

27 April – 3 May 2014

Weekly summary

Average prices have increased from the previous week, more noticeably in Brisbane and Sydney where average increases were around 40 and 60 cents per gigajoule respectively. There were only two trades in the Wallumbilla Gas Supply Hub this week, with maintenance in the region.

Long term statistics and explanatory material

The AER has published an [explanatory note](#) to assist with interpreting the data presented in its weekly gas market reports. The AER also publishes a range of [longer term statistics](#) on the performance of the gas sector including gas prices, production, pipeline flows and consumer demand.

Market overview

Figure 1 sets out the average daily prices (\$/GJ) in the Victorian Declared Wholesale Market (VGM or Victorian gas market) and for the Sydney (SYD), Adelaide (ADL) and Brisbane (BRI) Short Term Trading Market hubs (STTM) for the current week compared to historical averages.

Figure 1: Average daily prices – all markets (\$/GJ)¹

	Victoria	Sydney	Adelaide	Brisbane
27 Apr - 03 May 2014	3.89	3.87	3.93	3.27
% change from previous week	8	18	6	14
13-14 financial YTD	3.93	4.07	4.39	4.85
% change from previous financial YTD	-12	-21	-13	-16

Figure 2 compares average weekly gas prices, ancillary market payments and scheduled injections against historical averages for the Victorian gas market.

Figure 2: Victorian gas market

	Price (\$/GJ)	Ancillary payments (\$000)*	BOD forecast demand quantity (TJ)
27 Apr - 03 May 2014	3.89	-	655
% change from previous week	8	-	30
13-14 financial YTD	3.93	-	504
% change from previous financial YTD	-12	-	-4

* Note: only positive ancillary payments, reflecting system constraints will be shown here.

More detailed analysis on the VGM is provided in section 1.

Figures 3 to 5 show average ex ante and ex post gas prices, Market Operator Service (MOS) balancing gas service payments together with the related daily demand quantities against historical averages for the Sydney, Adelaide and Brisbane STTM hubs, respectively.

¹ The weighted average daily imbalance price applies for Victoria.

Figure 3: Sydney STTM

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
27 Apr - 03 May 2014	3.87	3.81	9.43	239	243
% change from previous week	18	28	33	12	15
13-14 financial YTD	4.07	3.93	10.44	232	228
% change from previous financial YTD	-21	-27	-3	-1	-3

Figure 4: Adelaide STTM

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
27 Apr - 03 May 2014	3.93	3.80	2.65	63	64
% change from previous week	6	20	-74	26	41
13-14 financial YTD	4.39	4.36	14.84	64	63
% change from previous financial YTD	-13	-13	70	-3	-2

Figure 5: Brisbane STTM

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
27 Apr - 03 May 2014	3.27	3.06	2.84	158	153
% change from previous week	14	14	45	-1	-3
13-14 financial YTD	4.85	4.95	1.60	150	150
% change from previous financial YTD	-16	-14	-33	4	5

More detailed analysis of the STTM hubs is found in sections 2 to 4.

Section 5 provides analysis on production and pipeline flows on the National Gas Bulletin Board (**Bulletin Board**), as well as gas powered generation (**GPG**) volumes in each state, and section 6 provides information on the gas supply hub at Wallumbilla.

Significant Market Events or Issues this week

On Monday 28 April, an imbalance quantity of -8.1 TJ resulted in the ex post price falling to \$2.80/GJ in Adelaide. However, renominations to reduce supply in line with over forecast demand resulted in only a minimal MOS requirement on the day.

Conversely, under forecast demand in Brisbane and Sydney on this day saw large volumes of increase MOS required to balance the markets. The requirement on the Roma to Brisbane Pipeline (RBP) was significant at 8.8 TJ², while a large imbalance in Sydney led to over 20 TJ of increase MOS and increased the ex post price to its highest level for the week (\$4.19/GJ, see figure 2.1).

² The third highest increase MOS requirement on RBP since market start. Increase MOS requirements have only exceeded 8 TJ on five occasions

In Brisbane, forecasting errors on other days coincided with renominations which reduced MOS requirements. On Tuesday 29 April, under forecasting led to a large imbalance (around 15 TJ), but only 4.1 TJ of MOS was delivered. From Thursday 1 May, over forecasting led to significant imbalance volumes, yet some large renominations on Thursday and Friday reduced MOS requirements to 0.4 TJ and -1.5 TJ respectively. There was however a more notable impact to the ex post price as a result of these imbalances, falling to \$2.01/GJ on Thursday (-33.8 TJ), and \$2.80/GJ on Friday (-20.6 TJ) from ex ante prices of \$3.40/GJ or higher.

In Sydney, MOS increase requirements on Tuesday and Wednesday due to under forecast demand were 12.8 TJ and 10.9 TJ respectively. On Saturday 3 May, over forecast demand led to 17.7 TJ of decrease MOS.

On Monday 28 April, lower capacity on the Moomba to Sydney Pipeline (MSP) due to ongoing maintenance³ led to the D-3 provisional schedule for the Thursday 1 May gas day being constrained. The pipeline capacity was about 165 TJ and led to a provisional price of \$15/GJ (and a provisional capacity constraint price of around \$10.87/GJ) when lower priced offers could not be scheduled. Rebidding on subsequent days saw additional offers of gas priced at the floor on the Eastern Gas Pipeline (EGP) and resulted in prices below \$5/GJ for the later schedules (see figure 6). The capacity of the pipeline was returned to above 245 TJ from the following day.

Figure 6 shows the supply volumes offered on the EGP and the MSP in the schedules for the Thursday 1 May gas day.

