

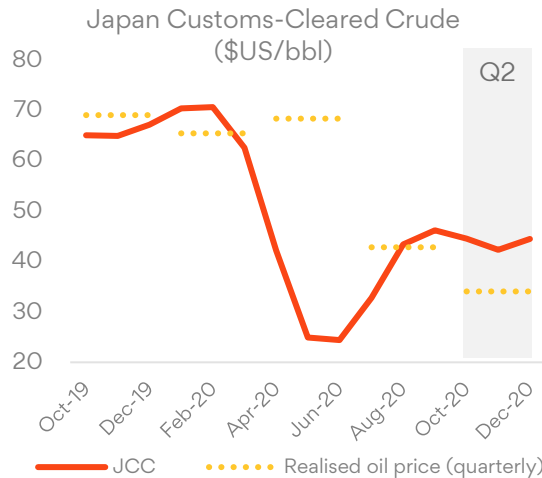
# Origin Energy

# Quarterly Report

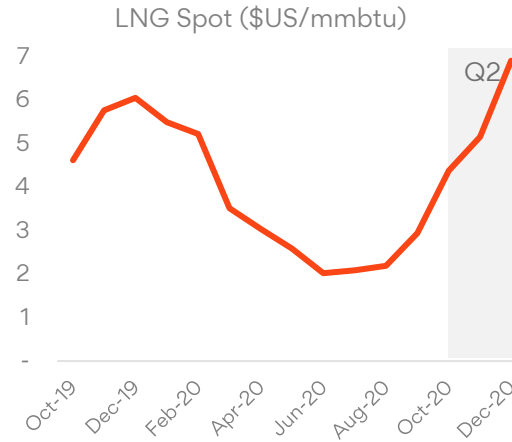
## December 2020



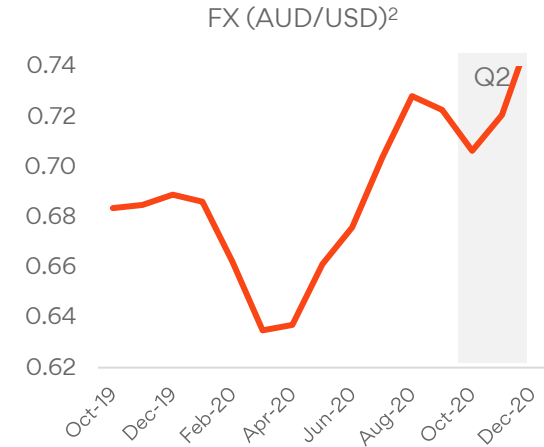




Source: Petroleum Association of Japan, Refinitiv



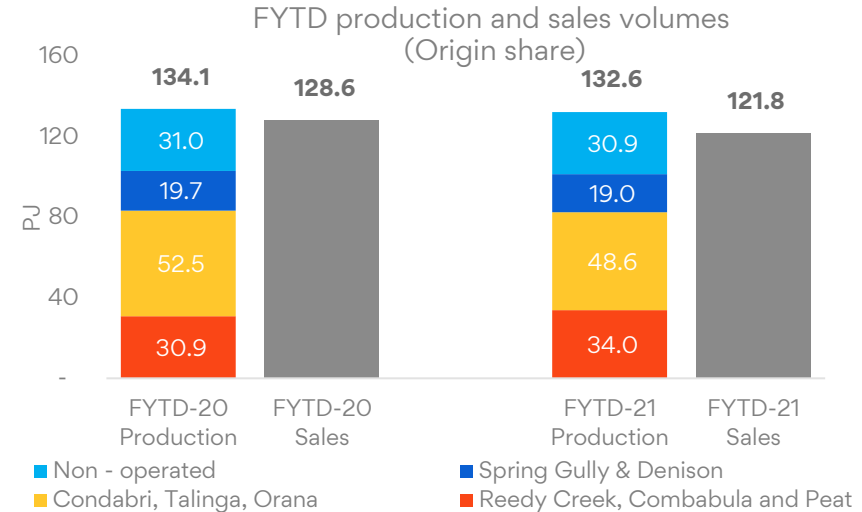
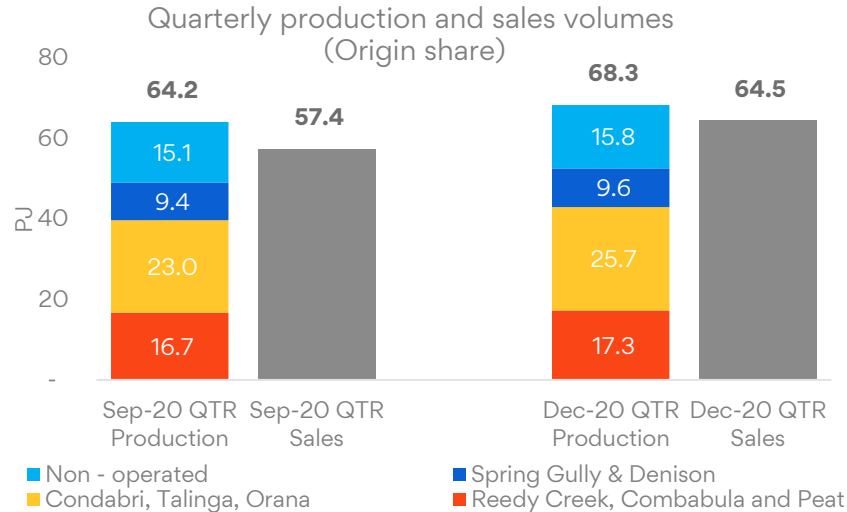
Source: IHS Markit<sup>1</sup>



- APLNG's realised lagged oil price in the Dec-20 quarter was US\$34/bbl (A\$46/bbl), down from US\$43/bbl (A\$60/bbl) in the Sep-20 quarter and US\$69/bbl (A\$100/bbl) in the Dec-19 quarter
- As at 31 December 2020, ~91% of APLNG's FY2021 JCC oil exposure was priced at ~US\$43/bbl, based on contract lags
- The Dec 20 quarter saw an improvement in global oil demand, coinciding with OPEC+ supply restrictions, acting to support JCC, while JKM prices were buoyed by strong northern hemisphere winter demand and supply bottlenecks

