

# Origin Energy Quarterly Report March 2019



# Summary

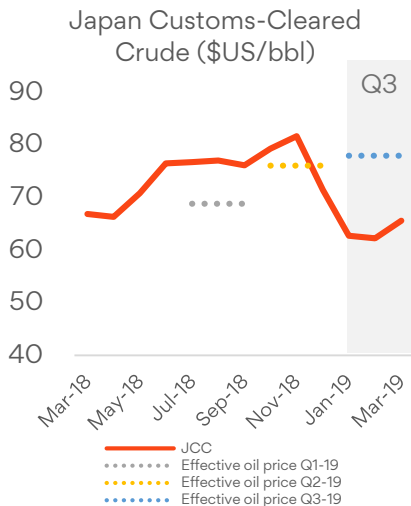


	Unit	Mar-19 QTR	Dec-18 QTR	% Mvt	Mar-18 QTR	% Mvt	FYTD-19	FYTD-18	% Mvt
<b>Integrated Gas - Origin Share of APLNG</b>									
Production	PJ	63.3	63.1	-	62.7	1%	190.6	189.6	1%
Sales	PJe	63.4	64.2	(1%)	61.2	4%	191.3	192.2	-
Commodity Revenue	\$m	763.9	740.9	3%	499.9	53%	2,145.2	1,484.2	45%
<b>Energy Markets</b>									
Electricity sales	TWh	9.3	8.7	7%	9.6	(3%)	27.5	28.4	(3%)
Natural gas sales	PJ	58.5	65.0	(10%)	58.1	1%	206.2	203.5	1%
<b>Corporate</b>									
Origin capex - continuing operations	\$m	77	152	(49%)	56	38%	271	195	39%
Investments	\$m	61	-	n/a	-	n/a	61	-	n/a

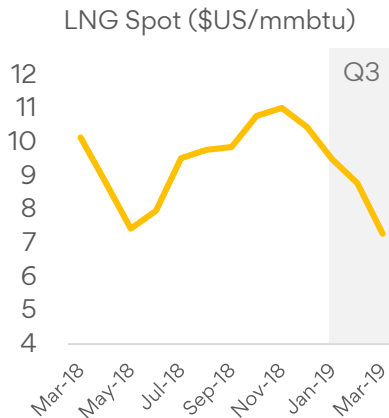
- APLNG revenue increased by 53% on Mar-18 quarter driven by higher effective oil prices.
- Energy Markets' electricity sale volumes increased 7% on Dec-18 quarter reflecting seasonal demand and decreased 3% on Mar-18 quarter due to lower Business volumes.
- Energy Markets' gas sales volumes decreased 10% on Dec-18 quarter reflecting seasonal demand and non-recurrence of short term wholesale contracts offset by increased gas to generation.
- Mar-19 quarter Origin capex decreased 49% due to lower generation maintenance. Investments includes \$33 million relating to OC Energy and a US\$20m Future Energy investment.
- Total expected FY2019 cash distribution from APLNG of ~\$850 million, subject to FX. APLNG has retained cash to fund the Ironbark transaction, settlement is subject to regulatory approvals.



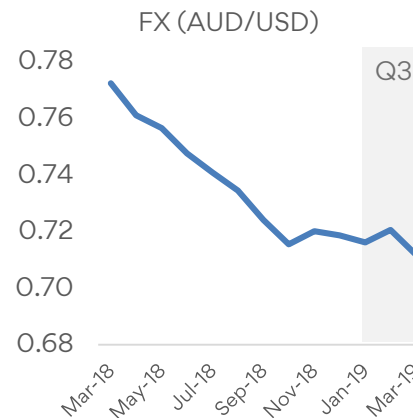
# Oil and LNG markets



Source: Petroleum Association of Japan, Origin analysis



Source: Origin analysis



- APLNG's effective oil price in Mar-19 quarter was US\$78/bbl, up from US\$76/bbl in Dec-18 quarter.
- JCC prices softened in the early part of the March-19 quarter, as economic growth concerns and US sanction waivers for Iran helped ease oil market tightness. Prices have since recovered, driven by OPEC output cuts and further supply outages in Venezuela.
- LNG prices softened from Dec-18 quarter driven by a mild northern hemisphere winter and additional supply from new projects weighing on the market.