Figure 6: Gas offered on the main pipelines supplying the Sydney STTM for 1 May

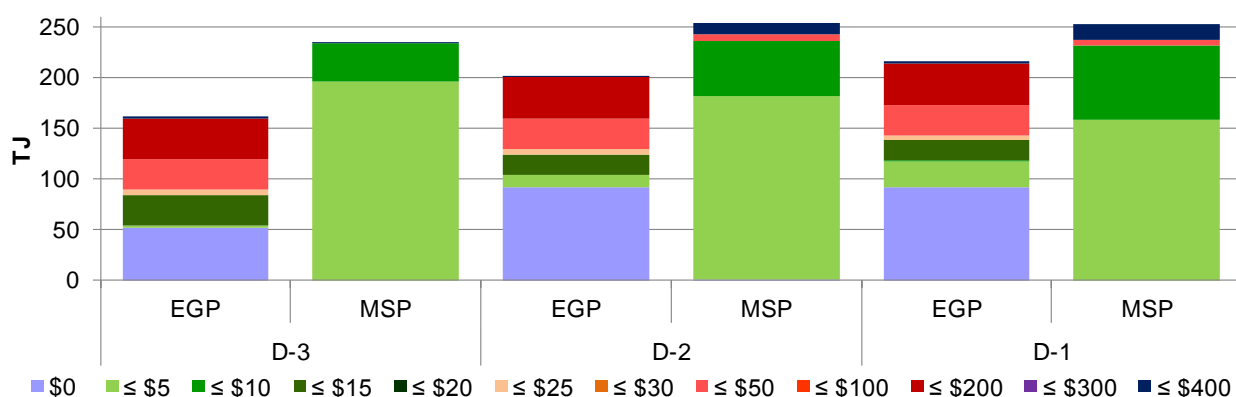
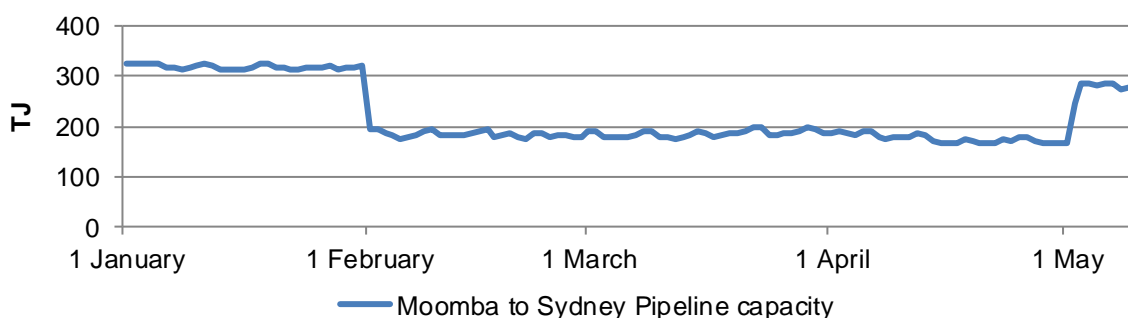


Figure 7 shows the capacity reduction on the MSP over the planned maintenance period.

Figure 7: Moomba to Sydney Pipeline capacity in 2014



In Victoria, over forecast demand led to some low schedule prices on Tuesday and Saturday (see figure 1.1). There was also higher demand towards the end of the week as temperatures decreased (see figure 1.5).

³ Information on the capacity reduction from the beginning of February to the end of April 2014 was presented in the 9 - 15 February gas weekly report. The reduction related to planned works on the Young to Wilson and Bulla Park to Young MSP mainlines.

Detailed Market Analysis

27 April – 3 May 2014

1 Victorian Declared Wholesale Market

In the Victorian gas market, gas is priced five times daily at 6 am, 10 am, 2 pm, 6 pm and 10 pm. However, the volume weighted gas price on a gas day tends towards the 6 am price which is the schedule at which most gas is traded.

The main drivers of price are demand forecasts together with bids to inject or withdraw gas from the market. For each of the five gas day pricing schedules, figures 1.1 to 1.4 below show the daily prices, demand forecasts⁴, and injection/withdrawal bids.⁵ Figure 1.5 provides information on which system injection points were used to deliver gas, in turn indicating the location and relative quantity of gas bids cleared through the market. Gas is priced five times daily (at 6 am, 10 am, 2 pm, 6 pm and 10 pm) when the first schedule and four reschedules apply, while the last 8-hour schedule has been separated into two 4-hour blocks for a consistent comparison with other scheduled injection volumes. The main drivers of price are demand forecasts and gas bids.⁶

Figure 1.1: Prices by schedule

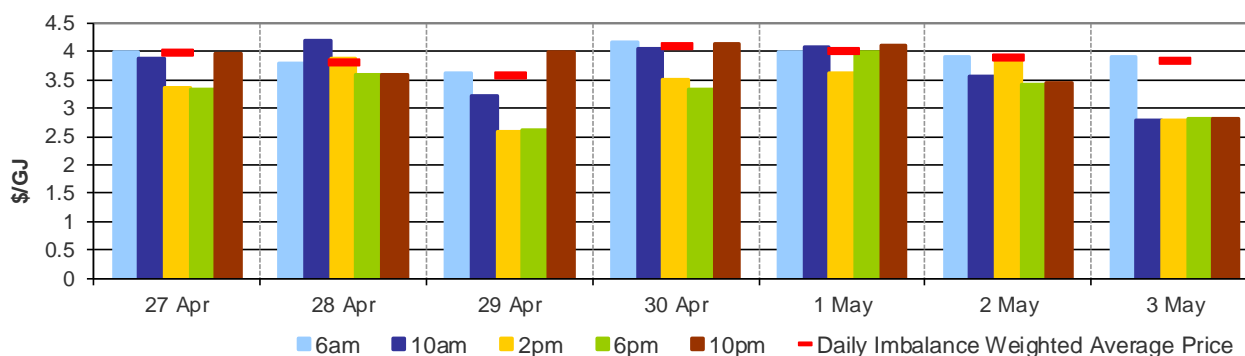
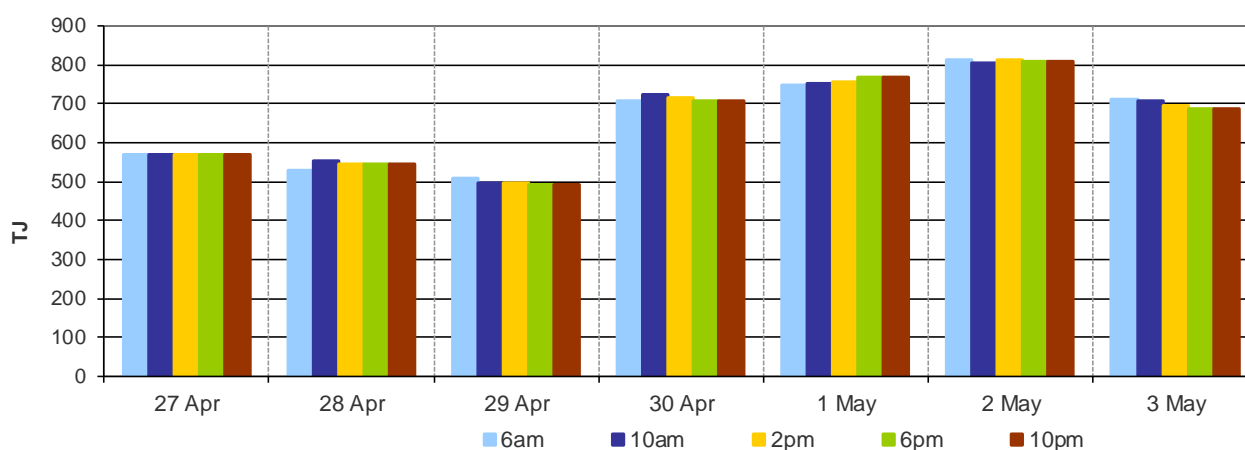


