

2009/10 Safety Monitors

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Background to Safety Monitors

◆ Safety Monitors replaced Top-Up, introduced for Winter 2004/5

- ◆ Why? - the differential between non storage supply and firm severe demands forecasts resulted in the need to book most / all storage as Top-up thus potentially restricting the functioning of the 'gas market'
- ◆ Firm Monitors now represent Top-Up type levels of storage required. These are for information only

◆ Both Safety Monitors and Firm Monitors are a UNC requirement

◆ Purpose of Safety Monitors

- ◆ Preserve **safe** operation of the gas transportation system rather than security of supply
- ◆ Included in National Grid's Safety Case
- ◆ Provide a mechanism to avoid a gas supply emergency
- ◆ Through provision of information provide a means for the 'market' to respond

Fundamentals to Safety Monitors

◆ All types of demand are either protected by Monitor or protected by Isolation

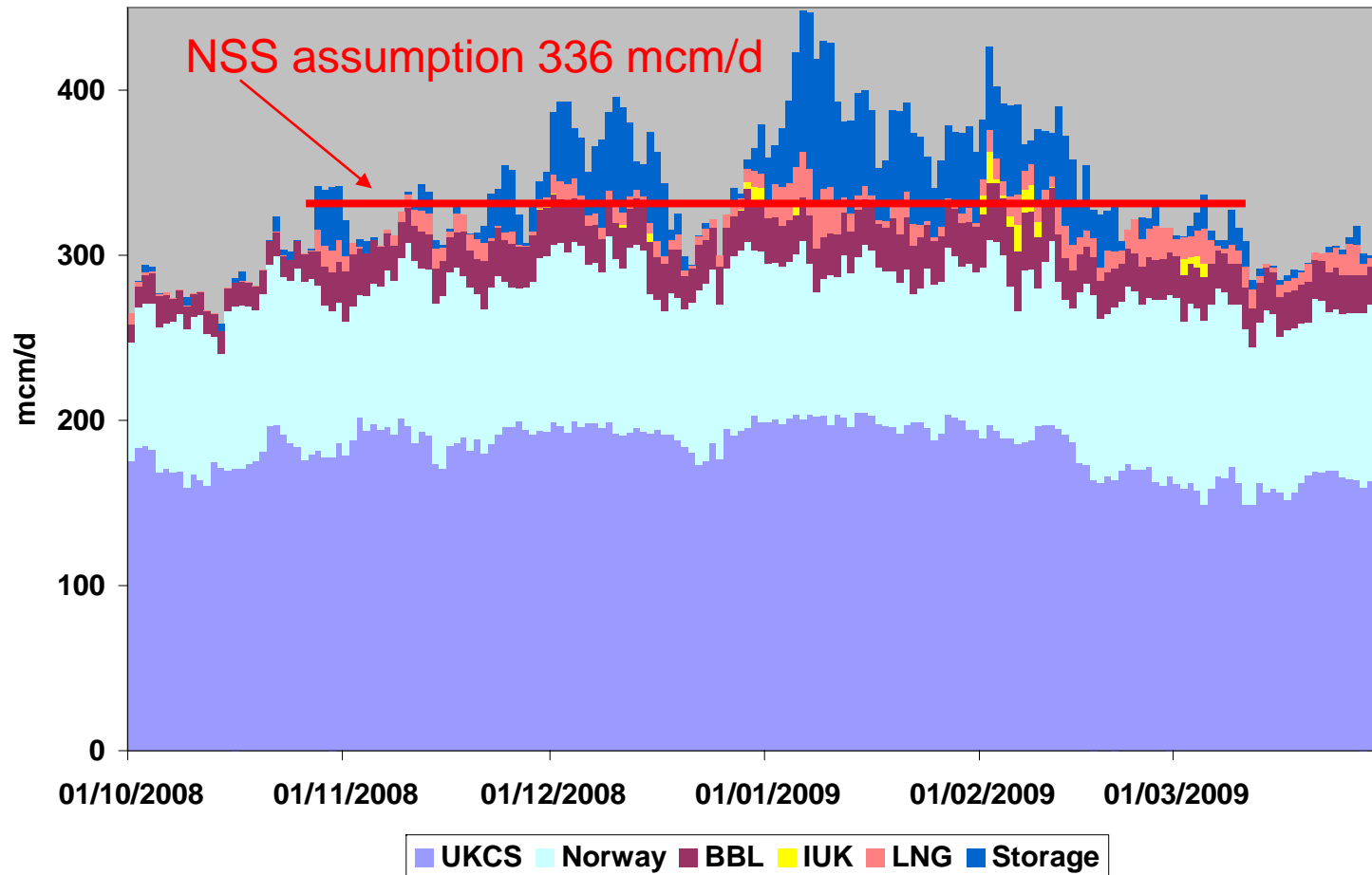
Protected by Isolation	Protected by Monitor
Sites which can be safely isolated from the network	Sites which require protection under the safety monitor
NTS Interruptibles	Priority Firm DM
LDZ Interruptibles	Ireland Firm
NTS Power Firm	>5860 MWh NDM
NTS Industrial Firm	2196-5860 MWh NDM
DM (excluding priority customers)	732-2196 MWh NDM
	73-732 MWh NDM
	0-73 MWh NDM

◆ Demand is from our severe diversified forecasts (1 in 50 for space, 1 in 20 for peak)

◆ Supplies are based on an assumed level of non storage supply with storage making up any shortfall with demand

Non Storage Supply (NSS)

2008/9 Winter



Provisional Winter Outlook Figures (Assessment of capability, mcm/d)

