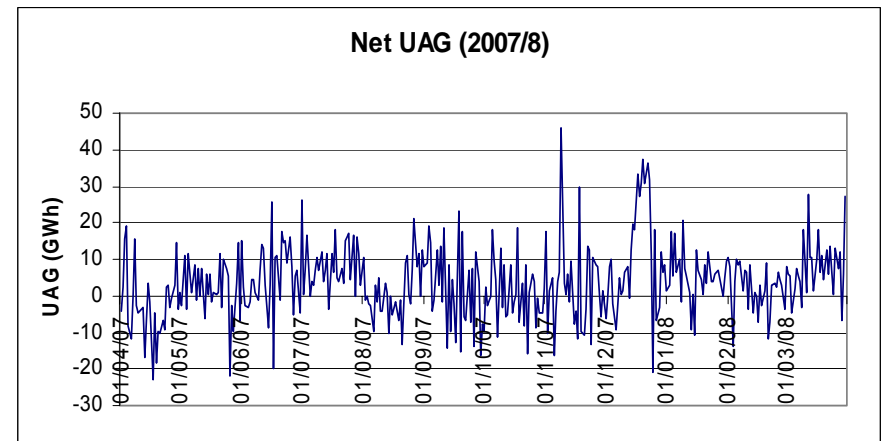
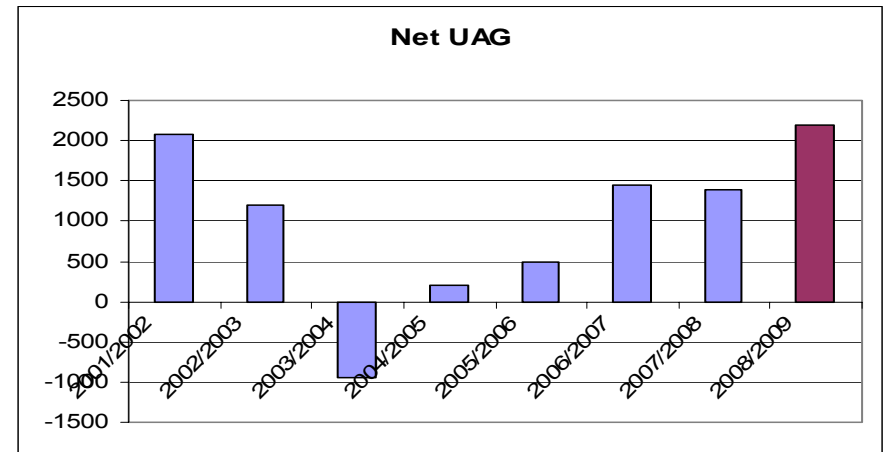
- ◆ Site specific metering errors / failures
 - Errors in metering systems occur which introduce biases or failures to register flow / CV

- ◆ Calculation inaccuracy
 - Linepack calculation cannot be perfectly accurate

Unaccounted for gas

Trends and Behaviour

- ◆ Historically, extremely volatile at both a daily and annual level
- ◆ No statistically robust driver to explain behaviour
- ◆ No statistically robust methodology for producing a forecast using historical data
- ◆ Rising trend of positive UAG since 2003



UAG and impact of errors

On any day there will be a net cumulative level of unaccounted for gas

- ◆ Metering uncertainty and/or error means that there is a disparity between the actual quantity of gas that has flowed and the metered quantity
- ◆ Leads to variance between the gas metered entering the system and that metered out of it (once change in linepack has been accounted for)
- ◆ If gas metered in exceeds that going out we define it as +ve UAG and vice versa as -ve UAG

Disparity leads to a misallocation of costs to users, which means that some will

- ◆ gain (through either not paying for gas that they have actually taken, or being paid for putting more gas into the system than they actually have), or
- ◆ Lose (through either paying for gas that they have not actually taken, or being paid for putting less gas into the system than they actually have)

Shrinkage acts as the counterparty to this cost misallocation

Financial impact of UAG socialised to all shippers via commodity charges

UAG and impact of errors (cont)

The misallocation to users due to meter error/uncertainty at as site is effectively invisible, but the impact on commodity charge is not

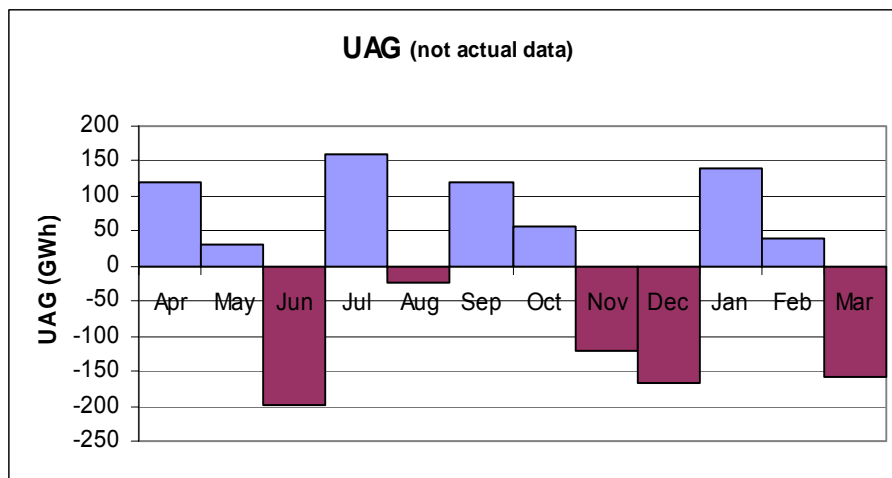
The shrinkage incentive in its current form aims to minimise the mathematical total of UAG (cost to commodity),

Annual UAG may be zero, or negative, but cost misallocation has still occurred, only the socialised element is zero

A meter error that leads to negative UAG is still a meter error

- ♦ it is still causing some users to be incorrectly charged/paid, it just looks beneficial from a commodity charge perspective

For example is the UAG profile in the example shown below desirable ?

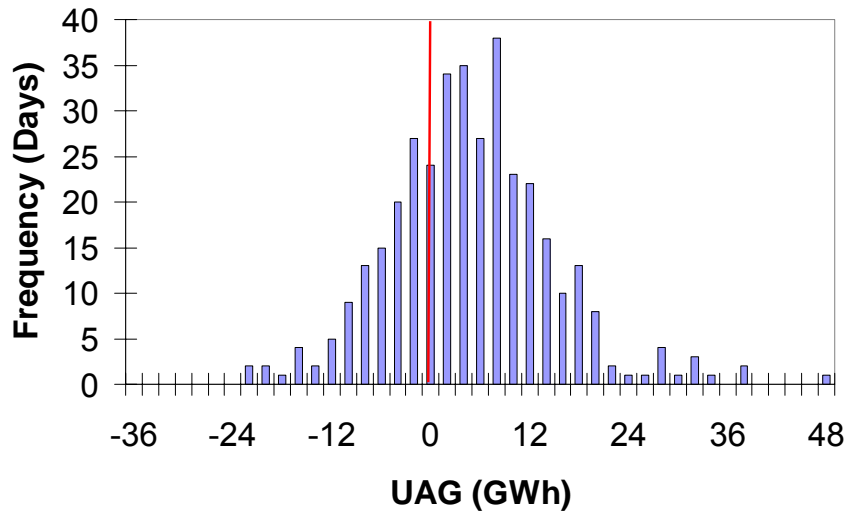


Annual UAG total is 0 GWh

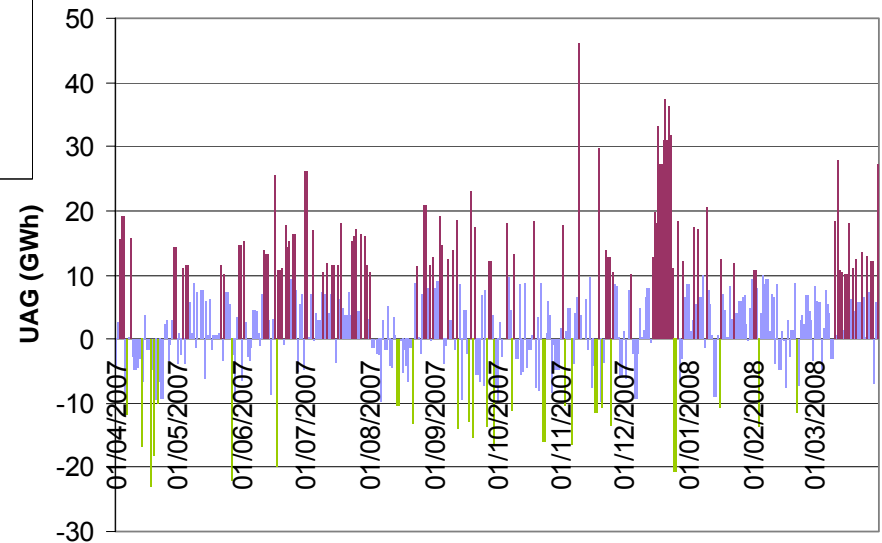
But there is 1332 GWh of misallocation.....

