GSH Trading Summary

Week commencing Monday, 19 June 2017.

Overview

The GSH Trading Summary is a weekly report on trading outcomes in the Gas Supply Hub. This week's edition presents volumes and prices by pipeline and product for 19 June to 25 June.

Notes

- All information is collated by Gas Day (unless otherwise specified).
- The Wallumbilla Benchmark price is determined and published by AEMO. http://www.aemo.com.au/Gas/Gas-Supply-Hubs/-/media/B310AC6E6F204E1AAD6AA4A83CC0D96C.ashx
- Comparative NEM-equivalent gas prices are based on an assumed thermal efficiency ratings. See Key Assumptions at the end of this report.

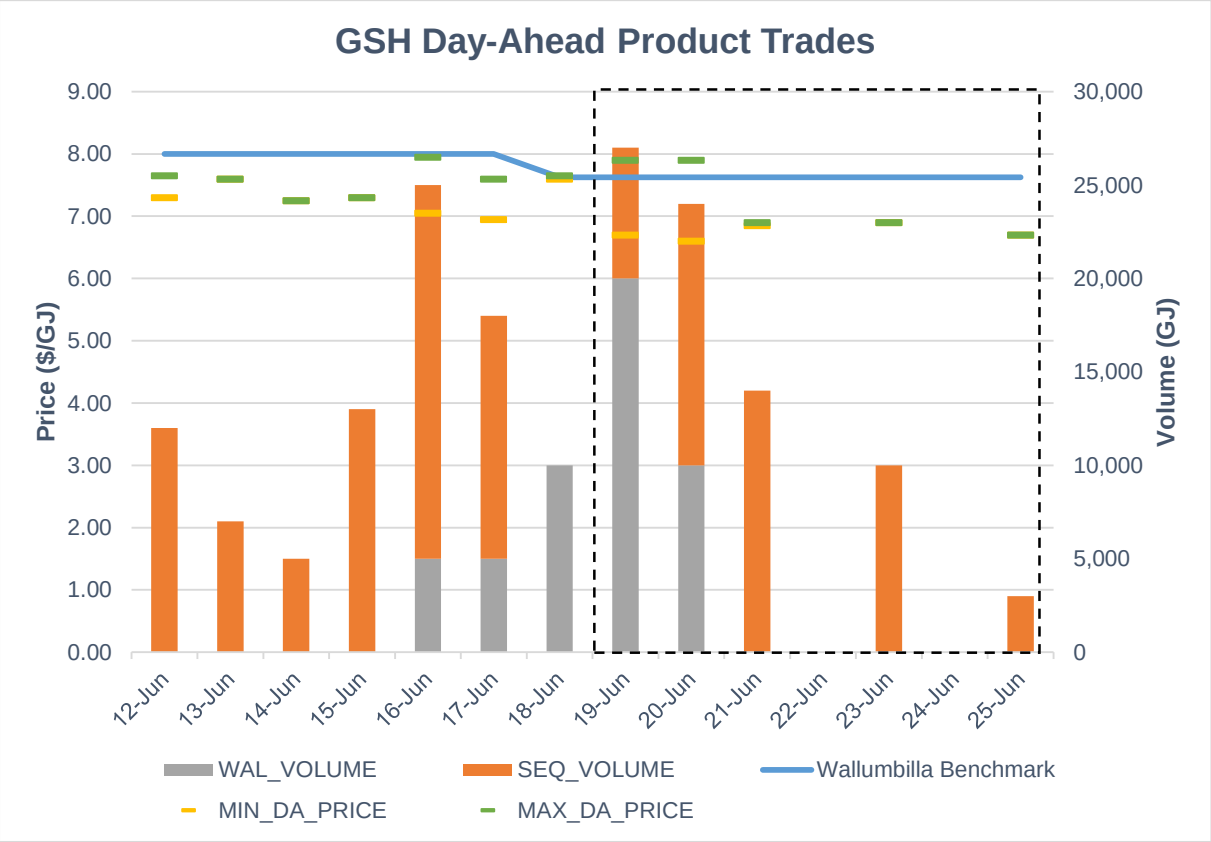

Figure 1: GSH Day-Ahead Product Trades

Week-on-week comparison of Gas Supply Hub Day-Ahead traded volume (GJ) by Trading Location (bar chart right-hand axis), and Wallumbilla Benchmark price ($/GJ) (line chart left-hand axis).

