

GMCC 08-072-01



Victorian Energy Networks Corporation

Significant Event Report

Gas Day: 25 July 2008

VENCORP
September 2008

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Significant Event Report 25 July 2008

1 Introduction

VENCorp is required to monitor daily trading activity within the Victorian wholesale gas market to ensure such trading is in accordance with the MSO Rules and to identify any significant market events in and between trading intervals. This report provides an explanation of the events for 25 July 2008 and examines whether the activities of market participants may have significantly affected market outcomes.

2 Summary of Results

Significant settlement variations occurred on gas day 25 July 2008. This day is considered significant due to the large ancillary payments that occurred in schedules 4 and 5. See Table 1 for the wholesale spot market prices and ancillary payments.

Table 1 – Price and Ancillary Payments

Payment Type	Gas Day	Schedule 1	Schedule 2	Schedule 3	Schedule 4	Schedule 5	Total
Market Price	25 Jul 08	\$3.40/GJ	\$3.45/GJ	\$3.45/GJ	\$3.40/GJ	\$3.07/GJ	
Ancillary Payment	25 Jul 08	\$0	\$0	\$0	\$605,184	-\$217,400	\$387,784

The following summarises the events during the day.

At the start of the gas day:

- cold temperatures were forecast by the Bureau of Meteorology (BOM), with an expected minimum of 6°C and maximum of 15°C;
- market participants' (MPs) demand forecasts were 1,032.9TJ including 50.5TJ of forecast gas fired power generation (GPG);
- the market price was \$3.40; and
- there were no ancillary payments.

As the gas day progressed through to schedule 3 there were no significant issues. Forecast and actual temperatures were similar; VENCORP did not override MP's aggregate demand forecasts; there was no significant movement in the market price and there were no ancillary payments.

However between 5:09pm and 5:12pm, as shown in Figure 1, there was a complete loss of supply from Longford. The injection flow from Longford recommenced and gradually increased, however the linepack was rapidly deteriorating in the approach to the evening demand peak.

At 6:06pm, minimum pressures at Sale were breached; at this time TRU Energy was contacted regarding the potential threat and possible curtailment of the Jeeralang and Newport generators. Both generators voluntarily reduced their withdrawals.

At 6:15pm, ESSO advised that two of the three Longford gas plants were back online and would slowly ramp up, but flow rates did not increase significantly.

Subsequently, an ad-hoc schedule was issued at 6:51pm applying from 7pm with supply demand point constraints (SDPCs) applied on Longford from 7pm until the end of the scheduling horizon (6am the following day), based on a continuation of the then current Longford flow rates.

Accordingly, gas supply was scheduled from alternate sources without any further intervention or direction by VENCORP. In the ad-hoc schedule applying from 7pm, a total of 1,096 TJ of gas supply was scheduled from Longford, Iona, SEA Gas, BassGas plus LNG, Culcairn and VicHub, as shown in Table 2. This included an additional 51 TJ of LNG, 9 TJ from Culcairn and 10 TJ from VicHub, in reaction to a 94 TJ shortfall in supply from Longford. This coupled with SDPCs associated with this ad-hoc schedule caused \$605,184 of ancillary payments.