Every day, Every site, Every error should count

UAG 2007/08



UAG 2007/8



NTS Unaccounted for Gas

As we have seen from the previous slides

- ◆ Incentive based around minimising impact of UAG on commodity charge does not directly address the underlying issue of ensuring accurate allocation of cost
- ◆ Annual net volumes of UAG are unpredictable leading to lack of confidence in forecasts and targets

Industry acknowledged in consultation responses that

- ◆ NG is probably best placed in the industry to take a holistic view of the factors that contribute to UAG and
- ◆ there are levers for us to use to influence gross UAG levels down in the longer term.
- ◆ There was support for a new incentive with the objective of reducing underlying UAG levels over the longer term.

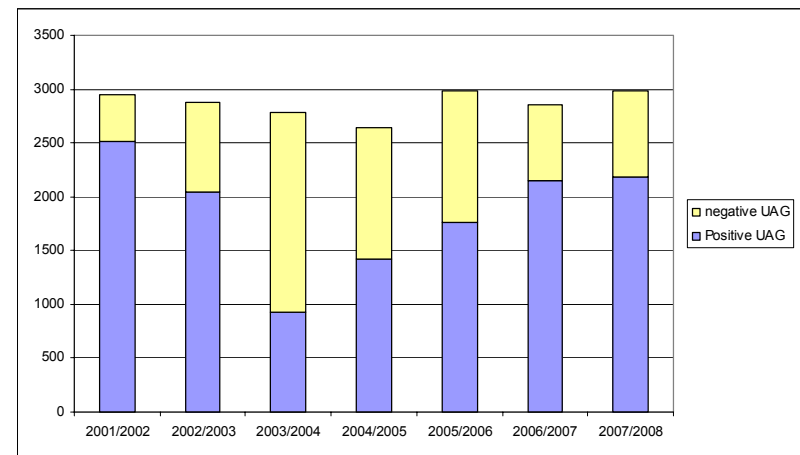
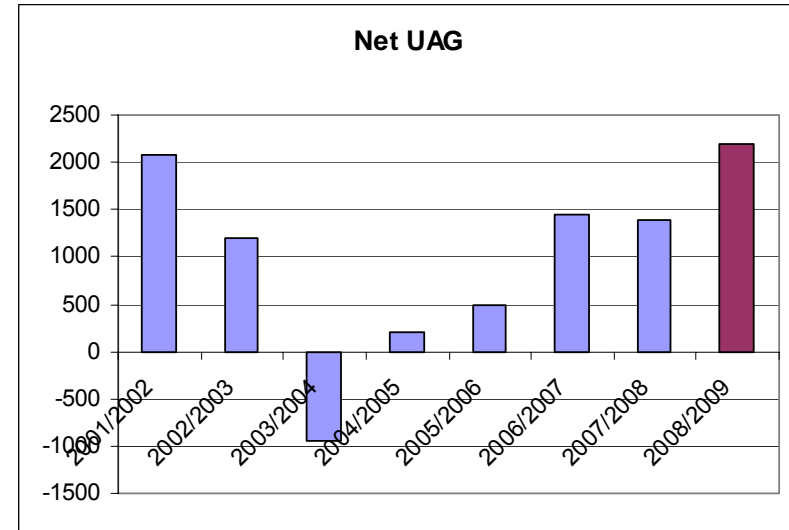
Therefore we are proposing a new incentive which focuses on minimising gross/absolute UAG volumes

- ◆ UAG (whether positive or negative) is an inherent misallocation of volume, therefore focusing on reducing the gross UAG volume reduces misallocation, which benefits users and aligns with broader objective to accurately target cost
- ◆ Means every site counts every day
- ◆ allows a credible forecast / target to be set as in gross/absolute terms, the historical level of UAG is reasonably consistent year on year

Gross/Absolute UAG

Why focus on Gross UAG

- ◆ All UAG reflects a misallocation of costs
- ◆ From a misallocation perspective the direction is unimportant
- ◆ Focus should be on reducing total misallocation not the net level
- ◆ Total misallocation directly linked to underlying meter uncertainty /error which net position is not
- ◆ Total misallocation or gross UAG position has been consistent for a number of years



Actions to meet incentive targets

As discussed through the consultation process initial activities are likely to be based around :

- ◆ **Site Witnessing and validation review**

- ◆ Ensures meter assurance is being carried out appropriately by meter owners
- ◆ Increase number of sites witnessed and / or scope of witnessing regime

- ◆ **Finding errors and resolving them**

- ◆ Develop new techniques and improve processes in data analysis to identify trends, problem sites etc

- ◆ **Meter owner liaison and development**

- ◆ Spread best practice and consistency

- ◆ **Development of standards**

- ◆ **Develop validation/audit processes across all exit points**

Key is that the incentive should encourage innovation by NG and gives us time and scope to react to events and experiences to ensure we focus on the most effective initiatives

Wider issues impacting UAG

There are a number of wider regime issues which potentially limit the effectiveness of our actions

- ◆ No direct incentives on meter owners to ensure accuracy
- ◆ No visibility of assurance and issues arising on entry meters
- ◆ entry errors not reconciled beyond M+15

Where we find evidence that these are making a material difference to the performance of the incentive we will look to develop initiatives to resolve them

Similarly we cannot expect appreciable asset replacement in the time period

- ◆ We can only directly influence how the assets are managed not what they are
- ◆ But we will work with asset owners to address specific issues where we find them

Unaccounted for gas – incentive principles

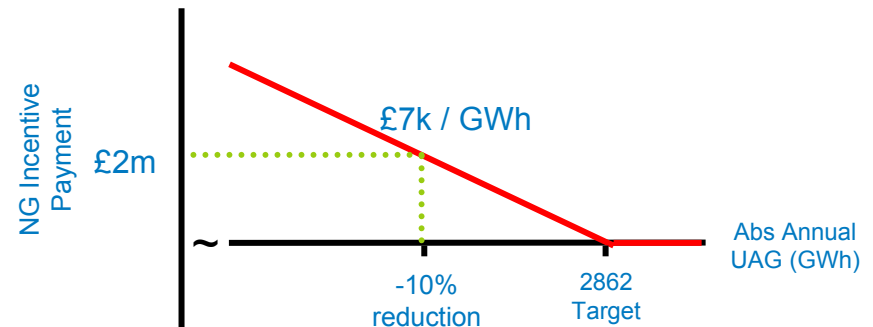
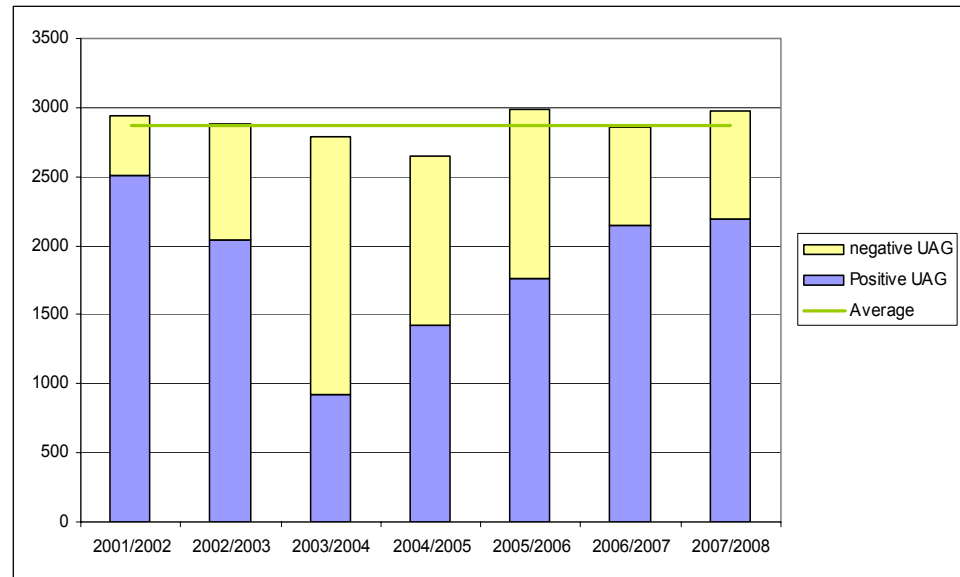
In developing incentive proposal we have identified the necessary elements to the incentive