Figure 1.2: Demand forecasts



⁴ These are Market Participants' aggregate demand forecasts adjusted for any override as applied by AEMO from time to time. The main driver of the amount of gas scheduled on a gas day are these forecasts which are forecasts that cannot respond to price or in other words is gas delivered regardless of the price.

⁵ The price might also be affected by transmission or production (contractual) constraints limiting how much gas can be delivered from a locale or System Injection Point (SIP) from time to time.

⁶ The price might also be affected by transmission or production (contractual) constraints limiting how much gas can be delivered from a locale or SIP from time to time.

Figure 1.3: Injection bids by price bands

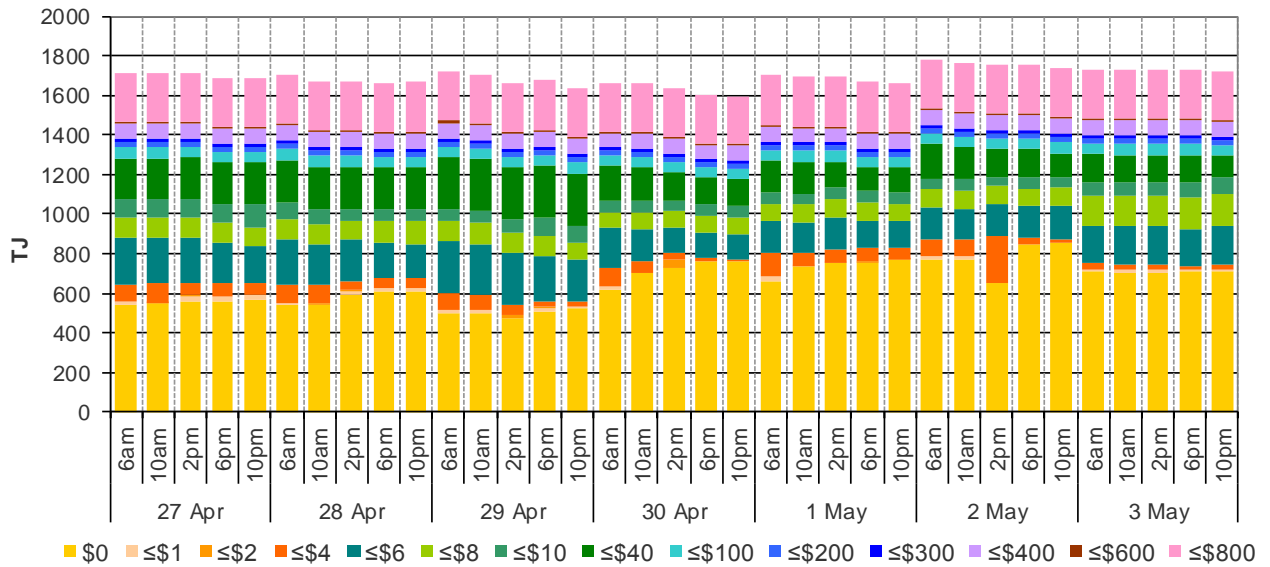


Figure 1.4: Withdrawal bids by price bands

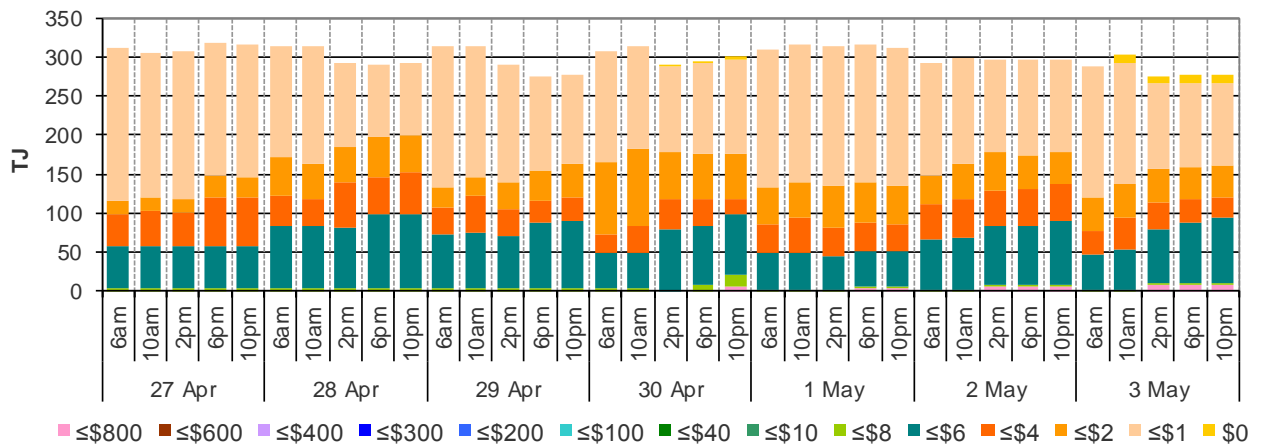
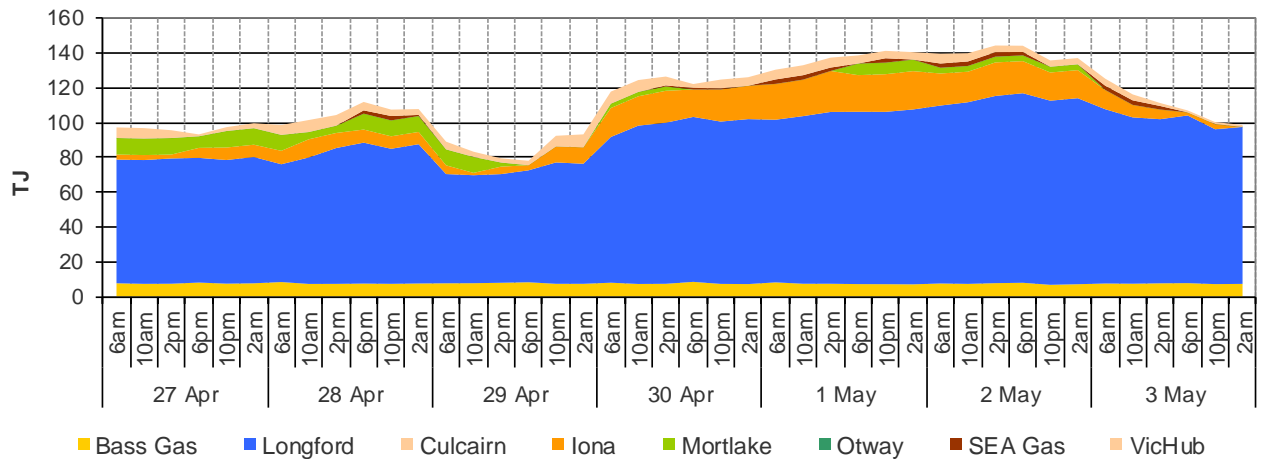


Figure 1.5: Metered Injections by System Injection Point



2 Sydney STTM

In each STTM hub, gas is priced once before each gas day (the ex ante price) and once after the gas day (the ex post price). The main drivers of ex ante and ex post prices are demand forecasts, together with participant offers and offers to inject or bids to withdraw gas traded through the hub.⁷ Prices before and after the gas day may also vary depending on how much gas is scheduled before the gas day (setting the ex ante price) and how much gas is consumed in the hub on a gas day (setting the ex post price).