Figure 1 – Longford injection flow from 6pm 24 July 2008 - 6am 27 July 2008

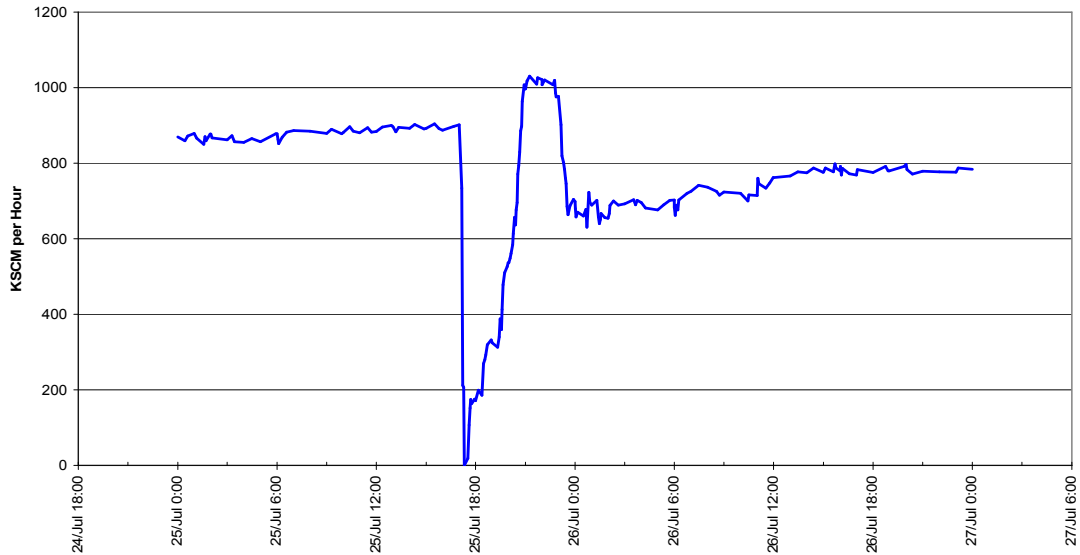


Figure 2 – Actual Hourly Injections

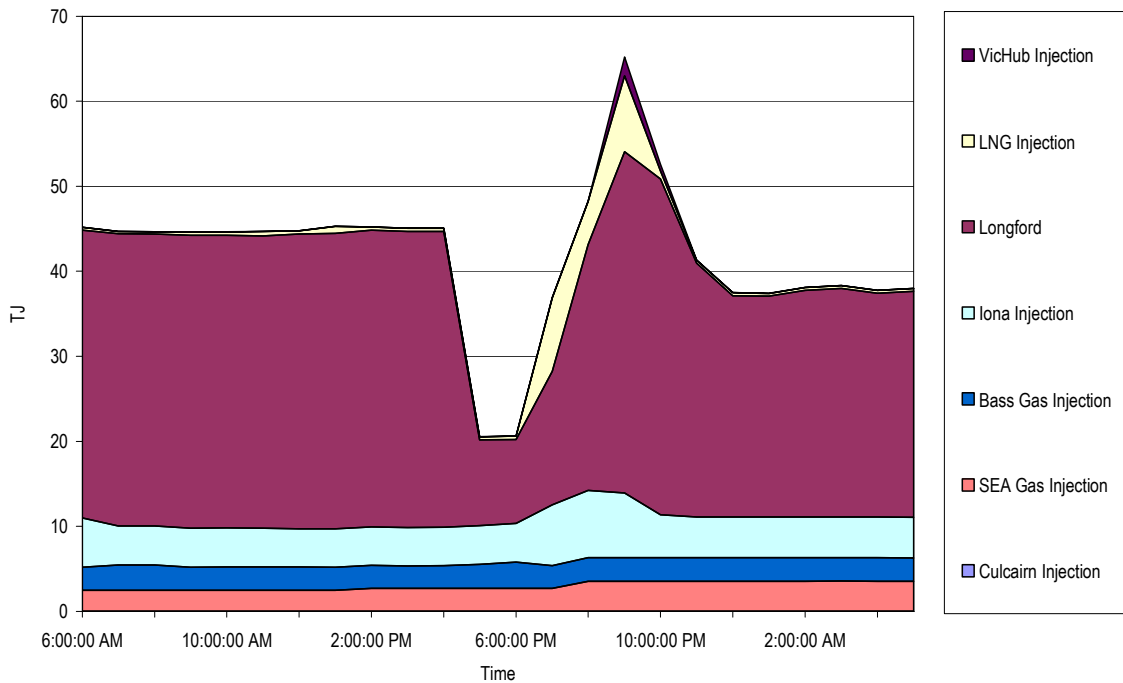


Table 2 – Comparisons of Actual and Scheduled Injections by Injection Point

Injection Point MIRN	Injection Point Name	6pm Scheduled Injections (TJ)	7pm Scheduled Injections (TJ)	10pm Scheduled Injections (TJ)	Actual Injections (TJ)
20000001PC	Culcairn	0.0	9.0	2.5	0.0
30000001PC	Longford	818.6	742.6	712.0	712.5
30000101PC	LNG	0.0	51.5	30.2	29.6
30000154PC	Iona	110.0	146.6	119.8	121.6
30000167PC	VicHub	0.0	10.0	3.0	3.2
30000168PC	SEA Gas	63.0	71.3	71.3	71.3
30000170PC	BassGas	65.0	65.0	65.0	66.5
Total		1,056.6	1,096.0	1,003.6	1,004.7

With the ongoing recovery of Longford, normal operation was fully restored by the 10pm schedule. Figure 3 shows that the 10pm market price dropped to \$3.07, reflecting the Longford recovery and the downward revision in bid prices by a number of MPs at the 10pm schedule, as shown in Figure 4. See Appendix 1 for the full details of Market Participants' bids at the 6pm and 10pm schedules, and Appendix 2 for the LNG bids for each Market Participant.

Figure 3 – Actual and Forecast Demand and Market Price

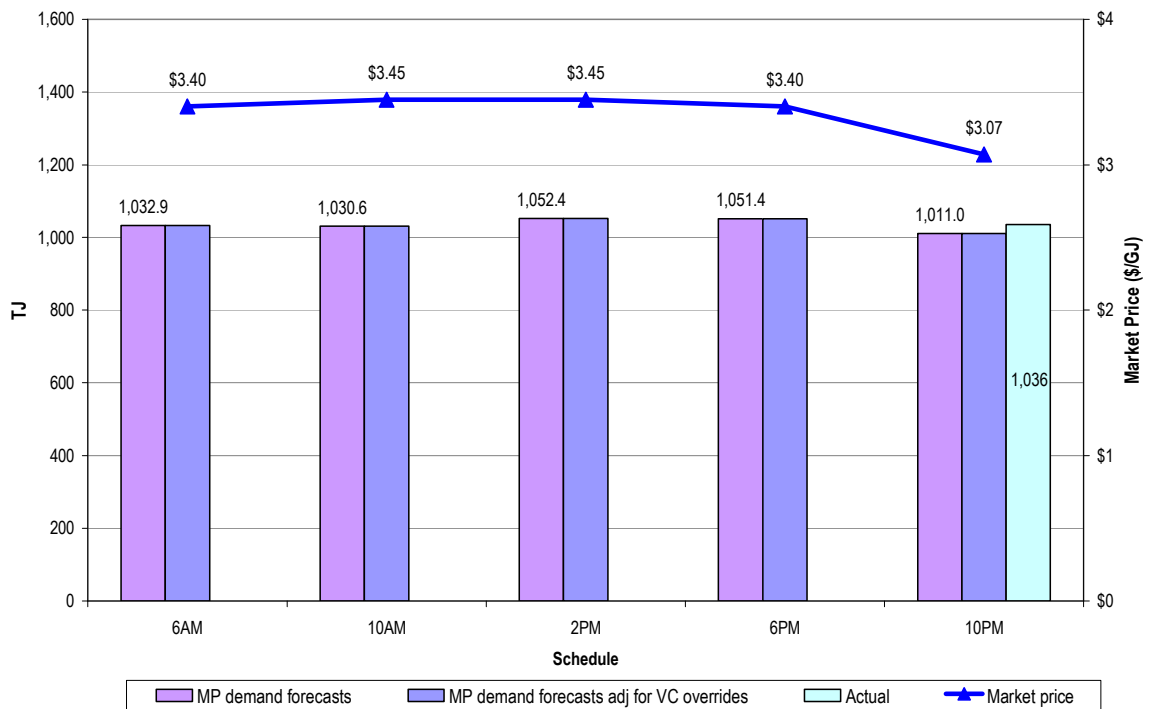
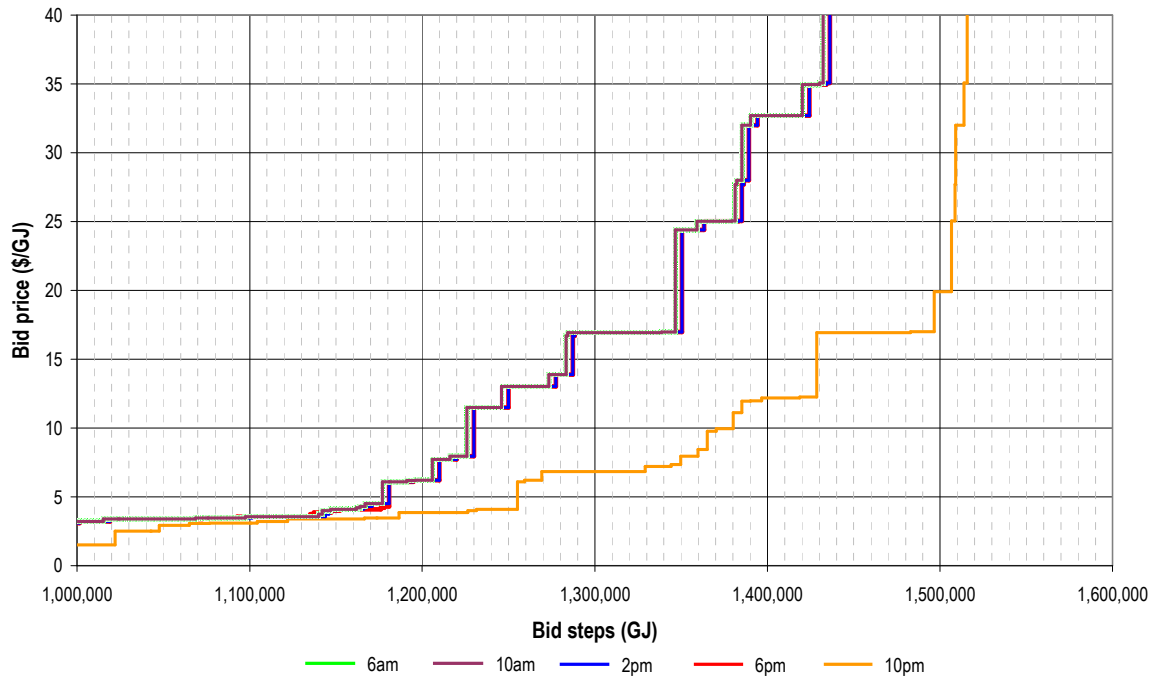


