

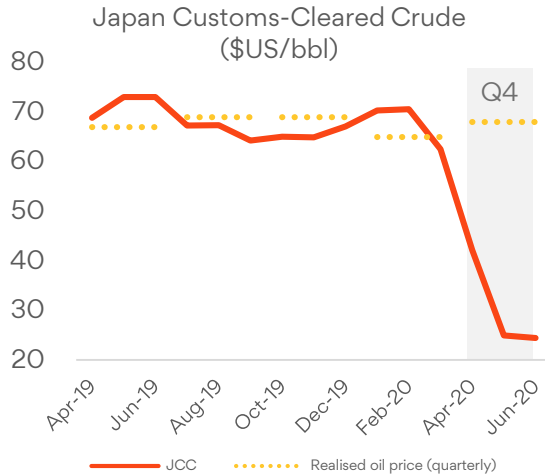
# Origin Energy

# Quarterly Report

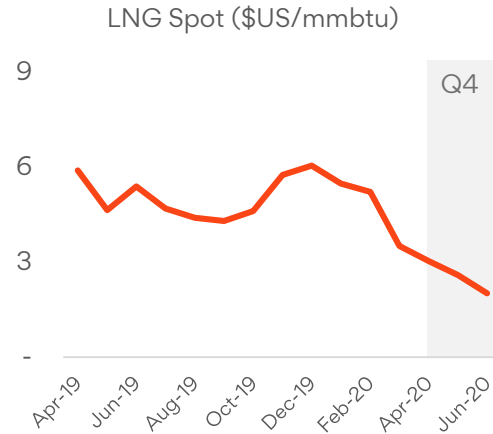
June 2020



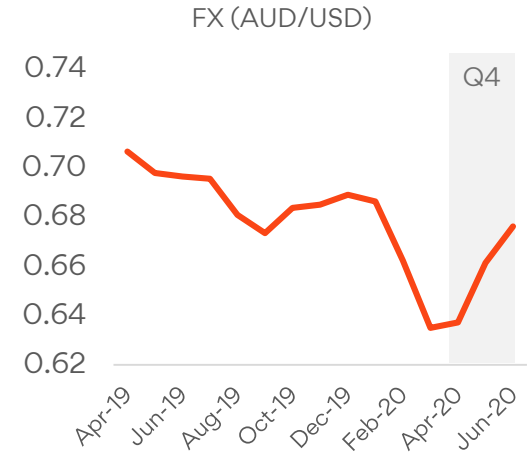




Source: Petroleum Association of Japan, Refinitiv



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



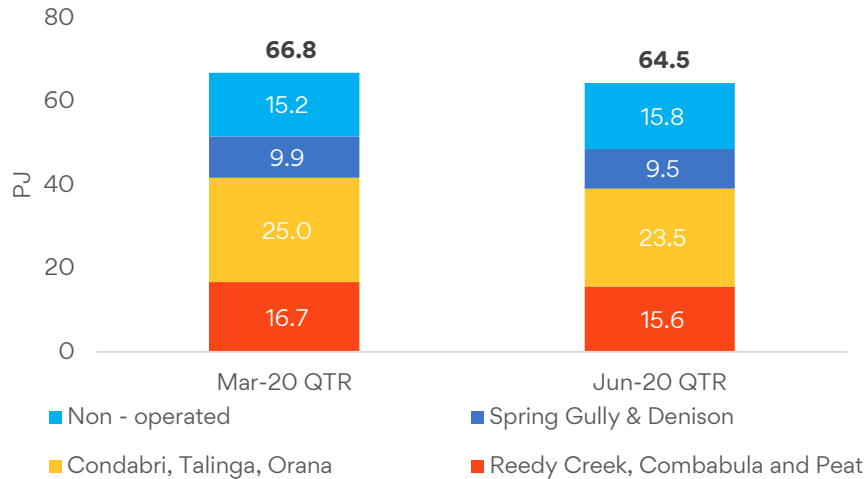
- APLNG's realised lagged oil price in the Jun-20 quarter was US\$68/bbl (A\$104/bbl), up from US\$65/bbl (A\$99/bbl) in the Mar-20 quarter and US\$67/bbl (A\$95/bbl) in the Jun-19 quarter
- FY2020 APLNG US\$ realised lagged oil price (US\$68/bbl) was down on FY2019 (US\$73/bbl), but stable in A\$ terms (A\$101/bbl)
- JCC and Spot LNG prices materially declined in the Jun-20 quarter as a result of weaker demand linked to COVID-19. JCC was also impacted by a disagreement amongst OPEC+ members on production in early March 2020