- ◆ Needs to be longer term to ensure that the initiatives undertaken have time to take effect
- ◆ Incentive should be based around a number of distinct incentive years rather than a single multi year term
- ◆ Target should be based on a number of years of history to reduce impact of annual fluctuations
- ◆ Target should apply for the whole period to ensure that benefits accrued align with investments and operational costs
- ◆ Incentive based around outcomes rather than actions taken
- ◆ As there is an implicit cost to NG in carrying out the work needed to drive down UAG the incentive should not also have a downside for failing to meet performance targets
- ◆ Performance should not be capped to ensure there is continuing emphasis on improving performance under all circumstances

Incentive Design

Incentive Design

- ◆ Target based on historical long term annual average “absolute” level of UAG
- ◆ multi-year scheme as it will take time for potential reductions to materialise
- ◆ Upside only, as we can only indirectly influence outcomes therefore believe we should not be exposed to explicit risk through the incentive
- ◆ implicit downside to NG as we will be incurring investment costs against an uncertain outcome
- ◆ Incentive reward is based on valuing absolute UAG at SAP.
- ◆ If a reduction is achieved then the benefit delivered through the incentive should be 50%
- ◆ No cap on benefits



Summary

Overall we believe that the incentive as proposed :

- ◆ Gives appropriate focus to improving measurement assurance
- ◆ Has an appropriate balance of risk and reward given the nature of the incentive
- ◆ Incentivises the correct behaviours and actions
- ◆ Aligns with industry feedback from earlier consultation (general desire to tackle UAG)



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Residual Balancing

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Residual Balancing - Background

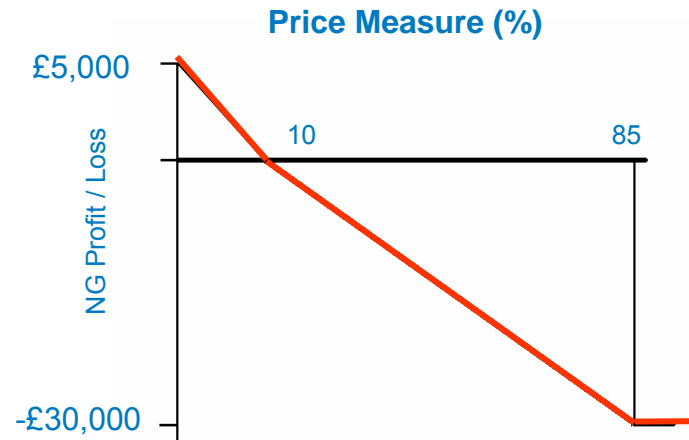
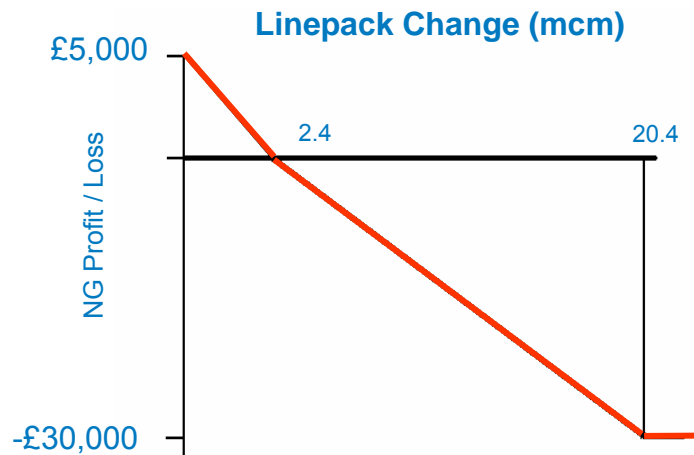
Residual Balancing Incentive is about the energy balancing trades we take to match supply and demand and the influence these have on the market

- ◆ In its role as residual balancer, NG buys and sells gas on the OCM for system energy balancing purposes (Buys £32.3m and sells £50.8m in 2007/8)
- ◆ The costs of these actions are recovered through the UNC energy balancing neutrality mechanism – the costs are not directly incentivised
- ◆ The prices of our balancing trades can set marginal cashout prices, and hence influence Shippers' incentives to balance themselves
- ◆ As imbalances can physically be transferred between days through linepack, incentive design supports the principle of daily cost allocation which underpins the daily balancing regime

Residual Balancing – Incentive Design

Objective: Bring the system to energy balance each day but with minimum residual balancing activity from the SO

- ◆ The existing Incentive design contains two interacting elements, the Linepack scheme and the Price scheme
- ◆ The interaction between these and the behaviours they drive in the System Operator has been a key area in this years consultation.



Existing Price Performance Measure (PPM)

Objective

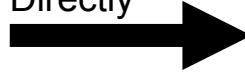
“To deliver pricing efficiency ”

Indirectly

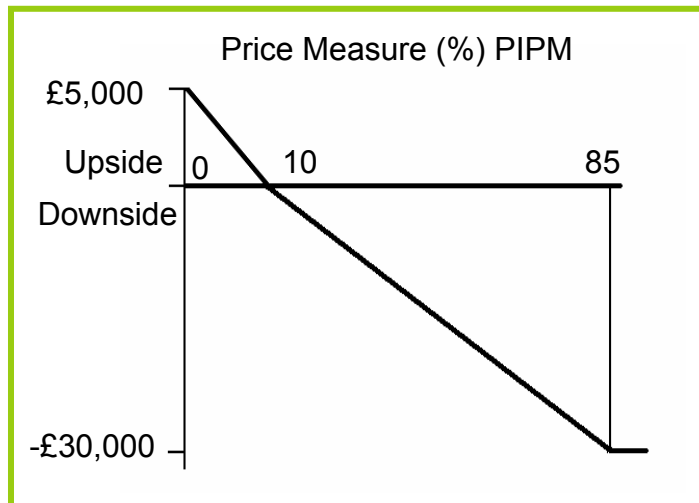


Overall cost minimisation

Directly



Minimise market intervention



$$\text{Price Measure} = \frac{\text{Spread of price of NG trades}}{\text{SAP}}$$

Is this still the best approach to deliver pricing efficiency?

Price Scheme: Feedback & Initial Proposals

- ◆ The responses to the consultation document confirmed that minimal market intervention by the residual balancer should continue to be a key objective for a Residual Balancing incentive
- ◆ When the residual balancer needed to enter the market, the incentive should continue to encourage trades close to market prices as a measure of efficiency.
- ◆ All of the responses indicated that the existing Price scheme supported these objectives and that structural changes were not required.
- ◆ It was however recognised that the scheme targets should be updated to better reflect industry views on its appropriate balance with linepack. Again;
 - Worked up two options for initial proposals
 - Accept there will be other variants (views on scheme features invited)