Figure 4 – Injection Bid Stacks by Schedule



3 Details of Events across the Day

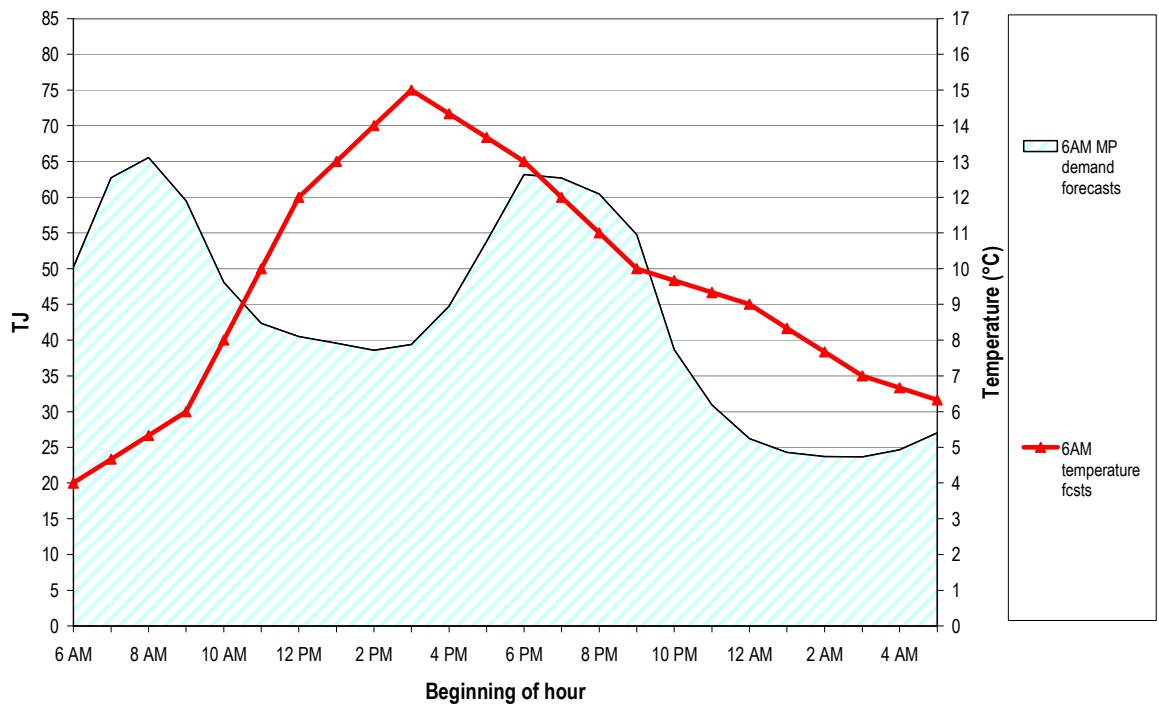
3.1 6am Schedule

The highlights of the events are summarised below and shown in Figure 5.

At 6am:

- the gas day started with 317.1 TJ of system linepack which was slightly below the target level of 330 TJ;
- cold temperatures were forecast by the BOM (the forecast minimum and maximum temperatures were 6°C and 15°C respectively);
- MP's aggregate demand forecasts were 1,032.9 TJ and included about 50.5 TJ of forecast gas fired power generation (GPG);
- VENCORP did not override the MP's aggregated demand forecasts;
- there were 12 TJ of controllable withdrawals at Culcairn scheduled for the day. This remained unchanged in subsequent schedules;
- 1,057 TJ of gas supplies were scheduled from Longford, Iona, SEA Gas and BassGas
- the market price of \$3.40 was set by Origin Energy.