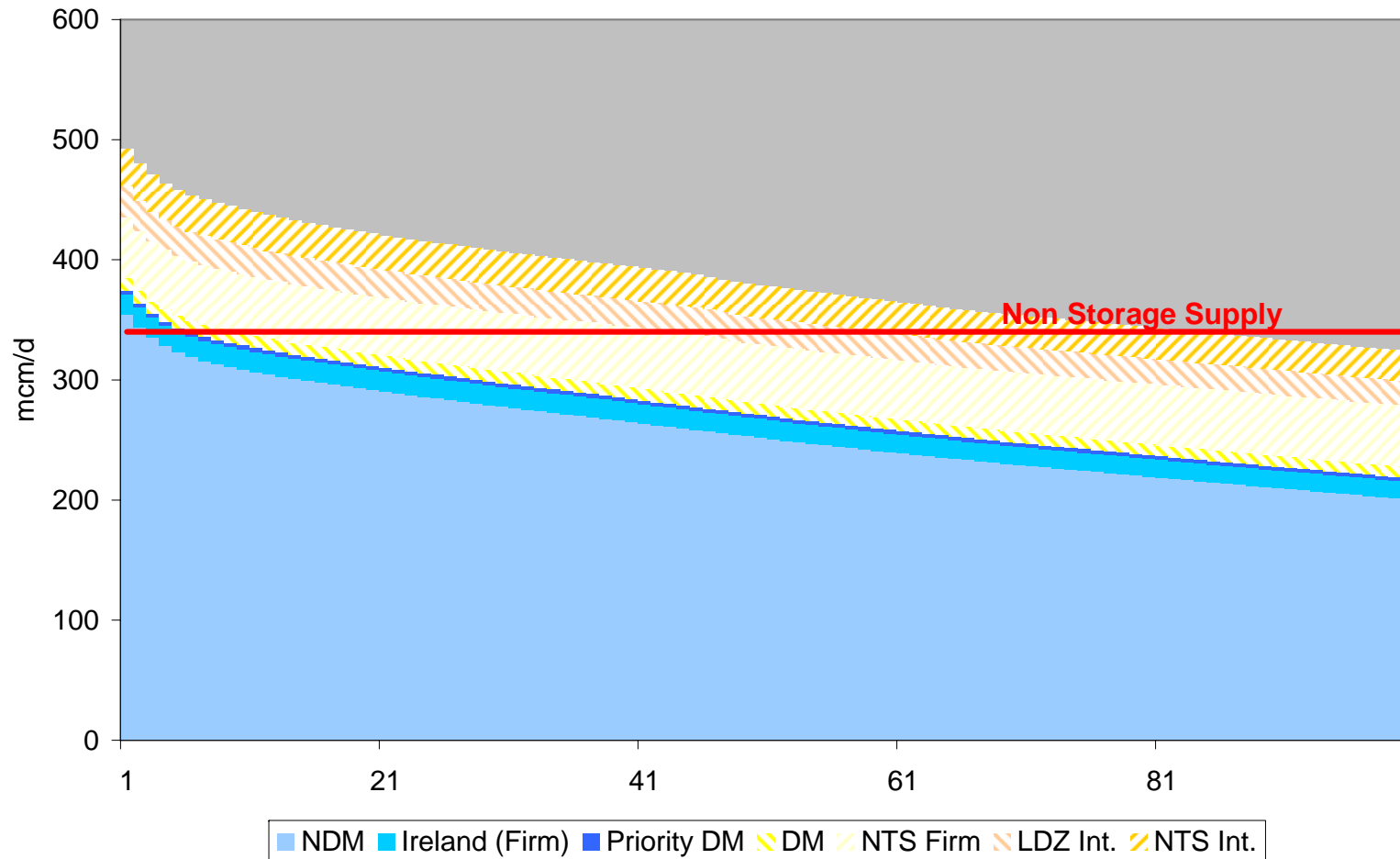
mcm/d	2008/9 forecast	2008/9 outturn ^[1]	2009/10 forecast	Comments
UKCS	195	197	180	Further UKCS decline in 2009/10
Norway	81	98	95	Continent will still have priority but increased Norwegian production ensures UK take
IUK	20 ^[2]	3	10	Considerable uncertainty, could export if UK is well supplied or Continent calls
BBL	30	28	25	Commercial reverse flow could lower imports
LNG Imports	10	13	30	Both MH terminals on stream, considerable upside possible
Total non-storage	336	339	340	Essentially the same as last winter but with considerable upside through LNG
Total storage	140	95	127	Last year included some Aldbrough, this year excludes Dynevor and has lower Partington
Supply Total	476	434	467	

