

Additional information provision to the gas market for the winter

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What I'll cover today

- ◆ Overview and context
- ◆ Structure and layout of the draft proposal
 - ◆ System alerts (similar in principle to an electricity NISM)
 - ◆ Daily snapshot supply/demand summary
 - ◆ Winter to date supply/demand summary
 - ◆ Storage position
- ◆ Explanation of how this structure provides useful signals to market participants
- ◆ Seek guidance on some outstanding issues
- ◆ Deliverability for winter 2005/06
- ◆ Capture feedback and comments from you

Overview and context

- ◆ The purpose of this proposal is to:
 - ◆ Inform participants daily of the “status” of the gas transmission system
 - ◆ Provide a useful signal to participants to stimulate additional demand side response
 - ◆ Response over and above existing interruption capability
 - ◆ May be turndown
 - ◆ On the basis that consumers would prefer to offer additional response with some notice than to be instructed to cease consumption in an emergency with little notice
 - ◆ Be the platform for gas system warnings similar in principle to an electricity NISM
 - ◆ Based on defined criteria and data from the proposal – therefore transparent to participants

Structure and layout of the draft proposal

- ◆ System alerts (similar in principle to an electricity NISM)
 - ◆ Two alerts are needed, shorter and longer term
 - ◆ Important to understand the context of the proposal first – I'll come back to the alerts
- ◆ Daily snapshot supply/demand summary
 - ◆ Intended to give an indication of how things are currently – is today looking OK?
- ◆ Winter to date supply/demand summary
 - ◆ Intended to give an indication – are we looking OK to see the winter out?
- ◆ Storage position
 - ◆ This is key to understanding to what extent demand side response is needed

SYSTEM ALERTS

UPCOMING ISSUES

WINTER DURATION

[Definitions](#)

Click [here](#) for system alert history

DEMAND

		Demand (mcm)	SND (mcm)	Variance (mcm)
14/01/06	Actual Demand	397	407	-10
15/01/06	Forecast Demand	417	408	9
16/01/06	Forecast Demand	424	408	13

15/01/06
15/01/06
15/01/06
15/01/06

[Definitions](#)

Click [here](#) for forecast demand report (SIS03)

FLOWS INTO NTS

Todays Forecast Flows into the NTS	414 mcm
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15/01/06
15/01/06

[Definitions](#)

Click [here](#) for forecast aggregate flows report (NTSAPF)

LINE PACK

Todays Opening Linepack	296 mcm
Predicted Closing Linepack (PCLP1)	293 mcm
Change in Linepack	-3 mcm

15/01/06
15/01/06
15/01/06

Linepack Graph

[Definitions](#)

Click [here](#) for full system status report (NB92)

INTERRUPTION

Likelihood of Interruption for gas day	NTS Spec.	Med	2 areas
	NTS Non-Spec.	Low	
15/02/06	LDZ NSL	High	3 Zones
	LDZ Non NSL	Med	6 Zones

15/01/06
15/01/06

[Definitions](#)

Click [here](#) for Likelihood of interruption details

STORAGE

	14/1/06 GWh	15/01/06 GWh	Safety Monitor GWh	Max rate (GWh/day)	Days left	Ave rate (GWh/day)	Days left
Short	1010	990 (57%)	275 (10%)	490	1	200	3
Medium	1810	1700 (43%)	340 (10%)	290	4	160	7
Long	8790	8600 (24%)	450 (10%)	420	21	380	23

15/01/06
15/01/06

[Definitions](#)

Click [here](#) for storage monitor spreadsheet

DAILY SNAPSHOT/SUMMARY

Two system alerts – more later

Actual and forecast demand – are we above or below normal

Note link to definitions of terms

Total gas supplies into the NTS

Opening and predicted close of linepack, and variance. Good signal of supply demand stress

Note time and date stamps

Likelihood to interrupt. Good signal of supply demand stress

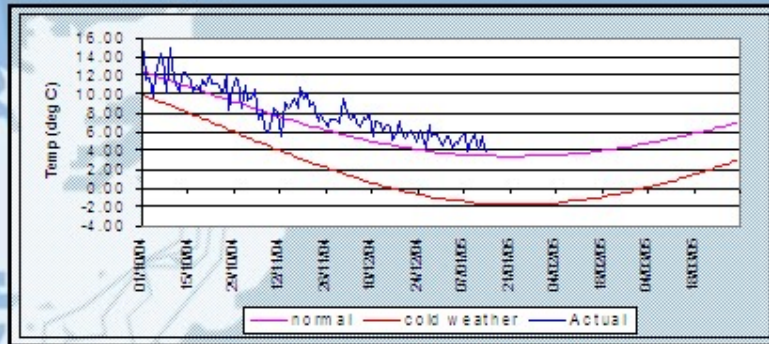
Note links to more detailed source reports