Existing Linepack Incentive Objective & Design

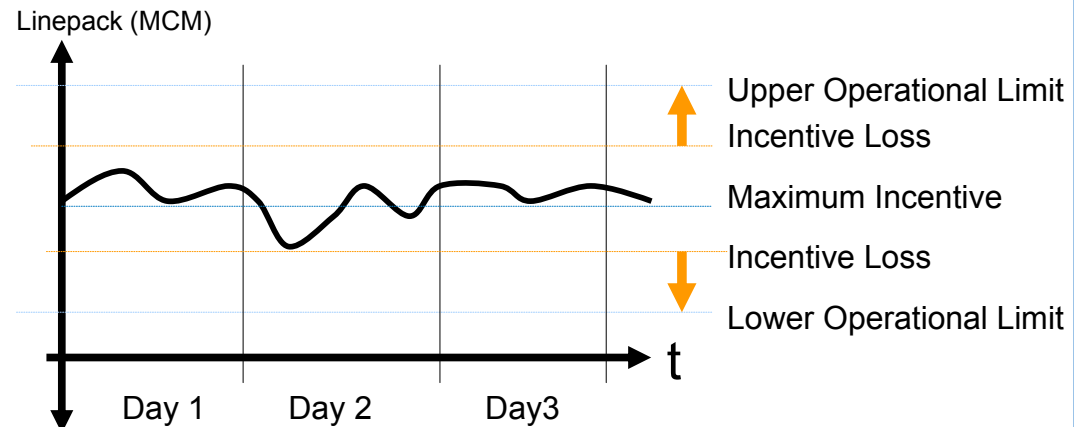
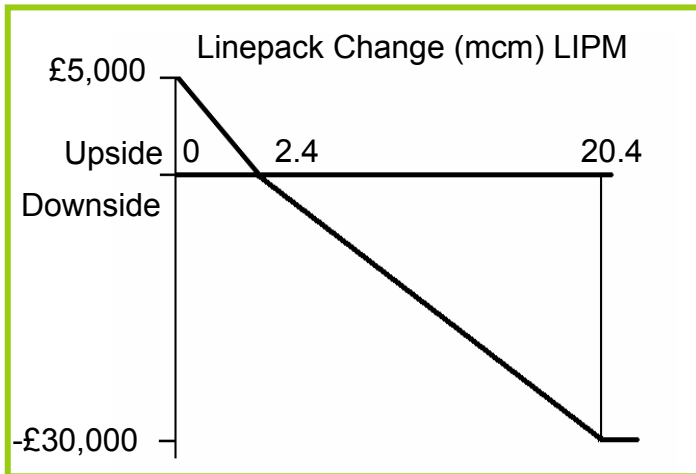
Objective: Pros

Cost targeting to each gas day
'Polluter Pays'

Downside: Potential Cons

May not be the least cost solution
Could encourage greater levels of intervention by NG

- ◆ Scheme Introduced after PPIM and was designed to balance National Grid's Risk / Reward
- ◆ Are these pros and cons still balanced?



Linepack Scheme: Feedback & Initial Proposals

- ◆ There is a view that we should balance the system with the objective to keep within physical limits rather than to prevent transfer of imbalances.
- ◆ Difficult to see that complete removal of linepack incentive is appropriate as it could result in the transfer of large imbalances across gas days therefore potentially inappropriate cost targeting
- ◆ We therefore believe, inline with the majority of industry respondents, that the incentive should remain but be revised to better reflect industry views that the current commercial band is too tight ;
 - Worked up two options for initial proposals
 - Accept there will be other variants (views on scheme features invited)

Linepack concepts not taken forward in Initial Proposals

Demand Indexed Target

National Grid originally envisaged proposing an index mechanism for the linepack target. The index would recognise the operational requirement to run the NTS at higher linepack levels at higher levels of demand.

Creation of a Linepack Manager



It was suggested the creation within UNC of a separate role, which would have responsibility for managing the required operational changes in daily linepack by trading for operational linepack requirements in advance.

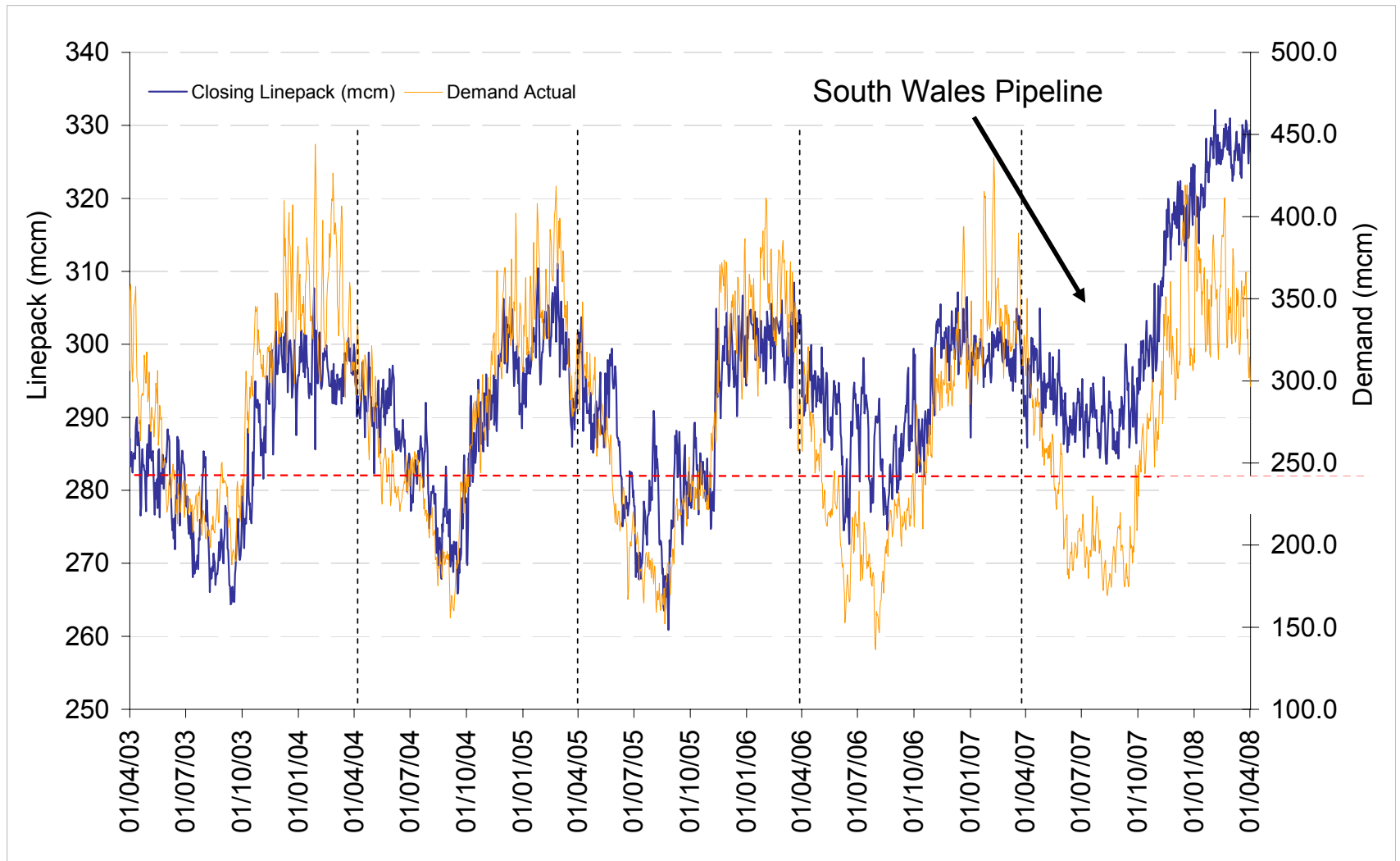
Inter Day Energy Transfer Service

National Grid raised the concept of allowing industry participants to use potential additional daily NTS operational tolerance whilst still upholding principle of daily allocation costs

Mixed responses but a number of key issues raised. National Grid to address these issues separately through a Strawman in 2009