Cold demand ~400 mcm/d, peak demand ~500 mcm/d

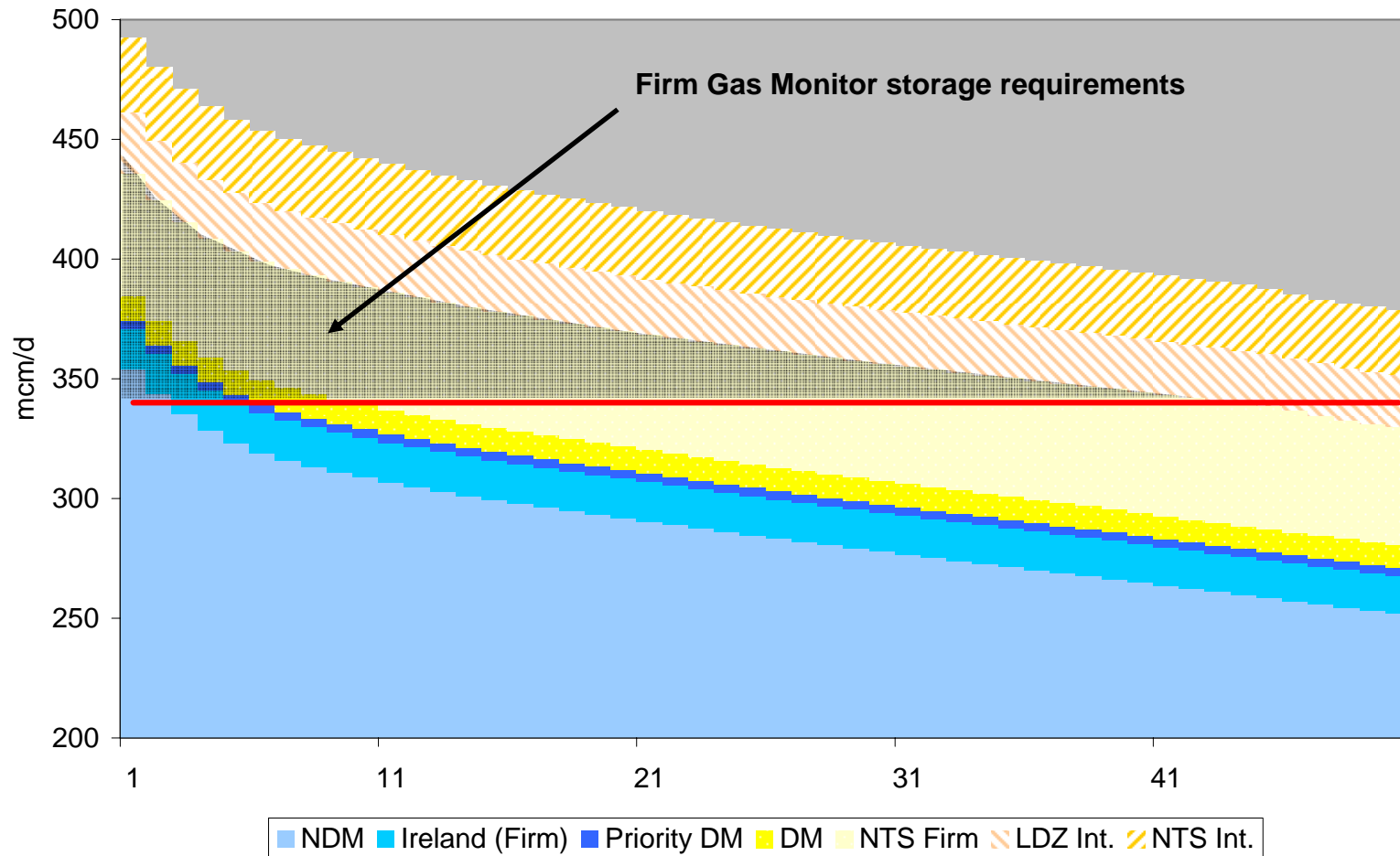
^[1] Represents average supply for highest 50 demand days (average demand 389 mcm/d) except for storage where highest flow is reported

^[2] We forecast IUK to be more akin to a storage facility with imports only at high demands, highest UK imports were 19 mcm/d

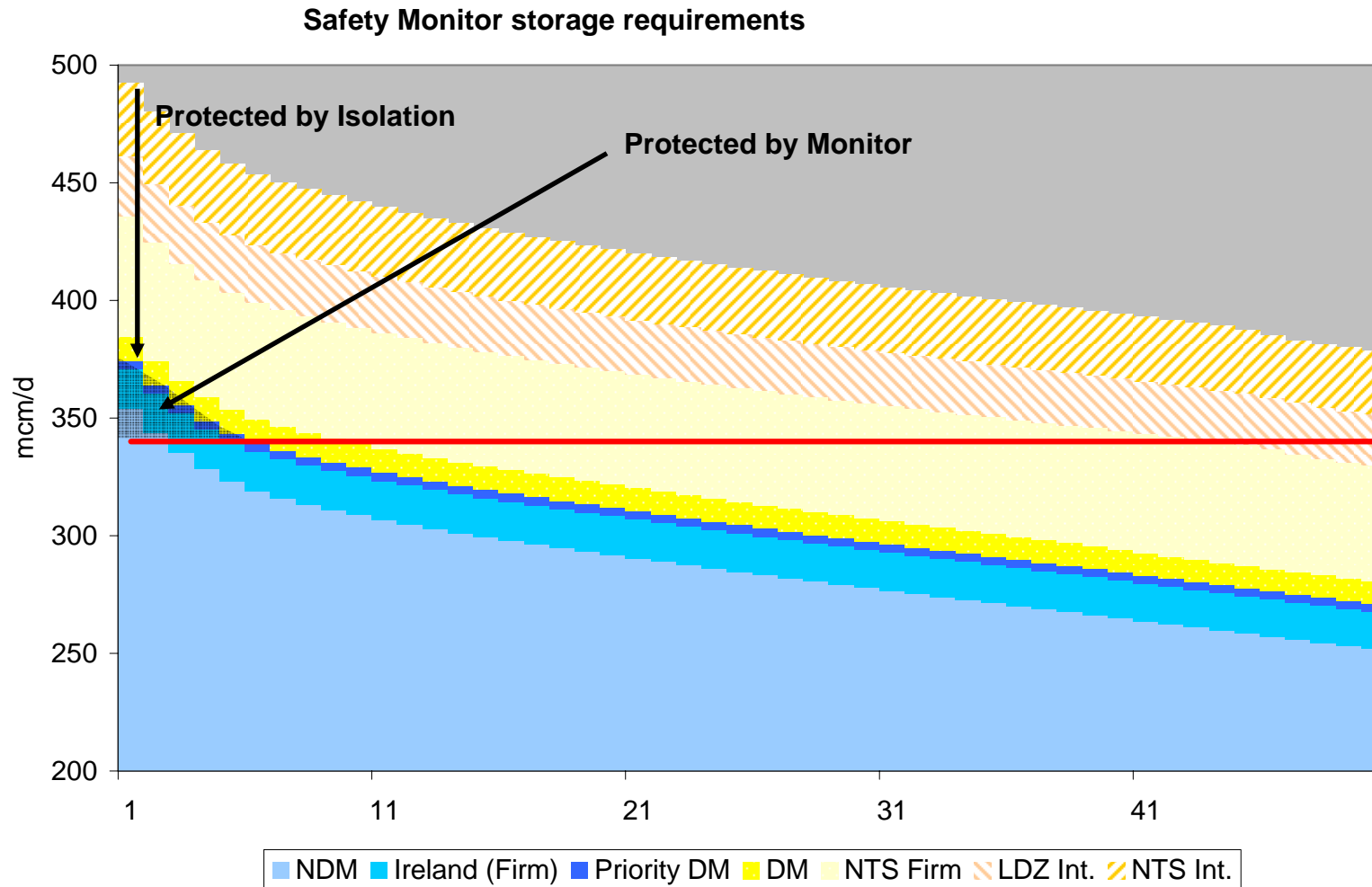
2009/10 Severe Load Duration Curve



2009/10 Firm Gas Monitor



2009/10 Safety Monitor



8 **Protected by Isolation represents the gas that is consumed by large sites as they undergo the physical process of isolation**