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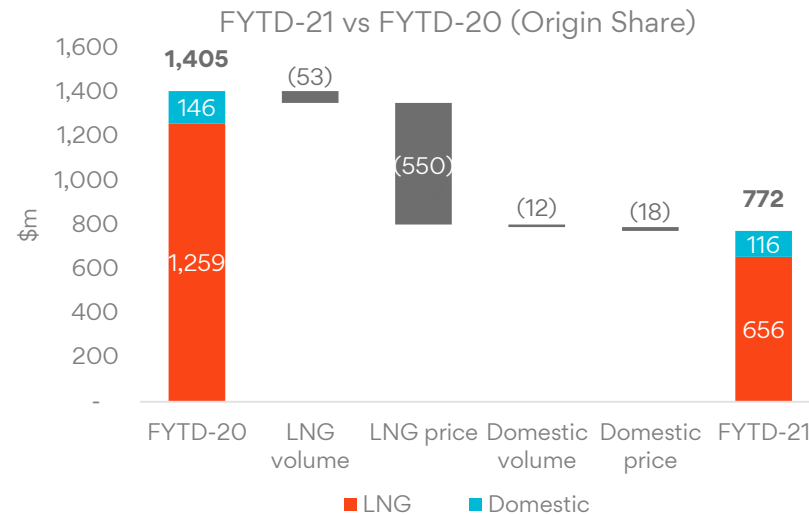
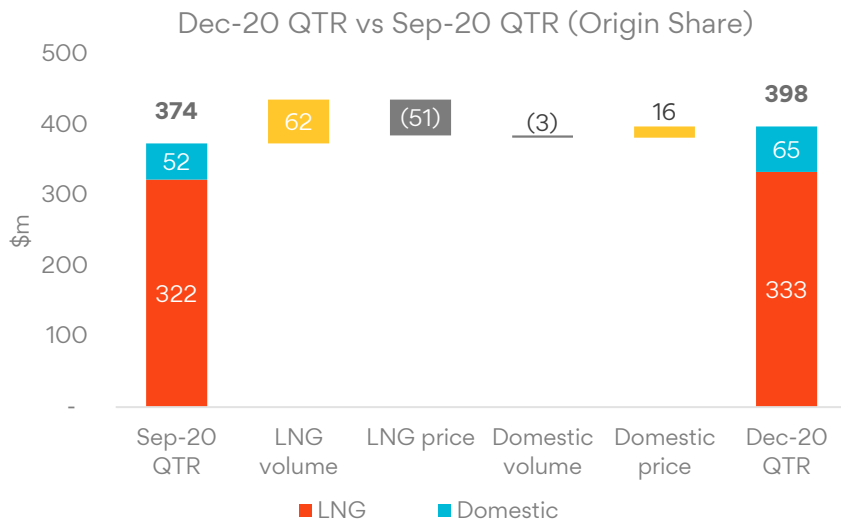
# APLNG achieves record production in the December-20 quarter



- Dec-20 quarter production up 6% from Sep-20 quarter:
  - Operated production up 7% in response to higher demand
  - Non-operated production up 5% with sustained facility reliability and well availability following completion of planned maintenance in the prior quarter
- Dec-20 quarter sales volume up 12% vs Sep-20 quarter with increased demand resulting in less banking of non-operated production and a drawdown on LNG inventory due to cargo timing

- FYTD-21 production relatively stable from prior year:
  - reduced production primarily in Sep-20 quarter at Condabri, Talinga, Orana in response to lower demand and planned facility maintenance
  - partially offset by increases at Reedy Creek/Combabula with ramp up of the ERIC pipeline in the prior period
- FYTD-21 sales volume down 5% as lower demand resulted in less purchases and lower volumes lifted from non-operated production, partially offset by a drawdown in LNG inventory

# APLNG revenue up in the quarter but lower than prior year

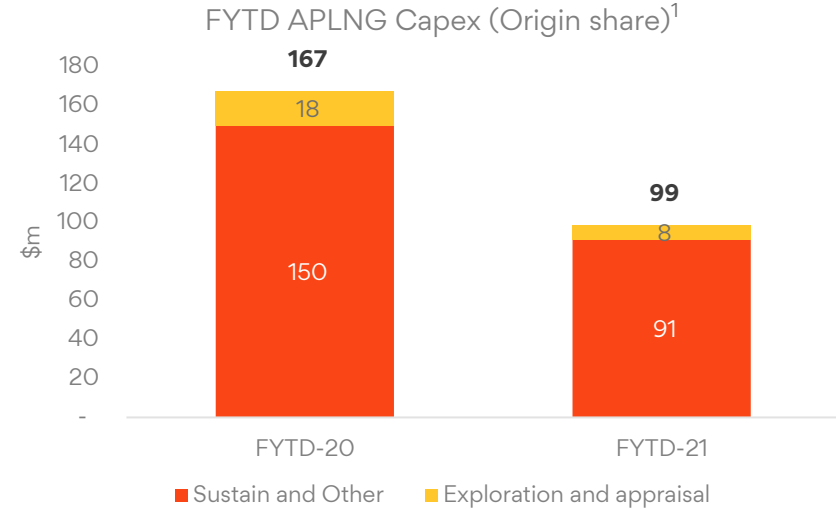
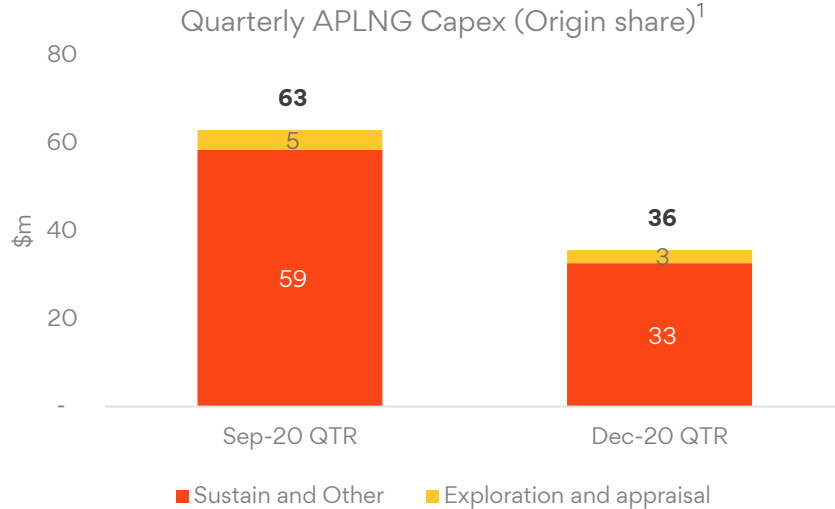