Demand Indexed Target

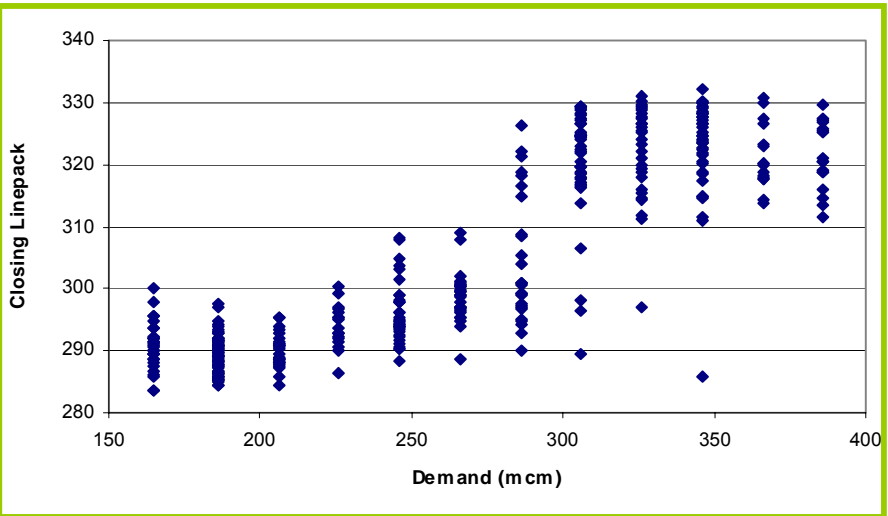
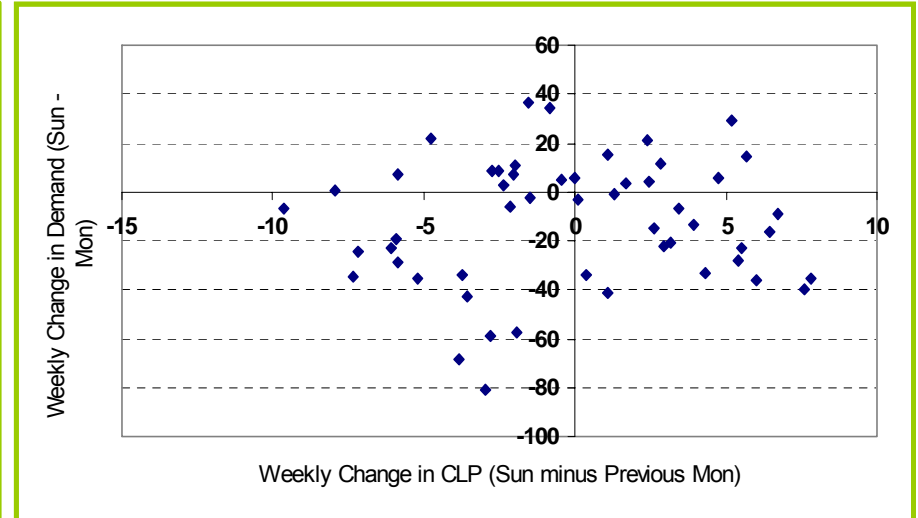
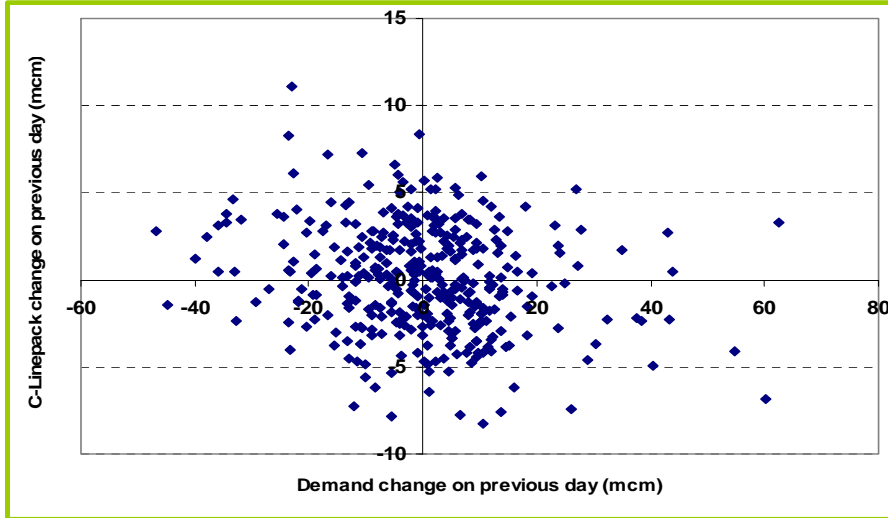
 Closing linepack
 Demand



N.B Operational flexibility does not proportionally increase with linepack

Linepack Target Indexed by Demand Analysis

Based on Incentive Year 2007/08 data



Concept Issues

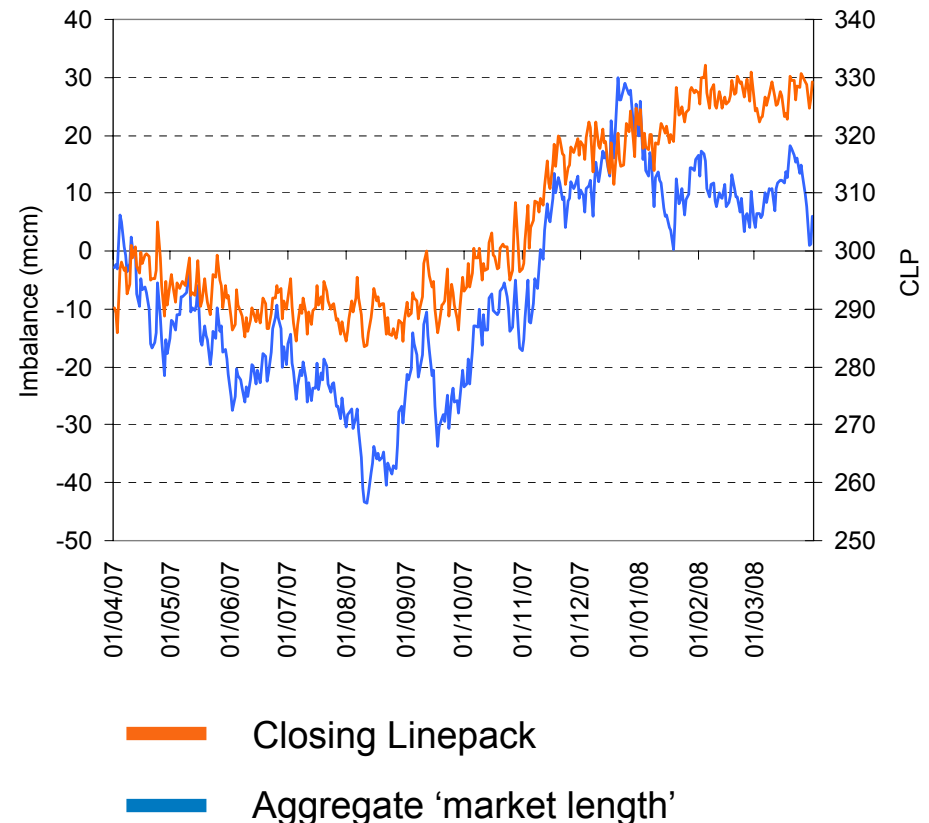
- ◆ Weak historic daily correlation
- ◆ System topology changes relationship
- ◆ Industry concerns regarding transparency

Creation of a linepack account - Issues

Magnitude

- ◆ Given the typical difference between summer and winter linepack levels this movement between these two levels over a six month period would create a requirement for a daily linepack account trade of $\sim 0.16\text{mcm}$. As the daily volatility in closing linepack is much larger than this, it is not clear that additional trading of 0.16mcm a day would add to the overall efficient operation of the market.

Direction



Proposed Scheme A - Physical tolerances

Summary

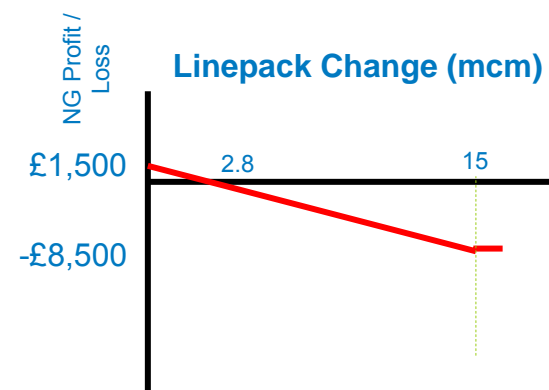
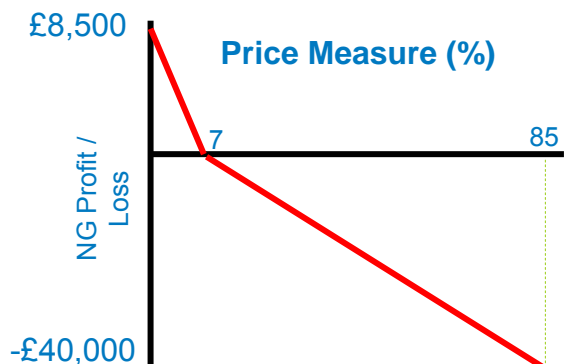
- ◆ “Balance the system to physical needs”
- ◆ Increased focus on price performance
- ◆ **Minimal Balancing by SO**

Price Performance Measure (PPM)

- ◆ Based on a response to the August consultation document
- ◆ Stronger incentive on PPM and tighten target

Linepack measure (LM)

- ◆ Weaker Linepack Incentive and slacken target
- ◆ Incentive to not carry over large imbalances between days
- ◆ Linepack target of 2.8mcm is average change in an ‘unbalanced’ system i.e. with SO balancing actions removed (1:1 vol)