Market Operator Service balancing gas (MOS) payments arise because the amount of gas nominated on pipelines for delivery on a gas day will either exceed or fall short, by some amount, of the amount of gas consumed in the hub. In such circumstances, MOS payments are made to participants for providing a service to park gas on a pipeline or to loan gas from a pipeline to the hub.⁸

Figures 2.1 and 2.2 show daily prices, demand, offers and bids. Figures 2.3 and 2.4 show gas scheduled and allocated on pipelines, indicating the location and relative quantity of gas offers across pipelines and also the amount of MOS allocated for each pipeline.

Figure 2.1: SYD STTM daily ex ante and ex post prices and quantities

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	3.76	3.88	3.76	4.07	4.11	3.60	3.89
Ex ante quantity (TJ)	207	228	236	239	257	253	256
Ex post price (\$/GJ)	3.76	4.19	3.95	4.13	4.11	3.67	2.89
Ex post quantity (TJ)	207	246	247	248	256	256	238

Figure 2.2 (a): Daily hub offers in price bands (\$/GJ)

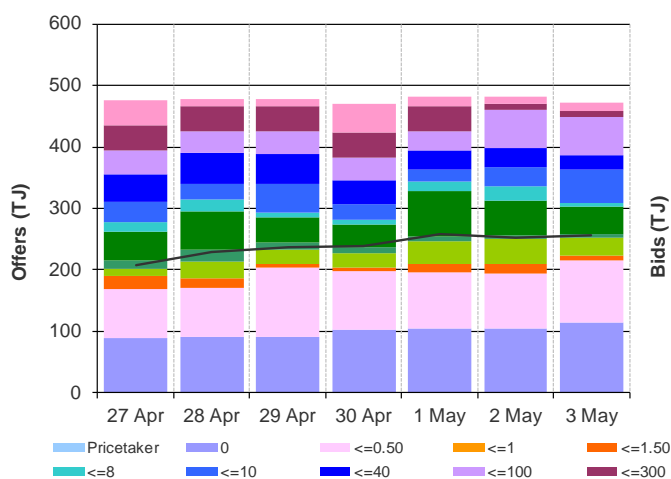
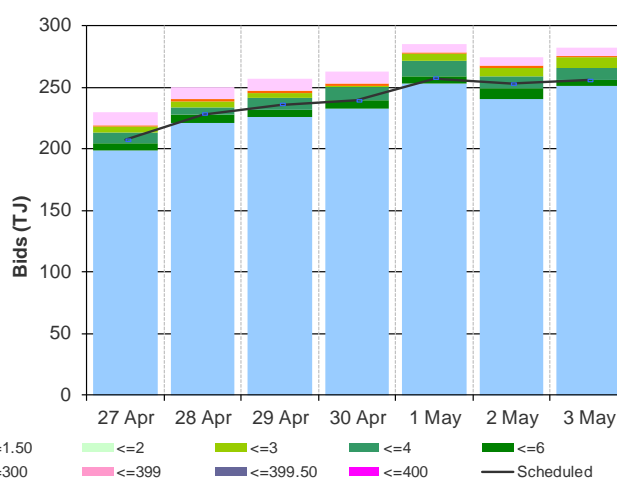


Figure 2.2 (b): Daily hub bids in price bands (\$/GJ)



⁷ The main driver of the amount of gas scheduled on a gas day is the ‘price-taker’ bid, which is forecast hub demand that cannot respond to price and which must be delivered, regardless of the price.

