

Gas Emergency Arrangements

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Gas Emergency Arrangements

- ◆ UK Legislative framework and the role of the Network Emergency Coordinator (NEC)
- ◆ Network Gas Supply Emergencies
 - ◆ Gas Deficit
 - ◆ Transportation Constraint
 - ◆ GS(M)R Safety Monitors
- ◆ Priority Customers

GS(M)R 1996

Safety Case obligations

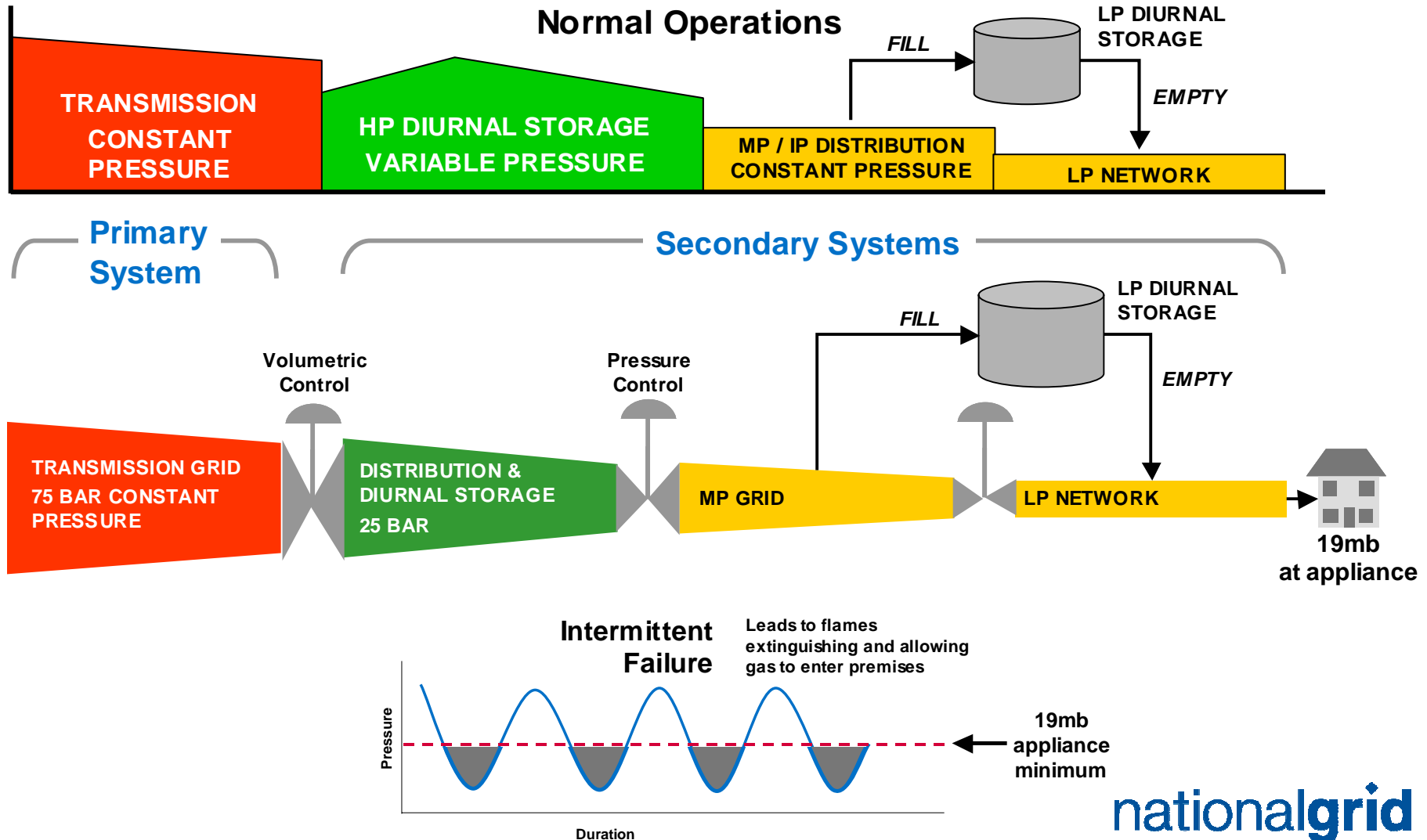
- ◆ The current NEC Safety Case was accepted by the HSE in March 2005
- ◆ Its clear objective being:
 - ◆ To prevent a Network Gas Supply Emergency from occurring, and if it should occur
 - ◆ Minimising the risk to the general public