Changes to Safety Monitor

◆ No change to determining space requirements

◆ BUT changes to allocation – from 3 storage types (LRS, MRS & SRS) to just Total Storage

- ◆ Enables equitable treatment for all storage types
- ◆ Provides greater clarity for market participants and operational decision making
- ◆ Ability to show a winter deliverability profile as well as a winter space profile
- ◆ Existing stock reporting of LRS, MRS & SRS to continue

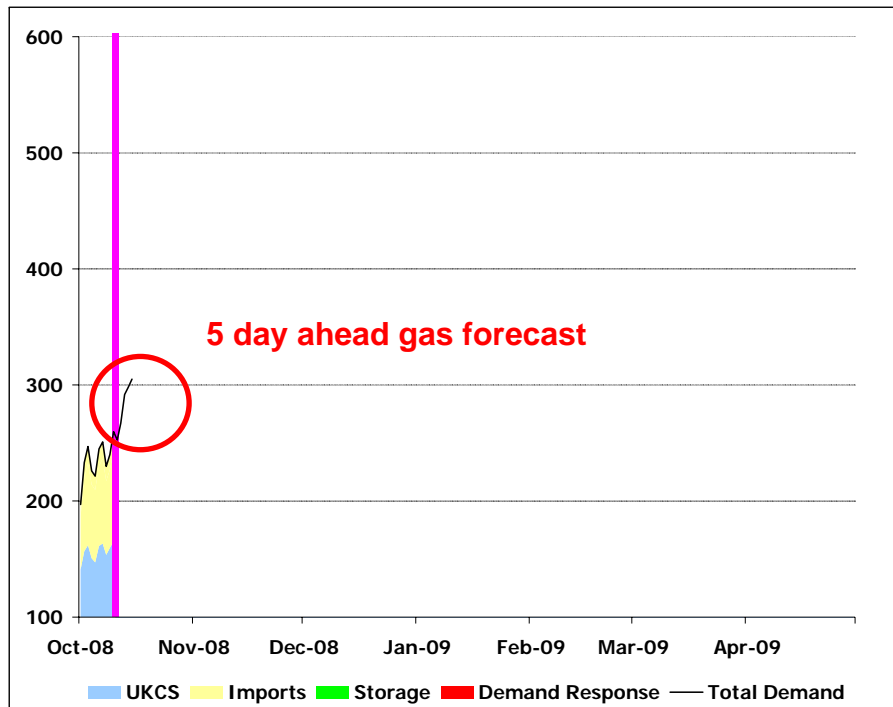
◆ Improved market information

- ◆ Increased transparency of supply / demand assumptions
- ◆ Greater clarity of remaining storage position
- ◆ Improved linkage to setting of GBA
- ◆ GBA storage based on 2 days+ of every storage site rather than by storage type

Type of information that we anticipate showing.....

1. Start of winter

10th October

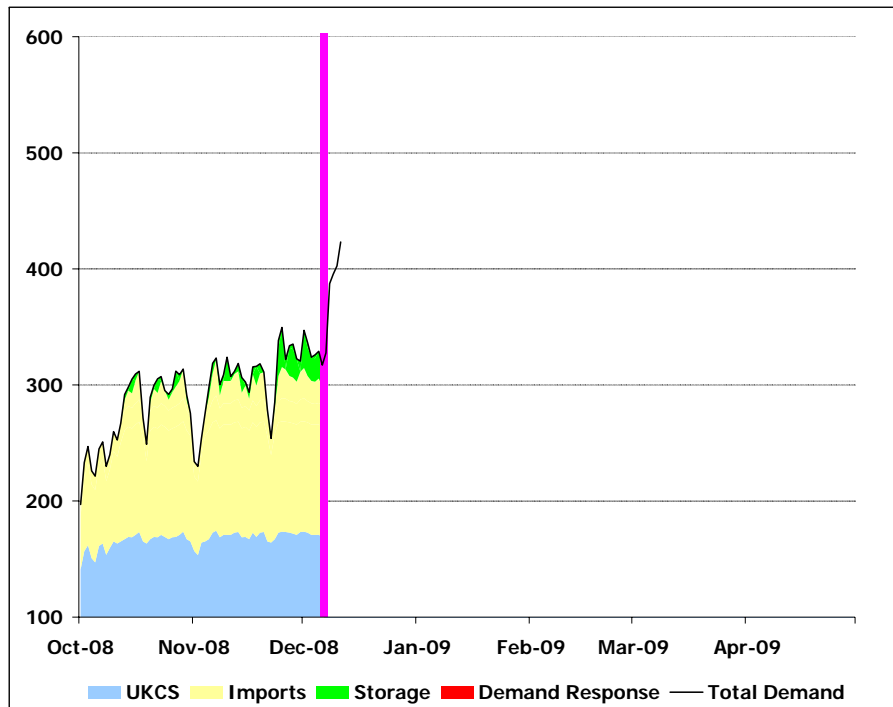


(Space requirement only ~ 120 mcm)