# Integrated Gas



	Unit	Mar-19 QTR	Dec-18 QTR	% Mvt	Mar-18 QTR	% Mvt	FYTD-19	FYTD-18	% Mvt	
Total production (ORG share)	PJ	63.3	63.1	-	62.7	1%	190.6	189.6	1%	
<b>LNG (ORG share)</b>										
Production	kt	834.1	844.0	(1%)	781.1	7%	2,444.9	2,492.8	(2%)	
Sales	kt	862.4	838.6	3%	772.8	12%	2,463.1	2,483.2	(1%)	
Commodity Revenue	\$m	688.8	650.5	6%	417.2	65%	1,866.3	1,251.7	49%	
Average realised price	US\$/mmbtu	10.84	10.59	2%	8.10	34%	10.38	7.50	38%	
<b>Domestic Gas (ORG share)</b>										
Sales	PJ	15.6	17.7	(12%)	18.4	(15%)	54.8	54.6	-	
Commodity Revenue	\$m	75.0	90.4	(17%)	82.7	(9%)	278.9	232.5	20%	
Average realised price	\$/GJ	4.80	5.10	(6%)	4.50	7%	5.09	4.26	19%	
<b>Origin Only costs</b>										
Origin hedging costs	\$m	(33.7)	(78.1)	(57)%	(22.0)	53%	(162.8)	(54.0)	201%	

- LNG production was in line with Dec-18 quarter and was up 7% on Mar-18 quarter primarily driven by Mar-18 scheduled downstream maintenance.
- LNG revenue was up 6% on Dec-18 quarter and 65% on Mar-18 quarter due to a higher proportion of contract sales at higher effective oil prices.
- Domestic gas revenue was down by 17% on Dec-18 quarter reflecting lower short term domestic demand and down 9% on Mar-18 quarter reflecting lower sales volumes associated with Mar-18 scheduled downstream maintenance, partially offset by higher average prices.
- Hedging costs of \$33.7 million decreased by 57% on Dec-18 quarter reflecting a smaller LNG hedge position and lower oil hedge premium amortisation.
- FY2019 total oil and LNG hedging costs are expected to be \$190 - \$210 million (unchanged).

# Integrated Gas Capex



	Unit	Mar-19 QTR	Dec-18 QTR	% Mvt	Mar-18 QTR	% Mvt	FYTD-19	FYTD-18	% Mvt
<b>Origin Only capex</b>									
Capex - continuing operations	\$m	10	8	25%	5	100%	20	15	33%
<b>APLNG capex (100%)</b>									
Exploration and appraisal	\$m	27	34	(21%)	20	35%	88	47	87%
Sustain and Other	\$m	305	245	24%	272	12%	883	850	4%

## Origin Only capex

- Beetaloo Stage 2 appraisal - two horizontal wells planned in CY2019 dry season targeting 2 of the 4 stacked unconventional plays:
  - Kyalla shale liquids rich gas play; and
  - Velkerri shale liquids rich gas play.

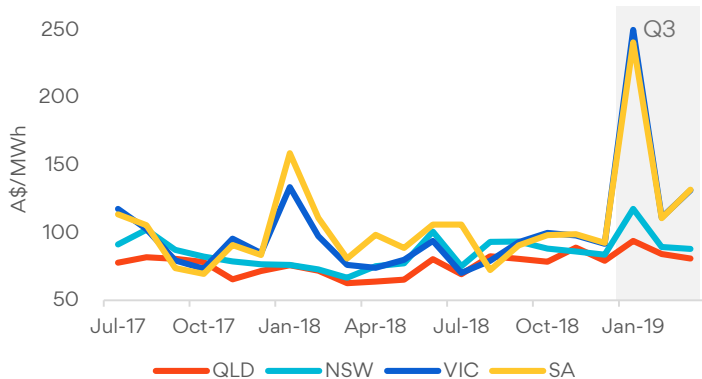
## APLNG capex

- Exploration and appraisal spend in the Mar-19 quarter primarily related to completion of Peat 3D Seismic, drilling, casing and suspending of the Westgrove 9 well and four appraisal wells to provide further information to guide development.
- Sustain and Other capex was 24% higher than Dec-18 quarter driven by a planned increase in procurement and construction scope related to wells not yet online and a fracture stimulation campaign starting in the quarter.
- FYTD-19 Exploration and appraisal and Sustain and Other capex remains lower than guidance run rate primarily due to deferral of activity.