GS(M)R legal obligations

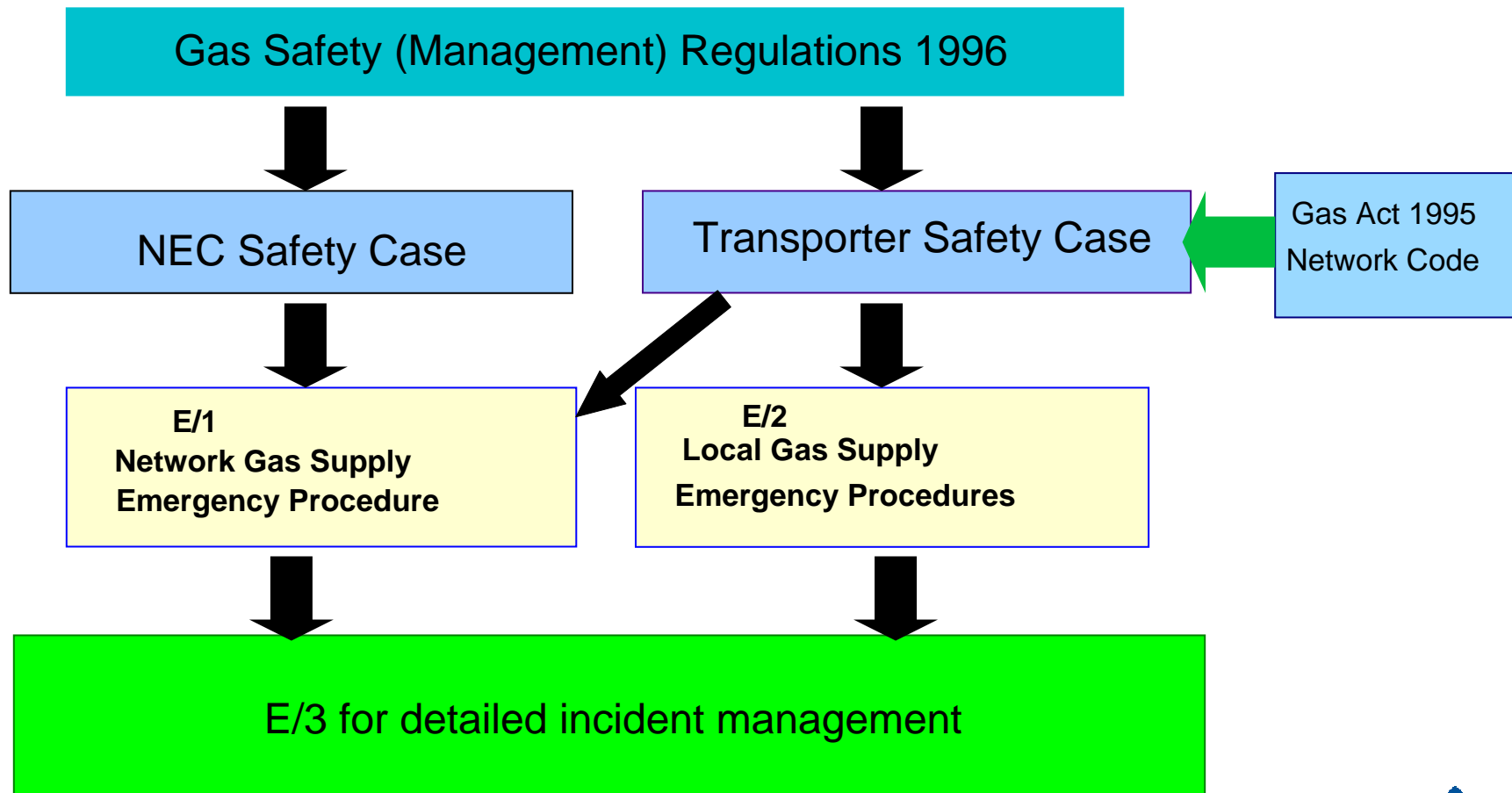
- ◆ To achieve this objective all gas conveyors have a legal obligation to comply with their own safety case, which must be aligned with the NEC Safety Case
- ◆ In addition, the following parties have a legal duty to cooperate with gas conveyors and the NEC
 - ◆ Consumers
 - ◆ Shippers
 - ◆ Storage Operators
 - ◆ Terminal Operators
 - ◆ Interconnectors