- APLNG revenue up 6% from Sep-20 quarter:
  - LNG revenue up 3% with lower realised oil prices on contract volumes offset by higher spot LNG volumes and prices
  - Domestic revenue up 25% due to higher realised prices, including on legacy oil-linked sales to QGC

- APLNG revenue down 45% on prior year:
  - LNG revenue down 48% due to lower realised oil prices and lower volumes
  - Domestic revenue down 21% driven by lower legacy contract volumes and lower realised prices on short term contracts and legacy oil-linked sales to QGC



# APLNG capital expenditure (Origin share)

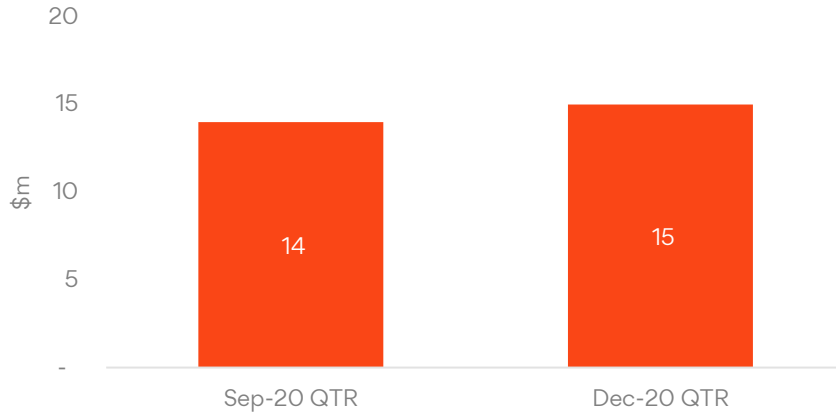


- Capex was down \$27 million (43%) from Sep-20 quarter with a continued reduction in development activity primarily related to improved field performance allowing reduced connections and commissioning, lower infrastructure spend and a decrease in non-operated development activity

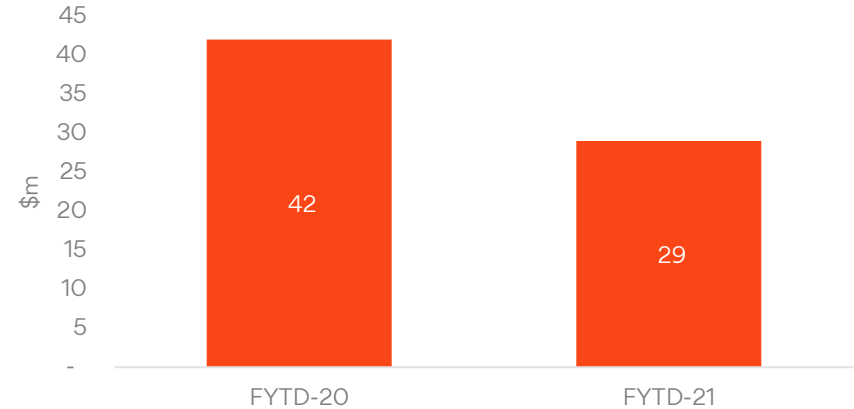
- Capex was down \$68 million (41%) reflecting a ramp down in development activity enabled by strong field performance as well as lower exploration and non-operated activity

1) APLNG capex is reported on an accrual basis.

### Quarterly Integrated Gas - Other Capex



### FYTD Integrated Gas - Other Capex

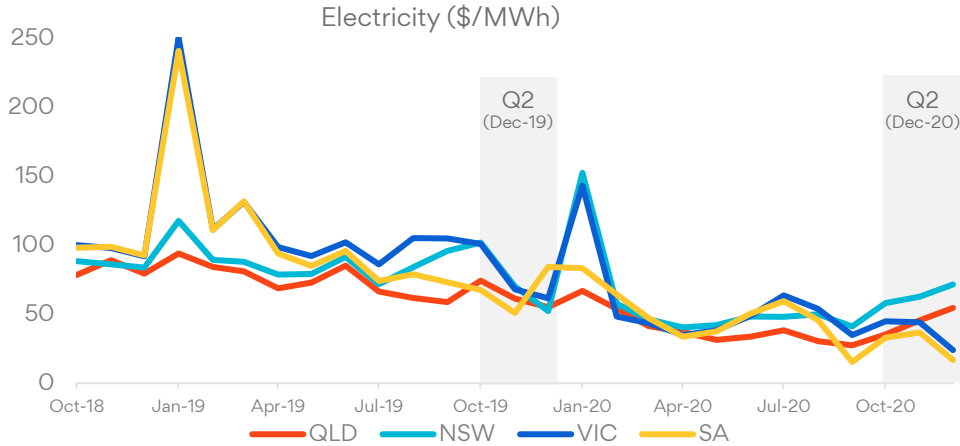


- Dec-20 quarter spend primarily relates to appraisal activity in the Beetaloo Basin, including mobilisation, fracture stimulation and initial flowback activities at the Kyalla well
- Origin also spudded the Obelix-2 well in the Cooper-Eromanga Basin during the quarter and has since completed the well and taken log and core data for evaluation
- Capex spend relates primarily to Beetaloo E&A activity
- Lodged a Notice of Discovery with Northern Territory government after encouraging initial results at Kyalla-117
  - Met objective to flow liquids rich gas to surface and confirmed elevated liquids yields and low levels of CO<sub>2</sub>
  - Further work underway to enable continuous unassisted production, EPT planned in the dry season with results expected in Q4 FY2021