# Electricity and Gas markets

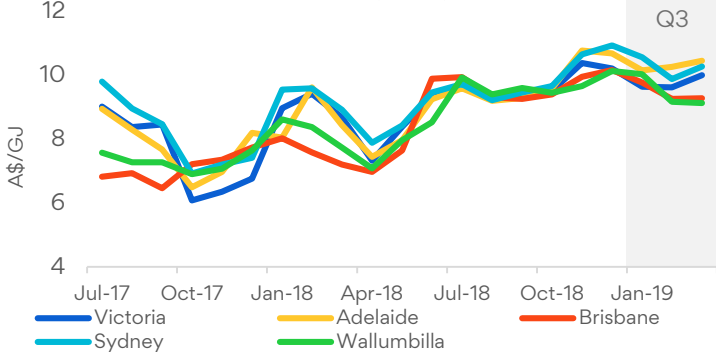


Electricity (\$/MWh)



- Average NEM spot electricity price for Mar-19 quarter was \$127.38/MWh, up \$37.13/MWh from Dec-18 quarter:
  - Significantly higher prices in VIC and SA driven by high temperature days on 24-25 January and 1 March, baseload outages in VIC, lower wind generation in SA and continued drought in TAS
  - Slightly higher prices in NSW and QLD, with higher demand largely met by increased coal and gas generation in both states

Natural Gas (\$/GJ)



- Average domestic spot gas price for Mar-19 quarter was \$9.82/GJ, down \$0.24/GJ from Dec-18 quarter.

# Energy Markets operations



	Unit	Mar-19 QTR	Dec-18 QTR	% Mvt	Mar-18 QTR	% Mvt	FYTD-19	FYTD-18	% Mvt
<b>Sales volumes</b>									
Electricity sales – Retail	TWh	4.5	3.8	18%	4.4	2%	13.0	13.3	(2%)
Electricity sales – Business	TWh	4.8	4.9	(2%)	5.2	(8%)	14.5	15.1	(4%)
Natural gas sales – Retail	PJ	5.3	7.0	(24%)	5.5	(4%)	28.6	29.7	(4%)
Natural gas sales – Business	PJ	37.4	47.5	(21%)	37.6	(1%)	139.5	127.4	9%
Natural gas sales – Internal	PJ	15.8	10.5	50%	15.0	5%	38.1	46.4	(18%)
Capex – continuing operations	\$m	65	140	(54%)	54	20%	245	178	38%
Investments	\$m	61	-	n/a	-	n/a	61	-	n/a

- Electricity Retail sales up 18% on Dec-18 and 2% on Mar-18 quarter due to a hot summer.
- Gas Retail sales decreased 24% on Dec-18 quarter due to lower seasonal demand and decreased 4% on Mar-18 quarter due to lower volumes in VIC from lower customer numbers.
- Gas Business sales decreased 21% on Dec-18 quarter due to non-recurrence of short term wholesale contracts in QLD partly offset by more gas to generation.
- Capex in the quarter relates to normal sustaining spend.
- Investments relate to:
  - OC Energy acquisition upfront payment (\$33 million) as announced on 15 February 2019
  - A research and development partnership and minority equity investment in Intertrust<sup>1</sup> (US\$20 million) aimed at developing new data driven products for the energy market