A Network Gas Supply Emergency

Supply / Demand Balance



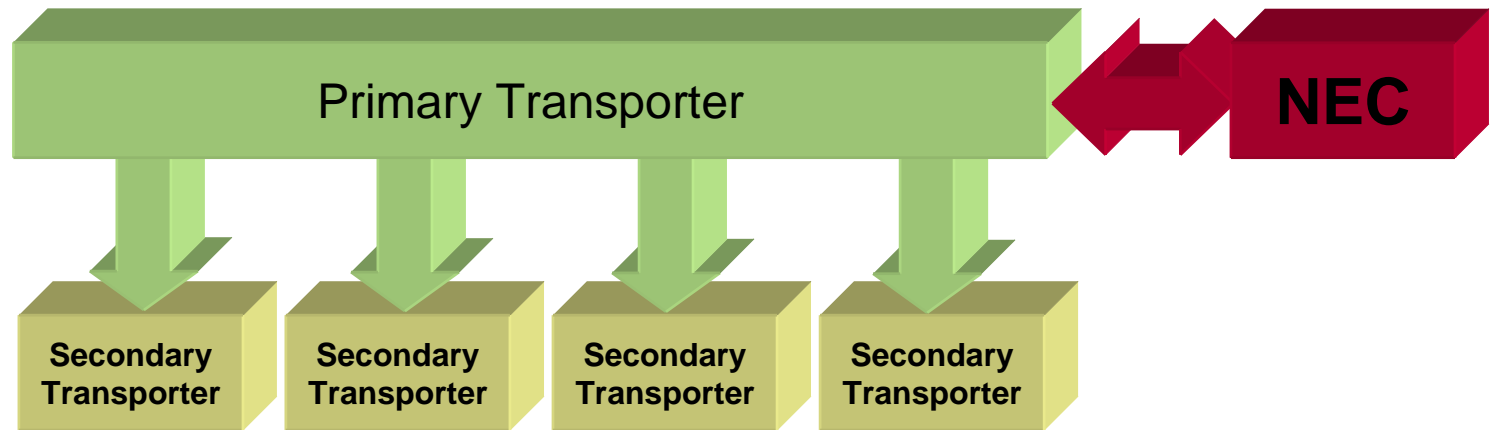
Emergency Documentation



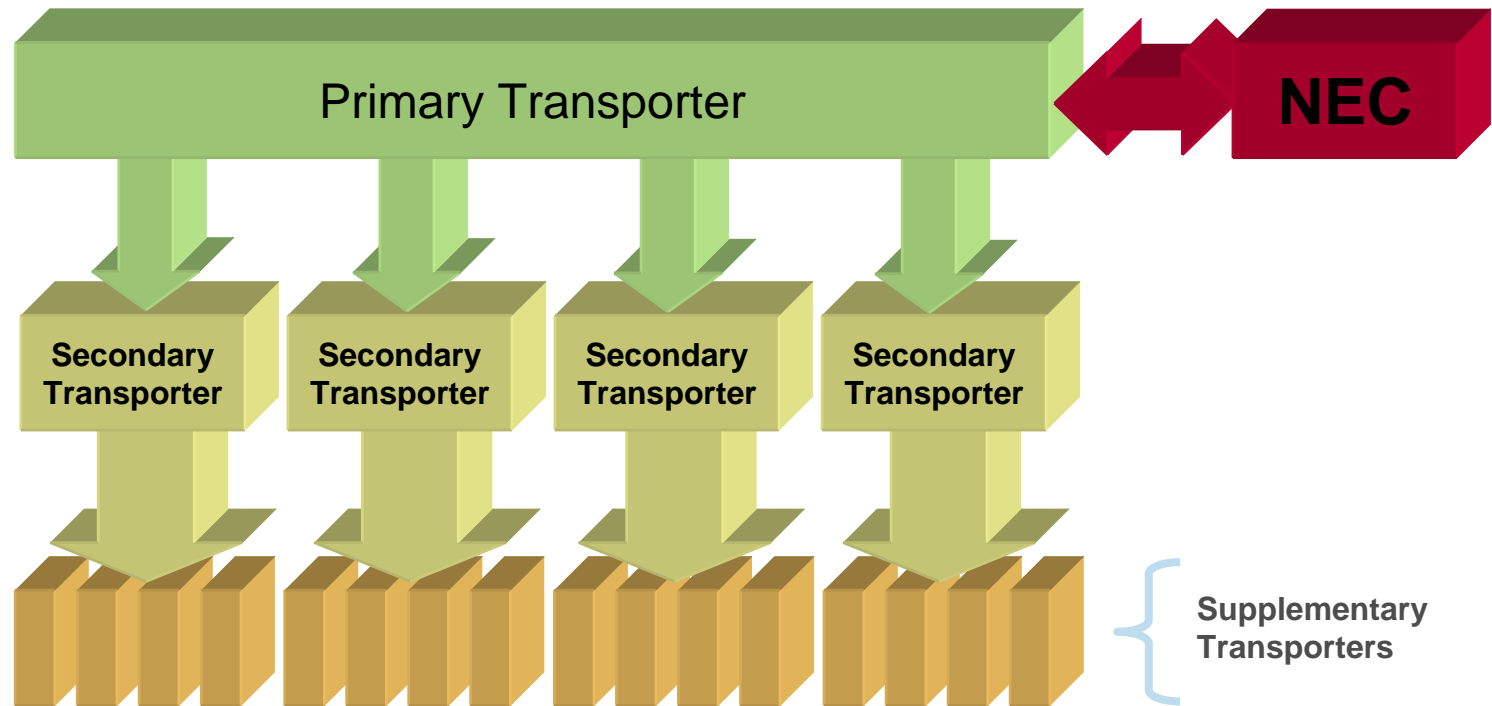
Communication routes



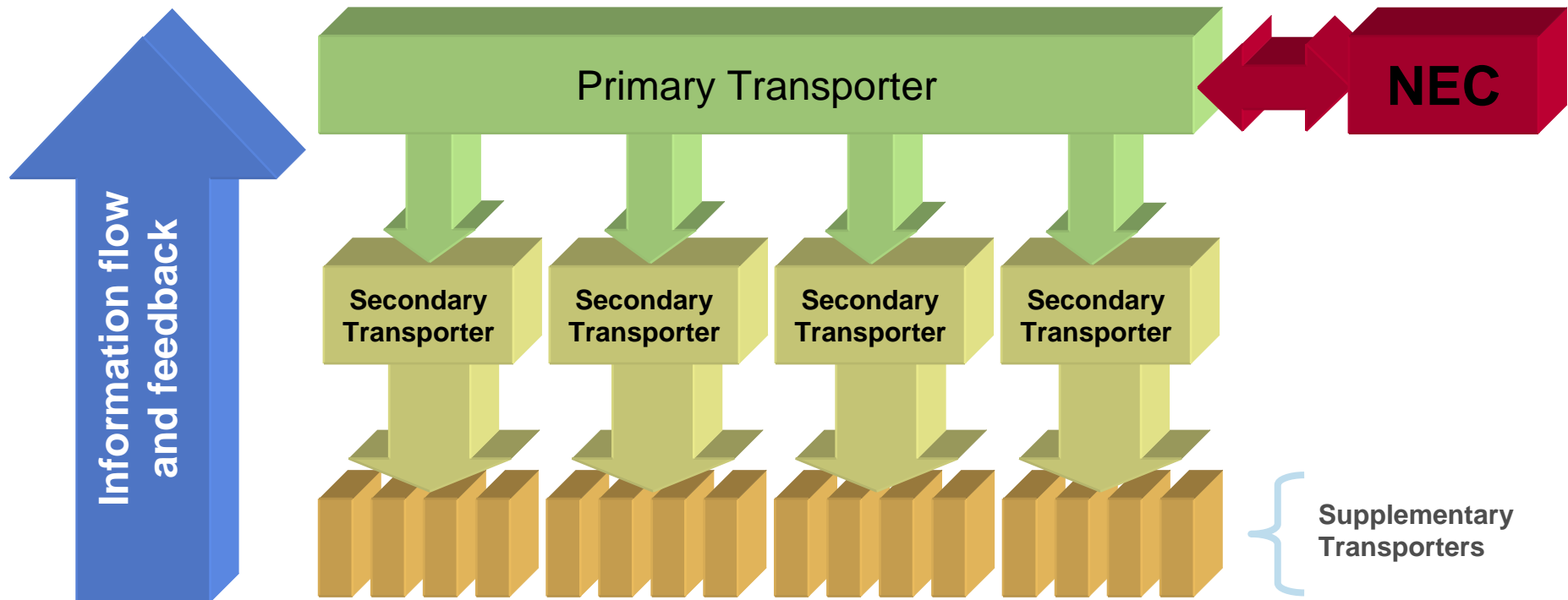
Communication routes



Communication routes



Communication routes



Emergency Decision Tree

Options Available

		NGSE GDE	NGSE GS(M)R	NGSE CTC
STAGE 1 Potential	Emergency Spec Gas	✓	✗	✓
	Primary System Linepack	✓	✗	✓
	Secondary System Storage	✓	✗	✓
	Emergency Interruption	✓	✓	✓
	Public Appeal 1 & 2	✓	✓	✓
	Storage Curtailment	✗	✓	✗
STAGE 2 Declaration	Maximise Beach Gas	✓	✓	✗
	Maximise Storage	✓	✓	✓
	Suspension of OCM	✓	✓	✗
	Public Appeal 1 & 2	✓	✓	✓
STAGE 3 Firm Load Shedding	VLDMCs inc Interconnector	✓	✗	✓
