

To	Company Announcements Office	Facsimile	1300 135 638
Company	ASX Limited	Date	31 January 2022
From	Helen Hardy	Pages	24
Subject	December 2021 Quarterly Report		

Please find attached a release on the above subject.

Regards

A handwritten signature in black ink, appearing to read "Helen Hardy".

Authorised by:
Helen Hardy
Company Secretary

02 8345 5000



ASX/Media Release

31 January 2022

Quarterly Report December 2021

Origin Energy Limited (Origin) has released its Quarterly Report for the period to 31 December 2021, covering the performance of its Integrated Gas and Energy Markets divisions.

Integrated Gas:

- Continued strong APLNG production for December quarter, up 2 per cent from September quarter.
- APLNG commodity revenue increased 91 per cent on prior year and 33 per cent on prior quarter, primarily driven by higher realised oil prices and spot LNG prices. Three JKM-linked spot cargoes were delivered in December quarter. North Asian LNG market prices delivered in the quarter averaged ~US\$28/mmbtu. Another five JKM-linked spot cargoes sold for delivery in the March quarter.
- December quarter APLNG realised gas price was A\$13.29/GJ, comprising an average LNG price of US\$11.80/mmbtu (contracted and spot) and an average domestic price of A\$6.33/GJ (legacy and short-term).
- Origin received \$555 million in cash distributions from APLNG for the 6 months to December 2021.
- In January 2022, APLNG shipped its 700th LNG cargo.

Energy Markets:

- Electricity sales volume increased 2 per cent on December 2020 quarter. A 6 per cent decrease in retail volumes due to cooler weather, lower usage and COVID-19 impacts; was more than offset by a 10 per cent increase in business volumes due to net customer wins, though this was partially offset by COVID-19 impacts.
- Gas sales volumes decreased 17 per cent on December 2020 quarter. Retail volumes were up by 14 per cent due to colder weather and increased household usage, though this was more than offset by a 17 per cent decrease in business volumes due to expiration of contracts, partly offset by new sales. Gas sales to generation also fell 39 per cent on the prior quarter.
- Announced acquisition of WINconnect, which will add 87,000 embedded electricity network and serviced hot water customers with a pipeline of 36,000 further contracted apartments. Consideration for the acquisition and amendments to associated agreements for metering with Intellihub is a net amount of \$42.2 million post tax.

Origin CEO Frank Calabria said, "Australia Pacific LNG has continued its strong performance and was able to benefit from the substantial increase in oil and spot LNG prices and favourable currency movements, helping to drive a large increase in revenue compared to the prior year.

"Early completion of planned maintenance boosted production and sales in the December quarter, and also allowed Australia Pacific LNG to capitalise on a buoyant spot LNG market, selling three JKM-linked spot cargoes with a further five sold for delivery in the coming months.

"In the domestic market, an average price of close to \$6/GJ demonstrates Australia Pacific LNG continues to ensure competitively priced supply for local customers.



“Origin recently announced ConocoPhillips had exercised its pre-emption rights in relation to Origin’s sale of 10 per cent of its shareholding in Australia Pacific LNG, subject to FIRB approval. Origin remains upstream operator and will retain a 27.5 per cent interest.

“In Energy Markets, a cooler start to summer and reduced economic activity owing to continued lockdowns in the two most populous states meant the December quarter was subdued. Prices across the NEM were lower in this period, as a consequence of fewer unplanned baseload outages and increased renewable generation.

“Origin won new business customers in electricity which drove increased volumes in this segment, however natural gas business volumes declined as contracts expired and the impact of COVID was felt across the economy. Gas to generation was also lower as a result of reduced daytime pool prices.

“In December, Origin also announced the acquisition of WINconnect adding further scale to our growing community energy services business. The acquisition is expected to deliver strong returns and add a significant number of embedded electricity network and serviced hot water customers,” Mr Calabria said.

	Unit	Dec-21 QTR	Sep-21 QTR	% Change	Dec-20 QTR	% Change	FYTD-22	FYTD-21	% Change
Integrated Gas – APLNG 100%¹									
Production	PJ	177.9	173.6	2%	182.3	(2%)	351.4	353.6	(1%)
Sales	PJ	169.2	168.2	1%	171.9	(2%)	337.3	324.8	4%
Commodity revenue	\$m	2,247.8	1,689.9	33%	1,061.3	112%	3,937.7	2,058.3	91%
Average commodity price	A\$/GJ	13.29	10.05	32%	6.17	115%	11.67	6.34	84%
Energy Markets									
Electricity sales	TWh	8.2	8.9	(8%)	8.0	2%	17.1	16.7	2%
Natural gas sales	PJ	48.3	67.1	(28%)	58.0	(17%)	115.4	130.0	(11%)
Corporate									
Origin capex	\$m	113	102	11%	98	15%	215	172	25%
Origin investments	\$m	77	189	(59%)	48	62%	267	48	450%
Net cash from APLNG	\$m	555	n/a	n/a	265	109%	555	265	109%

For further information:

Media

Anneliis Allen

Ph: +61 2 8345 5119

Mobile: +61 428 967 166

Investors

Peter Rice

Ph: +61 2 8345 5308

Mobile: +61 417 230 306

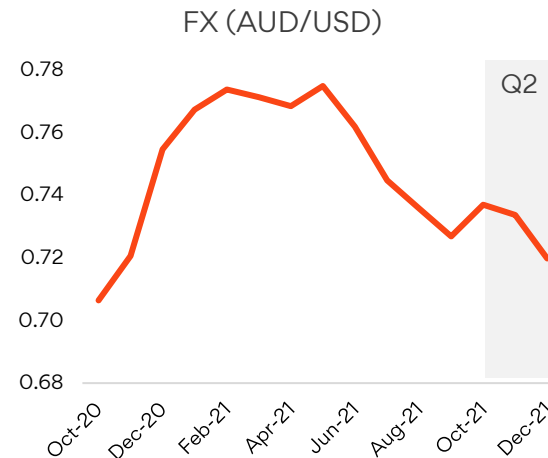
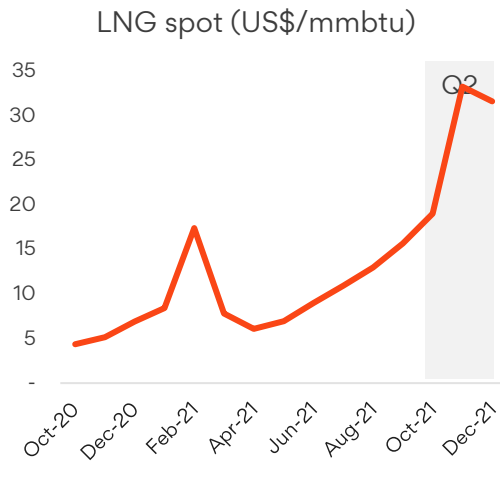
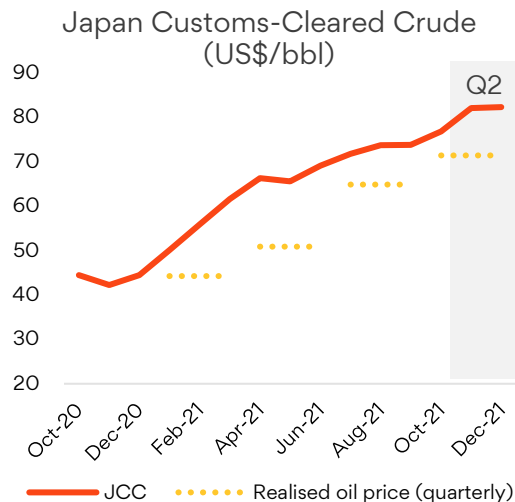
¹ Origin is currently in the process of completing the sale of a 10% interest in APLNG. As a result of the sale, from 8 December 2021 Origin will account for ownership in APLNG at 27.5%. However, to allow for period comparisons, data in this report is shown at the APLNG 100% level.

Quarterly Report

December 2021

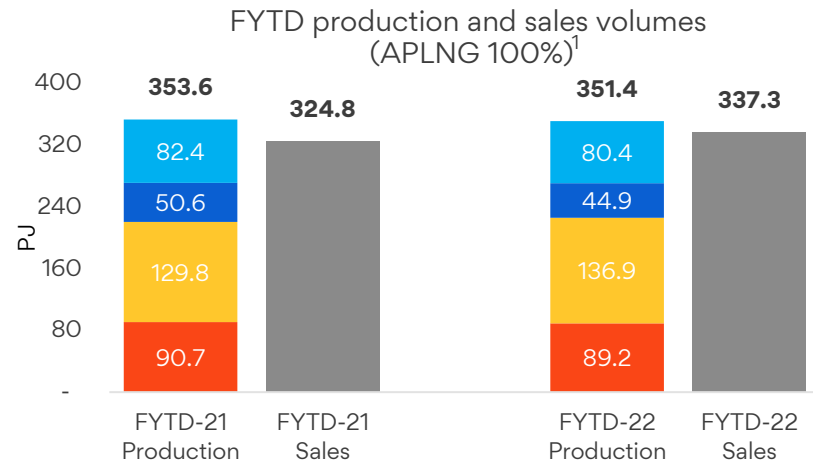
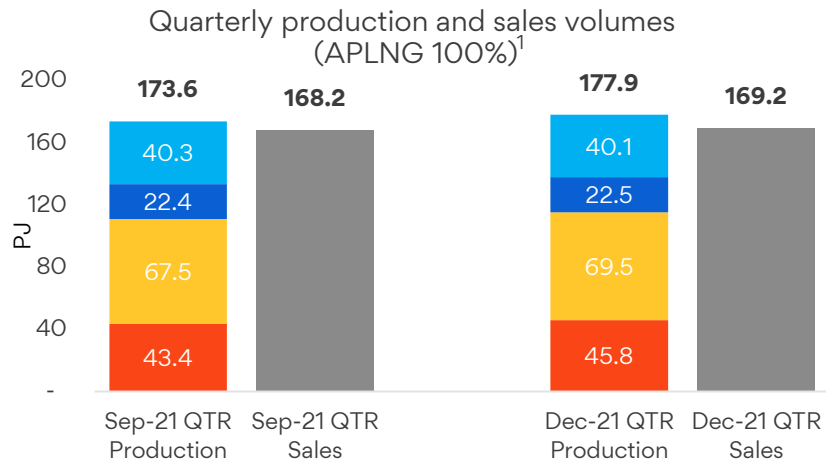






- APLNG's effective oil price in the Dec-21 quarter was US\$71/bbl (A\$98/bbl), up from US\$65/bbl (A\$88/bbl) in the Sep-21 quarter and up from US\$34/bbl (A\$46/bbl) in the Dec-20 quarter
- As at 31 December 2021, ~91% of APLNG's FY2022 JCC oil exposure was priced at ~US\$72/bbl, based on contract lags
- APLNG delivered three JKM-linked spot cargoes in the Dec-21 quarter. North Asian LNG market prices delivered in the quarter averaged ~US\$28/mmbtu. Another five JKM-linked spot cargoes were sold for delivery in the Mar-22 quarter.
- Oil and spot LNG prices continued to rally in the Dec-21 quarter driven by strong global demand and persistent supply bottlenecks