Figure 5 – 6am Schedule - Forecast Demand and Temperatures



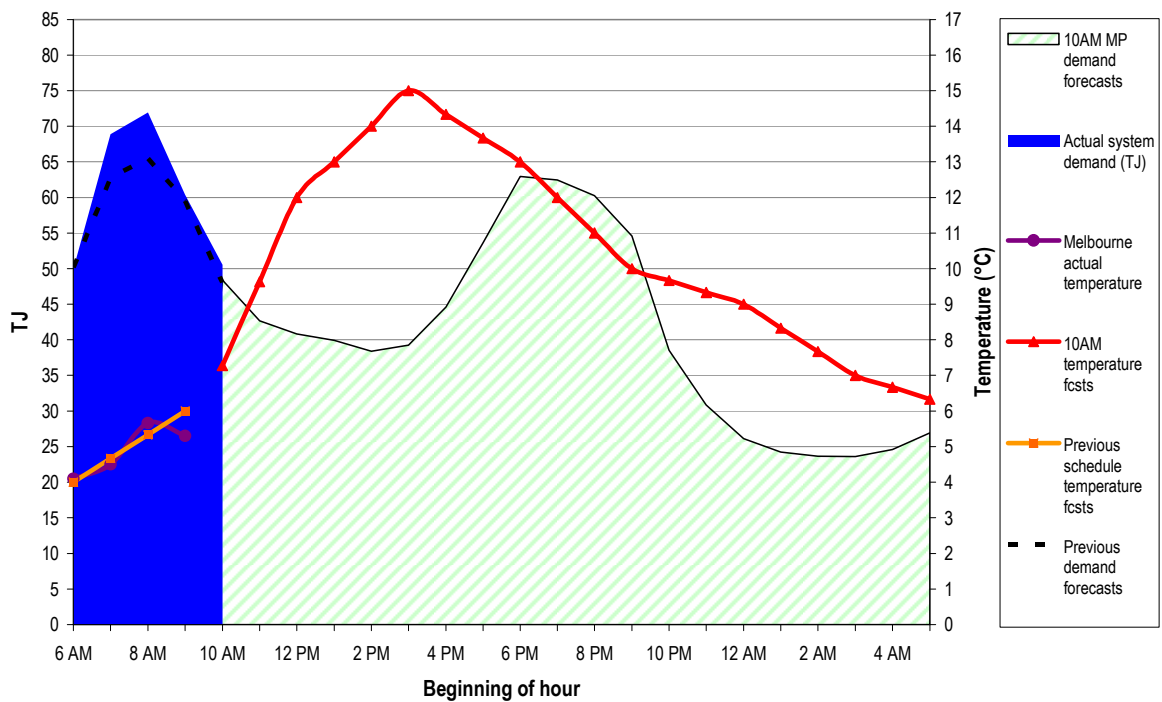
3.2 10am Schedule

The highlights of the events are summarised below and shown in Figure 6.

For the 10am schedule:

- the actual temperatures for 6am – 9am were similar to the forecast temperatures for the same time;
- the BOM did not change the temperature forecasts for the remaining hours of the day because the actual temperatures between 6am – 9 am were close to the previous forecasts;
- the actual demand for 6am – 10am ended up being 16 TJ higher than forecast previously;
- MPs reduced their demand forecasts for the day from 1,032.9 TJ to 1,030.6 TJ;
- VENCORP did not override the MPs' demand forecasts;
- 1,071 TJ of gas supplies were scheduled from Longford, Iona, SEA Gas and BassGas;
- the market price of \$3.45 was set by TRUenergy; and
- there was no injection re-bidding.

Figure 6 – 10am Schedule - Actual and Forecast Demand and Temperatures



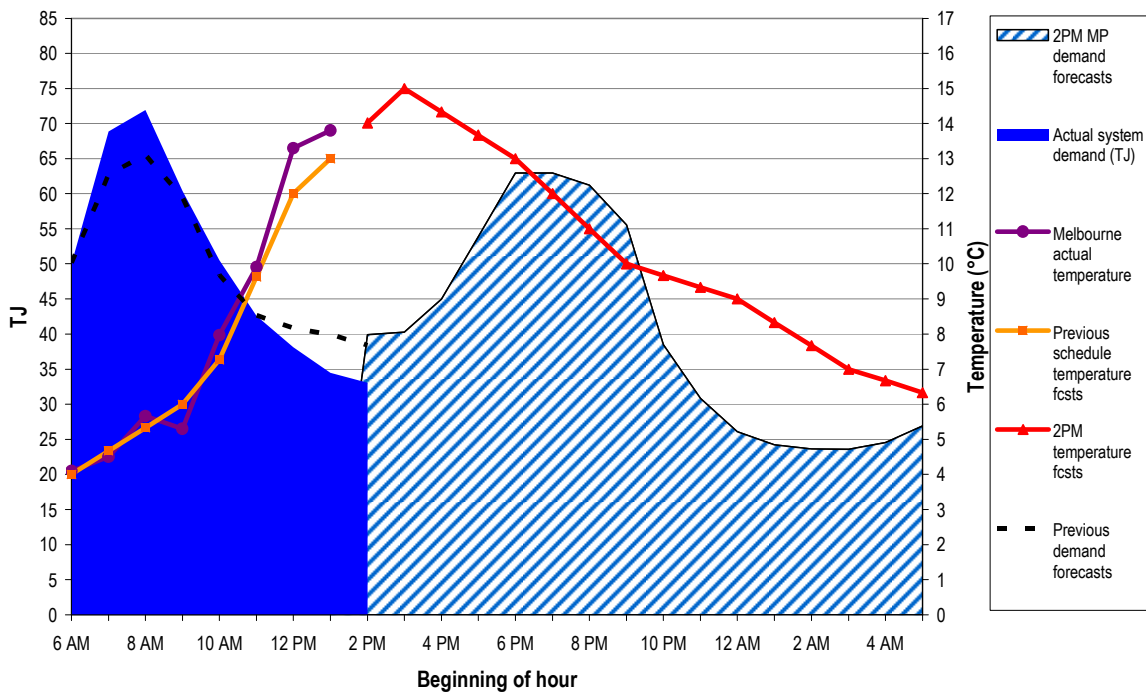
3.3 2pm Schedule

The highlights of the events are summarised below and shown in Figure 7.

For the 2pm schedule:

- the actual temperatures between 10am – 1pm were slightly warmer than forecast;
- the forecast temperatures from the BOM for the first three hours in the scheduling horizon were revised up marginally;
- the cumulative actual demand up to 2pm was 1 TJ higher than forecasts in the previous schedules;
- MPs revised the demand forecasts up from 1,030.6 TJ to 1,051.4 TJ;
- VENCorp did not override MPs' aggregated demand forecasts;
- A total of 1,074 TJ gas supplies were scheduled from Longford, Iona, SEA Gas and BassGas;
- the market price of \$3.45 was set by TRUenergy; and
- some Longford gas was re-bid in this schedule (see Figure 4).