1) Intertrust Technologies Corporation, a US based private technology company





# Data tables





# APLNG sources of gas



	Units	Mar-19 QTR Origin Share 37.5%	Dec-18 QTR Origin Share 37.5%	% Change	Mar-18 QTR Origin Share 37.5%	FYTD2019 Origin Share 37.5%	FYTD2018 Origin Share 37.5%
<b>Production volumes</b>							
<b>Operated</b>							
Spring Gully	PJ	9.6	10.0	(4%)	9.7	29.7	28.7
Peat	PJ	0.2	0.2	-	0.3	0.6	0.8
Denison	PJ	0.0	0.1	n/a	0.0	0.2	-
Talinga	PJ	6.9	7.1	(3%)	6.6	20.8	19.3
Orana	PJ	6.4	5.2	23%	6.2	18.0	18.3
Condabri	PJ	11.1	12.3	(10%)	12.5	35.2	37.5
Combabula/Reedy Creek	PJ	13.9	14.1	(1%)	12.8	42.3	39.4
<b>Total operated production</b>	<b>PJ</b>	<b>48.2</b>	<b>49.1</b>	<b>(2%)</b>	<b>48.1</b>	<b>146.9</b>	<b>144.0</b>
<b>Non-operated</b>							
Fairview (GLNG)	PJ	3.3	3.6	(8%)	3.6	10.5	11.4
Arcadia (GLNG)	PJ	0.1	0.1	-	0.1	0.2	0.2
Angry Jungle <sup>1</sup> (GLNG)	PJ	-	-	n/a	-	-	-
Anya (QGC)	PJ	0.2	0.1	100%	-	0.3	-
Kenya East (QGC)	PJ	5.6	5.2	8%	5.2	16.2	15.9
Kenya (QGC)	PJ	5.6	4.8	17%	5.6	15.8	17.2
Bellevue (QGC)	PJ	0.3	0.3	-	0.2	0.8	0.9
<b>Total non-operated production</b>	<b>PJ</b>	<b>15.1</b>	<b>14.0</b>	<b>8%</b>	<b>14.7</b>	<b>43.8</b>	<b>45.6</b>
<b>Total upstream production</b>	<b>PJ</b>	<b>63.3</b>	<b>63.1</b>	<b>-</b>	<b>62.7</b>	<b>190.6</b>	<b>189.6</b>
Natural gas purchases	PJ	2.3	4.2	(45%)	4.7	10.2	14.7
Changes in Upstream gas inventory/other	PJ	-	1.0	n/a	(2.0)	0.2	(0.2)
<b>Total sources of natural gas</b>	<b>PJ</b>	<b>65.6</b>	<b>68.3</b>	<b>(4%)</b>	<b>65.3</b>	<b>201.1</b>	<b>204.1</b>

1) Angry Jungle is a sub-section of Roma East

# APLNG uses of gas



Uses of gas	Units	Mar-19 QTR Origin Share 37.5%	Dec-18 QTR Origin Share 37.5%	% Change	Mar-18 QTR Origin Share 37.5%	FYTD2019 Origin Share 37.5%	FYTD2018 Origin Share 37.5%
LNG feed gas	PJ	49.9	50.5	(1%)	46.9	146.3	149.5
Domestic sales	PJ	15.6	17.7	(12%)	18.4	54.8	54.6
<b>Total uses of natural gas</b>	<b>PJ</b>	<b>65.6</b>	<b>68.3</b>	<b>(4%)</b>	<b>65.3</b>	<b>201.1</b>	<b>204.1</b>

LNG	Units	Mar-19 QTR Origin Share 37.5%	Dec-18 QTR Origin Share 37.5%	% Change	Mar-18 QTR Origin Share 37.5%	FYTD2019 Origin Share 37.5%	FYTD2018 Origin Share 37.5%
LNG Production	kt	834.1	844.0	(1%)	781.1	2,444.9	2,492.8
Changes in LNG inventory	kt	28.2	(5.4)	n/a	(8.3)	18.2	(9.6)
<b>Total LNG sales volume</b>	<b>kt</b>	<b>862.4</b>	<b>838.6</b>	<b>3%</b>	<b>772.8</b>	<b>2,463.1</b>	<b>2,483.2</b>
<b>LNG cargoes loaded and shipped<sup>1</sup></b>	<b>#</b>	<b>33</b>	<b>32</b>	<b>3%</b>	<b>30</b>	<b>94</b>	<b>97</b>

