Review of the UNC Post-Emergency Arrangements

Cash-flow examples

Example 1 – Emergency claims *not adjusted* by frozen SAP price

1. Daily Energy Imbalances for Gas Day 1st December (End of Day)

Table 1

Total System Daily Imbalance   **Shippers' Daily Imbalances**

	System	shipper1	shipper2	shipper3	shipper4	shipper5	shipper6	shipper7
Inputs								
Physical	**5500**	**900**	**500**	**400**	**1500**	**400**	**1800**	**0**
NBP Buys								1800
Sub-total	5500	900	500	400	1500	400	1800	1800
Outputs								
Physical	**5700**	**250**	**250**	**750**	**1900**	**750**	**0**	**1800**
NBP Sells		0	0	0	0	0	1800	0
Sub-total	5700	250	250	750	1900	750	1800	1800
Net	**-200**	**650**	**250**	**-350**	**-400**	**-350**	**0**	**0**
Imbalance cash-out £		*123.5*	*47.5*	*-69.965*	*-79.96*	*-69.965*	*0*	*0*

Note: Daily Imbalance | +900 kWh surplus *(posted as OCM offers)* | -1100 kWh short *(sum of shippers' deficit imbalances)*

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2. Daily Cashout Price(s)

Table 2

	Stage 1	Stages 2-5 (frozen)
SAP	0.1800	0.1900
SMP Buy	0.1900	0.1999

A Gas Deficit Emergency (GDE) occurred on 1st December. Prior to Stage 2 of the GDE, the cashout prices remained dynamic however, at Stage 2+, the cashout prices are frozen. The shippers' daily energy imbalances are cashed-out at the frozen price i.e. at SAP for those shippers with a long position and at SMP Buy for those with a short position.

3. OCM Physical Market Offers

Shippers 1 and 2 posted offers to sell their additional over-supply on the OCM with a price-range of 0.2000 to 2.4500 p/kWh; these offer prices were above the frozen SMP Buy price of 0.1999 p/kWh and thus did not provide a strong incentive for those shippers with a short imbalance (cashed-out at SMP Buy) to address their imbalance positions.

Table 3

OCM Offers	kWh	p/kWh	Cost £	
Offer 1	250	0.2000	50.00	*(Shipper2)*
Offer 2	150	0.3000	45.00	*(Shipper1)*
Offer 3	300	0.2200	66.00	*(Shipper1)*
Offer 4	150	1.1010	165.15	*(Shipper1)*
Offer 5	50	2.4500	122.50	*(Shipper1)*
Totals	**900**		**448.65**	

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4. ## Post-Emergency Claims

Whilst those offers posted by the shippers remained on the OCM, the oversupplies did physically flow (in accordance with GSMR obligations to maximise supplies) and thus those particular shippers' daily imbalances would be allocated as long and cashed-out at SAP (0.1900 p/kWh).

The shippers will now able to submit these OCM offers as the basis for recovering their costs via the revised post-emergency claims process e.g. through the existing Balancing Neutrality process. It should be noted that under the prevailing UNC post-emergency arrangements, 'long' shippers are able to claim for the quantities of surplus gas above their demand.

Only valid post-emergency claims will be processed.

The costs of the post-emergency claims will be recovered from those shippers that incurred a short imbalance position.

Calculation of the costs and weighted average price of the post-emergency claims:

a) Calculate the cost of each claim = claim quantity (kWh) * claim price (p/kWh)
b) Calculate the sum total quantity (kWh) of the claims
c) Calculate the sum total cost (p/kWh) of the claims
d) Calculate the weighted average price (p/kWh) =

Sum total cost (p/kWh) of claims
Sum total quantity (kWh) of claims

In this example, the weighted average price of the emergency claims:

$$\frac{448.6500}{900} = 0.4985 \text{ p/kWh}$$

Review of the UNC Post-Emergency Arrangements

Cash-flow examples

5. Payment of claims/recovery of costs

To preserve the integrity of Balancing Neutrality, it will be necessary for xoserve to process the payments of the claims and, the recovery of the associated costs simultaneously in the same billing period. It is anticipated that this will be no later than [3] months post GDE/Gas Day(s).