Storage position and days remaining – compare to winter remaining

Daily Outlook

Gas Day : Wednesday, 15/01/06

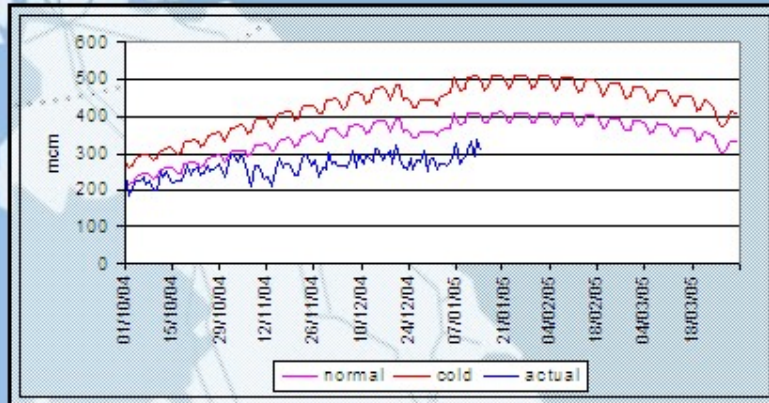
WINTER TEMPERATURE CURVE



Definitions

Click [here](#) for link to met office web site

WINTER DEMAND CURVE



Definitions

SUPPLY SUMMARY

Supply Graphs

	14/01/06 Daily Flow	Max Flow since 01/10/05	Min Flow since 01/10/05	Average 7 day Flow
Beach (mcm)	261	331	234	300
IUK (mcm)	11	28	0	12
Storage (mcm)	30	68	0	28

Definitions

Click [here](#) for link to NTS Entry EOD report

PRICE

Price Graph

	SAP 14/01/06	SMP Buy	SMP Sell	7 day average
Price (p/KWh)	1.58	1.59	1.55	1.59

Definitions

Click [here](#) for NORD01 price report

WINTER TO DATE SUMMARY

Actual temperature versus SNT/CWT. How cold has it been relative to normal? Where does the weather forecast take us (see Met Office link)

Actual demand versus SND/CWD. How much demand have we seen relative to normal? Combined with weather above, allows an estimate of forthcoming demand

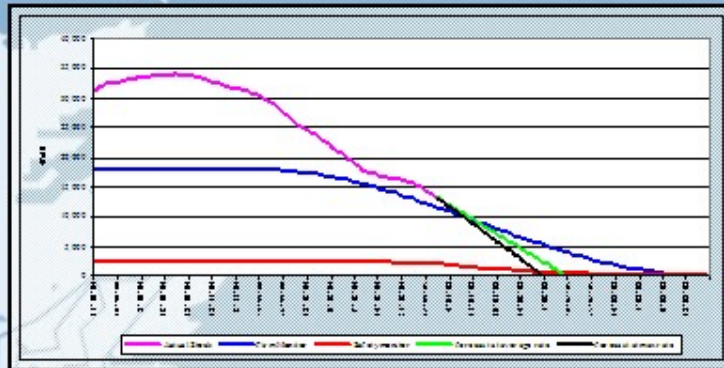
Supplies performance summary. Allows a view on whether demand is likely to be met with or without storage