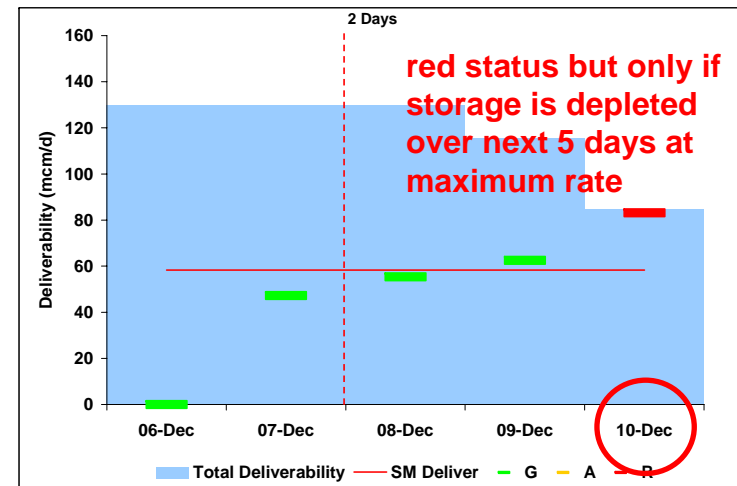
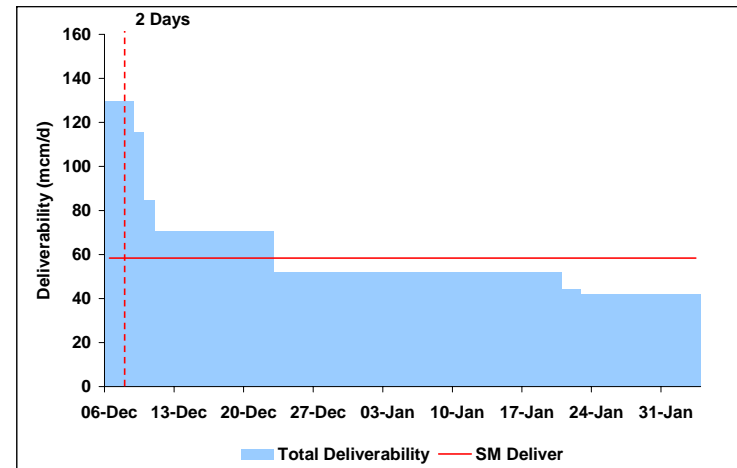
Type of information that we anticipate showing.....

2. A cold spell is forecast

6th December



	Dem	NSS	Stor	Tot
D+1	328	340	130	470
D+2	387	340	130	470
D+3	395	340	130	470
D+4	403	340	116	456
D+5	423	340	85	425



bars represent expected storage flow
= demand – non storage supply

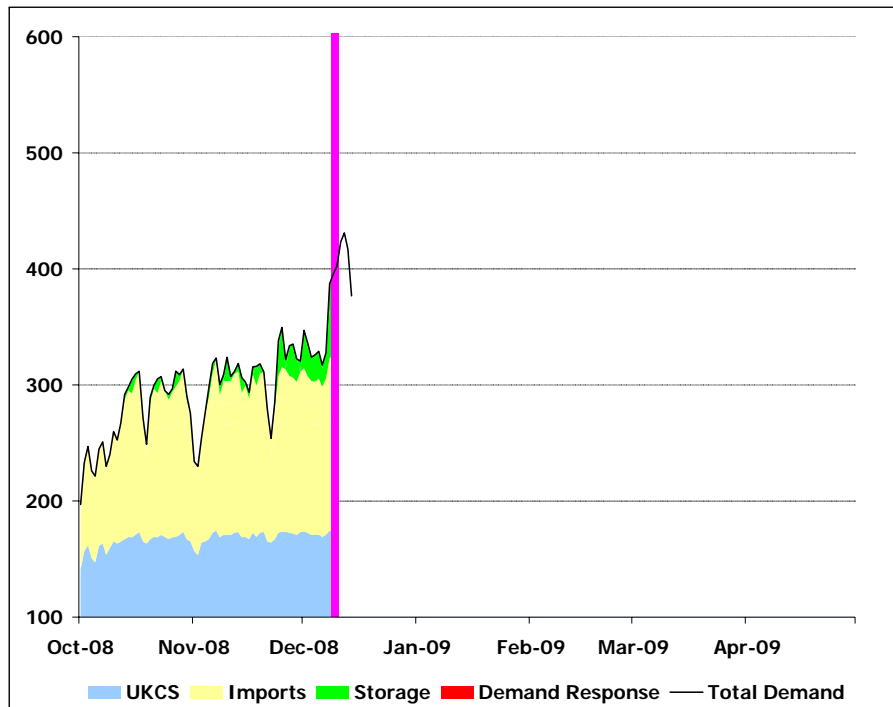
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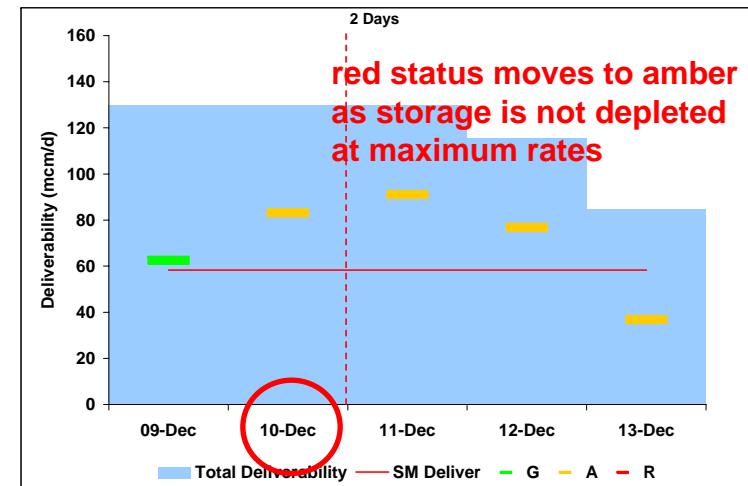
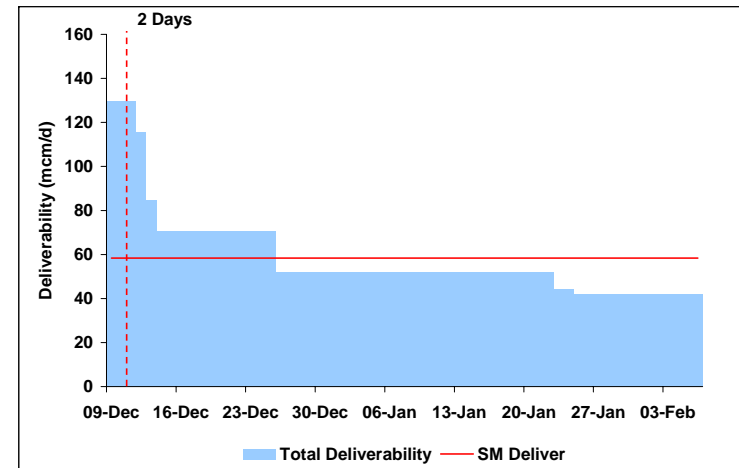
Type of information that we anticipate showing.....