Figure 7 – 2pm Schedule - Actual and Forecast Demand and Temperatures



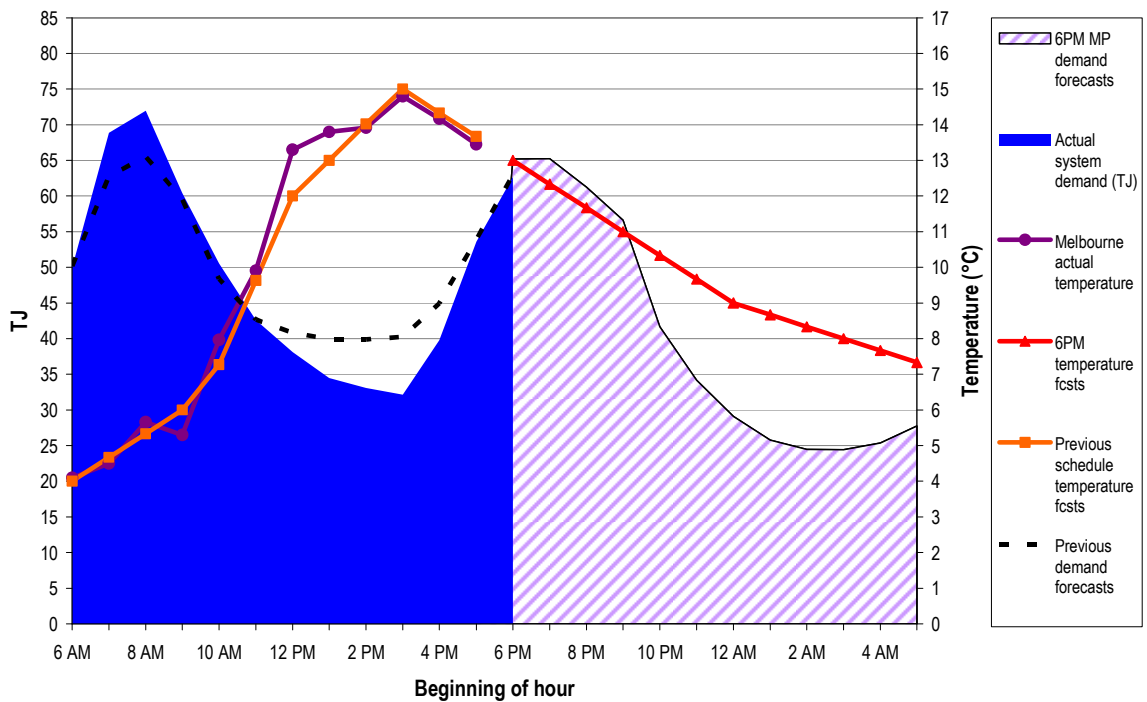
3.4 6pm Schedule

The highlights of the events are summarised below and shown in Figure 8.

For the 6pm schedule:

- the actual temperatures between 2pm – 5pm were close to the forecasts albeit slightly colder;
- the forecast temperatures from the BOM for the first three hours in the scheduling horizon were revised down marginally whilst temperatures towards the end of the scheduling horizon were revised up marginally;
- the cumulative actual demand up to 6pm was estimated to be about 12 TJ lower than forecasts in the previous schedules;
- MPs revised their demand forecasts upwards from 1,030.6 TJ to 1,052.4 TJ for the remainder of the day, this included 87 TJ of forecast GPG;
- VENCORP did not override MPs' aggregated demand forecasts.
- A total of 1,057 TJ gas supplies were scheduled from Longford, Iona, SEA Gas and BassGas;
- the market price of \$3.40 was set by Origin Energy and
- some Iona gas was re-bid in this schedule (see Figure 4).

Figure 8 – 6 pm Schedule - Actual and Forecast Demand and Temperatures



3.5 7pm Ad-hoc Schedule

The following summarises the events that led to the issuing of the 7pm ad-hoc schedule.

- At 5:09pm, it was observed that the Longford injection flow rate started to fall, reaching zero flow by 5:12pm. A subsequent call to ESSO revealed that their inlet valves had tripped.
- As a result of the trip, VENCORP Operations immediately configured relevant compressors to support pressures in the Longford to Dandenong line. APA GasNet was also contacted to advise that LNG would likely be required if the situation did not alter. The injection flow from Longford recommenced and gradually increased and was at approximately 20% of its original level by 5:40pm, however the linepack was still rapidly deteriorating in the approach to the evening demand peak.
- The timing of the flow reduction was such that VENCORP was unable to complete a new schedule before the 6:00pm deadline, so the schedule previously approved at 5:13pm was issued without reflecting the reduced Longford injection capability. VENCORP continued to monitor the flow rate to consider the need for an ad hoc schedule to be issued at 7:00pm, and contacted other potential sources of gas to determine the maximum available flow rates for use in an ad hoc schedule.
- At 6:06pm, minimum pressures at Sale were breached (4,800 KPa as defined in the System Security Guidelines). Origin Energy was accordingly advised.
- At 6:10pm, Culcairn operations advised that they could flow south if required, with a one to three hour turnaround time to allow this. At the same time, TRUenergy was contacted regarding the potential threat and possible curtailment of the Jeeralang and Newport generators. Both generators voluntarily reduced their withdrawals.
- A notification was sent at 6:21pm advising of a potential threat to system security, detailing the nature of the emerging threat and the time at which VENCORP would intervene in the operation of the gas market if the threat did not subside (6:45pm). Subsequently, VENCORP advised of a formal threat to system security via System Wide Notice (SWN) and MIBB attachment at the nominated time, as the supply shortfall had not yet subsided.
- Corresponding to the threat notice, and in accordance with the Gas Scheduling Procedures, VENCORP had assessed the impact of the ESSO plant outage and believed that any further delay beyond 7pm in representing the supply outage with SDPCs would threaten system security. Subsequently, an ad hoc schedule was issued at 6:51pm applying from 7pm with an SDPC applied on Longford for hours 7pm until the end of the scheduling horizon, based on a continuation of the then current Longford flow rates.
- Accordingly, gas supply was scheduled from alternate sources without any further intervention or direction by VENCORP. A total of 1,096 TJ of gas supply was scheduled from Longford, Iona, SEA Gas, BassGas plus LNG, Culcairn and VicHub. This included an additional 51 TJ of LNG, 9 TJ from Culcairn and 10 TJ from VicHub in reaction to a 94 TJ shortfall in supply from Longford. This coupled with SDPC's associated with this ad hoc schedule caused \$605,184 of ancillary payments.
- At 8:09pm, LNG vapouriser C tripped, also tripping vapourisers A and B. APA GasNet subsequently advised that they would return these as soon as possible, and returned at 8:30pm. This did not impact any further operational decisions.