Price – good indicator of supply demand stress



STORAGE POSITION

LONG RANGE STORAGE



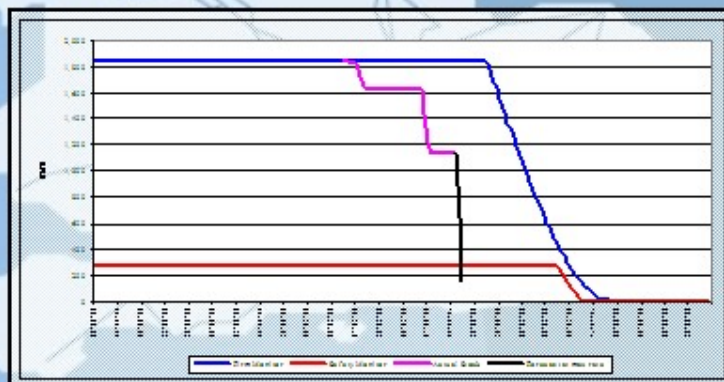
Definitions

MEDIUM RANGE STORAGE



Definitions

SHORT RANGE STORAGE

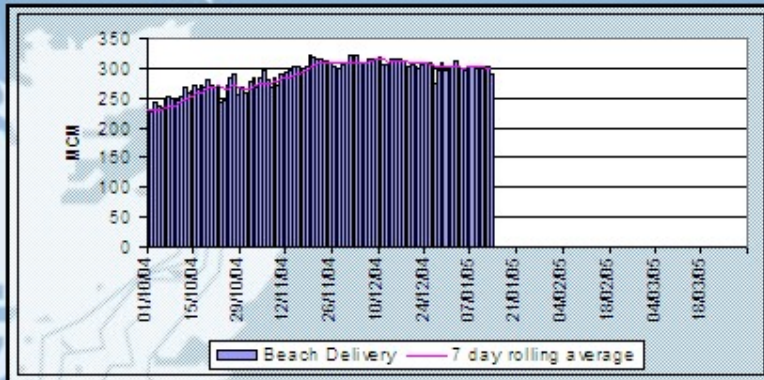


Definitions

Long range and medium range storage. Shows actual fill levels versus firm and safety monitors and projects forwards based on maximum withdrawal and last 7 days average withdrawal. Do we hit the safety monitor – i.e. are we trending towards an emergency without additional market or demand side action? This is a good indicator of winter duration supply / demand stress.

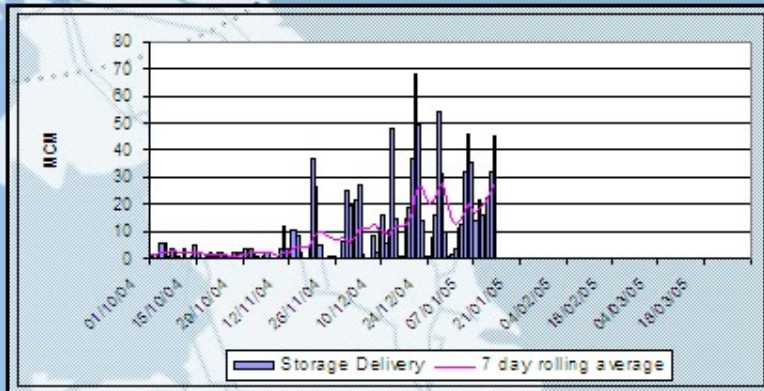
Short range storage (LNG). Only shows absolute level. SRS can always be emptied in under 4 days. Absolute level and usage is a good indicator of shorter term supply / demand stress

BEACH (Incl IOG)