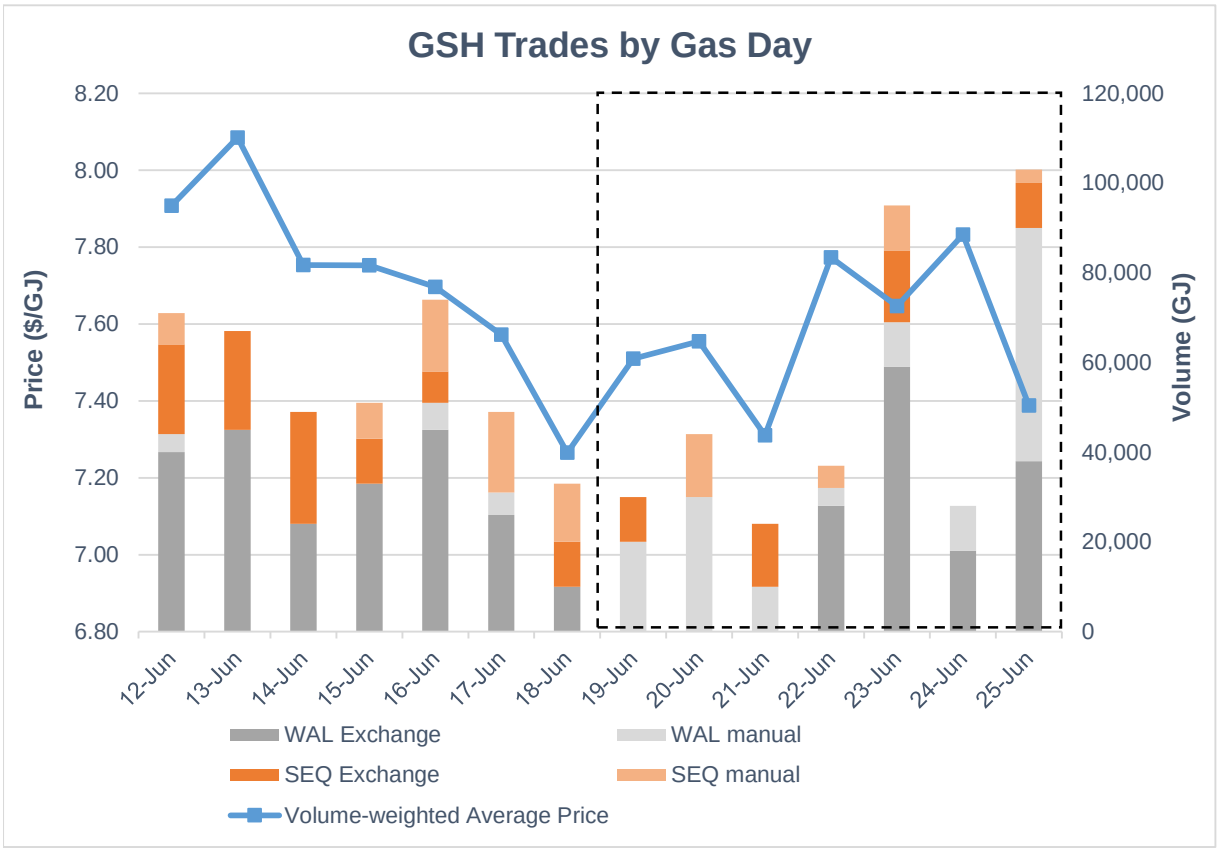

Figure 2: GSH Trades by Gas Day
Week-on-week comparison of all GSH traded volume for delivery on a Gas Day (GJ) by Trading Location, apportioned between on-market (exchange trades) and off-market (manual trades) (bar chart right-hand axis). Volume-weighted average price of all Gas Supply Hub trades for delivery for the corresponding Gas Day (line chart left-hand axis)