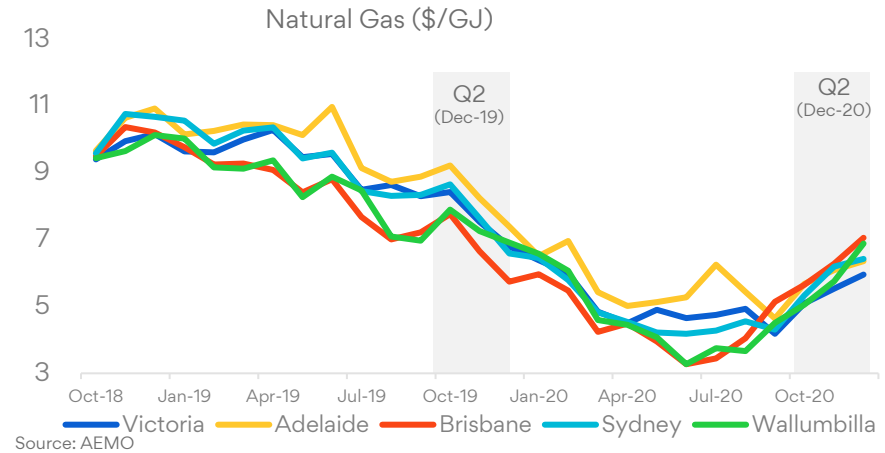




# Electricity and natural gas markets



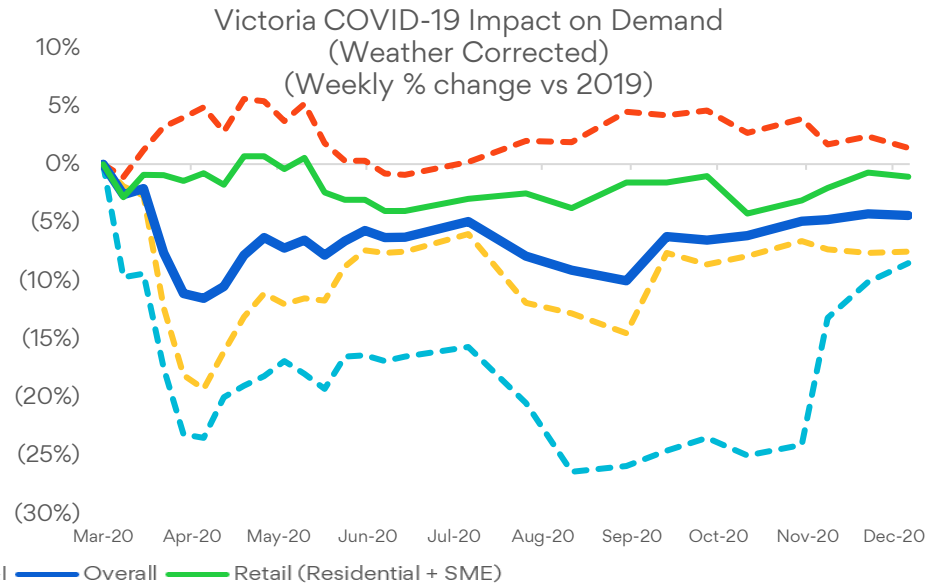
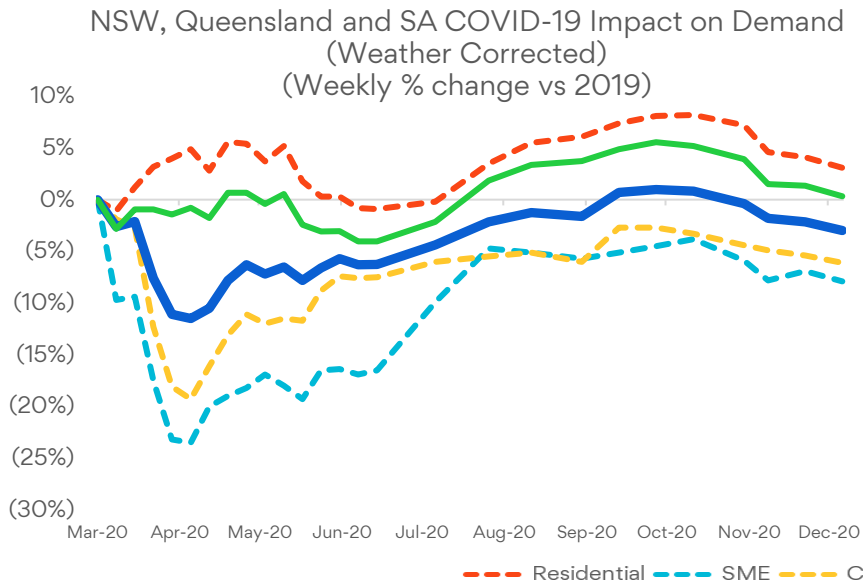
Source: AEMO