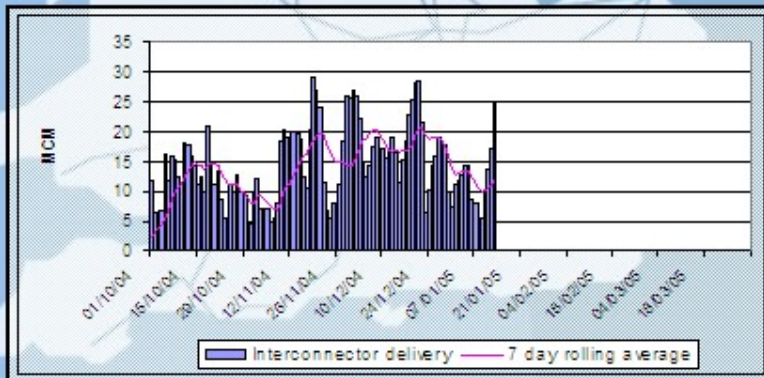
Definitions

STORAGE



Definitions

INTERCONNECTOR



Definitions

ACTUAL DELIVERY AND TRENDS

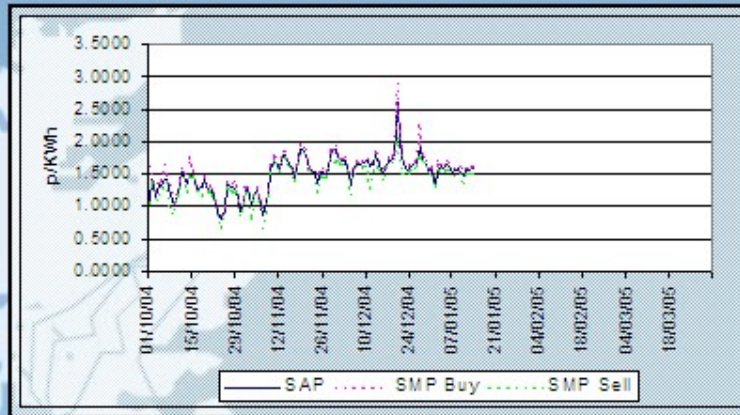
Beach delivery. Sum of all actual terminal flows into the NTS over the winter, including Isle of Grain terminal. Allows an assessment of winter long performance – and ability to meet forthcoming peaks

Storage delivery. Sum of all storage flows into the NTS over the winter. Allows and assessment of ability to meet peaks in conjunction with storage levels

Interconnector delivery. Shows interconnector flows into the system. Allows an indication of links to price and demands – and likelihood of import levels over forthcoming peaks

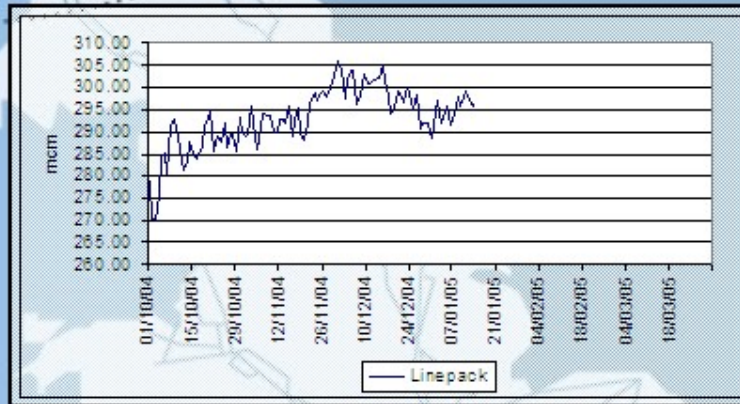
PRICE AND LINEPACK TRENDS

PRICE



Price – still a good indicator and trend allows an assessment of relativity

LINEPACK



Linepack. A good indicator of supply / demand stress and trending allows an assessment of relativity

How does this provide a signal?

- ◆ The daily snapshot of the system gives an overall indication of whether the supply demand balance for today is tight
- ◆ Forecast temperatures and relativity to seasonal normals give a good signal of what demand we may be seeing
- ◆ Short and long term supply histories and trends give a good indicator of whether this is likely to be met
- ◆ Storage usage and levels give a good indication of to what extent storage is being used to make up the balance
- ◆ If demands are high, supplies are low and storage is under heavy usage – things are tight

What is the basis for the alert?

- ◆ For electricity, demand must be met exactly by supply – constantly.
 - ◆ No real concept of storage
 - ◆ A NISM simply states that a predefined margin above forecast demand is not available
- ◆ For gas, demand must be met by supply over a day
 - ◆ Beach, interconnector and storage supplies, and interruption are tools to achieve a balance
 - ◆ Ultimately storage will have make up any “gap” in the balance (excluding additional demand side response)
- ◆ A supply demand balance forecast is not available to National Grid
 - ◆ Therefore the gas system alerts should be based on storage

What is the basis for the alert?

- ◆ For electricity there is only one way to get supply demand issues
 - ◆ Supply fails to meet demand at some point
- ◆ For gas there are two ways
 - ◆ Short term transitional peak in demand (or supply shortfall) – a few bad days
 - ◆ Longer term, sustained high demand levels. No particular days give an irresolvable supply demand mismatch, but overall storage rates are too high – we will run out before winter
- ◆ Therefore there are two system alerts a short term alert (“upcoming issues”) and a longer term alert (“winter duration”)

Daily Outlook Gas Day : Wednesday, 15/01/06

SYSTEM ALERTS

UPCOMING ISSUES

WINTER DURATION

[Definitions](#) [Click here for system alert history](#)

DEMAND		Demand	SND	Variance
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Definitions of the alerts