Statistics by Trading Location and Product						
Pipeline	Product	Volume (GJ)	Volume-weighted Price ($)			Trades
			Ave	Low	High	
SEQ	Balance-of-Day	34,000	7.02	6.80	7.18	6
SEQ	Day Ahead	10,000	6.90	6.90	6.90	1
SEQ	Day Ahead - netted	41,000	6.71	6.30	6.90	6
WAL	Balance-of-Day	61,000	7.29	6.90	7.90	8
WAL	Day Ahead	5,000	7.90	7.90	7.90	1
WAL	Day Ahead - netted	30,000	6.97	6.50	7.90	2
WAL	Daily	167,000	7.89	7.80	8.00	19
WAL	Monthly	62,000	8.75	8.75	8.75	1
WAL-Non-Netted	Weekly	105,000	7.63	7.25	8.00	3
WAL-Non-Netted	Monthly	276,000	8.00	8.00	8.00	3
Wallumbilla Benchmark Price			7.63*	7.63	7.63	-

Table 1: Statistics by Trading Location and Product
Weekly trade statistics by Trading Location and Product. Volume-weighted Price basis all trades for corresponding Trading Location and Product. *Arithmetic average. *Statistics based on trade day.

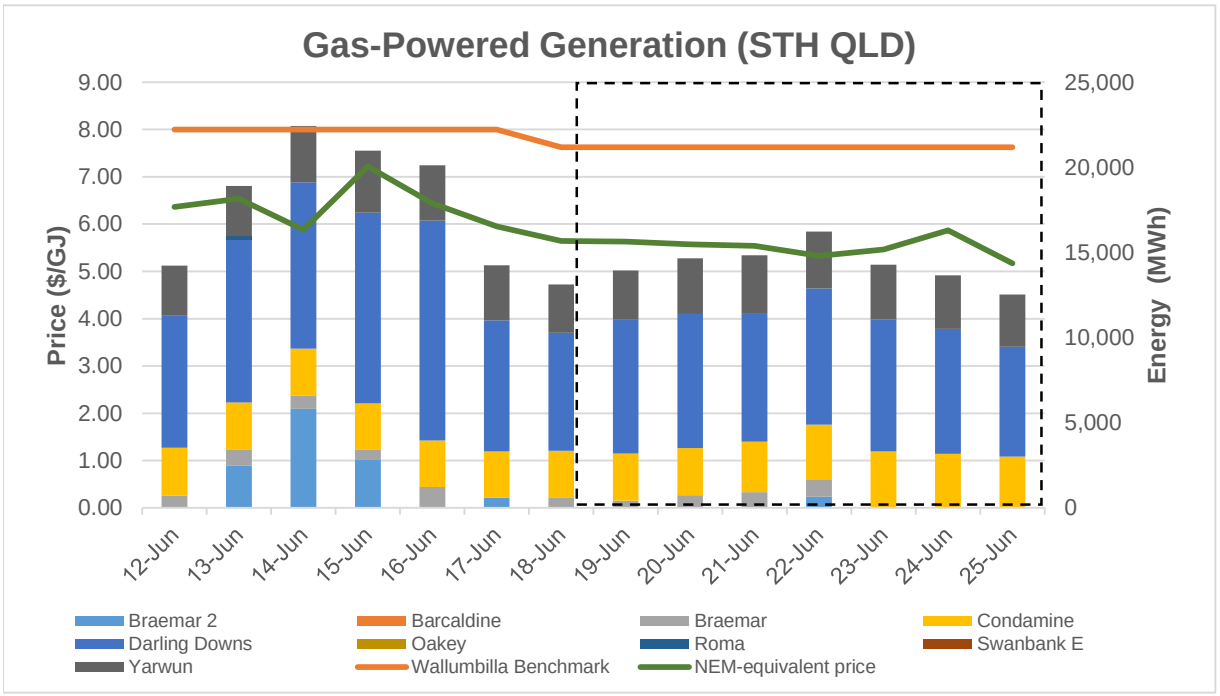

Figure 3: Gas-Powered Generation (STH QLD)
Southern Queensland daily Gas-Powered Generation (MWh) by station (calendar day) (bar chart right-hand side) and corresponding daily Wallumbilla Benchmark price ($/GJ) and daily **NEM-equivalent Gas price ($/GJ)** based on Generator Thermal efficiency of 12 GJ/MWh (line chart left-hand side).

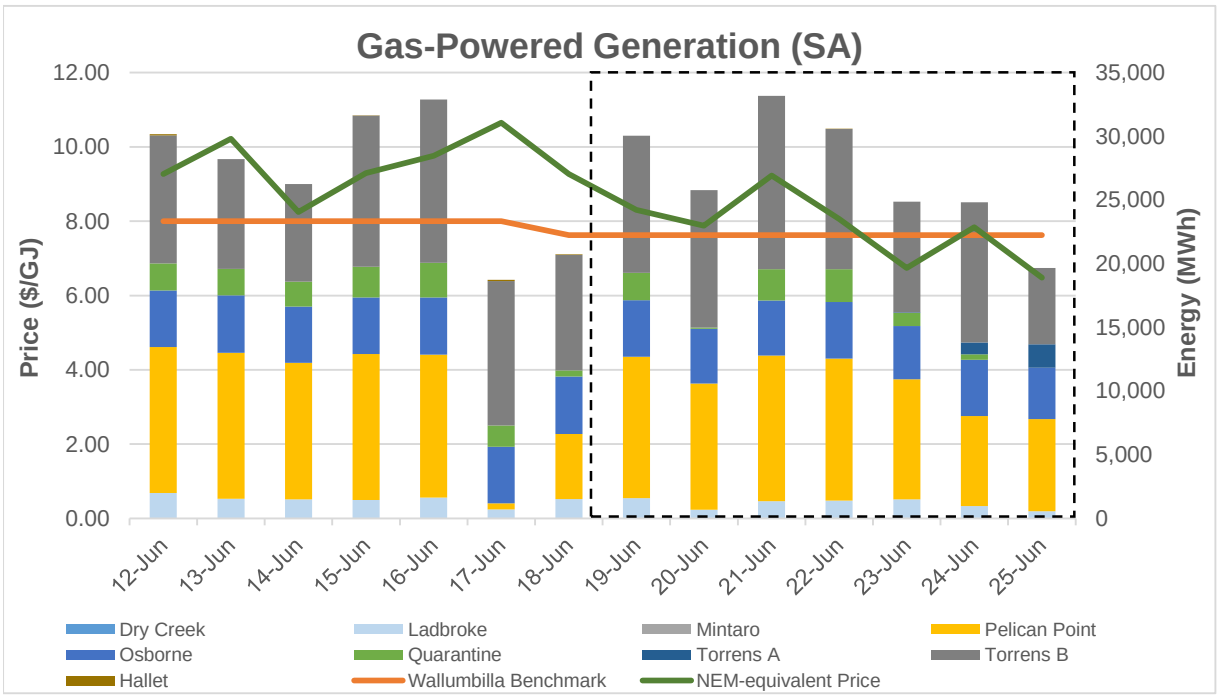

Figure 4: Gas-Powered Generation (SA)
South Australian daily Gas-Powered Generation (MWh) by station (calendar day) (bar chart right-hand side) and corresponding daily Wallumbilla Benchmark price ($/GJ) and **NEM-equivalent price ($/GJ)** based on Generator Thermal efficiency of 12GJ/MWh (line chart left-hand side).