Source: AEMO

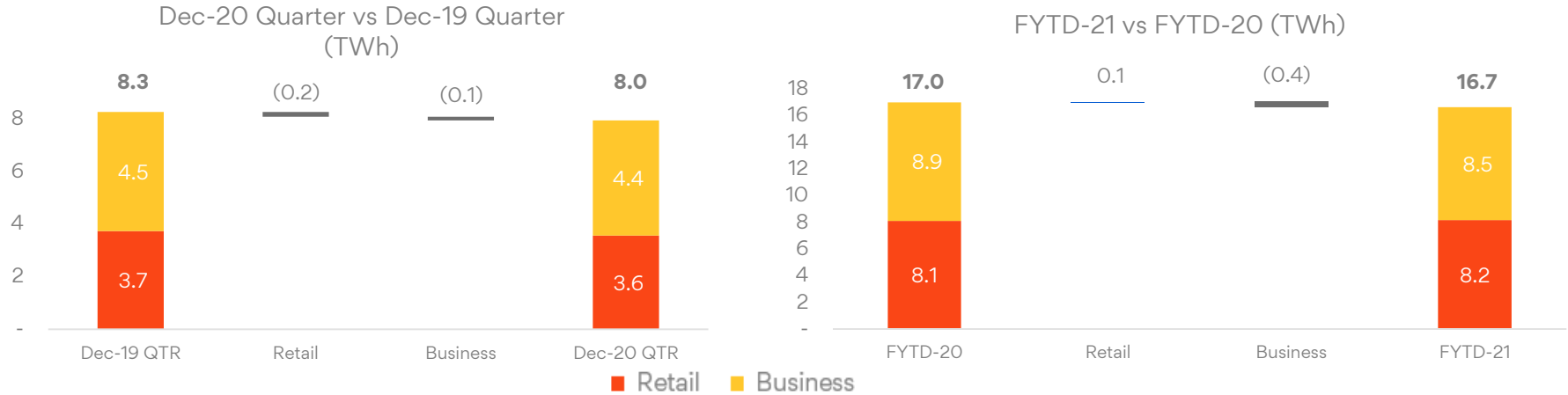
- Average NEM spot electricity price for Dec-20 quarter was \$43.8/MWh, a significant decrease from \$70.5/MWh in the Dec-19 quarter and in line with the Sep-20 quarter:
  - Decline from Dec-19 due to lower demand as a result of COVID-19, milder weather, lower fuel costs for gas and coal generation and increased renewable penetration
- Average domestic spot gas price for Dec-20 quarter was \$5.95/GJ, compared to \$7.51/GJ in the Dec-19 quarter and \$4.53/GJ in the Sep-20 quarter:
  - Decrease from Dec-19 driven by reduced demand as a result of COVID-19 and milder weather
  - Increase from Sep-20 driven by linkage to higher Asian LNG prices offsetting impacts of COVID-19 and milder weather

# COVID-19 impacts on state electricity demand



Source: Origin customer meter data and internal analysis

- Weather corrected demand across all NEM states (ex Victoria), is 3% lower than pre-COVID levels having significantly recovered from a low of 10% in Apr-20. Retail volumes remain slightly above pre-COVID levels, buoyed by residential demand.
- Weather corrected demand in Victoria remains below pre-COVID levels driven by lower C&I demand. Retail demand remains at pre-COVID levels with SME demand recovering considerably during the quarter.

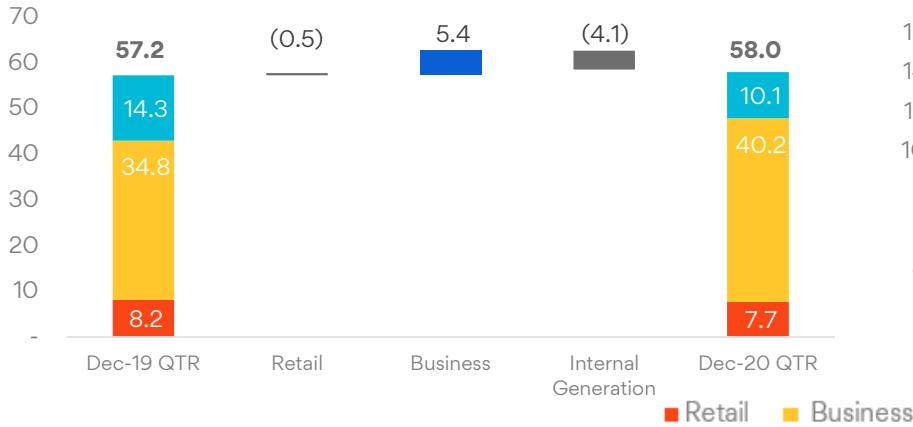


- Retail volumes down 5% on Dec-19 quarter due to
  - milder weather from La Niña conditions (-0.1 TWh);
  - lower usage from solar and energy efficiency (-0.1 TWh);
  - lower customer numbers relating to large SME tenders (-0.1 TWh);
  - net increase due to COVID-19 (+0.1 TWh) with higher residential demand and lower SME demand
- Business volumes down 3% on Dec-19 quarter due to COVID-19 impacts (-0.2 TWh), partly offset by new contracts (+0.1 TWh)
- Retail volumes up 1% on FYTD-20 due to
  - increase from COVID-19 (+0.3 TWh) driven by residential;
  - lower usage from solar and energy efficiency (-0.1 TWh);
  - lower SME customer numbers (-0.1 TWh);
  - no material weather impact: cooler weather in Sep-20 quarter offset by milder summer (La Niña) in Dec-20
- La Niña conditions are forecast to persist during Q3 FY2021
- Business volumes down 5% on FYTD-20 due to COVID-19 impacts, partly offset by new contract wins

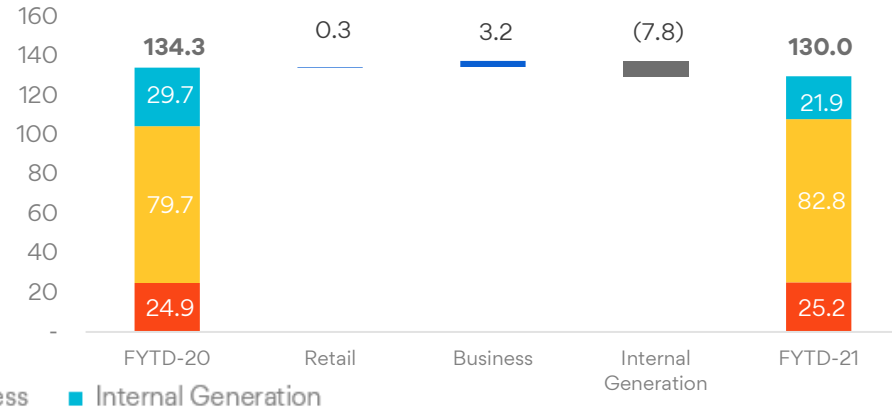
# Energy Markets – Natural gas sales



Dec-20 Quarter vs Dec-19 Quarter (PJ)



FYTD21 vs FYTD20 (PJ)