1) Number of cargoes reported are 100% APLNG

# APLNG Sales



Share of APLNG Sales revenue	Units	Mar-19 QTR Origin Share 37.5%	Dec-18 QTR Origin Share 37.5%	% Change	Mar-18 QTR Origin Share 37.5%	FYTD2019 Origin Share 37.5%	FYTD2018 Origin Share 37.5%
LNG	\$m	688.8	650.5	6%	417.2	1,866.3	1,251.7
Domestic Gas	\$m	75.0	90.4	(17%)	82.7	278.9	232.5
<b>Total Commodity Revenue (ORG share)</b>	\$m	<b>763.9</b>	<b>740.9</b>	<b>3%</b>	<b>499.9</b>	<b>2,145.2</b>	<b>1,484.2</b>

Sales – APLNG average realised prices	Units	Mar-19 QTR Origin Share 37.5%	Dec-18 QTR Origin Share 37.5%	% Change	Mar-18 QTR Origin Share 37.5%	FYTD2019 Origin Share 37.5%	FYTD2018 Origin Share 37.5%
LNG	US\$/mmbtu	10.84	10.59	2%	8.10	10.38	7.50
Domestic Gas	\$/GJ	4.80	5.10	(6%)	4.50	5.09	4.26
<b>Average Commodity price</b>	<b>\$/GJe</b>	<b>12.04</b>	<b>11.54</b>	<b>4%</b>	<b>8.17</b>	<b>11.22</b>	<b>7.72</b>

Origin only costs	Units	Mar-18 QTR	Dec-18 QTR	% Change	Mar-18 QTR	FYTD2019	FYTD2018
Hedge premium expense	\$m	(4.0)	(15.3)	(15)%	(16.5)	(21.5)	(51.0)
Gain / (Loss) on oil hedging	\$m	(23.5)	(27.4)	(27)%	(8.0)	(78.9)	(8.1)
Gain / (Loss) on LNG hedging	\$m	(6.2)	(35.4)	(82)%	2.5	(62.5)	5.1
<b>Total</b>	\$m	<b>(33.7)</b>	<b>(78.1)</b>	<b>(57)%</b>	<b>(22.0)</b>	<b>(162.8)</b>	<b>(54.0)</b>



# Operated drilling & production



## APLNG Operated Production Wells

		Avg daily production (APLNG share)		Development Wells	
				Wells drilled	Wells commissioned
Bowen	Spring Gully	285.0 TJ/d	Mar-19 QTR FYTD 2019	2 3	- 1
	Peat	7.3 TJ/d	Mar-19 QTR FYTD 2019	- -	- -
	Denison	1.1 TJ/d	Mar-19 QTR FYTD 2019	- -	- -
Surat	Talinga	204.2 TJ/d	Mar-19 QTR FYTD 2019	- -	- 29
	Orana	189.0 TJ/d	Mar-19 QTR FYTD 2019	- 2	- 28
	Condabri	329.4 TJ/d	Mar-19 QTR FYTD 2019	- 16	9 17
	Combabula / Reedy Creek	412.1 TJ/d	Mar-19 QTR FYTD 2019	45 151	15 105
	<b>TOTAL</b>	<b>1,428.1 TJ/d</b>	<b>Mar-19 QTR FYTD 2019</b>	<b>47 172</b>	<b>24 180</b>

# Non-Operated drilling & production



## APLNG Non-Operated Production Wells

		Avg daily production (APLNG share)		Development Wells	
				Wells drilled	Wells commissioned
GLNG	Fairview	99.2 TJ/d	Mar-19 QTR FYTD 2019	8 41	4 54
	Arcadia	1.9 TJ/d	Mar-19 QTR FYTD 2019	32 83	4 13
	Angry Jungle <sup>1</sup>	0.0 TJ/d	Mar-19 QTR FYTD 2019	37 107	29 109
QGC	Anya	5.4 TJ/d	Mar-19 QTR FYTD 2019	- 4	- 25 <sup>2</sup>
	Kenya East	165.5 TJ/d	Mar-19 QTR FYTD 2019	1 41	20 56 <sup>2</sup>
	Kenya	166.8 TJ/d	Mar-19 QTR FYTD 2019	11 20	11 18
	Bellevue	9.1 TJ/d	Mar-19 QTR FYTD 2019	- 4	- -
<b>TOTAL</b>		<b>447.9 TJ/d</b>	<b>Mar-19 QTR FYTD 2019</b>	<b>89 300</b>	<b>68 275</b>