Proposed Scheme B - Commercial tolerances

Summary

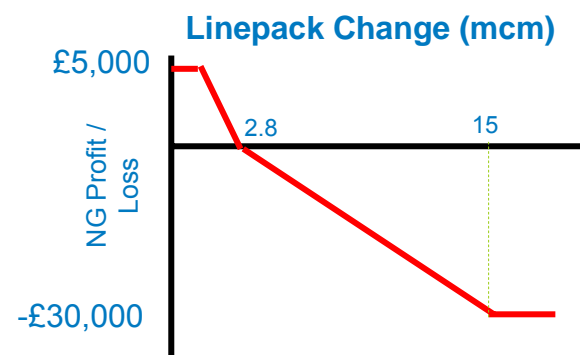
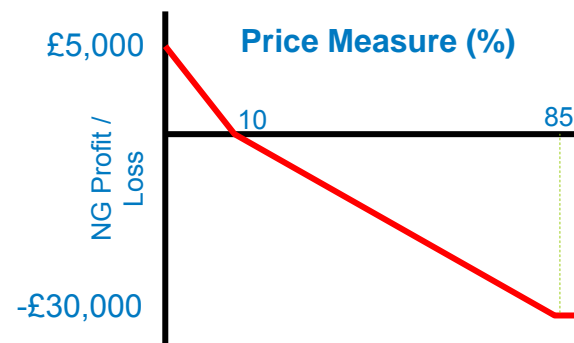
- ◆ **Minimal balancing** but try hard to **avoid large imbalances**, less worried about small ones

Price Performance Measure (PPM)

- ◆ PPM as current scheme

Linepack measure (LM)

- ◆ Introduce “S” into linepack incentive profile
- ◆ Slacken Linepack target but steeper downside gradient
- ◆ Linepack target of 2.8mcm is average change in an ‘unbalanced’ system i.e. with SO balancing actions removed (1:1 vol)





Initial Proposals for Gas SO Incentives from April 2009

Operating Margins (OM)

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Operating Margins (OM)

National Grid Procures Operating Margins services to meet the requirements of UNC and its Safety Case

- ◆ Holding OM gas is a requirement of UNC and NG's safety case
- ◆ OM is required to support pressures on the NTS during periods of operational stresses, providing a buffer until other balancing measures take effect
- ◆ Requirements for OM cater for events such as unanticipated supply failures, pipe-breaks, compressor plant unavailability etc
- ◆ There is also a requirement to procure an amount of gas to ensure the safe and orderly rundown of the distribution networks in the event of a network emergency
- ◆ Currently OM service is provided on a 'space only' basis by a range of storage and LNG importation facilities
 - UNC Pre-emption rights over space in regulated NG LNG facilities
 - NG LNG facility prices for OM administered through NGG licence condition 'C3'
 - Other storage facilities on normal commercial terms

Operating Margins (OM)

Incentive Design

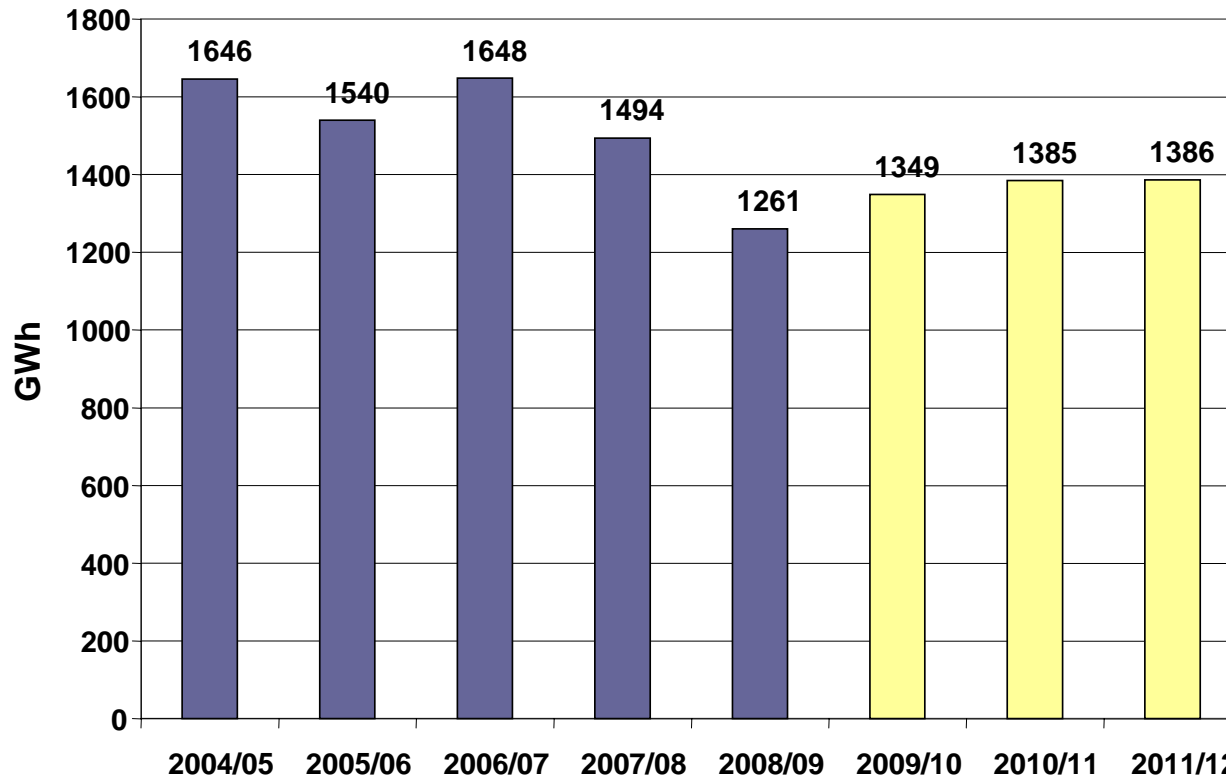
Objective: Minimise OM service costs, which are paid for by Shippers through SO commodity charge.

- ◆ Incentive covers the storage service costs rather than the cost of the gas itself – gas cost is dealt with through UNC
- ◆ Effectively the scheme is an ‘allowed revenue’ with SO exposed to 100% of the difference between target and outturn OM holding costs
- ◆ OM holdings allowed revenue £20.54m for 2007/8
- ◆ Small incentive around utilisation costs
- ◆ NG LNG Storage business provides ~50% of the total service at regulated ‘C3’ prices

OM Volume Requirements

2009/10 Volume requirements increase by 7% from current year

- ◆ Driven by changes in orderly rundown - based on supply outlook changes
- ◆ Reflects continued uncertainty about levels of LNG delivery to the UK