- Further consideration was given to issuing a second ad hoc schedule directing increased injections from UGS, however with the apparent ongoing recovery of Longford, this was determined to be unnecessary.
- By 8:55pm, Longford supply had recovered to approximately 110% of the original rate, leading to the approval of the 10pm schedule at 9:17pm with the SDPC removed at Longford and revocation of the threat to system security via SWN at 9:25pm. The 10pm schedule had constraints removed from the Longford supply, and normal operation was fully restored. As a result, there was negligible impact upon the next gas day.

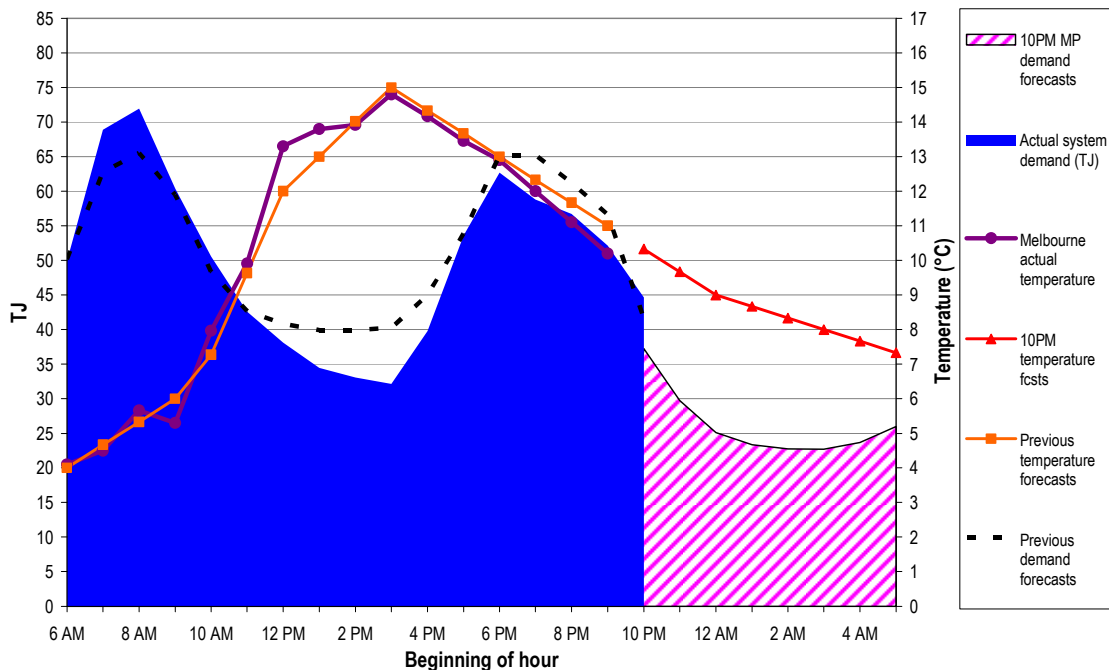
3.6 10pm Schedule

The highlights of the events are summarised below and shown in Figure 9.

For the 10pm schedule:

- the actual temperatures between 6pm – 9pm were close to the forecasts albeit slightly colder;
- the BOM revised the temperature forecasts downwards for the remaining hours of the day because the actual temperatures between 6pm – 9pm were slightly lower compared to the previous forecasts;
- the cumulative actual demand up to 10pm was 21 TJ lower than the forecasts in the previous schedules;
- MPs reduced their demand forecasts from 1,051.4 TJ to 1,011 TJ for the remainder of the day, including 68 TJ of forecast GPG (which was scheduled down 87 TJ from the previous schedule due to voluntarily reductions);
- A number of MPs rebid by lowering bid prices (see Appendix 1 and 2 for more details about MPs' bids at the 10pm schedule);
- VENCorp did not override MPs' aggregated demand forecasts;
- 1,003.6 TJ gas supplies were scheduled from Longford, Iona, SEA Gas, BassGas, LNG, Culcairn and VicHub.
- LNG was scheduled down from 51 TJ to 30 TJ, Culcairn was scheduled down from 9 TJ to 2.5 TJ and VicHub was scheduled down from 10 TJ to 3 TJ in reaction to normal operating conditions being restored, this caused \$217,400 of negative ancillary payments to occur;
- linepack at some zones was increasing;
- the market price of \$3.07 was set by Origin Energy;

Figure 9 – 10pm Schedule - Actual and Forecast Demand and Temperatures



4 Conclusions

The loss of supply at Longford just after 5pm lead to an ad-hoc schedule at 7pm and the requirement for more expensive gas, including LNG, to be injected. This caused ancillary payments of \$605,184 for the fourth schedule.

Longford fully recovered before the 10pm schedule, and the ancillary payments from the previous schedule were offset partially by negative ancillary payments of \$217,400 at the 10pm schedule.

VENCorp notes the injection re-bidding by participants for the 10pm schedule.

Appendix 1: Market Participants' Bidding Behaviour at the 10pm Schedule

Some market Participants responded to the Longford incident by lowering their bid prices or bidding at \$0/GJ at the 10pm schedule. In some cases, bid quantities also changed. Table 1 below compares Market Participants' 6pm and 10pm schedule bid prices at each injection point. The rebids are shown in green in Table 1 below. Some of the key features worth noting are:

- All Market Participants who own LNG submitted LNG bids at both the 6pm and 10pm schedules. Except for Victoria Energy, Red Energy and Australian Gas & Power, all other LNG owners reduced LNG bid prices at the 10pm schedule;
- AGL was the only Market Participant who reduced bid prices at all injection points (except Culcairn) at the 10pm schedule; and
- Simply Energy rebid their LNG and SEA Gas injections at \$0 at the 10pm schedule.