	Protected by Isolation customers	✗	✓	✗
	Public Appeal 1	✓	✓	✓
	Flow GSMR Storage Gas	✗	✓	✗
	Consumers >25,000 tpa	✓	✗	✓
	Sites protected by monitor	✗	✓	✗
	Public Appeal 2	✓	✓	✓
STAGE 4 Isolation	Allocation	✓	✓	✓
	Isolation	✓	✓	✓
STAGE 5 Restoration	Restoration of supply	✓	✓	✓
	Revocation of previous stages	✓	✓	✓

GDE – Gas Deficit Emergency; GS(M)R – Gas Safety (Management) Regulations; CTC – Critical Transportation Constraint

NGSE Stages

Normal Operations

- Markets in normal operation
- NG role of residual balancer
- Storage levels monitored
- Normal level of reporting

NGSE Stages

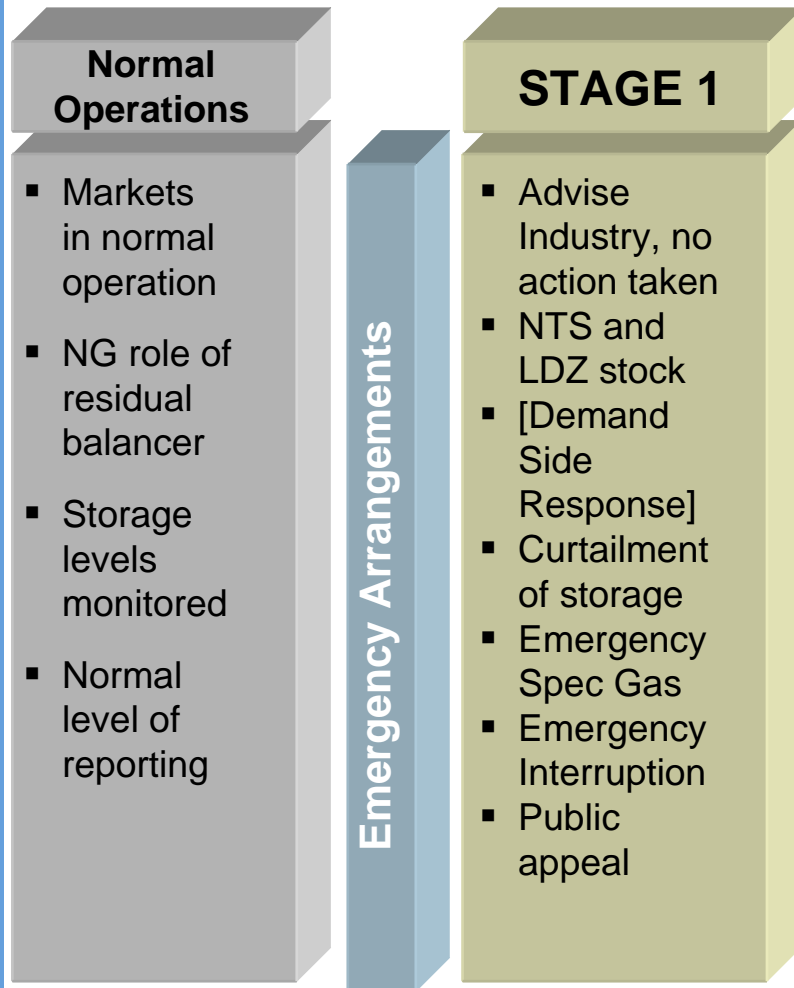
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Emergency Arrangements