APLNG production up 2% from prior quarter

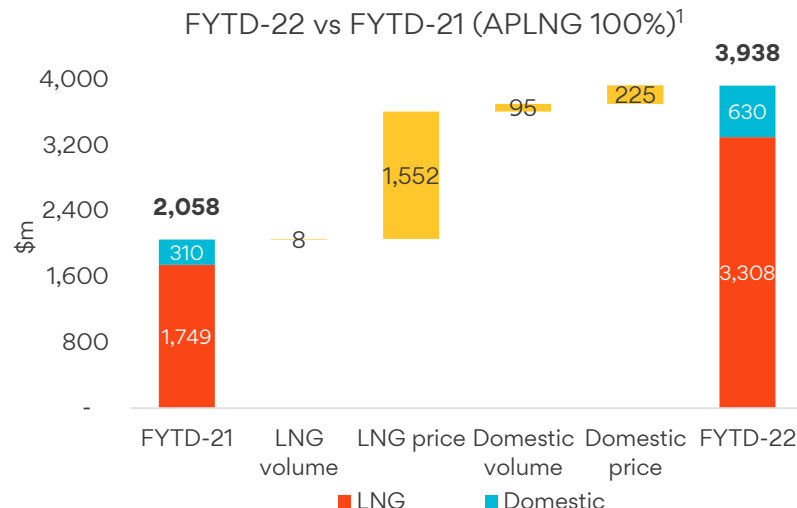
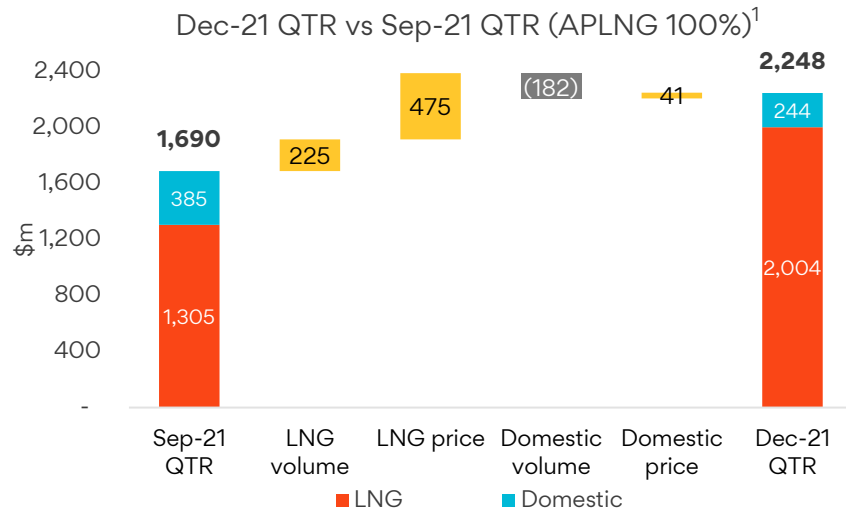


- Dec-21 quarter production up 2% compared to Sep-21 quarter due to less planned maintenance activity, partially offset by the impact of wet weather
- Dec-21 quarter sales volume up 1% from Sep-21 quarter, reflecting higher production

- FYTD-22 production relatively stable from prior year:
 - Increase at Condabri, Talinga and Orana primarily reflecting reduced production in the prior period in response to lower demand and planned maintenance
 - Offset by lower production at Spring Gully due to decline rates in legacy wells
- FYTD-22 sales volume up 4% primarily reflecting lower sales volume in the prior period in response to lower demand

¹ Origin is currently in the process of completing the sale of a 10% interest in APLNG. As a result of the sale, from 8 December 2021 Origin will account for ownership in APLNG at 27.5%. However, to allow for period comparisons, data in this report is shown at the APLNG 100% level.

APLNG revenue up 33% on prior quarter and 91% on prior year



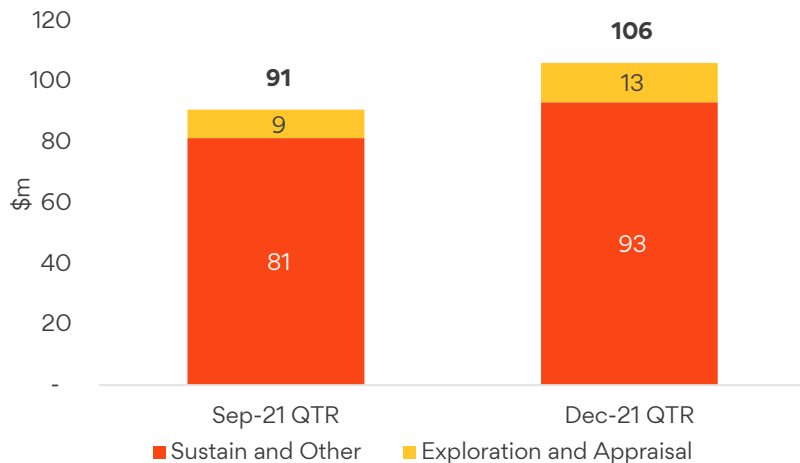
- APLNG revenue up 33% from Sep-21 quarter:
 - LNG revenue up 54% driven by three spot cargos delivered in the quarter capturing record spot LNG prices and higher realised oil prices on contract volumes
 - Domestic revenue down 37% primarily driven by lower short-term contract volumes reflecting higher sales volumes directed to the domestic market during the Sep-21 quarter downstream maintenance period
- APLNG revenue up 91% on prior year:
 - LNG revenue up 89% primarily driven by higher realised oil prices and higher spot LNG prices
 - Domestic revenue up 103% primarily driven by higher short-term contract prices and volumes during downstream maintenance in the Sep-21 quarter

¹ Origin is currently in the process of completing the sale of a 10% interest in APLNG. As a result of the sale, from 8 December 2021 Origin will account for ownership in APLNG at 27.5%. However, to allow for period comparisons, data in this report is shown at the APLNG 100% level.

APLNG capital expenditure

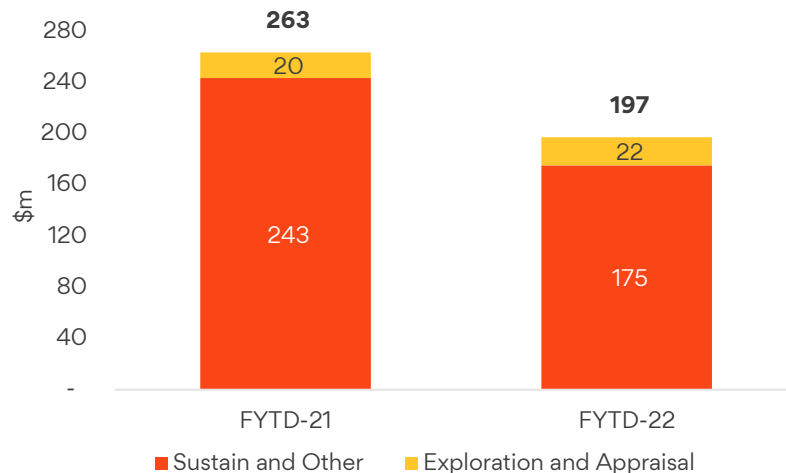


Quarterly APLNG Capex (APLNG 100%)^{1,2}



- Capex was up \$15 million (17%) from Sep-21 quarter in line with planned phasing of operated infrastructure and non-operated development activities, partially offset by the impact of wet weather