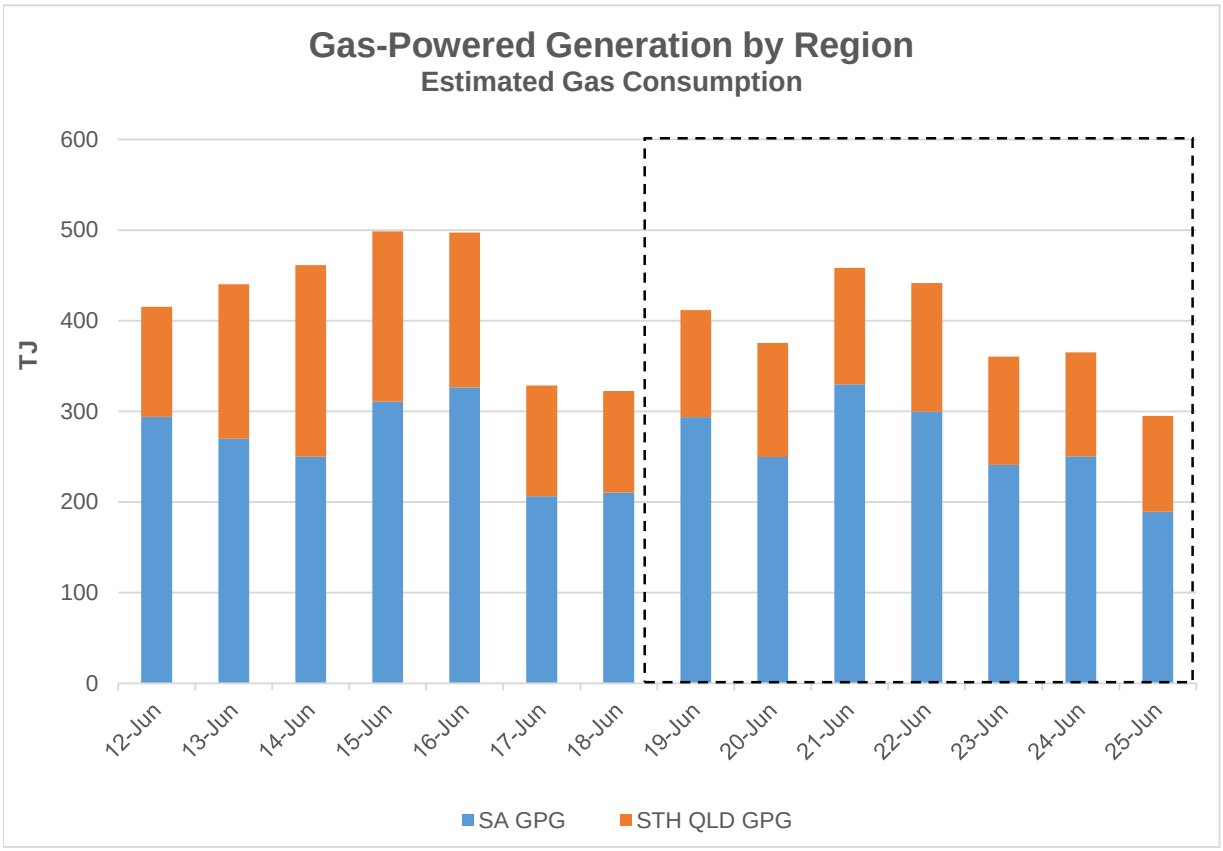

Figure 5: Gas-Powered Generation by Region
Week-on-week comparison of estimated gas consumption for Gas-Powered Generation (calendar day). The estimated thermal efficiency of each generator is provided under the 'Key Assumptions' section of this report.