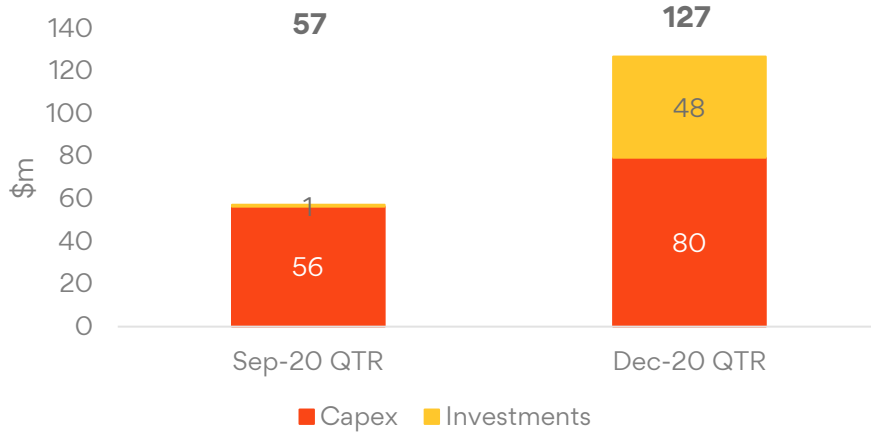
- Retail volumes down 6% on Dec-19 quarter with lower SME demand due to COVID-19 (-0.3 PJ) and milder weather in Victoria (-0.3 PJ), offset by higher customer numbers (0.1 PJ)
- Business volumes up 16% on Dec-19 as impacts of COVID-19 were more than offset by short term wholesale contracts
- Gas to generation down 29% on Dec-19 quarter due to lower pool prices, lower demand as well as elevated gas generation in the Dec-19 quarter to cover an outage at Eraring

- Retail volumes up 1% due to higher customer numbers (0.4 PJ) with a cooler winter being offset by milder weather in Dec-20 quarter (-0.1 PJ)
- Business volumes up 4% as COVID-19 impacts were more than offset by short term wholesale contracts
- Gas to generation down 26% due to lower pool prices, lower demand as well as elevated gas generation in the Dec-19 quarter to cover an outage at Eraring

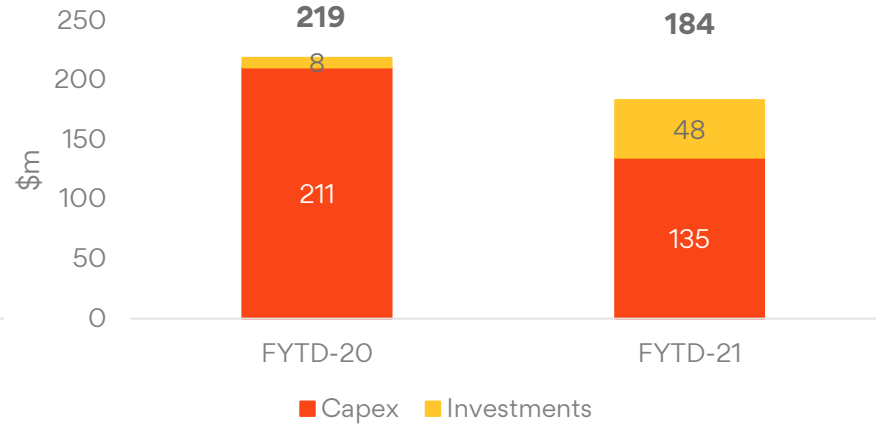
# Energy Markets capital expenditure



## Quarterly Energy Markets capex and investments



## FYTD Energy Markets capex and investments



- Capex spend in Dec-20 quarter included generation maintenance, spend in preparation for the move to 5 minute settlement of pool prices, and \$20 million to Octopus Energy relating to licensing the Kraken platform
- Dec-20 investments include payments relating to the 20% equity interest in Octopus Energy (\$36 million) and deferred consideration for OC Energy (\$11 million)

- As expected, capex is lower than the prior year primarily due to less generation spend, with the prior period including capex relating to a major outage at Eraring and Mortlake unit repairs

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## Data tables

# Integrated Gas – APLNG 100%



APLNG	Unit	Dec-20 QTR	Sep-20 QTR	% Change	Dec-19 QTR	% Change	FYTD-21	FYTD-20	% Change
Total production	PJ	182.3	171.3	6%	180.2	1%	353.6	357.5	(1%)
Total sales	PJ	171.9	153.0	12%	174.4	(1%)	324.8	342.9	(5%)
<b>LNG</b>									
Production	kt	2,341.4	2,002.2	17%	2,420.8	(3%)	4,343.6	4,630.7	(6%)
Sales	kt	2,394.7	2,008.3	19%	2,431.4	(2%)	4,403.0	4,596.2	(4%)
Commodity Revenue	\$m	889.0	859.5	3%	1,751.9	(49%)	1,748.5	3,356.2	(48%)
Average realised price	US\$/mmbtu	5.20	5.81	(10%)	9.38	(45%)	5.47	9.52	(43%)
<b>Domestic Gas</b>									
Sales	PJ	39.2	41.7	(6%)	39.7	(1%)	80.9	88.3	(8%)
Commodity Revenue	\$m	172.3	137.5	25%	158.8	9%	309.8	389.9	(21%)
Average realised price	\$/GJ	4.40	3.30	33%	4.00	10%	3.83	4.42	(13%)
<b>APLNG capex<sup>1</sup></b>									
E&A	\$m	8	12	(33%)	29	(72%)	20	47	(57%)
Sustain and Other	\$m	87	156	(44%)	173	(50%)	243	399	(39%)

1) APLNG capex is reported on an accrual basis.



