UNINTENDED SCHEDULING RESULT

Gas day 15 March 2010

PREPARED BY: Market Development and Market Operations

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Authorised by: ______________________________

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Unintended Scheduling Result: 15 March 2010

Background

In accordance with rule 218(1)(b) of the National Gas Rules, AEMO on its own initiative commenced an investigation into whether an *unintended scheduling result* occurred in the 6am schedule and any subsequent reschedules on 15 March 2010. On 30 March 2010, AEMO published a notice to this effect.

This Report includes AEMO's decision and the reasons for its decision in accordance with rule 218(3) of the National Gas Rules.

Decision

AEMO has determined that an *unintended scheduling result* occurred in the 6am, 10am and 2pm schedules on 15 March 2010. The 6am schedule was primarily impacted with smaller impacts in the 10am and 2pm schedules.

'Minimum injection profile' supply-demand point constraints "SDPCs" had been used in accordance with the Gas Scheduling Procedures on several occasions over summer on request from Exxon-Mobil. The purpose was to ensure that the schedules produced by the Market Clearing Engine (MCE) correctly took into account the gas injection profiling on the day at the Longford injection point that was caused by Jemena's compressor works conducted on the Eastern Gas Pipeline (EGP).

On 15 March 2010 the market system generated schedules subject to a similar SDPC but of shorter duration at Exxon-Mobil's and Jemena's request. This SDPC and Market Participants' accredited constraints were not compatible and, in effect, caused the minimum injection rate constraint to apply for the whole of the gas day rather than the first part of the day as intended. The outcome was that a quantity of gas priced higher than the market price was scheduled from the Longford injection point in both the pricing and operating schedules. The higher priced gas was treated as a *minimum schedule injection quantity* (MSIQ) and, in accordance with the settlements algorithm, this gas was settled at the market price and not the bid price. The scheduling outcome was due to the change in the SDPC and not because of the Market Participants' accredited constraints. As a consequence, AEMO estimates that the Market Participants flowing this gas were short-paid in the 6am schedule some $80,000 collectively relative to the relevant bid prices, with further changes in payments in the subsequent two reschedules.

Explanation of scheduling events on 15 March 2010

Jemena has been installing and commissioning new compressors since October 2009 and has required several half-day periods of zero gas flow into the EGP to enable the particular work. Before this, Exxon- Mobil and Jemena had met with AEMO to discuss the impacts of the augmentation works on the Victorian DTS and to mitigate the associated risks to gas supply. This could be achieved by applying a SDPC at the Longford injection point to enable Exxon-Mobil to have steady production flows across the gas day. AEMO's market systems would then schedule Longford injections into the DTS at rates which are higher during the first part of the gas day and lower over the evening and night, while at the same time flows into the EGP/TGP would complement those into the DTS to support a steady Longford plant production rate over the whole gas day.

Accordingly, on several selected days prior to 15 March 2010 as agreed with Exxon Mobil, AEMO applied a minimum hour flow SDPC at the Longford injection point to reflect the higher injection rates as requested. This SDPC was applied for 13 hours on each occasion, which aligns with Market Participants' contractual nomination window to enable reduction of the Longford injection rate later in the gas day. This process had been thoroughly tested prior to implementation and had worked successfully on each of several occasions prior to 15 March 2010.

However, for the gas day 15 March 2010, on request from Exxon-Mobil and as agreed by Jemena, the SDPC was applied for the first 11 hours only. The 6am schedule was generated as usual but it was not apparent at that time that there was a scheduling issue.

Later that morning a Market Participant communicated concerns to AEMO regarding the 6am schedule, and preliminary investigations found that two Market Participants had some gas injections that had been scheduled 'out of merit order' at the Longford meter (30000001PC) ie. some gas bid at prices higher than the market price had been scheduled in both the market schedule and the operating schedule.

AEMO's investigation concluded that the eleven hour SDPC setting conflicted with some Market Participants' Longford contractual settings set in the accreditation table in the market system. Ramping down could not occur after eleven hours as intended during the MCE process and additional higher priced gas was forced to be scheduled at Longford. AEMO has had Dr W Pepper of ICF Consulting confirm its understanding of how the market clearing engine produced these schedules.

The 6am schedule information is shown in Table 1. The 6am market price was set at $1.107 which aligns with total scheduled injections at the Longford meter of 178,234 GJ. However a further 32,304 GJ of gas was scheduled from the next higher priced bids at the Longford meter ranging from $3.4869 to $3.7769 (shaded in pink). This gas was scheduled due to the incompatible constraints and was treated as MSIQ flows and so was paid at market price in accordance with the settlements procedures i.e. where gas flows scheduled due to a Market Participant's accredited constraints do not qualify for ancillary payments. However, it is clear that the constraint causing the issue was the SPDC and not the Market Participants' accredited constraints.

Table 1. 15 March 2010 6am Schedule Data

Price	Bid Step	Schedule	Short-paid
$0.0000	111,000	111,000	$0
$0.0000	55,000	55,000	$0
$0.0001	16	16	$0
$0.0107	0	0	$0
$0.3889	12,212	12,212	$0
$1.1069	6	6	$0
$2.5901	0	0	$0
$3.4869	6,839	6,839	$16,277
$3.5000	10,000	10,000	$23,931
$3.7769	16,632	15,465	$41,292
$4.1100	10,000	0	$0
$4.9900	10,000	0	$0
$5.1469	35,947	0	$0
$123.4567	50,000	0	$0
$765.4321	50,000	0	$0
Total	**367,652**	**210,538**	**$81,499**

Table 1 show the relevant bids and scheduled quantities for the 6am schedule for the Longford injection point on 15 March 2010. On the day, two Market Participants were affected. In the 6am schedule these Market Participants were short paid an estimated total of $81,499 as indicated in

Table 1. The final short-paid amounts will differ, due to changes in the following schedules and deviations from schedule.

After contact by an impacted Market Participant that morning AEMO Gas System Operations Support investigated the issue and took a decision to maintain the SDPC as this would minimise further impact on Market Participants. Therefore the SDPC was not revised for reschedules for gas day 15 March 2010.

The constraint violation was due to the conflict between the SDPC setting and the Market Participants accredited constraints impacted settlements for the 6am, 10am and 2pm schedules but did not cause further impact in the 6pm and 10pm schedules.