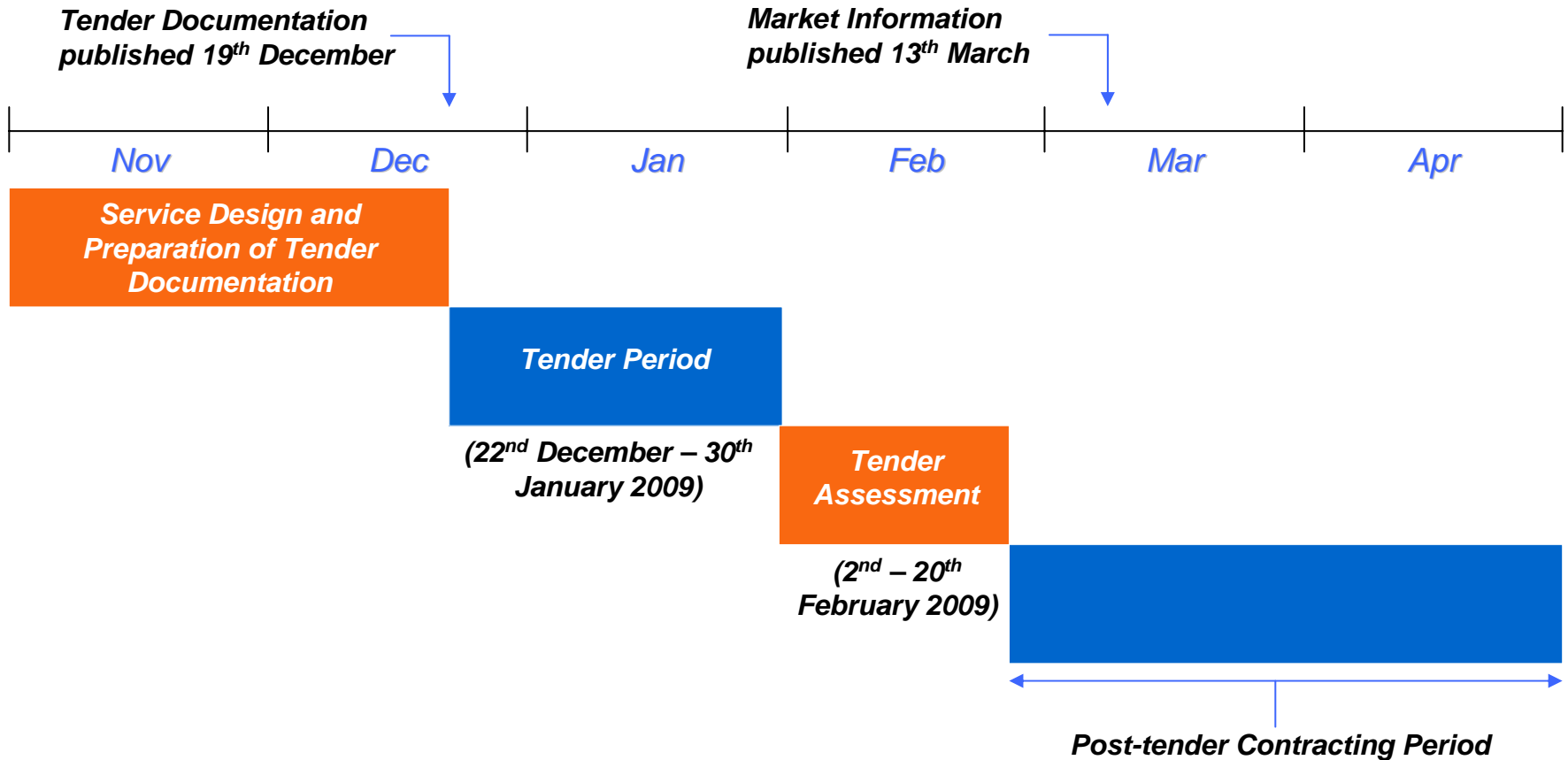
Operating Margins Contestability

Interactions with OM contestability and LNG Price review

- ◆ OM contestability project will establish contestable arrangements for procuring OM
- ◆ Tender planned for January 2009
- ◆ NG LNG facilities are expected to participate in tender but there is uncertainty over whether the administered prices for NG LNG facilities will be removed (and when)
- ◆ Continuing to work in on incorporating new classes of providers
- ◆ May need to over-procure OM in order to establish new providers / prove service delivery

The January Tender: Proposed Timescales

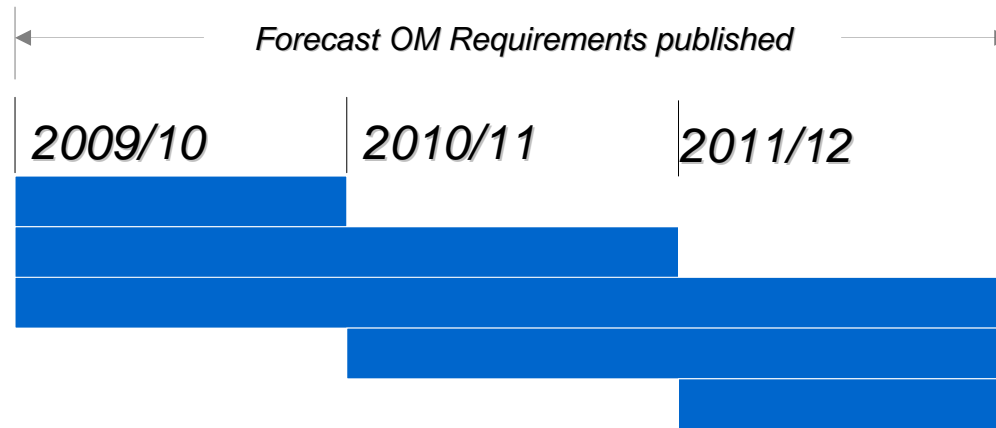
Tender based on open participation for all...



The January Tender: Proposed Products

Existing and New Provider types

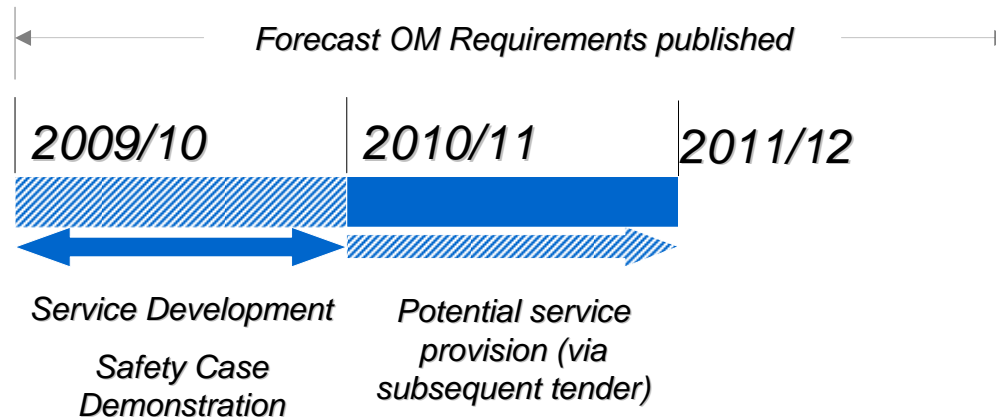
“Tender to provide service from 2009 onwards”



Or...

New Provider types

“Offer to develop service provision in 2009”



- ◆ Flexibility for new provider types – aim to develop and prove service provision to HSE satisfaction through 2009/10
 - May require ‘over-procurement’
 - Emphasis on service development rather than penalties for failure to provide service

Treatment of Operating Margins Costs for 2009/10

OM holding costs

- ◆ Uncertainty over volume and prices (hence total cost)
- ◆ Propose cost pass through for 2009/10 (subject to Ofgem scrutiny)
- ◆ Continue to work with Ofgem prior to Final Proposals to see if a cost minimisation scheme can be introduced

OM utilisation costs

- ◆ Roll forward of existing scheme



Initial Proposals for Gas SO Incentives from April 2009

Demand Forecasting

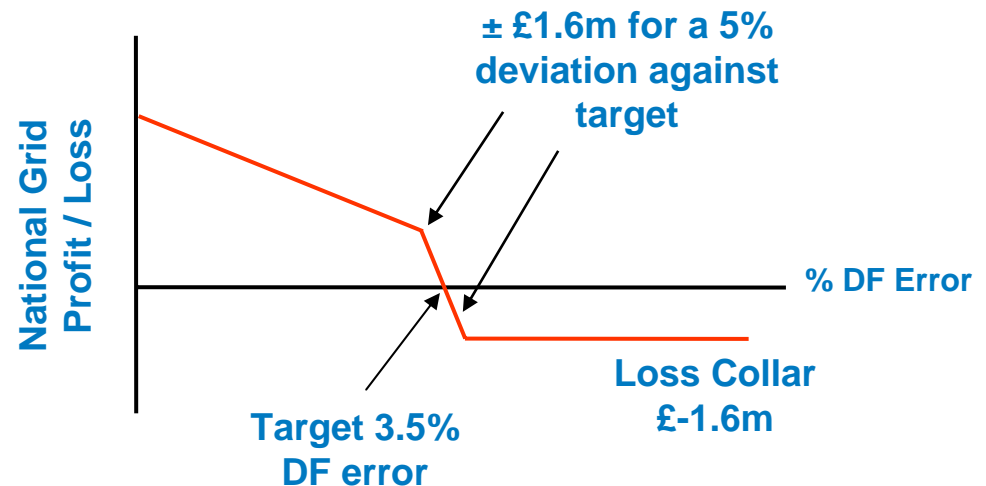
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Demand Forecasting Existing Incentive

National Grid is obliged to publish a demand forecast to the market and is incentivised on the accuracy of a key forecast at D-1

- ◆ Forecast of Total System demand, comprising
 - NDM demand
 - Direct connected demand (power stations etc)
 - Interconnectors
 - Storage injection
- ◆ Annual scheme