2.1 3 days later

9th December

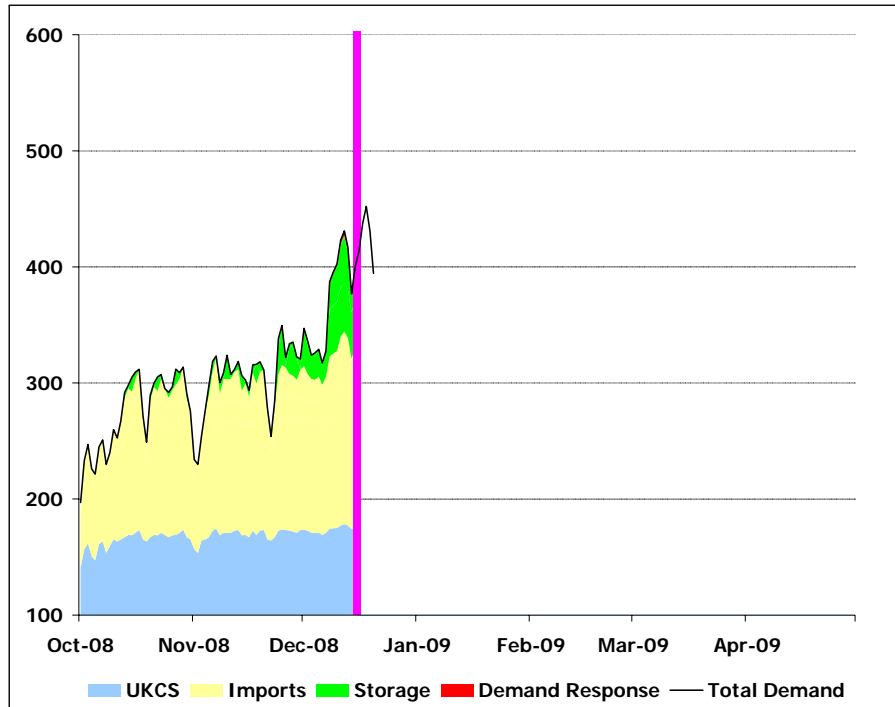


	Dem	NSS	Stor	Tot
D+1	403	340	130	470
D+2	423	340	130	470
D+3	431	340	130	470
D+4	417	340	116	456
D+5	377	340	85	425

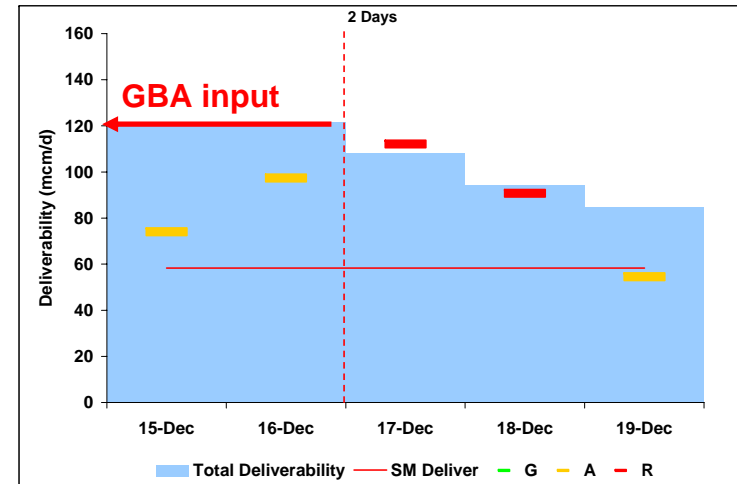
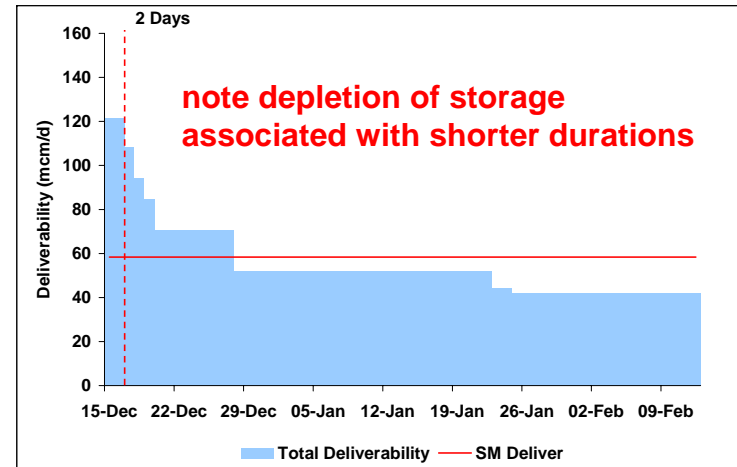


Type of information that we anticipate showing..... 2.2 a week later and it's still cold