Monthly Gas Day Trading Summary									
Date	Pipeline	BOD	DA	Daily	Weekly	Monthly	Volume	VWAP ($)	Trades*
May-17	SEQ	35,000	158,000	154,000			655,000	7.82	112
	WAL	35,000	64,000	160,000	28,000				
	Non-Nette	4,000	8,000	9,000					
Apr-17	SEQ	78,000	107,000				540,000	7.27	67
	WAL	62,000	85,000	205,000					
	Non-Nette	3,000							
Mar-17	RBP	71,275	120,000	34,000	14,000		470,575	8.69	78
	SWQP	9,300	111,000	29,000					
	Non-Netted			26,000	56,000				
Feb-17	RBP	15,825	40,000	42,000			318,125	12.64	49
	SWQP	18,300	27,000	105,000	70,000				
	Non-Netted								
Jan-17	RBP	99,475	57,000	48,000	28,000		756,125	10.73	91
	SWQP	92,650	79,000	121,000	91,000				
	Non-Netted				140,000				
Dec-16	RBP	56,725	49,000	7,000	35,000		675,100	8.20	77
	SWQP	63,375	195,000	45,000					
	Non-Net				224,000				
Nov-16	RBP	87,425	75,000	10,000			285,000	7.08	51
	SWQP	67,575	45,000						
Oct-16	RBP	27,725	36,000	4,000			289,625	5.58	39
	SWQP	8,900	6,000	95,000					
	Non-Net			112,000					
Sep-16	RBP	71,000	183,000	67,000			1,405,150	5.81	73
	SWQP	11,150	41,000		70,000				
	Non-Net			122,000		840,000			
Aug-16	RBP	105,975	277,000	50,000			1,303,975	8.47	98
	SWQP		80,000	10,000					
	Non-Net			6,000		465,000			
Jul-16	RBP	124,475	185,000	52,000			1,277,150	10.28	143
	SWQP	52,675	273,000	215,000					
	Non-Net		15,000	45,000	315,000				
Jun-16	RBP	31,450	80,000	25,000			621,425	8.22	63
	SWQP	92,975	205,000	187,000					

Table 2: Monthly Gas Day Trading Summary

Monthly trade statistics for each Trading Loaction and Product. Volume-weighted average prices (VWAP) and traded volume are basis all Gas Supply Hub trades (on-market and off-market) for delivery on Gas days in the corresponding month. *Transactions executed in the month.

Key Assumptions

For Gas-Powered Generation (Figures 3, 4, 5)

Estimated Thermal Efficiency (GPG)		
Region	**Generator**	**Thermal Efficiency (GJ/MWh) As sent-out**
STH QLD	Barcaldine	13.44
STH QLD	Braemar	12
STH QLD	Braemar 2	12
STH QLD	Condamine	7.5
STH QLD	Darling Downs	7.83
STH QLD	Oakey	11.04
STH QLD	Roma GT	12
STH QLD	Yarwun	10.59
SA	Dry Creek	13.85
SA	Ladbroke Grove	12
SA	Mintaro GT	12.86
SA	Pelican Point	7.5
SA	Osborne	8.57
SA	Quarantine	11.25
SA	Torrens Island A	13.04
SA	Torrens Island B	12
SA	Hallet	13.85

Table 3: Estimated Thermal Efficiency (GPG)
The thermal efficiency of each generator was sourced from '*Fuel resource, new entry amd generation costs in the NEM*', *ACIL Tasman, April 2009.* www.aemo.com.au/~/media/Files/Other/planning/419-0035%20pdf.

Figures 3 and 4
NEM-equivalent Gas price ($/GJ) = NEM Regional Reference Price ($/MWh) ÷ Generator Thermal Efficiency (GJ/MWh). The NEM-equivalent gas price is based on a fixed Generator Thermal Efficiency of 12 GJ/MWh.

Figure 5
Gas Powered Generation by Region (Estimated Gas Consumption) (TJ) = Regional ∑(Generator Initial MW generated (MWh) * Generator Thermal Efficiency (GJ/MWh)) ÷ 1000. Estimated gas consumption is calculated using the thermal efficiencies in Table 3.