New demand forecasting risks for 2009/10

Commissioning of Aldbrough MRS facility

- ◆ In 2008/09 estimate 280mcm space, 13mcm/d injection rate and 26mcm/d withdrawal rate
- ◆ Current MRS portfolio max injection of 23mcm/d – hence 56% increase
- ◆ Summer demand levels average 230mcm/d, hence significant influence on demand forecast

Nature of flows from Milford Haven importation terminals

- ◆ Unique shipping related drivers associated with LNG importation
- ◆ Likely to be some affect on NBP prices / transit of UK market
- ◆ Influence flows across IUK

Proposed Demand Forecasting Target

For 2007/8 target was set at 4%, which was reduced to 3.5% for 2008/9

We are proposing a further annual reduction in the target for 2009/10. Given the additional demand forecasting risks our proposed target for 2009/10 is 3.2%

We propose to leave the other elements of the scheme unchanged



Initial Proposals for Gas SO Incentives from April 2009

Data Publication

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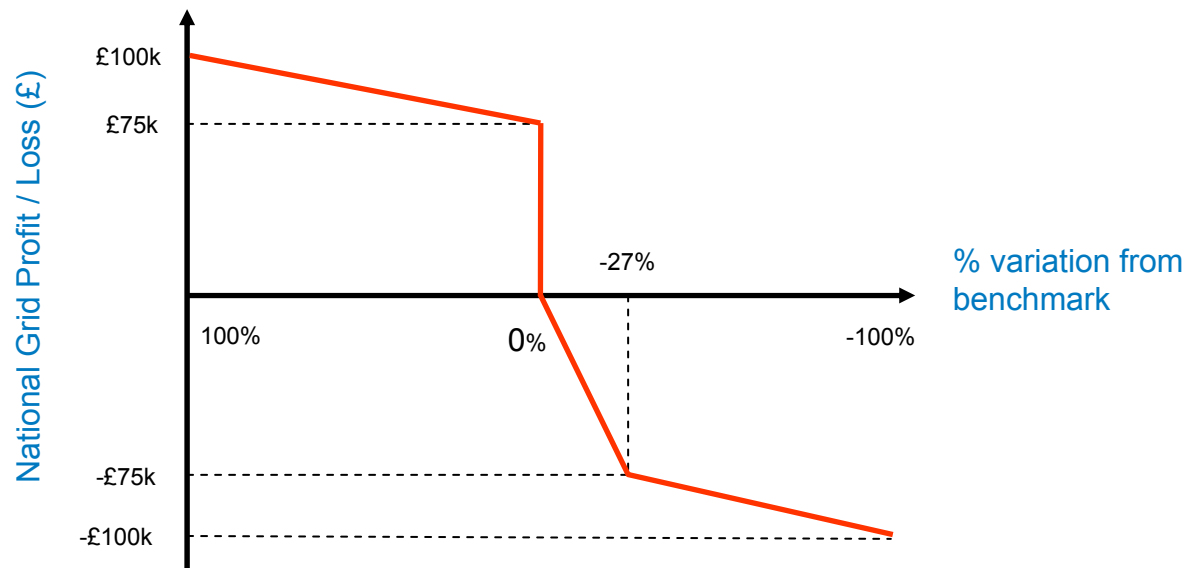
Data Publication

National Grid is incentivised to maintain a standard of service in relation to the publication of specific data items via our website

- ◆ Measures are timeliness of data publication and availability of system for key data items
 - Forecast flows onto the network (notified and physical)
 - Within day and D-1 Demand forecast
 - Predicted closing linepack
- ◆ Following last year's consultation the incentive is based around maintaining the current levels of performance
- ◆ A separate cost recovery mechanism for website improvements was introduced last year

Proposed Data Publication Incentive

Roll forward of existing scheme based around maintaining current levels of performance





Initial Proposals for Gas SO Incentives from April 2009

Environmental Incentive

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Environmental Incentive

Ofgem introduced the concept of NTS environmental incentives in last year's Final Proposals

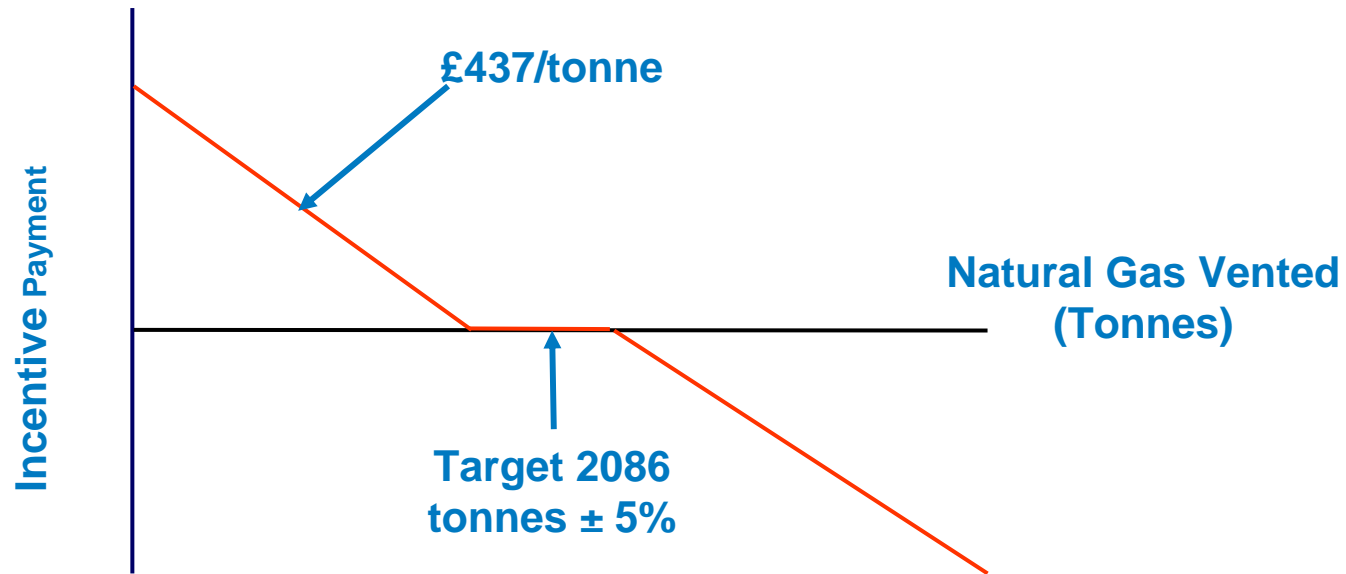
An Environmental Incentive was introduced on a retrospective basis in September 2008

The incentive is designed to make National Grid considers the environmental costs associated with venting natural gas from NTS Compressors

- ◆ Starting a compressor (e.g. purging of compressor and fuel lines)
- ◆ Standing down a compressor (e.g. depressurising the compressor)

Scheme currently applies to the gas turbine driven compressors

Existing scheme



Target set at historic average

Incentive 'strength' is based on DEFRA's shadow price of carbon

Proposal for Environmental Incentive

Volume target

- ◆ Use historic average (updated with outturn from calendar year 2008)
- ◆ Adjust target for electric drives
 - New electric drives
 - Existing electric drives
 - Response to Ofgem Formal Information Request by 31 Dec 2008

Consulting on two options for the Incentive Price, both based on Defra shadow price of carbon

- ◆ Methane only
- ◆ All polluting components on Natural Gas



Initial Proposals for Gas SO Incentives from April 2009

Any further questions or initial thoughts?

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Consultation Timetable

25 June 2008 - Industry Workshop

22 August / 2 September 2008 – Consultation documents issued

12 November 2008 – Initial proposals consultation document issued

→ 28 November 2008 – Industry Workshop

19 December 2008 – Deadline for responses

January 2008 – National Grid report to Ofgem

February 2009 – Ofgem issues its Final Proposals and Licence change Notice

April 2009 – Scheme Go-live

Purpose of today - Opportunity for the industry to seek further clarity on the proposals / express any initial thoughts

Closing Comments

- ◆ Thank you for attending today's workshops and your contributions throughout this year's consultation
- ◆ We are happy to answer further questions or arrange bilateral meetings
- ◆ Consultation Process Feedback requested by 19 December
- ◆ Ofgem will bring forward Final Proposals in the New Year
- ◆ Lunch