⁸ MOS service payments involve a payment for a MOS increase service when the actual quantity delivered exceeds final gas nominations for delivery to a hub, and a payment for a MOS decrease service when the actual quantity delivered is less than final nominations. As well as a MOS ‘service’ payment, as shown in figure 2.4, MOS providers are paid for or pay for the quantity of MOS sold into the market or bought from the market (MOS ‘commodity’ payments/charges).

Figure 2.3: SYD net scheduled and allocated gas volumes (excluding MOS) by STTM facility

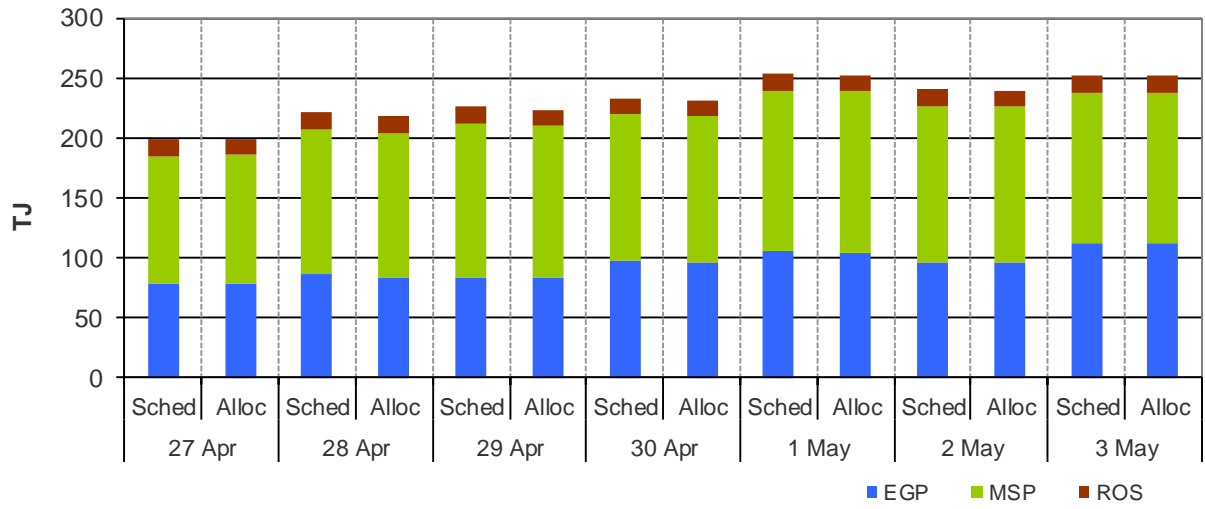


Figure 2.4 (a): SYD STTM MOS allocations (TJ)

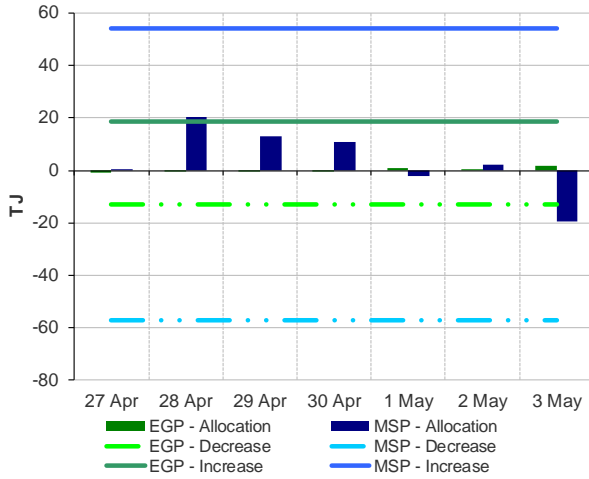
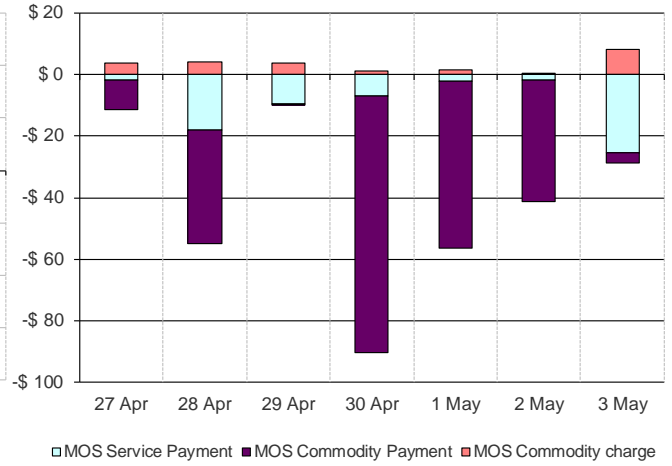


Figure 2.4 (b): Service payments and commodity payments/charges (\$000)



3 Adelaide STTM

The Adelaide STTM hub functions in the same way as the Sydney STTM hub. The same data that was presented for the Sydney hub is presented for the Adelaide hub in the figures below.