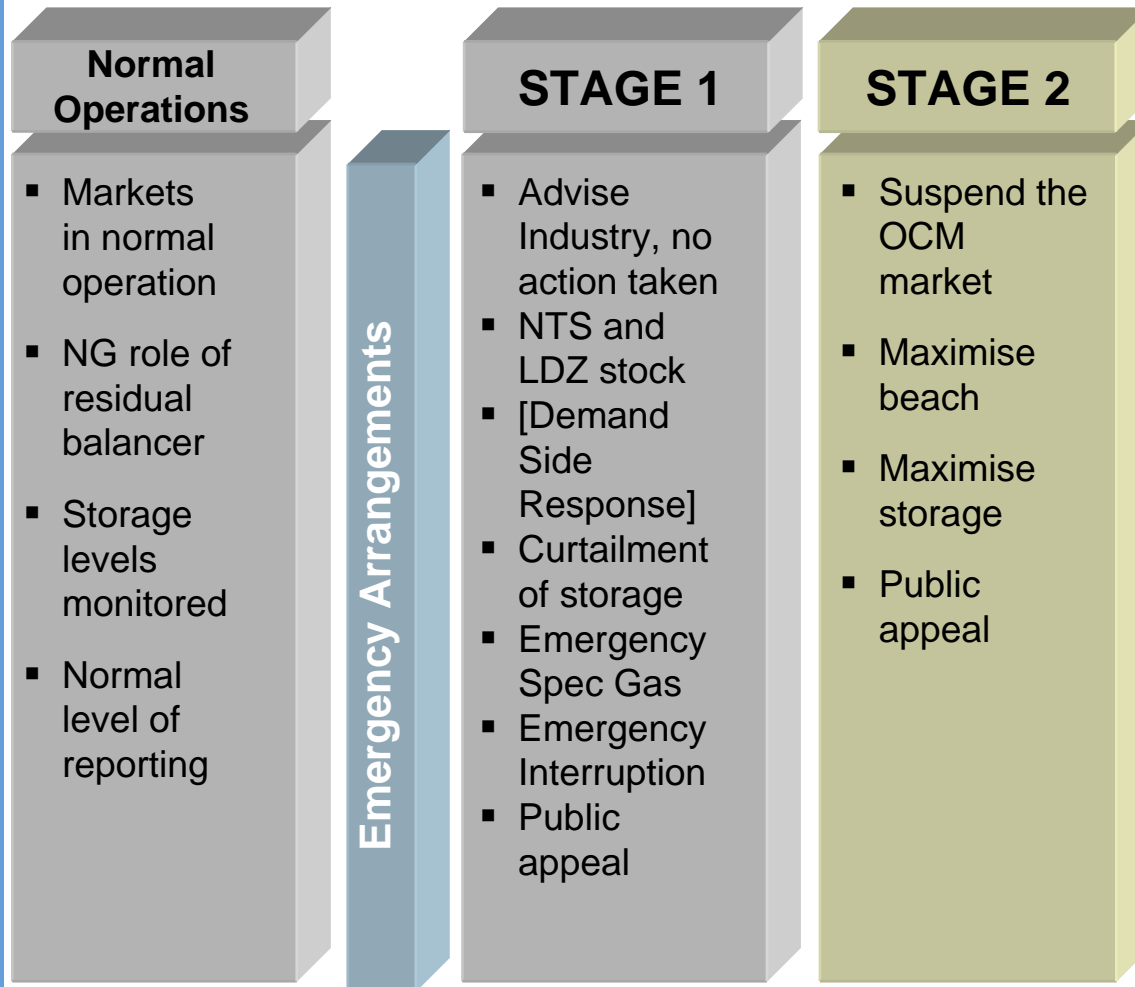
NEC will take minimum action necessary to prevent or minimise supply emergencies

NGSE Stages



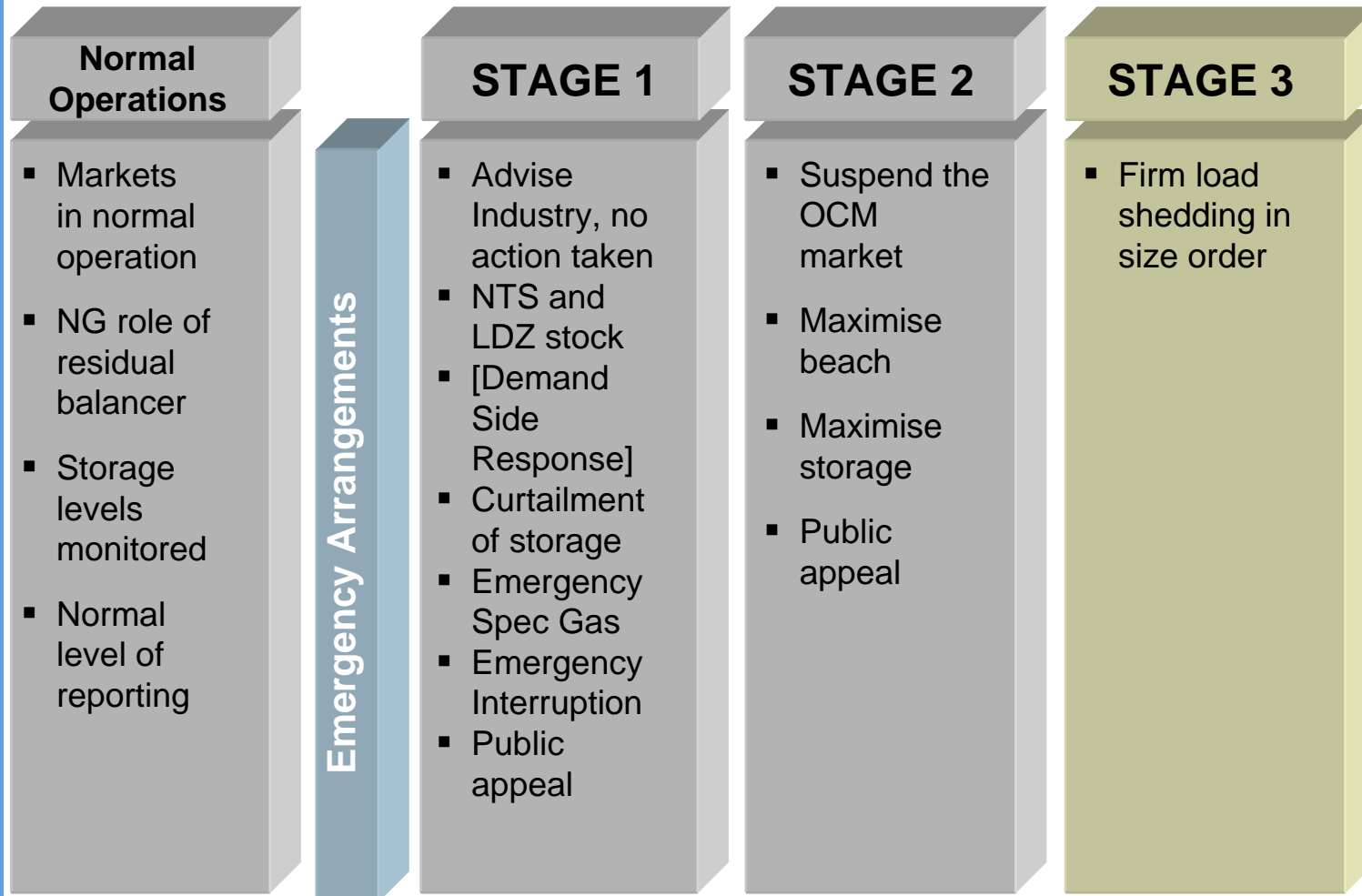
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NGSE Stages



