

Brisbane Ex Ante Price

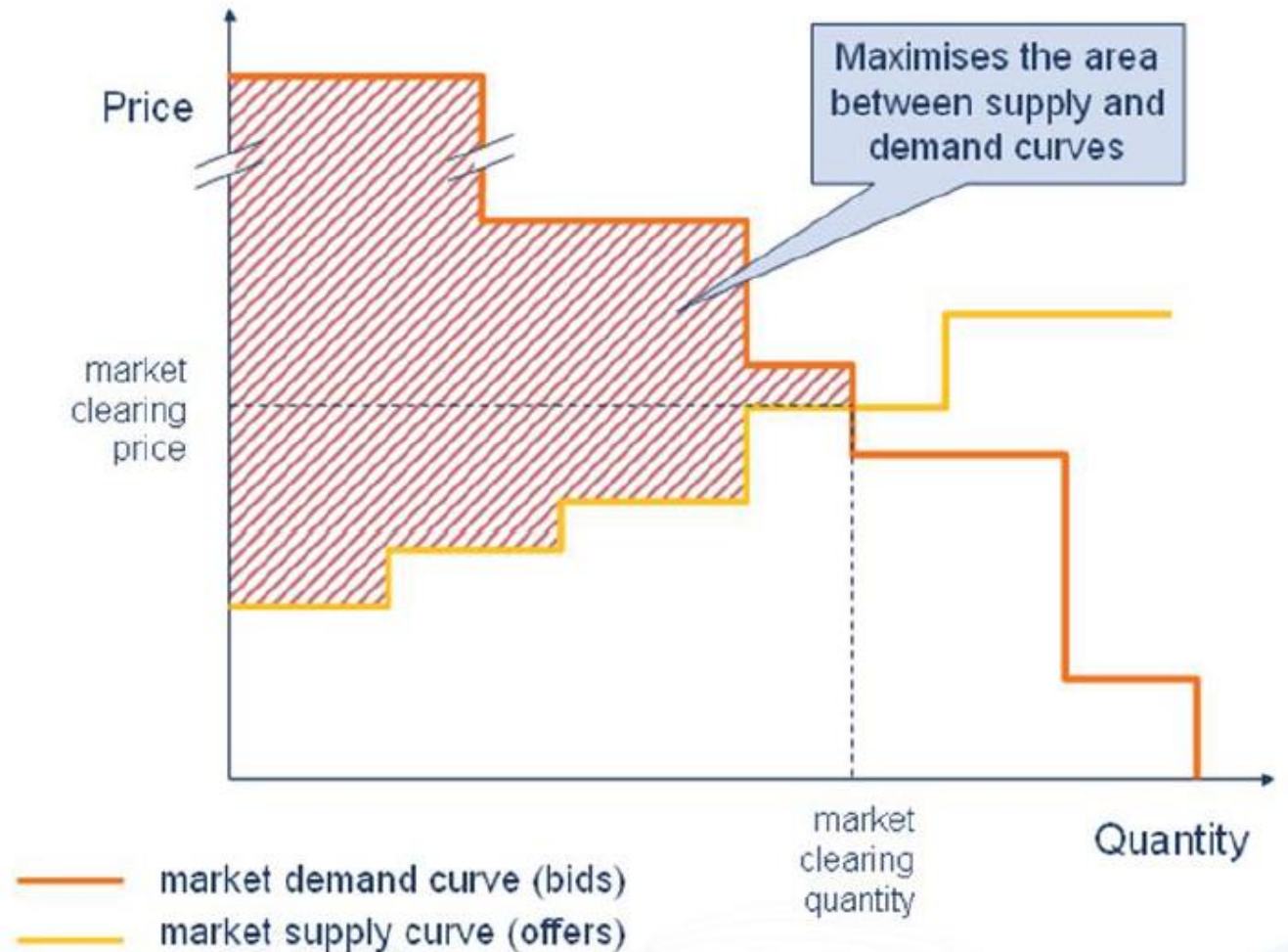
\$10.00

September 2020

SPA maximises the benefit to the market

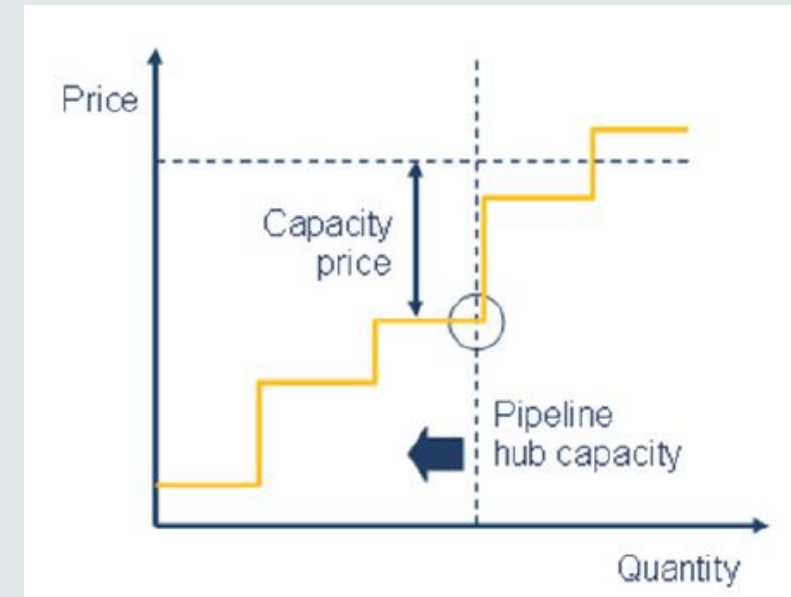
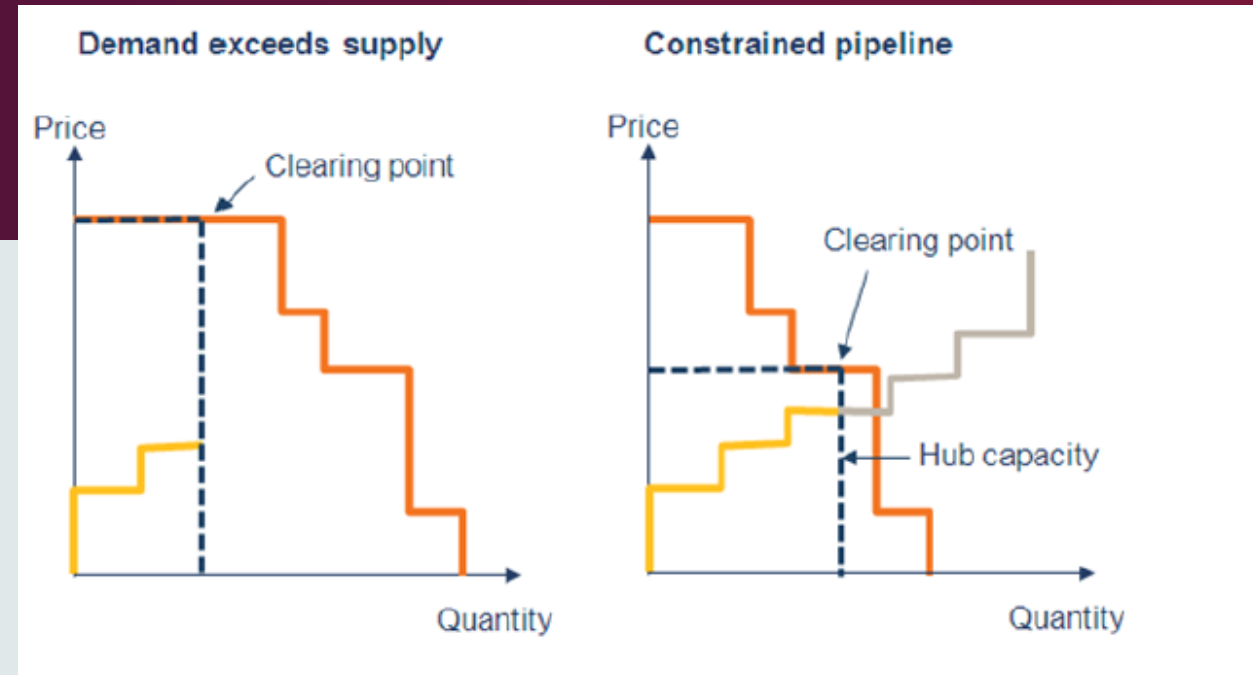
- Scheduling and Pricing Algorithm (SPA) applies NGR 405.
- The SPA seeks to maximise the amount by which the value of bids (and price taker withdrawals) scheduled exceeds the cost of offers.
- The Scheduling and Pricing Engine (SPE) is the software implementation of the SPA.