# APLNG sources of gas – APLNG 100%



Production volumes	Units	Dec-20 QTR	Sep-20 QTR	% Change	Dec-19 QTR	FYTD-21	FYTD-20
<b>Operated</b>							
Spring Gully	PJ	25.6	25.0	2%	26.3	50.6	52.4
Peat	PJ	0.8	0.9	(11%)	0.7	1.6	1.5
Talinga	PJ	19.4	17.4	11%	19.4	36.9	38.8
Orana	PJ	17.2	13.5	27%	17.9	30.7	35.0
Condabri	PJ	31.7	30.5	4%	33	62.2	66.1
Combabula/Reedy Creek	PJ	45.4	43.7	4%	40.9	89.1	81.1
<b>Total operated production</b>	<b>PJ</b>	<b>140.1</b>	<b>131.1</b>	<b>7%</b>	<b>138.3</b>	<b>271.2</b>	<b>275.0</b>
<b>Non-operated</b>							
Fairview (GLNG)	PJ	8.0	8.2	(2%)	8.9	16.2	17.7
Arcadia (GLNG)	PJ	1.0	0.7	43%	0.3	1.7	0.4
Angry Jungle (GLNG)	PJ	1.0	0.9	11%	0	1.8	0.1
Anya (QGC)	PJ	0.4	0.3	33%	0.4	0.7	0.9
Kenya East (QGC)	PJ	14.1	14.0	1%	15.4	28.0	30.1
Kenya (QGC)	PJ	16.7	15.1	11%	16.1	31.8	31.5
Bellevue (QGC)	PJ	1.1	1.0	10%	0.9	2.1	1.8
<b>Total non-operated production</b>	<b>PJ</b>	<b>42.2</b>	<b>40.3</b>	<b>5%</b>	<b>42.0</b>	<b>82.4</b>	<b>82.6</b>
<b>Total upstream production</b>	<b>PJ</b>	<b>182.3</b>	<b>171.3</b>	<b>6%</b>	<b>180.2</b>	<b>353.6</b>	<b>357.5</b>
Natural gas purchases	PJ	1.0	0.7	43%	4.4	1.7	10.9
Changes in Upstream gas inventory/other	PJ	(3.7)	(10.5)	(65%)	0.2	(14.2)	(2.6)
<b>Total sources of natural gas</b>	<b>PJ</b>	<b>179.5</b>	<b>161.5</b>	<b>11%</b>	<b>184.8</b>	<b>341.0</b>	<b>365.7</b>



## APLNG Operated Production Wells

		Avg daily production (APLNG share)	Development Wells	
			Wells drilled	Wells commissioned
Bowen	Spring Gully	<b>278 TJ/d</b>	Dec-20 QTR FYTD-21	- 5
	Peat	<b>9 TJ/d</b>	Dec-20 QTR FYTD-21	- -
Surat	Talinga	<b>211 TJ/d</b>	Dec-20 QTR FYTD-21	8 9
	Orana	<b>187 TJ/d</b>	Dec-20 QTR FYTD-21	1 4
	Condabri	<b>345 TJ/d</b>	Dec-20 QTR FYTD-21	12 30
	Combabula / Reedy Creek	<b>493 TJ/d</b>	Dec-20 QTR FYTD-21	- -
	<b>TOTAL</b>	<b>1,523 TJ/d</b>	<b>Dec-20 QTR FYTD-21</b>	<b>21 43</b>
				<b>36 103</b>

# APLNG uses of gas – APLNG 100%



Uses of gas	Units	Dec-20 QTR	Sep-20 QTR	% Change	Dec-19 QTR	FYTD-21	FYTD-20
LNG feed gas	PJ	140.3	119.7	17%	145.1	260.0	277.4
Domestic sales	PJ	39.2	41.7	(6%)	39.7	80.9	88.3
<b>Total uses of natural gas</b>	<b>PJ</b>	<b>179.5</b>	<b>161.5</b>	<b>11%</b>	<b>184.8</b>	<b>341.0</b>	<b>365.7</b>

LNG	Units	Dec-20 QTR	Sep-20 QTR	% Change	Dec-19 QTR	FYTD-21	FYTD-20
LNG Production	kt	2,341.4	2,002.2	17%	2,420.8	4,343.6	4,630.7
Changes in LNG inventory	kt	53.4	6.1	775%	10.6	59.5	(34.5)
<b>Total LNG sales volume</b>	<b>kt</b>	<b>2,394.7</b>	<b>2,008.3</b>	<b>19%</b>	<b>2,431.4</b>	<b>4,403.0</b>	<b>4,596.2</b>
<b>LNG cargos sold</b>	<b>#</b>	<b>35</b>	<b>29</b>	<b>21%</b>	<b>35</b>	<b>64</b>	<b>66</b>

APLNG commodity revenue	Units	Dec-20 QTR	Sep-20 QTR	% Change	Dec-19 QTR	FYTD-21	FYTD-20
LNG	\$m	889.0	859.5	3%	1,751.9	1,748.5	3,356.2
Domestic Gas	\$m	172.3	137.5	25%	158.8	309.8	389.9
<b>Total Commodity Revenue</b>	<b>\$m</b>	<b>1,061.3</b>	<b>997.0</b>	<b>6%</b>	<b>1,910.7</b>	<b>2,058.3</b>	<b>3,746.1</b>

Sales – APLNG average realised prices	Units	Dec-20 QTR	Sep-20 QTR	% Change	Dec-19 QTR	FYTD-21	FYTD-20
LNG	\$/GJ	6.70	7.73	(13%)	13.01	7.17	13.18
Domestic Gas	\$/GJ	4.40	3.30	33%	4.00	3.83	4.42
<b>Average Commodity price</b>	<b>\$/GJ</b>	<b>6.17</b>	<b>6.52</b>	<b>(5%)</b>	<b>10.95</b>	<b>6.34</b>	<b>10.92</b>