Table 1 – Market Participants' 6pm and 10pm Schedule Bid Prices by Injection Point

Injection Point	Market Participant	6pm Schedule Bid Price	10pm Schedule Bid Price	
Culcairn	AGL	\$3.98 - \$6.08	No change	
	Origin Energy (VIC) PTY LTD	\$0 - \$3.3999	No change	
Longford	AGL Sales Pty Limited	\$0 - \$6.18	\$0 - \$3.0887	
	TRUenergy Pty Ltd	\$0 - \$3.3369	No change	
	Visy Paper Pty Ltd	\$0	No change	
	Simply Energy	\$0	No change	
	Australian Power & Gas Pty Ltd	\$0	No change	
	Origin Energy Uranquinty Power Pty Ltd	\$0	No change	
	LNG plant	Origin Energy	\$13.8869 - \$798	\$6.83 - \$798
		AGL	\$24.38 - \$800	\$12.198 - \$800
TRUenergy Pty Ltd		\$387	\$17	
AGL (Queensland)		\$13.02	\$7.33 - \$11.99	
Simply Energy		\$16.69 - \$789.69	\$0 - \$789.69	
Victoria Electricity Pty Limited		\$69 - \$686	No change	
Red Energy Pty Limited		\$69 - \$600	No change	
Australian Power & Gas Pty Ltd		\$25.03 - \$730	No change	
Iona		Origin Energy	\$3.85	No change
		AGL	\$6.0999 - \$11.484	\$0 - \$16.93
	TRUenergy Pty Ltd	\$0 - \$16.93	No change	
	Simply Energy	\$0	No change	
VicHub	Victoria Electricity Pty Limited	\$0	No change	
	AGL (Queensland)	\$4.455 - \$6.30	No change	
SEA Gas	Origin Energy	\$0	No change	
	Simply Energy	\$16.96 - \$482	\$0 - \$482	
	Santos	\$0	No change	
	Victoria Electricity Pty Limited	\$0	No change	
BassGas	Origin Energy	\$0	No change	

As a result of Market Participants' lower priced rebids, there was a shift in the 10pm bid curve. Figure 1 compares the bid curves at the 6pm and 10pm schedules and show that:

- about 912 TJ of gas was offered at \$0/GJ at the 10pm schedule compared with 798 TJ at the 6pm schedule (or an increase of about 113TJ);
- there was a significant reduction in bid prices for (cumulative) bid quantities above 1,300 TJ

Figure 1 – 6pm and 10pm Bid Curves (All Bids Included)

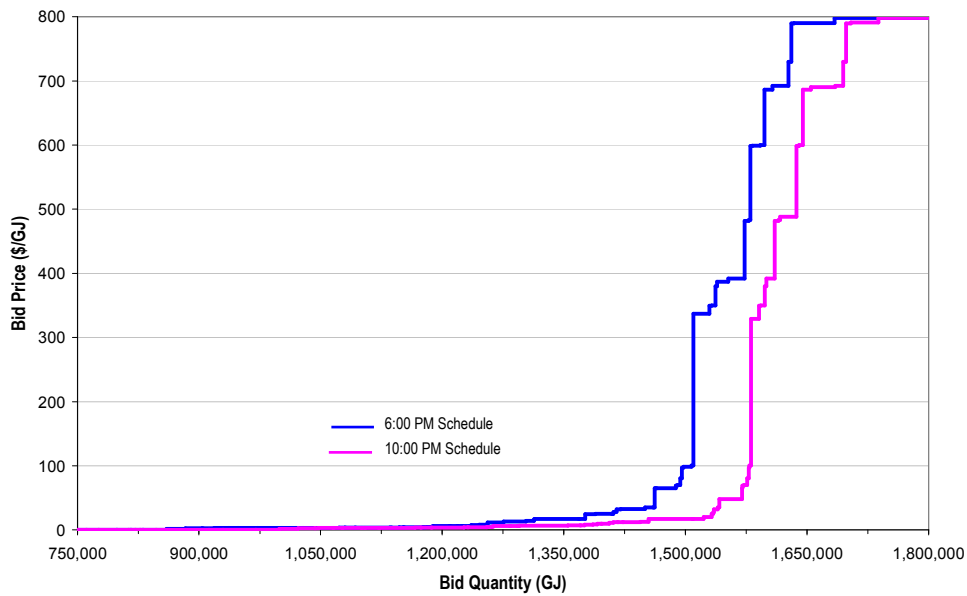
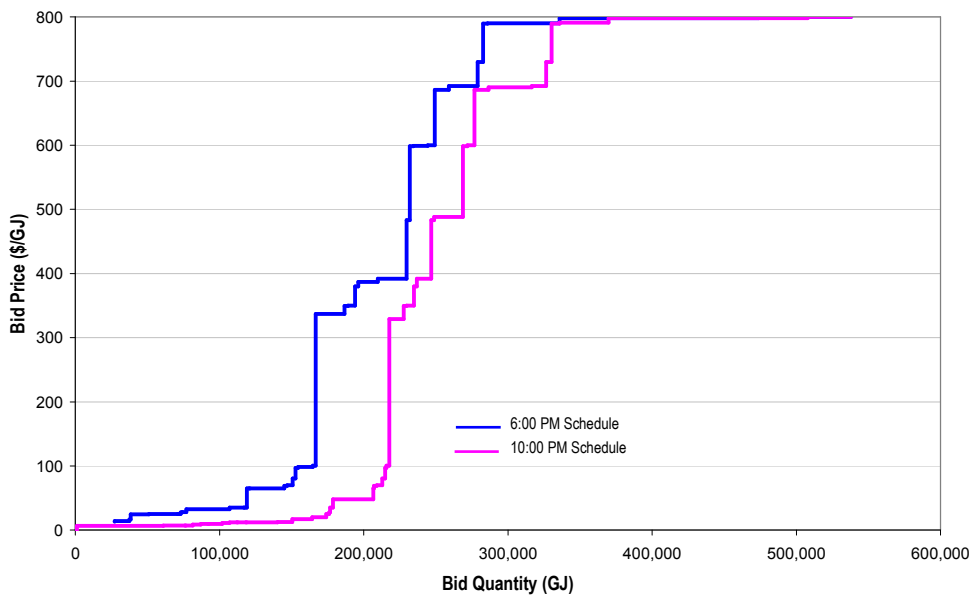


Figure 2 shows a similar shift in the 10pm LNG bid curve relative to the 6pm LNG curve. See Appendix 2 for details of the LNG bids from each Market Participant.