Payment of the emergency claims will be based on the quantity and price of the OCM offers (See Table 3) resulting in Shipper1 receiving £398.65 and shipper2 receiving £50.00.

Table 4

UNC Claims – Emergency Neutrality Charges

	Deficit Imbalance kWh	Charge £
Shipper1	0	0.00
Shipper2	0	0.00
Shipper3	350	174.47
Shipper4	400	199.41
Shipper5	350	174.47
Shipper6	0	0.0000
Shipper7	0	0.0000
Totals	**1100**	**548.35**

The costs of the emergency claims will be recovered from those shippers with deficit imbalances e.g. imbalance * weighted average price of emergency claims (0.4985p/kWh).

Any over-under recovery of the emergency claims costs will be apportioned across all shippers based on throughput (UDQI/UDQO). In this example, the total costs of the emergency claims was £448.65 (see Table 3) however, the emergency neutrality charges recovered £548.35 (Table 4). Therefore, the over-recovery of £99.70 will be apportioned (credited) to all shippers via Balancing Neutrality.

6. Shipper cash-flows

Table 5

	Imbalance Cashout £	Emergency Claims (paid) £	Emergency Claims (charges) £	Neutrality Smear	Total £
Shipper1	123.50	398.65	0.00	15.26	537.41
Shipper2	47.50	50.00	0.00	9.95	107.45
Shipper3	-69.96	0.00	-174.47	15.26	-229.17
Shipper4	-79.96	0.00	-199.41	45.11	-234.26
Shipper5	-69.96	0.00	-174.47	15.26	-229.17
Shipper6	0.00	0.00	0.00	23.87	23.87
Shipper7	0.00	0.00	0.00	23.87	23.87
Totals	-48.88	448.65	-548.35	148.58	0.00

Review of the UNC Post-Emergency Arrangements

Cash-flow examples

Example 2 - Emergency claims *adjusted* by frozen SAP price

1. Daily Energy Imbalances for Gas Day 1st December (End of Day)

Table 1

Total System Daily Imbalance   **Shippers' Daily Imbalances**

		System	shipper1	shipper2	shipper3	shipper4	shipper5	shipper6	shipper7
Inputs										
	Physical	**5500**	**900**	**500**	**400**	**1500**	**400**	**1800**	**0**
	NBP Buys									1800
	Sub-total	5500	900	500	400	1500	400	1800	1800
Outputs										
	Physical	**5700**	**250**	**250**	**750**	**1900**	**750**	**0**	**1800**
	NBP Sells		0	0	0	0	0	1800	0
	Sub-total	5700	250	250	750	1900	750	1800	1800
	Net	**-200**	**650**	**250**	**-350**	**-400**	**-350**	**0**	**0**
	Imbalance cash-out £		123.5	47.5	-69.965	-79.96	-69.965	0	0
	Note: Daily Imbalance		+900 kWh surplus *(posted as OCM offers)*		-1100 kWh short *(sum of shippers' deficit imbalances)*				

Review of the UNC Post-Emergency Arrangements

Cash-flow examples

2. Daily Cashout Price(s)

Table 2

	Stage 1	Stages 2-5 (frozen)
SAP	0.1800	0.1900
SMP Buy	0.1900	0.1999

A Gas Deficit Emergency (GDE) occurred on 1st December. Prior to Stage 1 of the GDE, the cashout prices remained dynamic however, at Stage 2+, the cashout prices are frozen. The shippers' daily energy imbalances are cashed-out at the frozen price i.e. at SAP for those shippers with a long position and at SMP Buy for those with a short position.

3. OCM Physical Market Offers

Shippers 1 and 2 posted offers to sell their additional over-supply on the OCM with a price-range of 0.2000 to 2.4500 p/kWh; these offer prices were above the frozen SMP Buy price of 0.1999 p/kWh. However, if the offer prices are adjusted by SAP, there is an incentive for shippers to address any short imbalance positions with several of the posted offers (offers 1 - 3) as the offer prices would be effectively below that of SMP Buy.