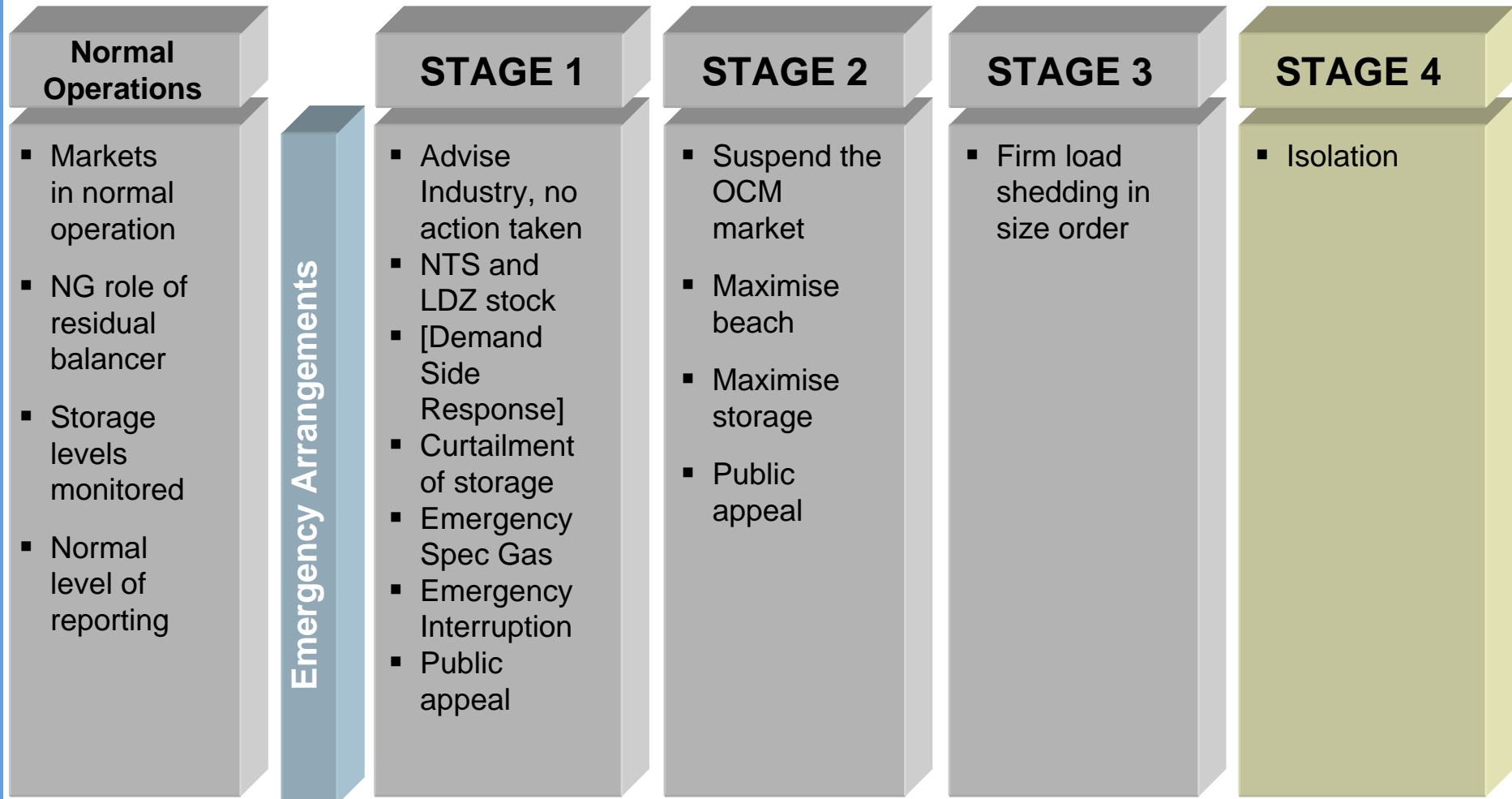
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NGSE Stages