FYTD APLNG Capex (APLNG 100%)^{1,2}

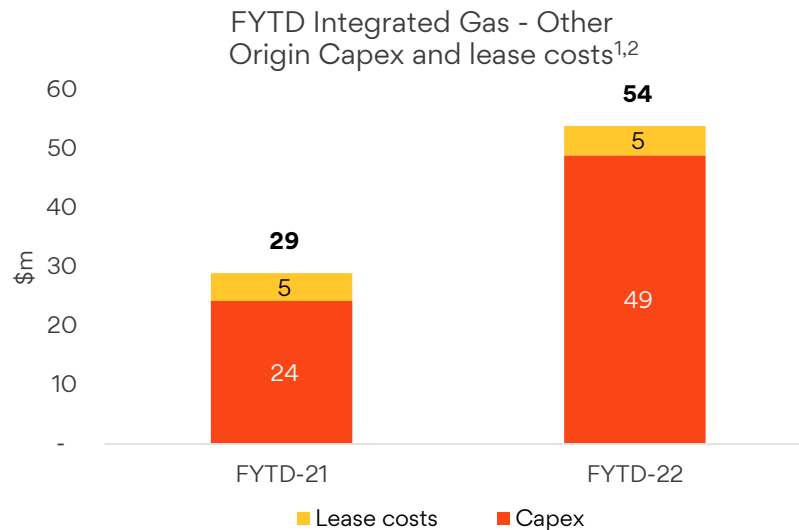
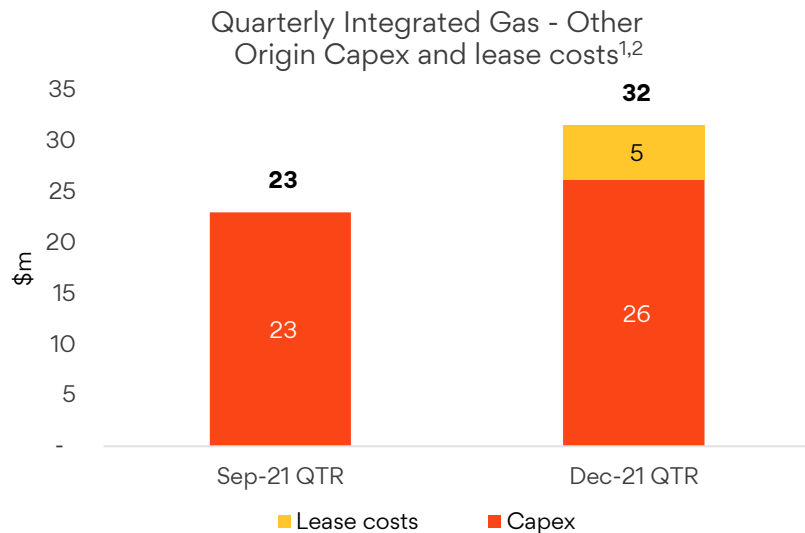


- Capex was down \$66 million (25%) driven by decreased operated development activity enabled by strong field performance, also reflecting the impact of wet weather in the Dec-21 quarter

1) APLNG capex is reported on an accrual basis.

2) Origin is currently in the process of completing the sale of a 10% interest in APLNG. As a result of the sale, from 8 December 2021 Origin will account for ownership in APLNG at 27.5%. However, to allow for period comparisons, data in this report is shown at the APLNG 100% level.

Integrated Gas – Origin capex and lease costs^{1,2}



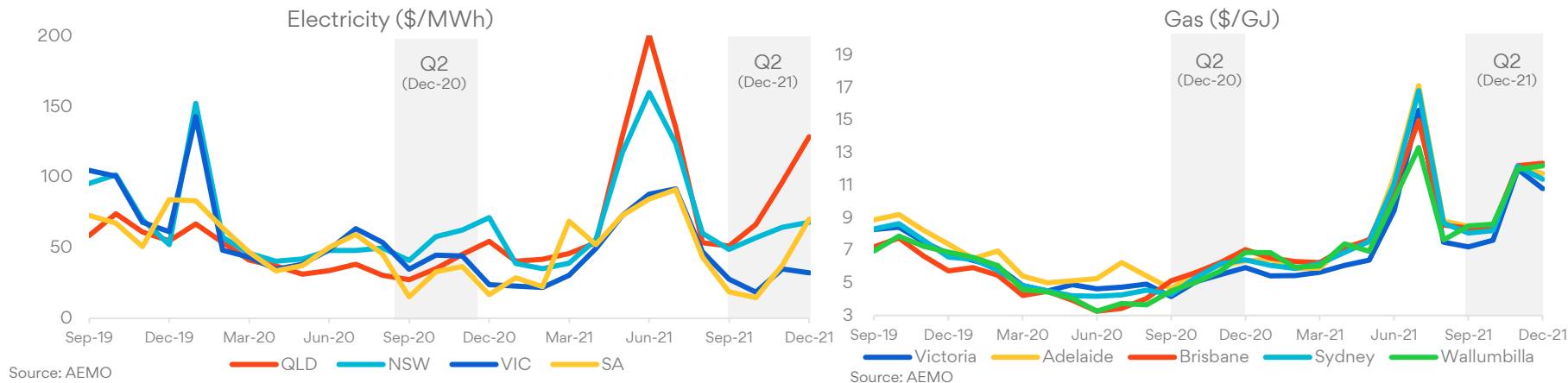
- In the Beetaloo Basin, the drilling of the Velkerri 76 S2-1 well was completed with encouraging preliminary results indicating that the Velkerri shales at this location are within the wet gas maturity window. Core sample analysis is being undertaken to determine gas composition
- In the Canning Basin, Rafael 1 well was drilled indicating liquids-rich gas potential in a conventional reservoir. A production test is planned to begin in Mar-22 quarter subject to Covid-19 restrictions on interstate personnel movements. Currajong 1 well drilled in August 2021 was written off due to no oil recovered from the test zones

1) AASB16 requires that the lease costs of drilling rigs used in development programs are disclosed within financing cash flows.