Figure 2 – LNG Bid Curves



This rebidding behaviour is allowed under the rules. VENCORP is reviewing the market efficiency of these outcomes and will take the matter up with the GMCC if warranted.

Appendix 2: LNG Bids

The following table displays MPs' bid prices and quantities across the 5 schedules and highlights the changes in bids in the 10pm schedule.

Company Name	Bid Price (\$/GJ)	Bid Quantity (GJ)				
		6am	10am	2pm	6pm	10pm
Origin Energy (VIC) PTY LTD	\$0.00	0	0	0	0	0
Origin Energy (VIC) PTY LTD	\$6.83					60,000
Origin Energy (VIC) PTY LTD	\$7.21					15,000
Origin Energy (VIC) PTY LTD	\$9.95					10,000
Origin Energy (VIC) PTY LTD	\$11.95					5,000
Origin Energy (VIC) PTY LTD	\$12.25					10,000
Origin Energy (VIC) PTY LTD	\$13.89	10,000	10,000	10,000	10,000	
Origin Energy (VIC) PTY LTD	\$25.02	20,000	20,000	20,000	20,000	
Origin Energy (VIC) PTY LTD	\$32.69	30,000	30,000	30,000	30,000	
Origin Energy (VIC) PTY LTD	\$34.95	10,000	10,000	10,000	10,000	
Origin Energy (VIC) PTY LTD	\$98.19	10,000	10,000	10,000	10,000	
Origin Energy (VIC) PTY LTD	\$392.00	20,000	20,000	20,000	20,000	10,000
Origin Energy (VIC) PTY LTD	\$692.00	20,000	20,000	20,000	20,000	10,000
Origin Energy (VIC) PTY LTD	\$798.00	138,000	138,000	138,000	138,000	138,000
AGL Sales Pty Limited	\$0.00					0
AGL Sales Pty Limited	\$12.20					22,000
AGL Sales Pty Limited	\$19.89					10,000
AGL Sales Pty Limited	\$24.38	12,600	12,600	12,600	12,600	
AGL Sales Pty Limited	\$28.00	3,000	3,000	3,000	3,000	
AGL Sales Pty Limited	\$48.00					28,000
AGL Sales Pty Limited	\$65.00	24,400	24,400	24,400	24,400	
AGL Sales Pty Limited	\$329.00					10,000
AGL Sales Pty Limited	\$337.00	20,000	20,000	20,000	20,000	
AGL Sales Pty Limited	\$488.00					20,000
AGL Sales Pty Limited	\$599.00	10,000	10,000	10,000	10,000	
AGL Sales Pty Limited	\$690.00					30,000
AGL Sales Pty Limited	\$790.00	50,000	50,000	50,000	50,000	
AGL Sales Pty Limited	\$791.00					34,000
AGL Sales Pty Limited	\$800.00	64,000	64,000	64,000	64,000	30,000
TRUenergy Pty Ltd	\$0.00					
TRUenergy Pty Ltd	\$17.00					13,700
TRUenergy Pty Ltd	\$387.00	13,700	13,700	13,700		
AGL Sales (Queensland) Pty Ltd	\$0.00					0
AGL Sales (Queensland) Pty Ltd	\$7.33					5,500
AGL Sales (Queensland) Pty Ltd	\$8.44					5,500
AGL Sales (Queensland) Pty Ltd	\$9.78					5,000
AGL Sales (Queensland) Pty Ltd	\$11.11					5,000
AGL Sales (Queensland) Pty Ltd	\$11.99					6,400

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Company Name	Bid Price (\$/GJ)	Bid Quantity (GJ)				
		6am	10am	2pm	6pm	10pm
AGL Sales (Queensland) Pty Ltd	\$13.02	27,400	27,400	27,400	27,400	
Simply Energy	\$0.00					1,000
Simply Energy	\$16.69	1,000	1,000	1,000	1,000	
Simply Energy	\$27.69	1,000	1,000	1,000	1,000	500
Simply Energy	\$64.69	1,500	1,500	1,500	1,500	500
Simply Energy	\$96.69	2,000	2,000	2,000	2,000	1,000
Simply Energy	\$349.69	2,500	2,500	2,500	2,500	2,000
Simply Energy	\$598.69	2,500	2,500	2,500	2,500	3,000
Simply Energy	\$789.69	3,200	3,200	3,200	3,200	5,700
Victoria Electricity Pty Limited	\$0.00	0	0	0	0	0
Victoria Electricity Pty Limited	\$69.00	2,000	2,000	2,000	2,000	2,000
Victoria Electricity Pty Limited	\$380.00	2,000	2,000	2,000	2,000	2,000
Victoria Electricity Pty Limited	\$686.00	9,700	9,700	9,700	9,700	9,700
Red Energy Pty Limited	\$0.00	0	0	0	0	0
Red Energy Pty Limited	\$70.00	3,700	3,700	3,700	3,700	3,700
Red Energy Pty Limited	\$350.00	5,000	5,000	5,000	5,000	5,000
Red Energy Pty Limited	\$600.00	5,000	5,000	5,000	5,000	5,000
Australian Power & Gas Pty Ltd	\$0.00	0	0	0	0	0
Australian Power & Gas Pty Ltd	\$25.03	2,000	2,000	2,000	2,000	2,000
Australian Power & Gas Pty Ltd	\$35.07	2,000	2,000	2,000	2,000	2,000
Australian Power & Gas Pty Ltd	\$80.68	2,000	2,000	2,000	2,000	2,000
Australian Power & Gas Pty Ltd	\$100.41	2,000	2,000	2,000	2,000	2,000
Australian Power & Gas Pty Ltd	\$483.21	2,000	2,000	2,000	2,000	2,000
Australian Power & Gas Pty Ltd	\$730.00	3,700	3,700	3,700	3,700	3,700