Figure 3.1: ADL STTM daily ex ante and ex post prices and quantities

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	3.90	3.90	3.90	3.90	4.00	4.00	3.89
Ex ante quantity (TJ)	51	58	56	62	67	76	68
Ex post price (\$/GJ)	3.90	2.80	3.89	3.99	4.00	4.01	3.99
Ex post quantity (TJ)	52	49	53	67	73	83	72

Figure 3.2 (a): Daily hub offers in price bands (\$/GJ)

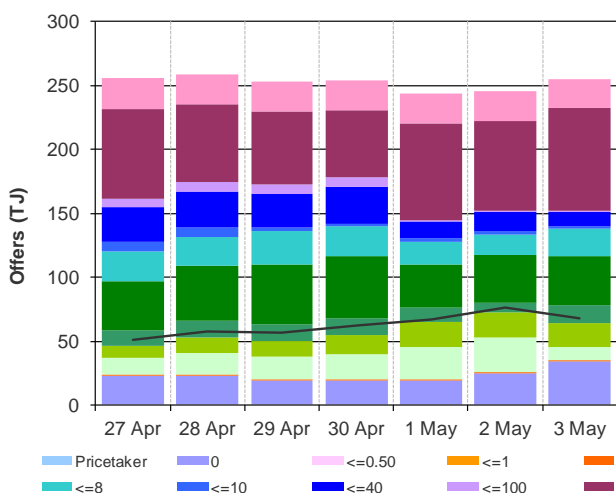


Figure 3.2 (b): Daily hub bids in price bands (\$/GJ)

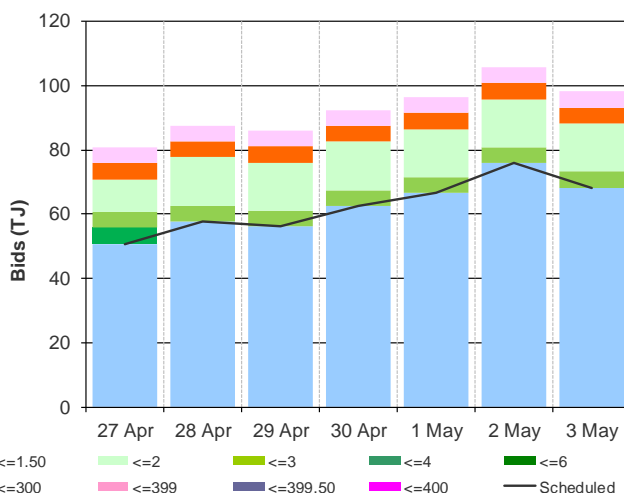


Figure 3.3: ADL net scheduled and allocated gas volumes (excluding MOS) by STTM facility

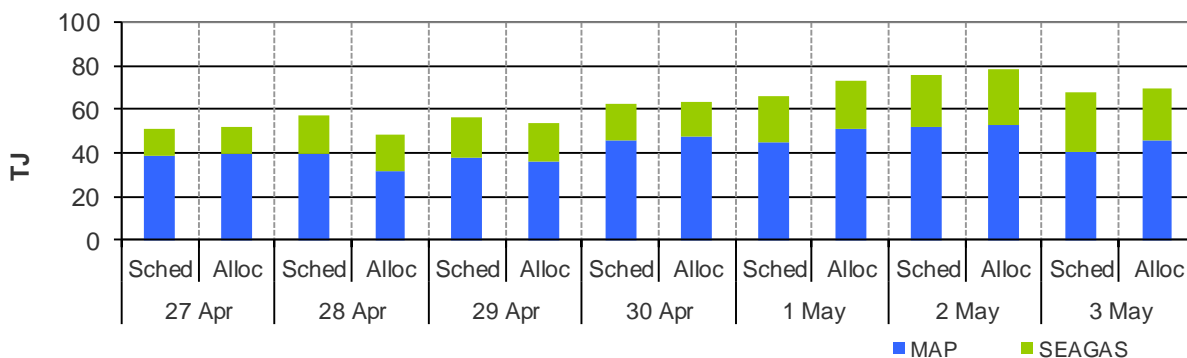


Figure 3.4 (a): ADL STTM MOS allocations (TJ)

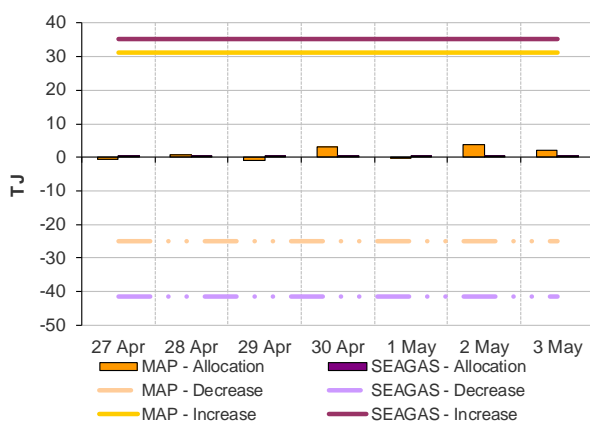
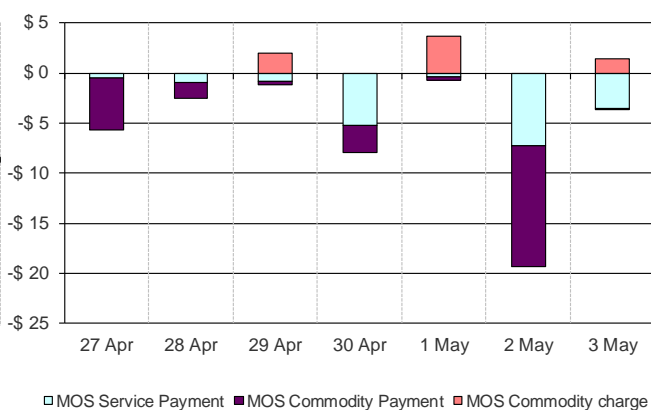


Figure 3.4 (b): Service payments and commodity payments/charges (\$000)



4 Brisbane STTM

The Brisbane STTM hub functions in the same way as the Sydney STTM hub. The same data that was presented for the Sydney hub is presented for the Brisbane hub in the figures below.