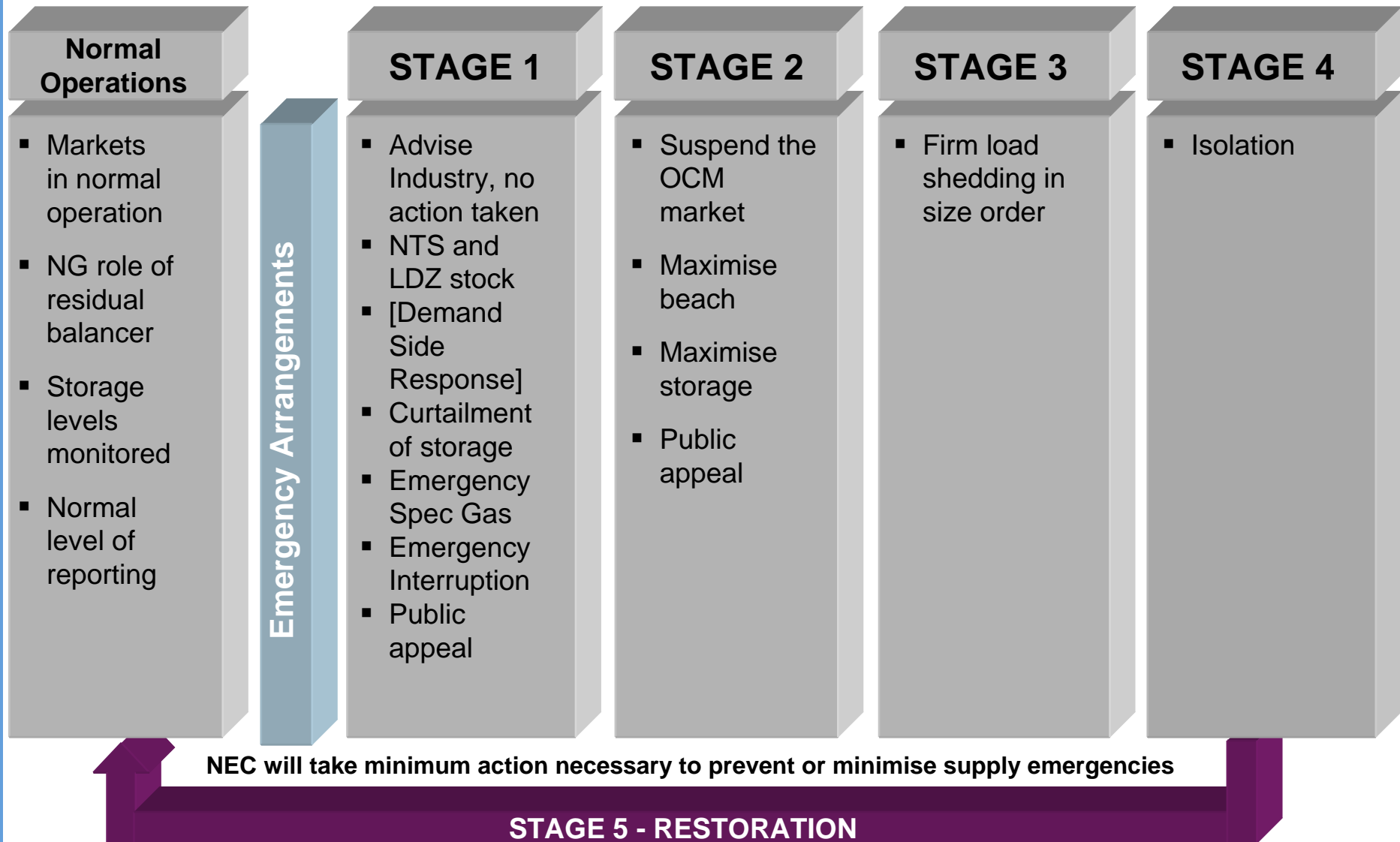
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NGSE Stages



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NGSE Stages



Network Gas Supply Emergency

- ◆ Three types of Emergency
 - ◆ Gas Supply Deficit
 - ◆ Critical Transportation Constraint
 - ◆ GS(M)R Safety Monitors Breach

Network Gas Supply Emergency

Gas Supply Deficit

- ◆ A Network Gas Supply Deficit occurs whenever there is insufficient gas available in the NTS to maintain a National supply / demand balance
- ◆ Generally envisaged to be of short duration, the steps taken to maintain control are dependent upon the conditions of the Network and the cause of the deficit

Network Gas Supply Emergency Critical Transportation Constraint

- ◆ A Critical Transportation Constraint occurs when the Primary Transporter is unable to maintain adequate pressures at specific gas offtakes from the National Transmission System (NTS)
- ◆ Various options to reduce local demand are available in such an emergency
- ◆ A key difference being that the “On-the-day Commodity Market” (OCM) would not be suspended
- ◆ Critical Transportation Constraint emergencies are generally expected to be of short duration

Network Gas Supply Emergency

GS(M)R Safety Monitors Breach

- ◆ Safety Monitors ensure continued safe control of the Network should the UK experience a severe winter
- ◆ If the safety monitor is breached for any storage type, the NEC will declare an emergency
- ◆ This type of emergency could be protracted and stay in place until either
 - ◆ The storage gas under the monitors is replenished, or
 - ◆ The monitor levels decline as the winter ends