2) Integrated Gas – Origin capex is reported on a cash basis.

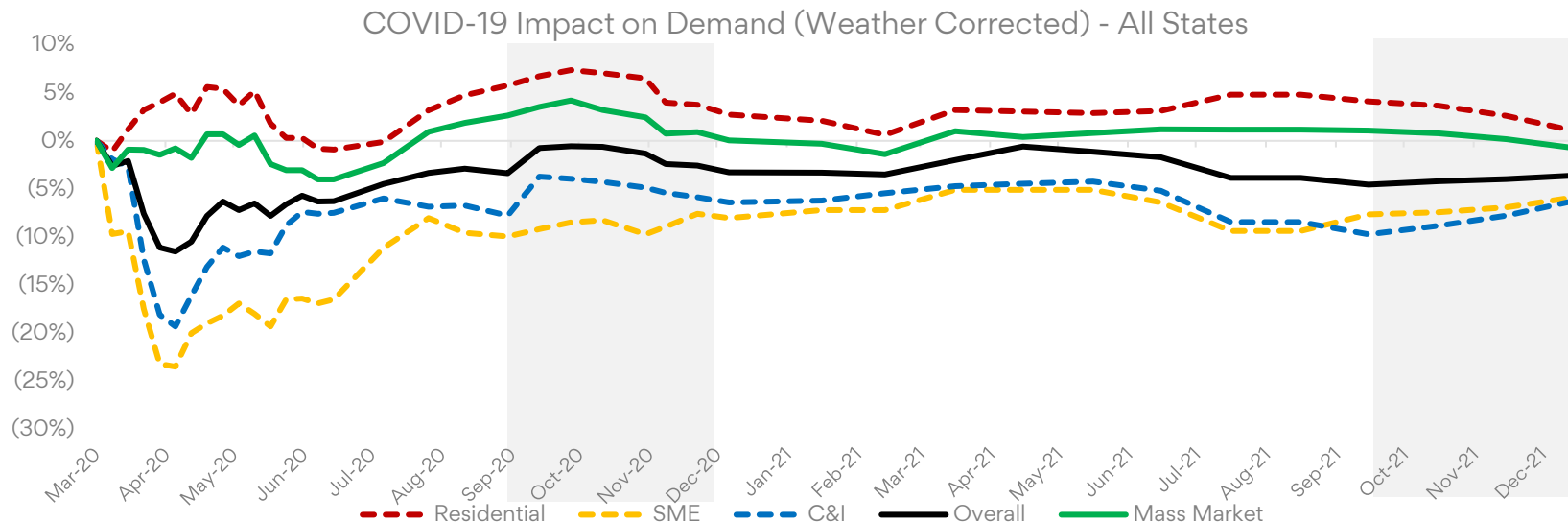


Electricity and natural gas markets



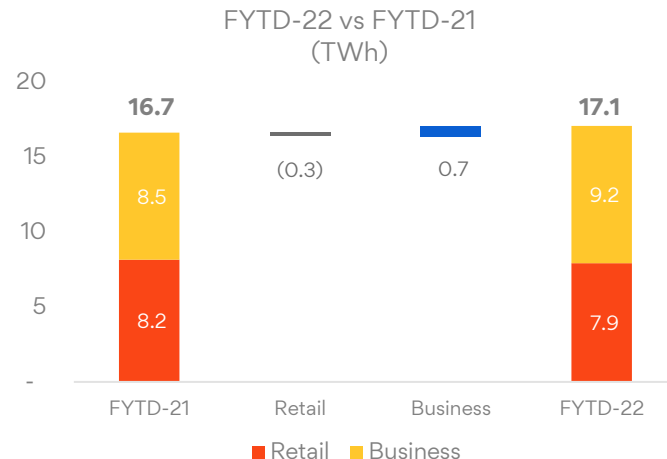
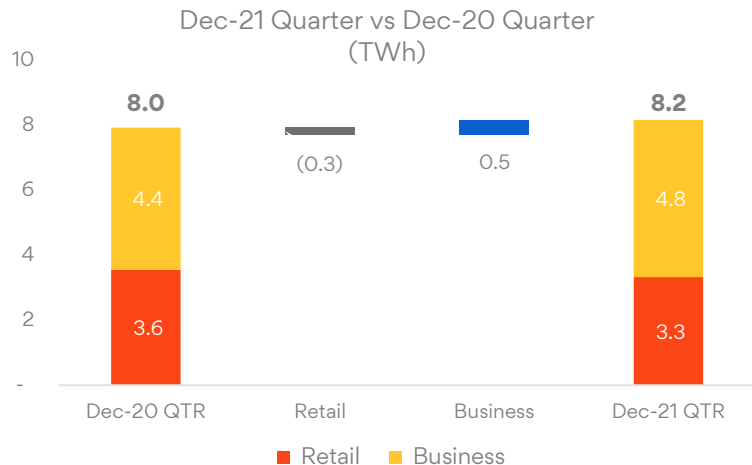
- Average NEM spot electricity price for Dec-21 quarter was \$57.5/MWh, down from \$66.1/MWh in Sep-21 quarter, but an increase from \$43.8/MWh in Dec-20 quarter:
 - Decrease from Sep-21 quarter due to fewer unplanned baseload outages and increased renewable generation
 - Increase from Dec-20 quarter due to constraints in the transmission network and higher fuel costs for coal and gas generation in Dec-21 quarter
- Average east coast spot gas price for Dec-21 quarter was \$10.68/GJ, in line with Sep-21 quarter price of \$10.65/GJ, but an increase from \$4.73/GJ in Dec-20 quarter:
 - Increase from Dec-20 quarter driven by price recovery from historically low 2020 levels and linkage to higher international prices