Figure 4.1: BRI STTM daily ex ante and ex post prices and quantities

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	3.00	3.00	3.28	4.00	3.45	3.40	2.75
Ex ante quantity (TJ)	145	167	155	167	165	167	143
Ex post price (\$/GJ)	3.28	3.00	3.61	3.99	2.01	2.80	2.75
Ex post quantity (TJ)	151	168	171	164	131	146	136

Figure 4.2 (a): Daily hub offers in price bands (\$/GJ)

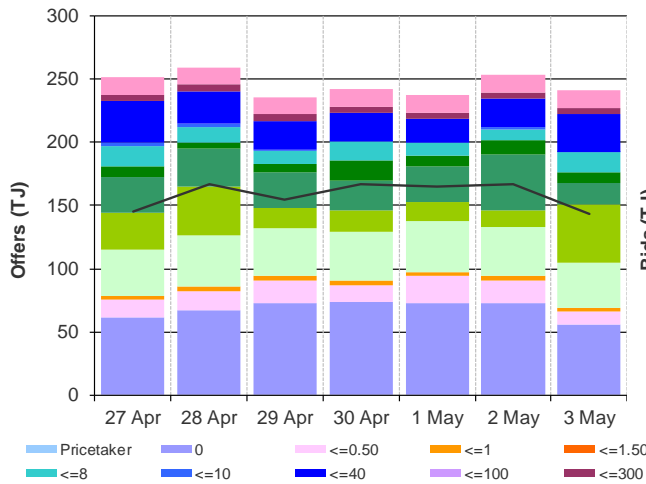


Figure 4.2 (b): Daily hub bids in price bands (\$/GJ)

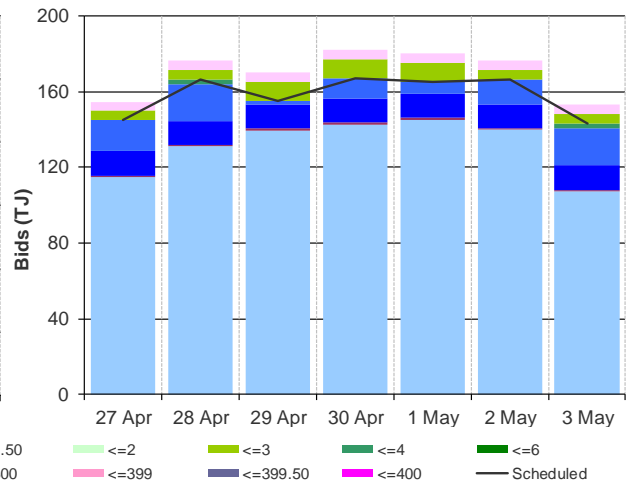


Figure 4.3: BRI net scheduled and allocated gas volumes (excluding MOS) by STTM facility

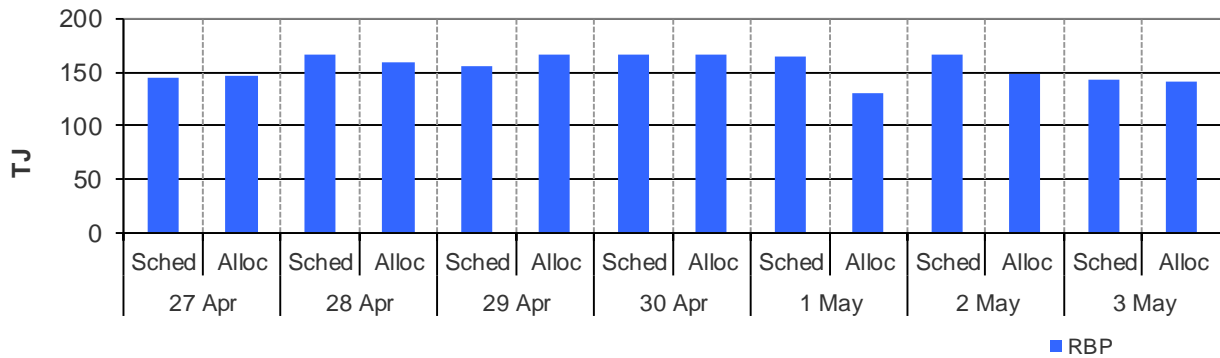


Figure 4.4 (a): BRI STTM MOS allocations (TJ)

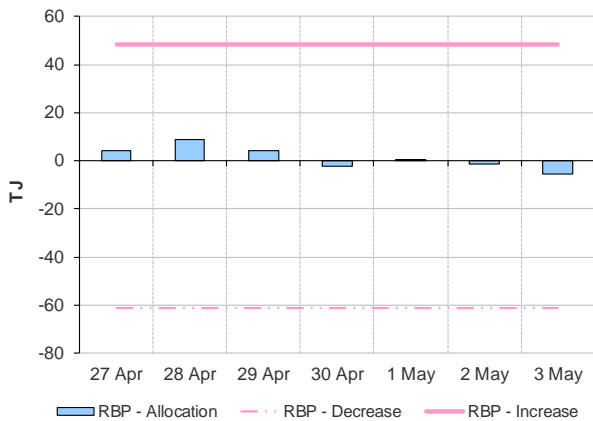
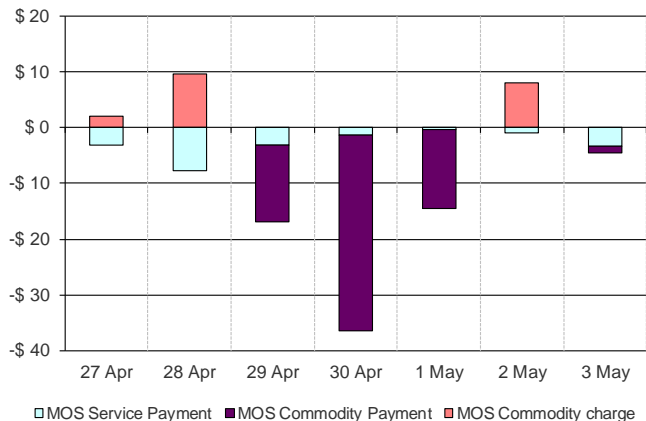