Incident at Rough Gas Storage Facility

16th February 2006



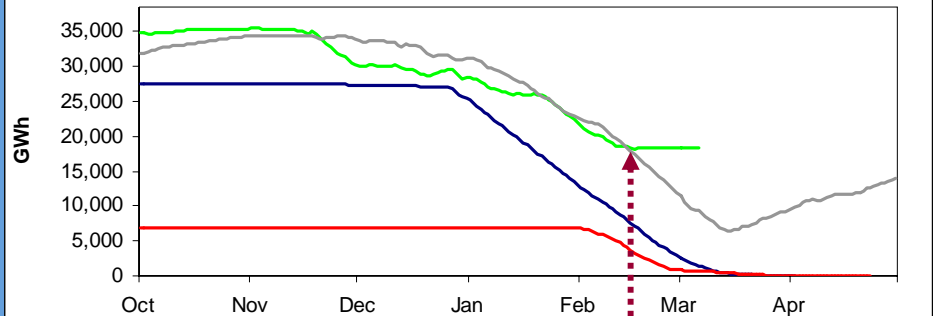
Incident details

- At 10.31 Thursday 16/02/06, there was a small fire on a mobile glycol tank on the 3B Platform.
- There were two casualties requiring hospital treatment but their injuries were not considered serious. As the fire was on a mobile tank, there has no damage to the actual platform.
- The platform and sea line were depressurised and made safe, and manning on 3B was reduced to essential operational staff only.

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Storage position following incident at Rough Gas Storage Facility

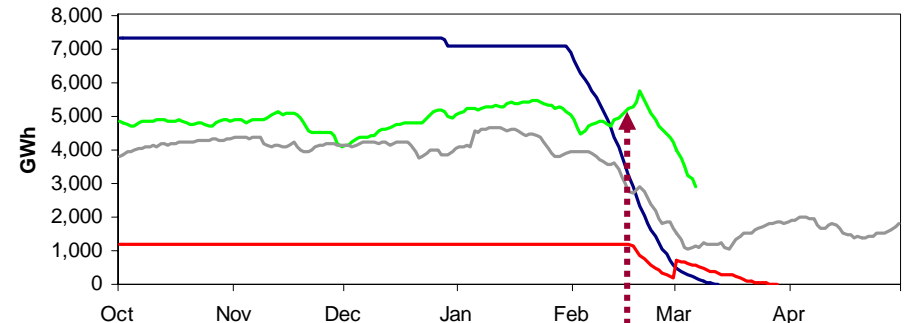
LRS Storage Stock



— Total Firm Monitor — Safety Monitor — Stock Level 2005 / 06 — Stock Level 2004 / 05

Rough Incident

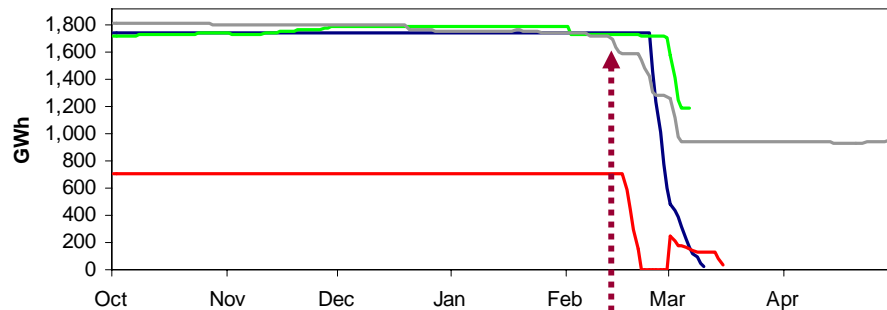
MRS Storage Stock



— Total Firm Monitor — Safety Monitor — Stock Level 2005 / 06 — Stock Level 2004 / 05

Rough Incident

SRS Storage Stock



— Total Firm Monitor — Safety Monitor — Stock Level 2005 / 06 — Stock Level 2004 / 05

Rough Incident

Consumers protected by monitor include all:

- Domestic customers
- Other non-daily metered loads
- Priority “firm” customers
- Firm exports to Ireland

Reallocation of safety monitors

- ◆ 16th February 2006
 - ◆ Incident at Rough Storage Platform
- ◆ 1st March 2006
 - ◆ Notification received that Rough outage would be for at least two months
 - ◆ Safety Monitors reallocated
 - ◆ GBA trigger reduced from 467mcm to 425mcm
- ◆ 5th March 2006
 - ◆ SRS 2-day warning safety monitor was breached
 - ◆ GBA trigger reduced from 425mcm to 377mcm

Priority Customers

- ◆ Priority customers have to meet specific criteria as laid out by the Secretary of State
- ◆ Application for registration is made by the Shipper to xoserve, who manage the process on behalf of the industry

Priority Category	Contract Type	Characteristics	Example of customers	GT Safety Case	No. of customers	Additional Information
Priority A	Firm	> 25,000 Therms per annum.	Failure to supply could put lives at risk. e.g. Hospitals or homes for elderly or disabled.	Protected by Monitor	4767 *	16 DM Aggregate AQ 407 GWh 4751 NDM Aggregate AQ 19 TWh
Priority B	Interruptible	Interruption Notice period normally 5 hours	Currently 4 Either Ambulance or Fire Stations the remainder are Hospitals.	Protected by Isolation	200 *	Aggregate AQ 6.4 Twh
Priority C	Firm or Interruptible	Require adequate time to be safely shut down. Otherwise could sustain serious damage (£50m or more)	Major items of capital plant.e.g.Fumaces, Glass works.	Firm Priority C = Protected by Monitor.	1	1 NTS Site AQ 1.66 Twh
				Interruptible Priority C = Protected by Isolation	0	

Market Flexibility

- ◆ Customers have greater flexibility to respond to a potential crisis under market arrangements rather than under gas contingency arrangements
- ◆ At Emergency Stage 3, customers have no choice but to switch off when instructed by their Transporter

Summary

- ◆ Industry emergency arrangements have been in existence for a number of years, and are subject to regular testing and exercise
- ◆ Compliance with statutory obligations by all parties will be essential in the event of an emergency ever being called
- ◆ The UK gas industry has an exemplary record for safe operation – a record the industry is committed to retaining!