1) Angry Jungle is a sub-section of Roma East

2) FYTD 2019 wells commissioned has been restated

# Energy Markets sales volumes



## Electricity sales volume (TWh)

Volumes sold (TWh)	Mar-19 QTR		Dec-18 QTR		FYTD2019		FYTD2018	
	Retail	Business	Retail	Business	Retail	Business	Retail	Business
NSW	2.1	2.4	1.8	2.5	6.2	7.2	6.3	7.0
Queensland	1.3	0.9	1.1	0.9	3.5	2.7	3.7	3.2
Victoria	0.7	0.9	0.7	1.1	2.3	3.2	2.4	3.6
South Australia	0.4	0.5	0.3	0.5	1.0	1.4	0.9	1.3
<b>Total volumes sold</b>	<b>4.5</b>	<b>4.8</b>	<b>3.8</b>	<b>4.9</b>	<b>13.0</b>	<b>14.5</b>	<b>13.3</b>	<b>15.1</b>

## Natural Gas sales volume (PJ)

Volumes sold (PJ)	Mar-19 QTR		Dec-18 QTR		FYTD2019		FYTD2018	
	Retail	Business	Retail	Business	Retail	Business	Retail	Business <sup>2</sup>
NSW	1.5	4.0	1.9	4.9	7.0	14.6	6.6	16.8
Queensland	0.7	19.4	0.8	29.4	2.4	75.3	2.2	64.9
Victoria	2.4	11.7	3.2	10.4	15.2	41.2	17.1	36.8
South Australia	0.8	2.2	1.1	2.8	4.0	8.4	3.8	9.0
<b>External volumes sold</b>	<b>5.3</b>	<b>37.4</b>	<b>7.0</b>	<b>47.5</b>	<b>28.6</b>	<b>139.5</b>	<b>29.7</b>	<b>127.4</b>
Internal sales (generation)		15.8		10.5		38.1		46.4
<b>Total volumes sold</b>		<b>58.5</b>		<b>65.0</b>		<b>206.2</b>		<b>203.5</b>

# Conversion factors and abbreviations



## Conversion factors

LNG	0.0554	PJ/ktonnes
LNG	1.0532	GJ/mmbtu

## Abbreviations

\$	Australian dollars, unless stated otherwise
APLNG	Australia Pacific LNG – an incorporated Joint Venture between Origin, ConocoPhillips and Sinopec
barrels	an international measure of oil production. 1 barrel = 159 litres
Bopd	barrels of oil per day
bwpd	barrels of water per day
C&C	cased and completed
C&S	cased and suspended
CSG	coal seam gas
FID	final investment decision
GJ	gigajoule = $10^9$ joules
joule	a measure of energy
kbbls	Kilo barrels = 1,000 barrels
kT	Kilo tonnes = 1,000 tonnes
LNG	liquefied natural gas
mmbbl	million barrels
mmboe	million barrels of oil equivalent
mmbtu	million British thermal units
mmscf	million standard cubic feet
mRT	Measured depth below rotary table in meters
mtpa	million tonnes per annum
P&A	plugged and abandoned
P&S	plugged and suspended
pa	per annum
PJ	petajoule = $10^{15}$ joules
PJe	petajoule equivalent, a measure used to express the volume of different petroleum products on the basis of the energy contained in the product
QGC	Queensland Gas Company
Spudding	to commence drilling a well
SWQ	South West Queensland
t	tonnes
TJ	terajoule = $10^{12}$ joules
TJ/d	terajoules per day
YTD	year to date