# Integrated Gas – Origin share



APLNG (ORG share)	Unit	Dec-20 QTR	Sep-20 QTR	% Change	Dec-19 QTR	% Change	FYTD-21	FYTD-20	% Change
Total production (ORG share)	PJ	68.3	64.2	6%	67.6	1%	132.6	134.1	(1%)
Total sales (ORG share)	PJ	64.5	57.4	12%	65.4	(1%)	121.8	128.6	(5%)
LNG (ORG share)									
Production	kt	878.0	750.8	17%	907.8	(3%)	1,628.8	1,736.5	(6%)
Sales	kt	898.0	753.1	19%	911.8	(2%)	1,651.1	1,723.6	(4%)
Commodity Revenue	\$m	333.4	322.3	3%	657.0	(49%)	655.7	1,258.6	(48%)
Average realised price	US\$/mmbtu	5.20	5.81	(10%)	9.38	(45%)	5.47	9.52	(43%)
Domestic Gas (ORG share)									
Sales	PJ	14.7	15.6	(6%)	14.9	(1%)	30.3	33.1	(8%)
Commodity Revenue	\$m	64.6	51.6	25%	59.5	9%	116.2	146.2	(21%)
Average realised price	\$/GJ	4.40	3.30	33%	4.00	10%	3.83	4.42	(13%)

Integrated Gas Other	Unit	Dec-20 QTR	Sep-20 QTR	% Change	Dec-19 QTR	% Change	FYTD-21	FYTD-20	% Change
Origin only capex									
Capex	\$m	4	3	33%	2	100%	7	7	0%
E&A	\$m	11	11	0%	25	(56%)	22	35	(37%)
Origin oil hedging and LNG trading									
Hedge premium expense	\$m	(3.1)	0.0	N/A	(13.7)	(77%)	(3.1)	(19.8)	(84%)
Gain / (Loss) on oil hedging	\$m	55.8	43.2	29%	2.0	2690%	99.0	0.8	12275%
Gain / (Loss) on LNG trading	\$m	(7.0)	(9.9)	(29%)	(52.2)	(87%)	(16.9)	(66.8)	(75%)
<b>Total oil hedging and LNG trading gain/(loss)</b>	\$m	<b>45.7</b>	<b>33.3</b>	<b>37%</b>	<b>(63.9)</b>	<b>(172%)</b>	<b>79.0</b>	<b>(85.8)</b>	<b>(192%)</b>

- Hedging/trading gain increased quarter-on-quarter driven by lower oil price, partially offset by a current quarter loss on LNG trading positions and oil hedge premium.

	Unit	Dec-20	Sep-20	% Change	Dec-19	% Change	FYTD-21	FYTD-20	% Change
<b>Sales volumes</b>									
Electricity – Retail	TWh	3.6	4.6	(23%)	3.7	(5%)	8.2	8.1	1%
Electricity – Business	TWh	4.4	4.1	7%	4.5	(3%)	8.5	8.9	(5%)
Natural gas – Retail	PJ	7.7	17.5	(56%)	8.2	(6%)	25.2	24.9	1%
Natural gas – Business	PJ	40.2	42.7	(6%)	34.8	16%	82.8	79.7	4%
Natural gas – Internal generation	PJ	10.1	11.8	(14%)	14.3	(29%)	21.9	29.7	(26%)
Capex	\$m	80	56	43%	132	(40%)	135	211	(36%)
Investments	\$m	48	1	5271%	5	823%	48	8	493%

## Electricity sales volume (TWh)

Volumes sold (TWh)	Dec-20 QTR		Dec-19 QTR		FYTD-21		FYTD-20	
	Retail	Business	Retail	Business	Retail	Business	Retail	Business
New South Wales	1.60	2.13	1.76	2.22	3.99	4.18	3.99	4.43
Queensland	1.05	1.01	1.02	0.96	2.11	1.84	1.97	1.77
Victoria	0.62	0.82	0.64	0.87	1.42	1.60	1.48	1.77
South Australia	0.29	0.43	0.31	0.47	0.64	0.86	0.66	0.91
<b>Total volumes sold</b>	<b>3.55</b>	<b>4.38</b>	<b>3.73</b>	<b>4.52</b>	<b>8.16</b>	<b>8.47</b>	<b>8.10</b>	<b>8.88</b>

## Natural Gas sales volume (PJ)

Volumes sold (PJ)	Dec-20 QTR		Dec-19 QTR		FYTD-21		FYTD-20	
	Retail	Business	Retail	Business	Retail	Business	Retail	Business
New South Wales	2.11	6.20	2.03	4.21	6.34	13.87	6.04	9.26
Queensland	0.70	20.71	0.71	15.83	1.76	35.25	1.67	33.15
Victoria	3.83	11.13	4.38	12.05	13.89	28.95	14.04	31.44
South Australia	1.04	2.13	1.10	2.66	3.24	4.78	3.18	5.84
<b>External volumes sold</b>	<b>7.69</b>	<b>40.17</b>	<b>8.22</b>	<b>34.76</b>	<b>25.24</b>	<b>82.85</b>	<b>24.93</b>	<b>79.69</b>
Internal sales (generation)	10.14		14.26		21.92		29.67	
<b>Total volumes sold</b>	<b>58.00</b>		<b>57.24</b>		<b>130.00</b>		<b>134.29</b>	

## Conversion factors

LNG	0.0554	PJ/ktonnes
LNG	1.0551	GJ/mmbtu

## Abbreviations

\$	Australian dollars, unless stated otherwise
APLNG	Australia Pacific LNG Pty Limited – an incorporated joint venture between Origin, ConocoPhillips and Sinopec
Barrels (bbl)	an international measure of oil production. 1 barrel = 159 litres
CSG	coal seam gas
E&A	Exploration & Appraisal
EPT	Extended Production Test
ERIC	Eurombah Reedy Creek Interconnect
FID	final investment decision
GJ	gigajoule = $10^9$ joules
GLNG	Gladstone Liquefied Natural Gas
JCC	Japan Customs-cleared Crude
joule	primary measure of energy in the metric system
kbbbls	Kilo barrels = 1,000 barrels
kT	Kilo tonnes = 1,000 tonnes
LNG	liquefied natural gas
mmbbl	million barrels
mamboe	million barrels of oil equivalent
mmbtu	million British thermal units
mmscf	million standard cubic feet
mtpa	million tonnes per annum
MWh	Megawatt hour = $10^3$ kilowatt hours
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
Spudding	to commence drilling a well
t	tonnes
TJ	terajoule = $10^{12}$ joules
TJ/d	terajoules per day
TWh	Terrawatt hour = $10^9$ kilowatt hours
YTD	year to date