15th December



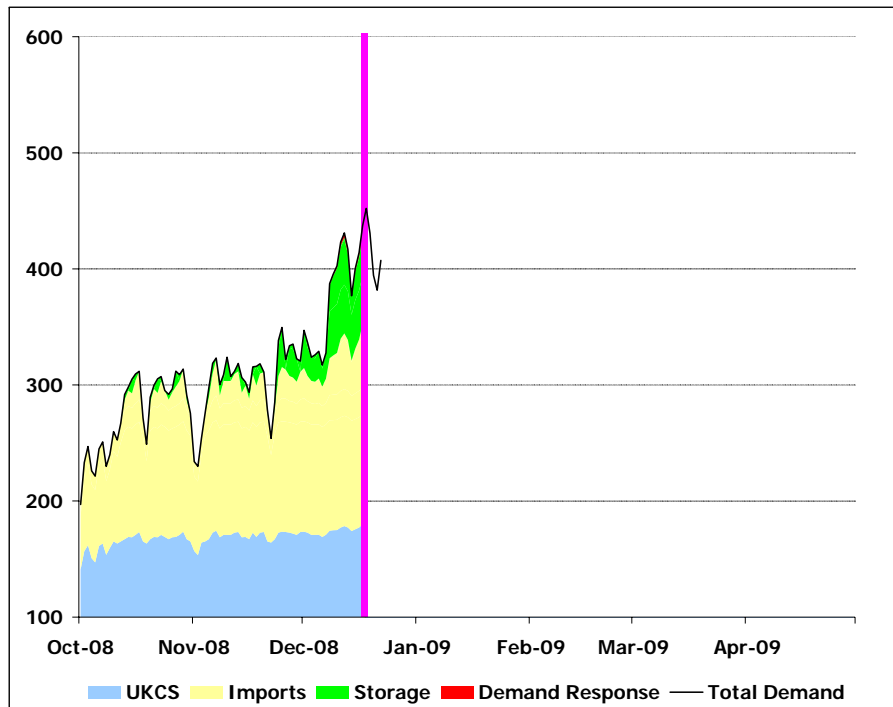
	Dem	NSS	Stor	Tot
D+1	414	340	122	462
D+2	437	340	122	462
D+3	452	340	108	448
D+4	431	340	94	434
D+5	395	340	85	425



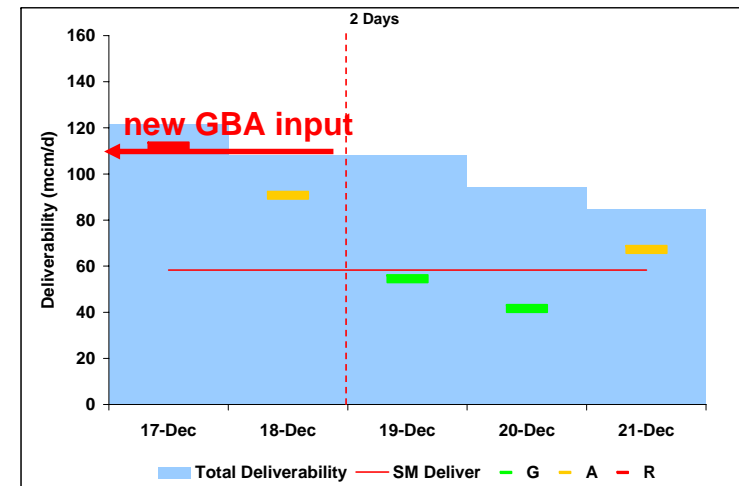
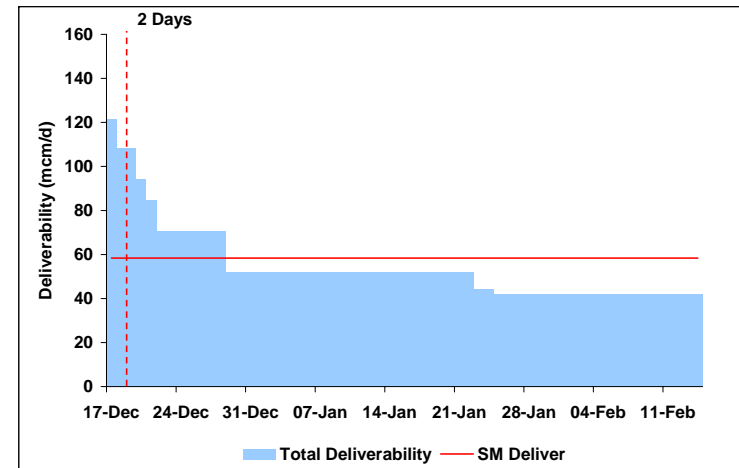
Type of information that we anticipate showing.....

2.3 depletion of storage reduces GBA trigger

17th December



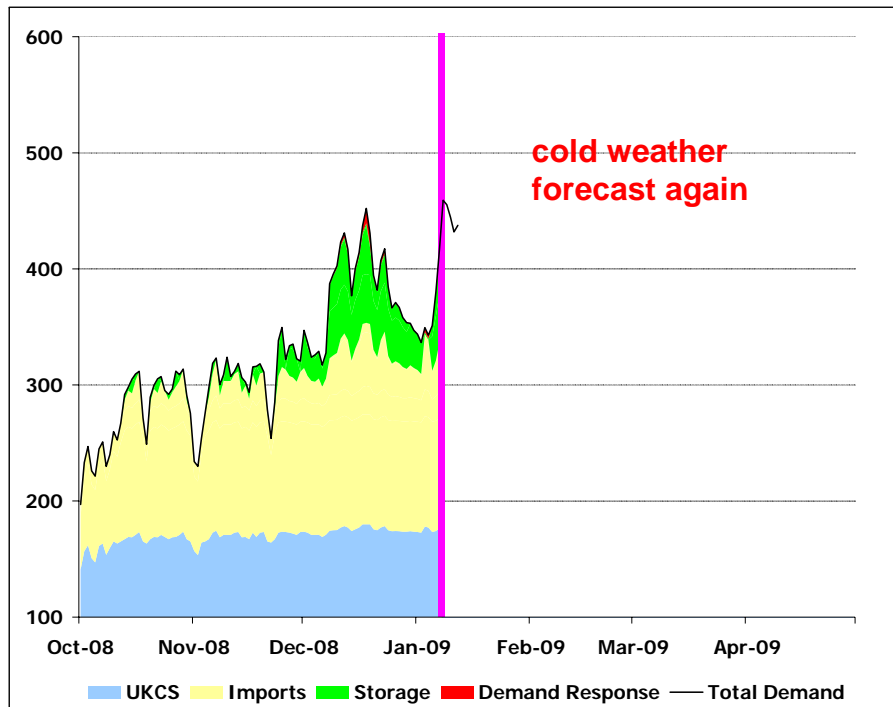
	Dem	NSS	Stor	Tot
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D+4	382	340	94	434
D+5	407	340	85	425