COVID-19 impacts on electricity demand



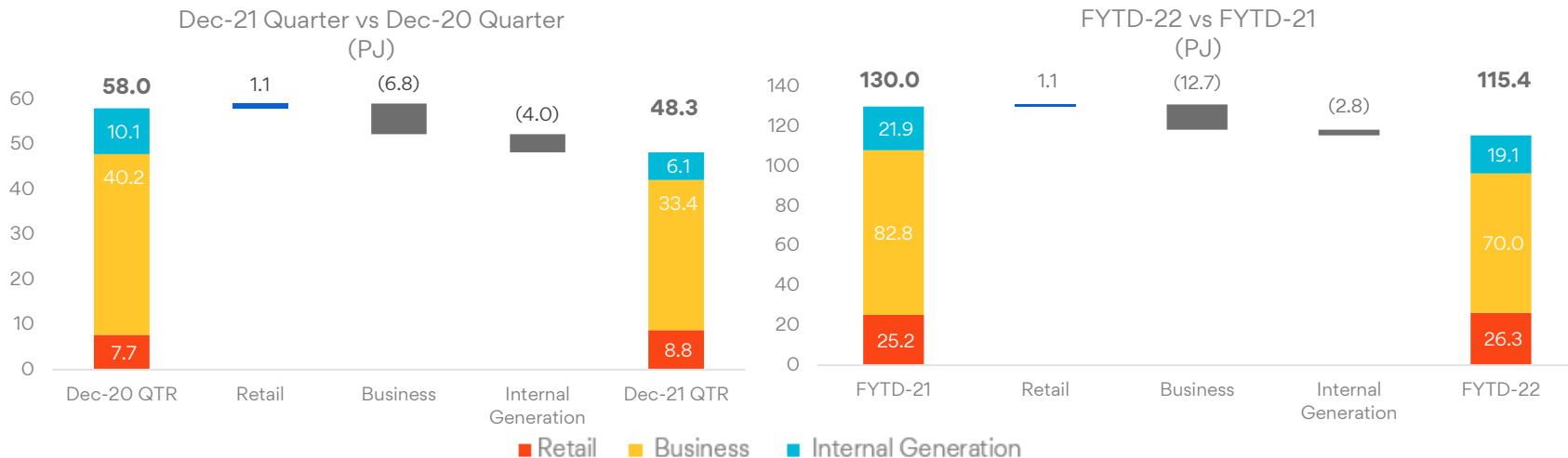
Source: Origin customer meter data and internal analysis

- Weather corrected electricity demand across all states is 3.6% lower than pre COVID-19 levels having significantly recovered from a low of 10% in Apr-20.
- Residential volumes remain slightly elevated at 1% higher than pre COVID-19 levels.
- C&I and SME volumes are down 6.2% and 5.8% respectively, driven by lower demand from service sectors such as travel, hospitality, recreation and education.



- Retail volumes down 6% or 0.3 TWh on Dec-20 quarter due to
 - cooler weather due to a stronger La Nina impact (-0.1 TWh);
 - COVID impact (-0.1 TWh) - lower residential volumes with less people working from home partially offset by a recovery in SME volumes
 - lower usage due to solar and energy efficiency (-0.1 TWh)
 - minimal impact from customer numbers
- Business volumes up 10% or 0.5 TWh on Dec-20 quarter with negative COVID-19 impacts more than offset by net customer wins, including sales to the Portland smelter
- Retail volumes down 3% or 0.3 TWh on FYTD-21 due to
 - lower usage due to solar and energy efficiency (-0.2 TWh)
 - cooler weather due to a stronger La Nina impact (-0.1 TWh)
 - no material COVID-19 impact
 - minimal impact from customer numbers
- Business volumes up 8% or 0.7 TWh on FYTD-21 with negative COVID-19 impacts more than offset by net customer wins, including sales to the Portland smelter

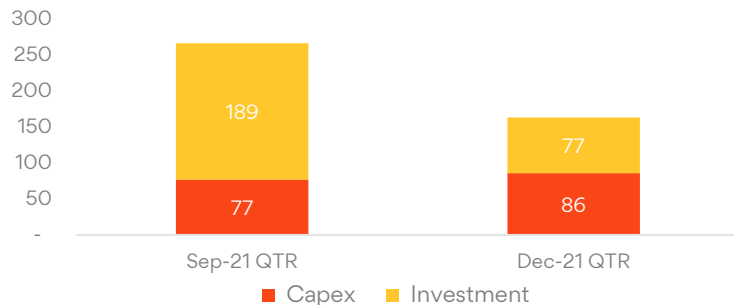
Energy Markets – Natural gas sales



- Retail volumes up 14% or 1.1 PJ on Dec-20 quarter due to:
 - colder weather across all states (+0.5 PJ); and
 - higher household usage concentrated in NSW and Vic (+0.6 PJ)
- Business volumes down 17% on Dec-20 due to expiration of contracts and COVID-19 impacts, partly offset by new sales.
- Gas to generation down 39% on Dec-20 quarter due to higher gas prices and lower daytime electricity pool prices with increased solar penetration.

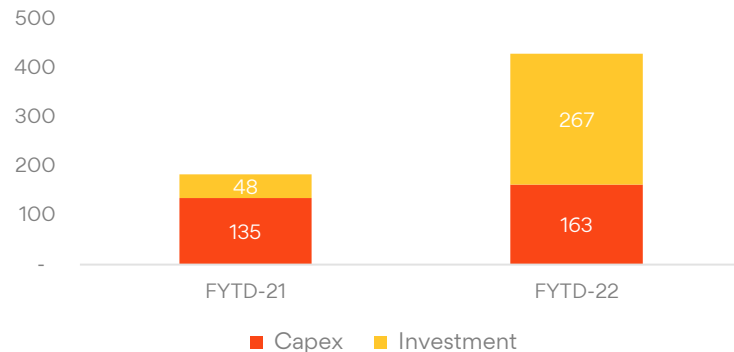
- Retail volumes up 4% or 1.1 PJ on FYTD-21 due to:
 - COVID-19 impacts and higher household usage concentrated in NSW and Vic (+0.9 PJ);
 - higher customer numbers (+0.2 PJ);
 - no material weather impact as milder Sep-21 quarter weather was offset by cooler weather in Dec-21 quarter
- Business volumes down 15% on FYTD-21 due to expiration of contracts and COVID-19 impacts, partly offset by new sales.
- Gas to generation down 13% on FYTD-21 due to higher gas prices and lower daytime electricity pool prices with increased solar penetration, partially offset by increased gas to generation in first quarter to cover a planned outage at Eraring.