Figure 16 SPA maximises the benefit to the market



Some examples

- Demand exceeds supply
 - Not enough supply to meet demand
 - Will trigger a Contingency Gas (CG) Event
 - Price will be at Maximum Price Cap (MPC) \$400/GJ
- Constrained pipeline
 - The bid will set the price
 - Capacity Price set to the difference between price and highest offer.



Offer/Bid Stacks: RBP capped @ 114TJ

Price = \$10.00

Highest offer = \$3.90

Capacity Price = \$6.10

OFFER STACK						BID STACK					
gas_date	FACILITY	CommonName	price	Quantity	cumqty_TJ	gas_date	FACILITY_IDENTIFIER	CommonName	price	Quantity	cumqty_TJ
31/08/2020	RBP	Incitec Pivot	0	38	38	31/08/2020	NETBRI1	Price Taker	400.00001	110.823	110.823
31/08/2020	RBP	Brickworks	0	1	39	31/08/2020	NETBRI1	Weston	400	1.972	112.795
31/08/2020	RBP	O-I International	0	3	42	31/08/2020	RBP	Weston	25	0.009	112.804
31/08/2020	RBP	CSR	0	2.2	44.2	31/08/2020	NETBRI1	Caltex	10	2.15	114.954
31/08/2020	RBP	AGL	0	0.67	44.87	31/08/2020	RBP	ERM	4.2522	3	117.954
31/08/2020	RBP	CleanCo	0	30.75	75.62	31/08/2020	RBP	Origin	3.81	2.056	120.01
31/08/2020	RBP	AGL	0	10	85.62	31/08/2020	RBP	Eastern Energy	3.8	3	123.01
31/08/2020	RBP	Origin	0	22.615	108.235	31/08/2020	RBP	ERM	3.4288	2	125.01
31/08/2020	RBP	Origin	0.1	0	108.235	31/08/2020	RBP	CleanCo	3.39	0.001	125.011
31/08/2020	RBP	Caltex	2.5	2.9	111.135	31/08/2020	RBP	ERM	3.2788	5	130.011
31/08/2020	RBP	Alinta	3.8	1	112.135	31/08/2020	RBP	ERM	3.1888	2	132.011
31/08/2020	RBP	Origin	3.8734	1.028	113.163	31/08/2020	RBP	ERM	2.5688	4	136.011
31/08/2020	RBP	Alinta	3.9	1	114.163	31/08/2020	RBP	CleanCo	2.55	0.999	137.01
31/08/2020	RBP	Alinta	3.95	1	115.163	31/08/2020	RBP	Eastern Energy	2.5	3	140.01
31/08/2020	RBP	Alinta	4	1	116.163	31/08/2020	RBP	ERM	2.01	4	144.01
31/08/2020	RBP	CleanCo	4.1	0.6	116.763	31/08/2020	RBP	Alinta	1.99	5	149.01
31/08/2020	RBP	CleanCo	4.35	2.4	119.163	31/08/2020	RBP	Alinta	1.51	5	154.01
31/08/2020	RBP	ERM	4.55	4	123.163	31/08/2020	RBP	CleanCo	1.5	3	157.01