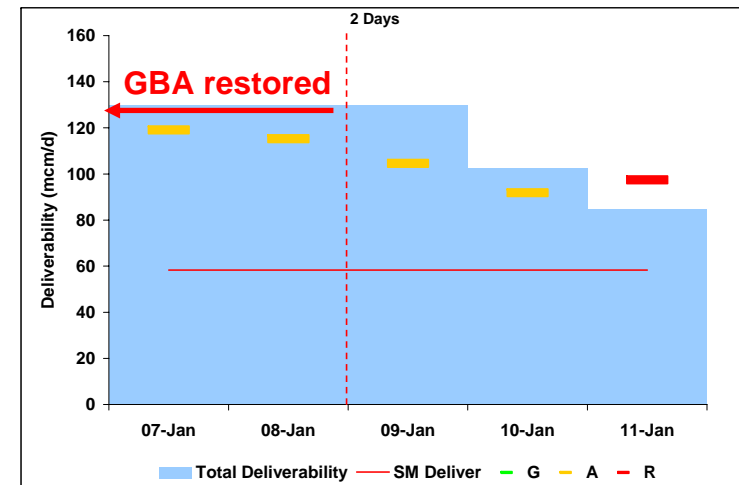
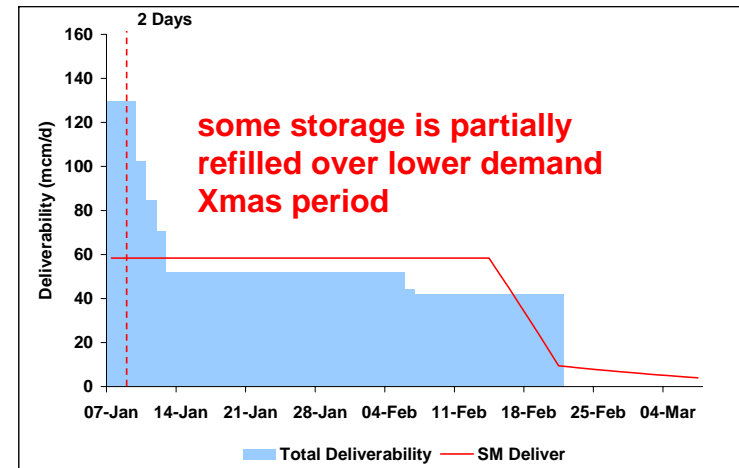
Type of information that we anticipate showing.....

3. The next month

7th January



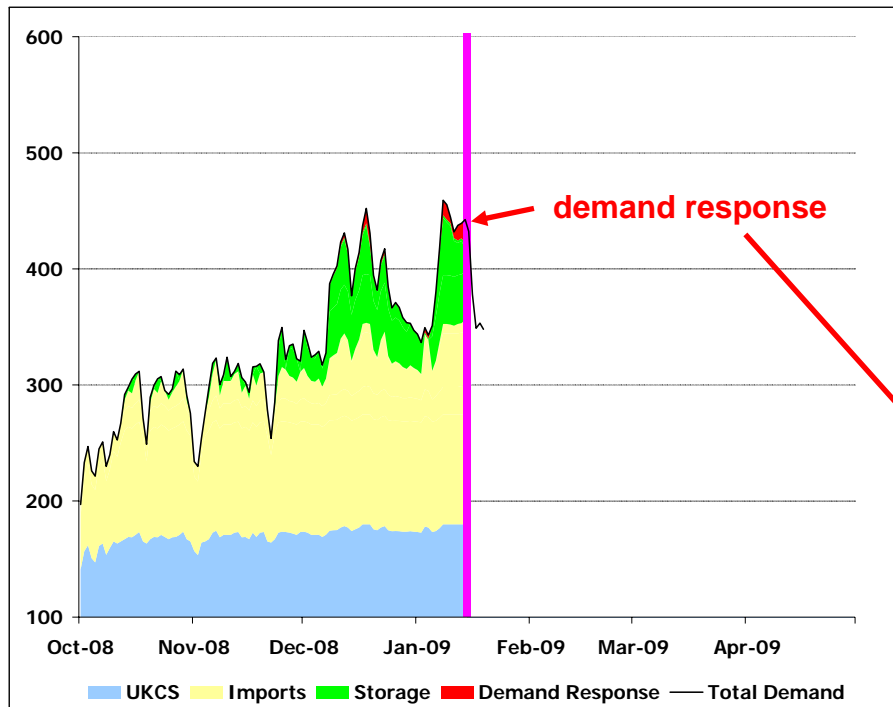
	Dem	NSS	Stor	Tot
D+1	459	340	130	470
D+2	455	340	130	470
D+3	445	340	130	470
D+4	432	340	103	443
D+5	437	340	85	425



Type of information that we anticipate showing.....

3.1. a week later

14th January



	Dem	NSS	Stor	Tot
D+1	432	340	90	430
D+2	378	340	90	430
D+3	349	340	76	416
D+4	353	340	66	406
D+5	348	340	52	392