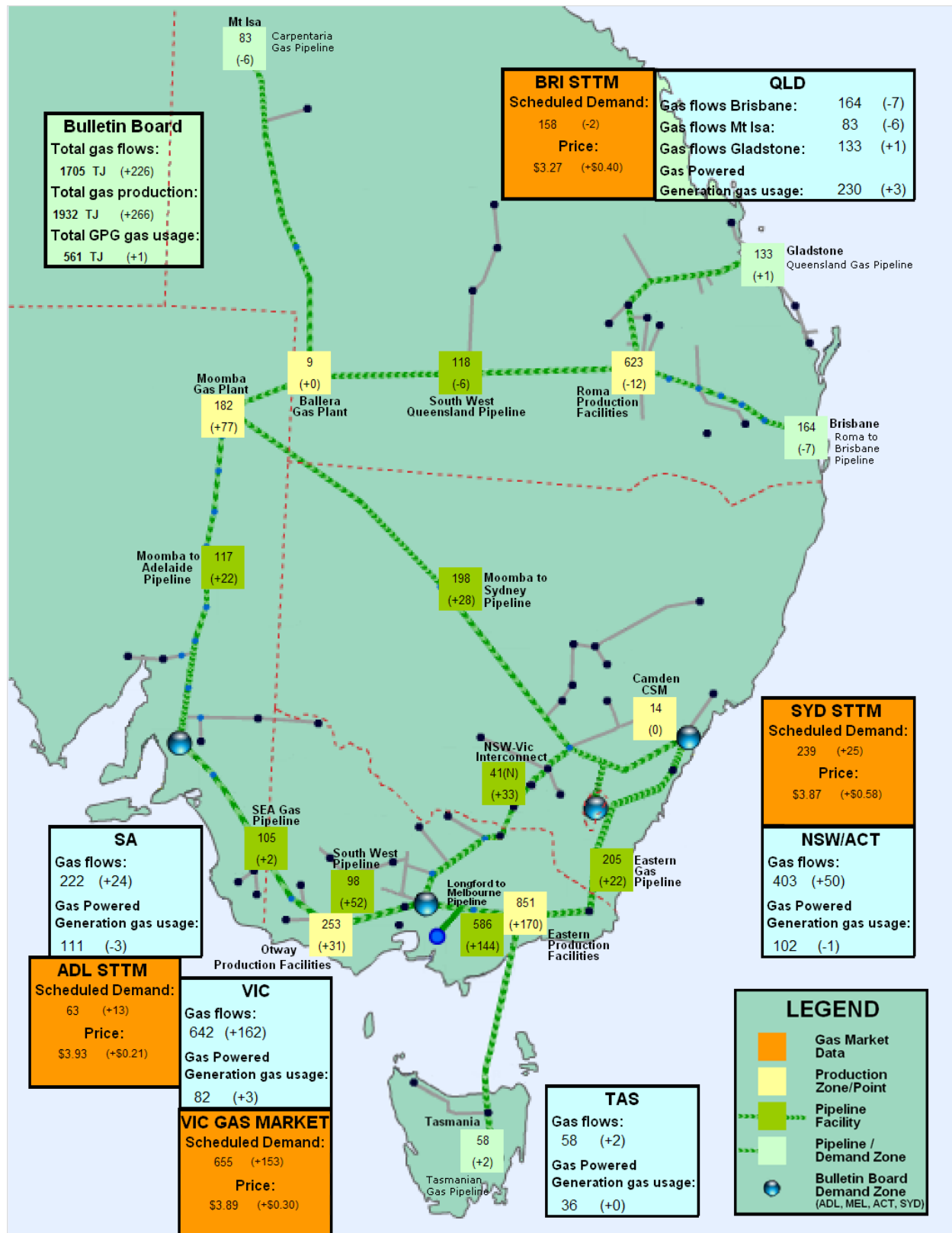
Figure 4.4 (b): Service payments and commodity payments/charges (\$000)



5 National Gas Bulletin Board

Figure 5.1 shows average daily actual flows for the current week in the aqua boxes⁹ from the Bulletin Board (changes from the previous week's average are shown in brackets). Gas powered generation (GPG) gas usage is also shown in each region in the aqua boxes. In the orange boxes average daily scheduled volumes and prices for each gas market are provided.

Figure 5.1: Gas market data (\$/GJ, TJ); Production, Consumption and Pipeline flows (TJ)



⁹ Regional Gas Flows: SA = MAP + SEAGAS, VIC = SWP + LMP – negative(NSW-VIC), NSW/ACT = EGP + MSP, TAS = TGP, QLD (Brisbane) = RBP, QLD (Mt Isa) = CGP, QLD (Gladstone) = QGP
GPG volumes include gas usage that may not show up on Bulletin Board pipeline flows.

6 Gas Supply Hub

The Gas Supply Hub (GSH) was established for the trading of gas at Wallumbilla because it is located in close proximity to significant gas supply sources and demand locations and is a major transit point between Queensland and the gas markets on Australia's east coast. The GSH is a voluntary market¹⁰ for the supply of gas traded between separate participants, with products listed for sale and purchase at delivery points on three major connecting pipelines at Wallumbilla – the Queensland Gas Pipeline (QGP), the South West Queensland Pipeline (SWQP) and the Roma to Brisbane Pipeline (RBP). There are separate products for each pipeline (each pipeline is considered a trading location, and each has a number of delivery points) and delivery period (daily, day-ahead, balance-of-day and weekly).

There were two trades on the RBP this week. The volume weighted cost of the trades was \$2.75/GJ.

¹⁰ Market trade is facilitated through an electronic trading platform, with standardised terms and conditions and a market settlement facility for the short-term trading of physical gas and related products. The market is designed to complement existing bilateral gas supply arrangements and gas transportation agreements, through the placement of anonymous offers (to sell) or bids (to buy) at specified quantity and price increments, which are automatically matched on the exchange to form transactions.