Offer/Bid Stacks: RBP capped @ 119TJ

\$0 offers = 122.95

RBP Cap = 119.00

% schedule = 96.8%

Price = \$10.00

Highest offer = \$0.00

Capacity Price = \$10.00

OFFER STACK						BID STACK					
gas_date	FACILITY_IDENTIFIER	CommonName	price	Quantity	cumqty_TJ	gas_date	FACILITY_IDENTIFIER	CommonName	price	Quantity	cumqty_TJ
3/09/2020	RBP	AGL	0	3.211	3.211	3/09/2020	NETBRI1	Price Taker	400.00001	104.097	104.097
3/09/2020	RBP	AGL	0	7	10.211	3/09/2020	NETBRI1	Weston	400	2.073	106.170
3/09/2020	RBP	Alinta	0	4.5	14.711	3/09/2020	RBP	Weston	25	0.006	106.176
3/09/2020	RBP	Brickworks	0	1	15.711	3/09/2020	NETBRI1	CleanCo	15	4	110.176
3/09/2020	RBP	Caltex	0	3.8	19.511	3/09/2020	NETBRI1	Caltex	10	2.2	112.376
3/09/2020	RBP	CleanCo	0	36	55.511	3/09/2020	NETBRI1	CleanCo	10	7.764	120.140
3/09/2020	RBP	CSR	0	2.2	57.711	3/09/2020	RBP	Origin	4.7895	2.085	122.225
3/09/2020	RBP	Incitec Pivot	0	38	95.711	3/09/2020	RBP	ERM	4.6488	4	126.225
3/09/2020	RBP	O-I International	0	3	98.711	3/09/2020	RBP	ERM	4.5088	4	130.225
3/09/2020	RBP	Origin	0	22.939	121.65	3/09/2020	RBP	Eastern Energy	4.1	3	133.225
3/09/2020	RBP	SGMT	0	1.3	122.95	3/09/2020	RBP	ERM	3.6188	4	137.225
3/09/2020	RBP	CleanCo	3.5	0	122.95	3/09/2020	RBP	CleanCo	3.39	0.001	137.226
3/09/2020	RBP	Arrow	4.5487	2	124.95	3/09/2020	RBP	ERM	3.3188	4	141.226
3/09/2020	RBP	Origin	4.7901	1.043	125.993	3/09/2020	RBP	Alinta	3.0011	5	146.226
3/09/2020	RBP	CleanCo	5.1	1	126.993	3/09/2020	RBP	Alinta	2.7211	5	151.226
3/09/2020	RBP	CleanCo	5.19	1.5	128.493	3/09/2020	RBP	ERM	2.61	2	153.226
3/09/2020	RBP	Arrow	5.2587	3	131.493	3/09/2020	RBP	CleanCo	2.55	0.001	153.227
3/09/2020	RBP	CleanCo	5.3901	3	134.493	3/09/2020	RBP	Eastern Energy	2.5	3	156.227
3/09/2020	RBP	Eastern Energy	5.5	1	135.493	3/09/2020	RBP	ERM	2.01	2	158.227
3/09/2020	RBP	ERM	5.7588	2	137.493	3/09/2020	RBP	CleanCo	1.5	0.998	159.225

Prices

- Ex post imbalance price also capped at RBP capacity.
- MOS D+2 has a big impact for negative deviation price.

gas_date	hub identifier	positive deviation price	negative deviation price	ex ante market price	ex post imbalance price	mos increase cost	mos decrease cost	ex ante capacity price	capacity qty
Mon 31-Aug-20	BRI	3.2788	10.5934	10.00	3.2788	10.5934		6.10	114,000
Tue 01-Sep-20	BRI	4.6787	10.00	4.6787	10.00		9.4802	0.00	114,000
Wed 02-Sep-20	BRI	10.00	10.00	10.00	10.00	5.085		5.189	119,000
Thu 03-Sep-20	BRI	3.6802	10.00	10.00	4.7895		3.6802	10.00	119,000
Fri 04-Sep-20	BRI	4.50	5.0676	4.50	4.50	5.0676		0.00	119,000
Sat 05-Sep-20	BRI	4.0087	5.0278	4.20	4.0087	5.0278		0.00	119,000
Sun 06-Sep-20	BRI	4.4787	10.585	4.4787	4.4787	10.585		0.00	119,000
Mon 07-Sep-20	BRI	3.719	4.4428	4.4428	4.4401		3.719	0.00	119,000
Tue 08-Sep-20	BRI	10.00	10.00	10.00	10.00	4.835		10.00	119,000