Quarterly Energy Markets capex and investments (\$m)



- Capex spend in Sep-21 and Dec-21 quarters include generation maintenance and spend on the 5-minute settlement of pool prices.
- Dec-21 quarter investment includes \$72 million to maintain our 20% equity interest in Octopus, following Generation Investment Management's (GIM) investment.

FYTD Energy Markets capex and investments (\$m)



- As expected, Capex spend in FYTD-22 increased compared with FYTD-21 due to higher spend on a major outage at Eraring.
- Investment spend FYTD-22 includes both deferred consideration for the initial Octopus Energy investment and \$72 million to maintain 20% interest following GIM's investment.



Data tables

Integrated Gas – APLNG 100%



APLNG	Unit	Dec-21 QTR	Sep-21 QTR	% Change	Dec-20 QTR	% Change	FYTD-22	FYTD-21	% Change
Total production	PJ	177.9	173.6	2%	182.3	(2%)	351.4	353.6	(1%)
Total sales	PJ	169.2	168.2	1%	171.9	(2%)	337.3	324.8	4%
LNG									
Production	kt	2,386.5	2,030.3	18%	2,341.4	2%	4,416.8	4,343.6	2%
Sales	kt	2,357.6	2,011.4	17%	2,394.7	(2%)	4,368.9	4,403.0	(1%)
Commodity revenue	\$m	2,003.6	1,304.6	54%	889.0	125%	3,308.2	1,748.5	89%
Average realised price	US\$/mmbtu	11.80	9.09	30%	5.20	127%	10.55	5.47	93%
Domestic gas									
Sales	PJ	38.6	56.7	(32%)	39.2	(2%)	95.3	80.9	18%
Commodity revenue	\$m	244.2	385.4	(37%)	172.3	42%	629.5	309.8	103%
Average realised price	\$/GJ	6.33	6.79	(7%)	4.40	44%	6.61	3.83	73%
APLNG capex ¹									
E&A	\$m	13	9	39%	8	62%	22	20	12%
Sustain and Other	\$m	93	81	15%	87	7%	175	243	(28%)

1) APLNG capex is reported on an accrual basis.

APLNG sources of gas – APLNG 100%



Production volumes	Units	Dec-21 QTR	Sep-21 QTR	% Change	Dec-20 QTR	FYTD-22	FYTD-21
Operated							
Spring Gully	PJ	22.5	22.4	0%	25.6	44.9	50.6
Peat	PJ	0.7	0.4	75%	0.8	1.1	1.6
Talinga	PJ	19.8	18.8	5%	19.4	38.5	36.9
Orana	PJ	17.7	16.3	9%	17.2	34.0	30.7
Condabri	PJ	32.0	32.4	(1%)	31.7	64.4	62.2
Combabula/Reedy Creek	PJ	45.1	43.0	5%	45.4	88.1	89.1
Total operated production	PJ	137.8	133.2	3%	140.1	271.0	271.2
Non-operated							
Fairview (GLNG)	PJ	7.1	7.4	(4%)	8.0	14.5	16.2
Arcadia (GLNG)	PJ	2.0	1.9	5%	1.0	3.9	1.7
Angry Jungle (GLNG)	PJ	1.4	1.4	0%	1.0	2.8	1.8
Anya (QGC)	PJ	0.4	0.4	0%	0.4	0.7	0.7
Kenya East (QGC)	PJ	12.2	12.5	(2%)	14.1	24.8	28.0
Kenya (QGC)	PJ	15.9	15.8	1%	16.7	31.8	31.8
Bellevue (QGC)	PJ	1.0	1.0	0%	1.1	2.0	2.1
Total non-operated production	PJ	40.1	40.3	(0%)	42.2	80.4	82.4
Total upstream production	PJ	177.9	173.6	2%	182.3	351.4	353.6
Natural gas purchases	PJ	4.4	3.8	16%	1.0	8.2	1.7
Changes in Upstream gas inventory/other	PJ	(0.8)	1.0	(180%)	(3.7)	0.2	(14.2)
Total sources of natural gas	PJ	181.5	178.4	2%	179.5	359.9	341.0

APLNG Operated Production Wells

				Development Wells	
		Avg daily production (APLNG share)		Wells drilled	Wells commissioned
Bowen	Spring Gully	245 TJ/d	Dec-21 QTR FYTD-22	- -	- -
	Peat	8 TJ/d	Dec-21 QTR FYTD-22	- -	- -
Surat	Talinga	215 TJ/d	Dec-21 QTR FYTD-22	4 4	14 34
	Orana	193 TJ/d	Dec-21 QTR FYTD-22	- -	- -
	Condabri	348 TJ/d	Dec-21 QTR FYTD-22	4 30	- -
	Combabula / Reedy Creek	490 TJ/d	Dec-21 QTR FYTD-22	- -	- -
	Total	1,498 TJ/d	Dec-21 QTR FYTD-22	8 34	14 34

APLNG uses of gas – APLNG 100%



Uses of gas	Units	Dec-21 QTR	Sep-21 QTR	% Change	Dec-20 QTR	FYTD-22	FYTD-21
LNG feed gas	PJ	142.9	121.7	17%	140.3	264.6	260.0
Domestic sales	PJ	38.6	56.7	(32%)	39.2	95.3	80.9
Total uses of natural gas	PJ	181.5	178.4	2%	179.5	359.9	341.0

LNG	Units	Dec-21 QTR	Sep-21 QTR	% Change	Dec-20 QTR	FYTD-22	FYTD-21
LNG production	kt	2,386.5	2,030.3	18%	2,341.4	4,416.8	4,343.6
Changes in LNG inventory	kt	(29.0)	(18.9)	53%	53.4	(47.9)	59.5
Total LNG sales volume	kt	2,357.6	2,011.4	17%	2,394.7	4,368.9	4,403.0
LNG cargos sold	#	34	29	17%	35	63	64