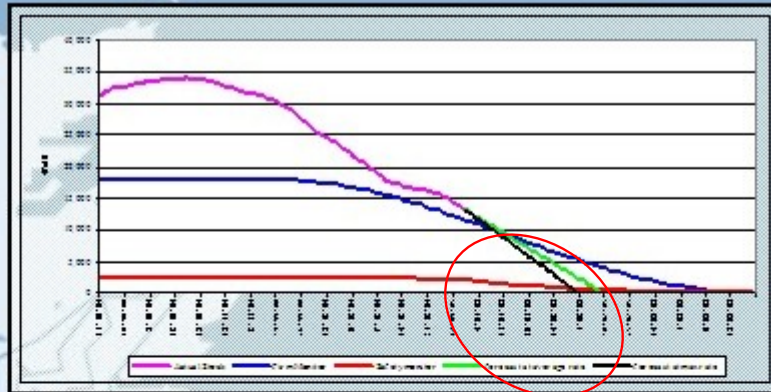
- ◆ It is critical that the system alerts are clearly and transparently defined to instil participant confidence
 - ◆ Must be based on known information – information contained in the report
 - ◆ Must be derived from an agreed “formula”, as is the case with the electricity NISM
- ◆ As no criteria can cover all scenarios, National Grid can always inform participants of unusual system issues or stress
 - ◆ This has always been the case
 - ◆ Shipper ANS system replicated on the group website (and here?)
 - ◆ Free text and on a best endeavours basis

National Grid's proposed definition

- ◆ Upcoming issues
 - ◆ Trigger: If total storage export for the day is greater than 75 mcm
- ◆ Winter duration
 - ◆ Triggers:
 - ◆ If LRS export at maximum rate will hit safety monitor before winter is over – low level alert
 - ◆ If MRS export at maximum rate will hit safety monitor before winter is over – low level alert
 - ◆ If MRS export at 7 day rolling average rate will hit safety monitor before winter is over – high level alert
 - ◆ If LRS export at 7 day rolling average rate will hit safety monitor before winter is over – high level alert

Illustrated example

LONG RANGE STORAGE

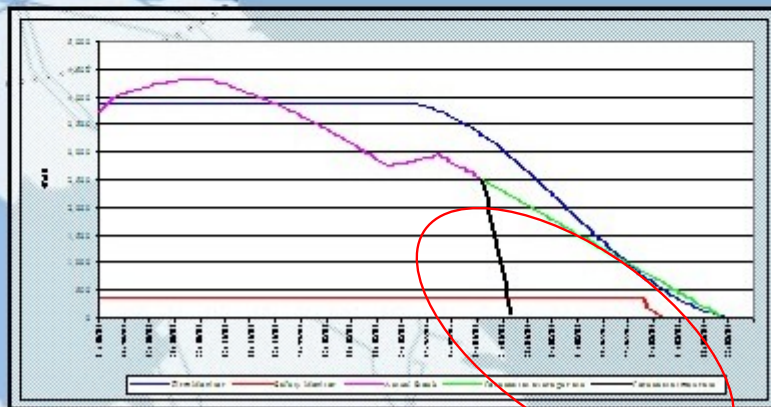


LRS maximum export hits safety monitor

LRS 7 day average export also hits safety monitor

Definitions

MEDIUM RANGE STORAGE



MRS maximum export hits safety monitor

MRS 7 day average export doesn't hit safety monitor

Definitions

Therefore National Grid would issue a high level alert

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Guidance on outstanding issues

- ◆ Does the DSWG agree that this provides appropriate signals?
- ◆ Does DSWG agree that the trigger points are appropriate?
- ◆ Wording of alerts is to be agreed – National Grid proposes simple, factual statements e.g. “Significant risk of LRS storage monitor breach at current export rates”
- ◆ National Grid envisage this as a website with links to additional information and other websites
 - ◆ Does DSWG agree that this is the best delivery
 - ◆ Do participants need to be able to print the information? (printer friendly view?)
 - ◆ Do participants envisage needing to download the data in some form? (MS excel spreadsheet?)

Deliverability for winter 2005/06

- ◆ National Grid is confident that it's IS suppliers can build this application for this winter
- ◆ The infrastructure to host the application remains unresolved
 - ◆ As a high priority National Grid are exploring every avenue (displacing existing applications, diverting hardware for other developments, co-hosting on an existing platform and sourcing new hardware)
 - ◆ Until infrastructure issues are resolved it isn't possible to commit to a delivery date
 - ◆ National Grid have been promised a proposal in the very near future
 - ◆ It is estimated that delivery before the winter peak should be deliverable

Feedback and comments?

Over to you...

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