Table 3

OCM Offers	Quantity kWh	Price p/kWh	SAP (frozen)	Adjusted Price	Cost £	
Offer 1	250	0.2000		0.0100	2.50	*Shipper2*
Offer 2	150	0.3000	0.1900	0.1100	16.50	*Shipper1*
Offer 3	300	0.2200		0.0300	9.00	*Shipper1*
Offer 4	150	1.1010		0.9110	136.65	*Shipper1*
Offer 5	50	2.4500		2.2600	113.00	*Shipper1*
Totals	**900**				**277.65**	

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Cash-flow examples

4. Post-Emergency Claims

Whilst those offers posted by the shippers remained on the OCM, the oversupplies did physically flow (in accordance with GSMR obligations to maximise supplies) and thus those particular shippers' daily imbalances would be allocated as long and cashed-out at SAP (0.1900 p/kWh).

The shippers will now able to submit these OCM offers as the basis for recovering their costs via the revised post-emergency claims process e.g. through the existing Balancing Neutrality process. It should be noted that under the prevailing UNC post-emergency arrangements, 'long' shippers are able to claim for the quantities of surplus gas above their demand.

Only valid post-emergency claims will be processed.

The costs of the post-emergency claims will be recovered from those shippers that incurred a short imbalance position.

In this example, the OCM offer price that forms the basis of the emergency claim will be adjusted by the frozen SAP price – see Table 3. The rationale for this is that those shippers submitting valid post-emergency claims would have received payment through Balancing Neutrality at SAP for their physical over-supply to the system.

Calculation of the costs and weighted average price of the post-emergency claims:

   a) Calculate the cost of each claim = claim quantity (kWh) * (claim price – frozen SAP) p/kWh
   b) Calculate the sum total quantity (kWh) of the claims
   c) Calculate the sum total cost (p/kWh) of the claims
   d) Calculate the weighted average price (p/kWh) =

$$\frac{\text{Sum total cost (p/kWh) of claims}}{\text{Sum total quantity (kWh) of claims}}$$

In this example, the weighted average price of the emergency claims: -

$$\frac{277.65}{900} = 0.3085 \text{ p/kWh}$$

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Cash-flow examples

5. Payment of claims/recovery of costs

To preserve the integrity of Balancing Neutrality, it will be necessary for xoserve to process the payments of the claims and, the recovery of the associated costs in the same billing period i.e. simultaneously. It is anticipated that this will be no later than [3] months post GDE/Gas Day(s).

Payment of the emergency claims will be based on the quantity and price of the OCM offers (See Table 3) resulting in Shipper1 receiving £275.15 and shipper2 receiving £2.50.

Table 4

UNC Claims – Emergency Neutrality Charges

	Deficit Imbalance kWh	Charge £
Shipper1	0	0.0000
Shipper2	0	0.0000
Shipper3	350	107.97
Shipper4	400	123.41
Shipper5	350	107.97
Shipper6	0	0.00
Shipper7	0	0.00
Totals	1100	**339.35**

The costs of the emergency claims will be recovered from those shippers with deficit imbalances e.g. imbalance * weighted average price of emergency claims (0.3085 p/kWh).

Any over-under recovery of the emergency claims costs will be apportioned across all shippers based on throughput (UDQI/UDQO). In this example, the total costs of the emergency claims was £277.65 (see Table 3) however, the emergency neutrality charges recovered £339.35 (Table 4). Therefore, the over-recovery of £61.70 will be apportioned (credited) to all shippers via Balancing Neutrality.

6. Shipper cash-flows

Table 5

	Imbalance Cashout £	Emergency Claims (paid) £	Emergency Claims (charges) £	Neutrality Smear	Total £
Shipper1	123.50	275.15	0.00	11.35	410.00
Shipper2	47.50	2.50	0.00	7.40	57.40
Shipper3	-69.96	0.00	-107.97	11.36	-166.57
Shipper4	-79.96	0.00	-123.41	33.57	-169.80
Shipper5	-69.96	0.00	-107.97	11.36	-166.57
Shipper6	0.00	0.00	0.00	17.77	17.77
Shipper7	0.00	0.00	0.00	17.77	17.77
Totals	-48.88	277.65	-339.35	110.58	0.00