APLNG commodity revenue	Units	Dec-21 QTR	Sep-21 QTR	% Change	Dec-20 QTR	FYTD-22	FYTD-21
LNG	\$m	2,003.6	1,304.6	54%	889.0	3,308.2	1,748.5
Domestic gas	\$m	244.2	385.4	(37%)	172.3	629.5	309.8
Total commodity revenue	\$m	2,247.8	1,689.9	33%	1,061.3	3,937.7	2,058.3

Sales – APLNG average realised prices	Units	Dec-21 QTR	Sep-21 QTR	% Change	Dec-20 QTR	FYTD-22	FYTD-21
LNG	\$/GJ	15.34	11.71	31%	6.70	13.67	7.17
Domestic Gas	\$/GJ	6.33	6.79	(7%)	4.40	6.61	3.83
Average commodity price	\$/GJ	13.29	10.05	32%	6.17	11.67	6.34

Integrated Gas – Origin share¹



APLNG (ORG share)	Unit	Dec-21 QTR	Sep-21 QTR	% Change	Dec-20 QTR	% Change	FYTD-22	FYTD-21	% Change
Total production (ORG share)	PJ	60.8	65.1	(7%)	68.3	(11%)	125.9	132.6	(5%)
Total sales (ORG share)	PJ	58.0	63.1	(8%)	64.5	(10%)	121.1	121.8	(1%)
LNG (ORG share)									
Production	kt	812.1	761.4	7%	878.0	(8%)	1,573.5	1,628.8	(3%)
Sales	kt	807.1	754.3	7%	898.0	(10%)	1,561.4	1,651.1	(5%)
Commodity revenue	\$m	693.6	489.2	42%	333.4	108%	1,182.8	655.7	80%
Average realised price	US\$/mmbtu	11.95	9.09	31%	5.20	130%	10.56	5.47	93%
Domestic gas (ORG share)									
Sales	PJ	13.3	21.3	(38%)	14.7	(9%)	34.6	30.3	14%
Commodity revenue	\$m	83.7	144.5	(42%)	64.6	30%	228.2	116.2	96%
Average realised price	\$/GJ	6.29	6.79	(7%)	4.40	43%	6.60	3.83	72%

Integrated Gas Other	Unit	Dec-21 QTR	Sep-21 QTR	% Change	Dec-20 QTR	% Change	FYTD-22	FYTD-21	% Change
Origin only capex and lease costs	\$m	32	23	39%	15	113%	54	29	86%
Origin oil hedging and LNG trading									
Hedge premium expense	\$m	(3.2)	0.0	0%	(3.1)	3%	(3.2)	(3.1)	3%
Gain / (Loss) on oil hedging	\$m	(28.8)	(26.4)	9%	55.8	152%	(55.2)	99.0	156%
Gain / (Loss) on LNG trading	\$m	(16.6)	(20.5)	(19%)	(7.0)	137%	(37.1)	(16.9)	120%
Total oil hedging and LNG trading gain/(loss)	\$m	(48.6)	(46.9)	4%	45.7	206%	(95.5)	79.0	221%

- Hedging and LNG trading losses increased quarter-on-quarter driven by higher commodity prices

¹ Origin is currently in the process of completing the sale of a 10% interest in APLNG and is required from 8 December 2021 to account for ownership in APLNG at 27.5%. The data shown for the Dec-21 quarter represents 37.5% for October and November and 27.5% for December.

	Unit	Dec-21	Sep-21	% Change	Dec-20	% Change	FYTD-22	FYTD-21	% Change
Sales volumes									
Electricity – Retail	TWh	3.3	4.6	(28%)	3.6	(6%)	7.9	8.2	(3%)
Electricity – Business	TWh	4.8	4.3	12%	4.4	10%	9.2	8.5	8%
Natural gas – Retail	PJ	8.8	17.5	(50%)	7.7	14%	26.3	25.2	4%
Natural gas – Business	PJ	33.4	36.6	(9%)	40.2	(17%)	70.0	82.8	(15%)
Natural gas – Internal generation	PJ	6.1	13.0	(53%)	10.1	(39%)	19.1	21.9	(13%)
Capex	\$m	86	77	12%	80	8%	163	135	20%
Investments	\$m	77	189	(59%)	48	62%	267	48	450%

Electricity sales volume (TWh)

	Dec-21 QTR		Dec-20 QTR		FYTD-22		FYTD-21	
Volumes sold (TWh)	Retail	Business	Retail	Business	Retail	Business	Retail	Business
New South Wales	1.5	2.1	1.6	2.1	3.8	4.0	4.0	4.2
Queensland	1.0	1.0	1.0	1.0	2.0	1.9	2.1	1.8
Victoria	0.6	1.3	0.6	0.8	1.4	2.4	1.4	1.6
South Australia	0.3	0.5	0.3	0.4	0.6	0.9	0.6	0.9
Total volumes sold	3.33	4.84	3.55	4.38	7.93	9.16	8.16	8.47

Natural Gas sales volume (PJ)

	Dec-21 QTR		Dec-20 QTR		FYTD-22		FYTD-21	
Volumes sold (PJ)	Retail	Business	Retail	Business	Retail	Business	Retail	Business
New South Wales	2.4	4.5	2.1	6.2	7.0	9.6	6.3	13.9
Queensland	0.7	18.3	0.7	20.7	1.5	33.2	1.8	35.3
Victoria	4.5	8.0	3.8	11.1	14.4	21.6	13.9	29.0
South Australia	1.2	2.6	1.0	2.1	3.3	5.6	3.2	4.8
External volumes sold	8.8	33.4	7.7	40.2	26.3	70.0	25.2	82.8
Internal sales (generation)	6.1		10.1		19.1		21.9	
Total volumes sold	48.3		58.0		115.4		130.0	

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
E&A	Exploration & Appraisal
GJ	gigajoule = 10^9 joules
JCC	Japan Customs-cleared Crude
joule	primary measure of energy in the metric system
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/d	million standard cubic feet per day
MWh	Megawatt hour = 10^3 kilowatt hours
PJ	petajoule = 10^{15} joules
t	tonnes
TJ	terajoule = 10^{12} joules
TJ/d	terajoules per day
TWh	Terrawatt hour = 10^9 kilowatt hours