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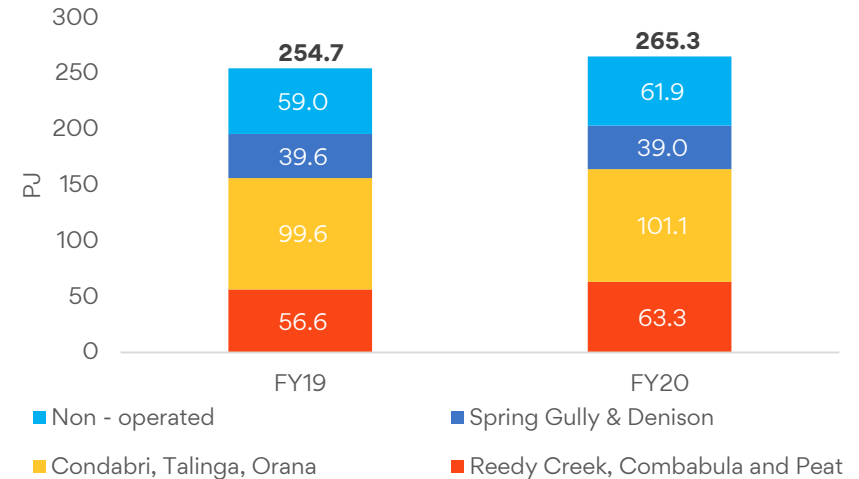
# APLNG delivered record production in FY2020



Quarterly Production (Origin Share)



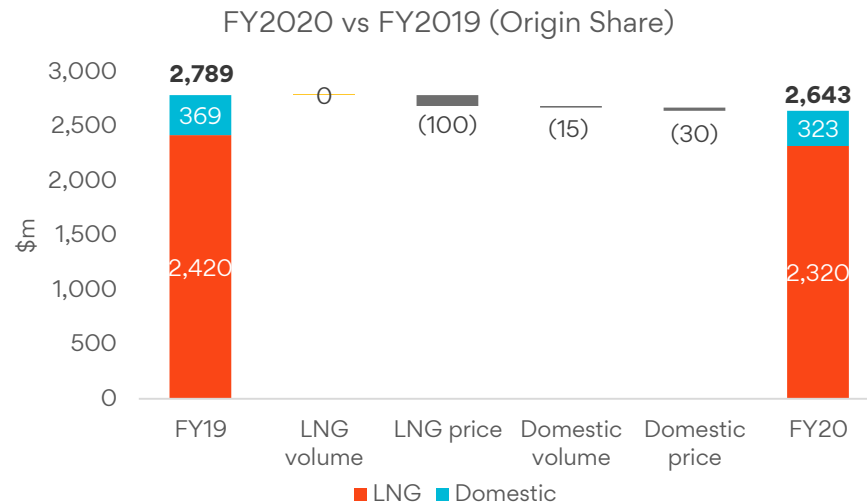
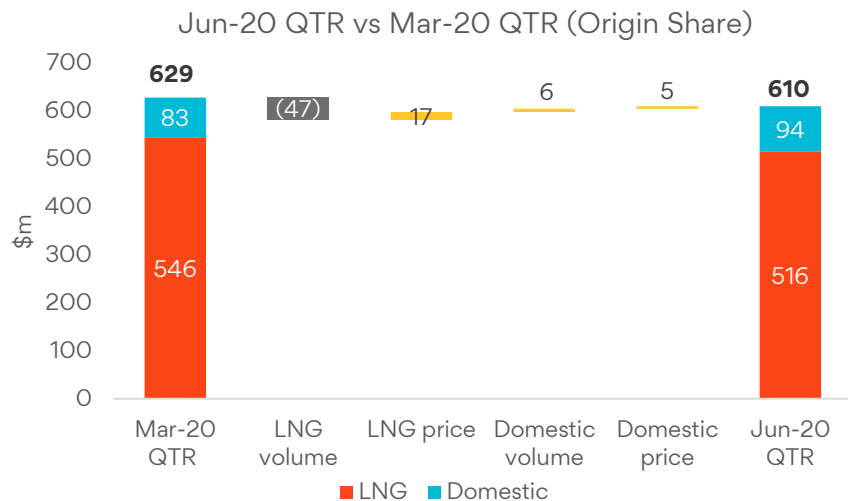
Financial Year Production (Origin Share)



- Jun-20 production down 2.3 PJ (3%) from Mar-20 quarter
  - reduced operated production in response to lower demand due to COVID-19
  - partially offset by improved non-operated facility reliability and well availability

- FY2020 production up 10.6 PJ (4%) from prior year
  - improved operated and non-operated field performance with higher well availability and facility reliability
  - commissioning of the Eurombah Reedy Creek Interconnect (ERIC) pipeline in July 2019 improved utilisation of processing capacity
  - partially offset by reduction in operated production in Jun-20 quarter in response to lower demand

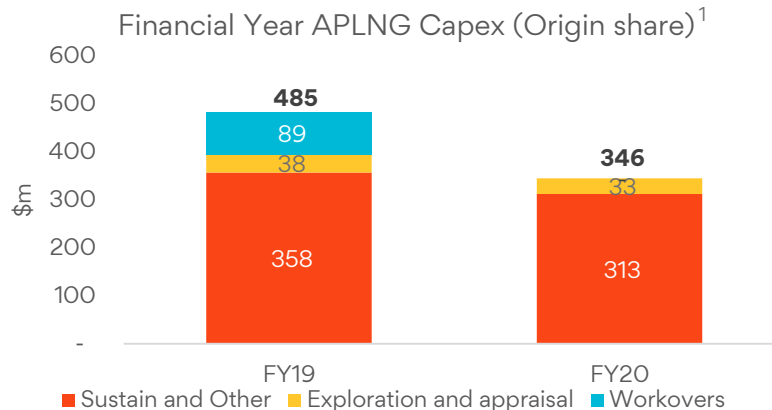
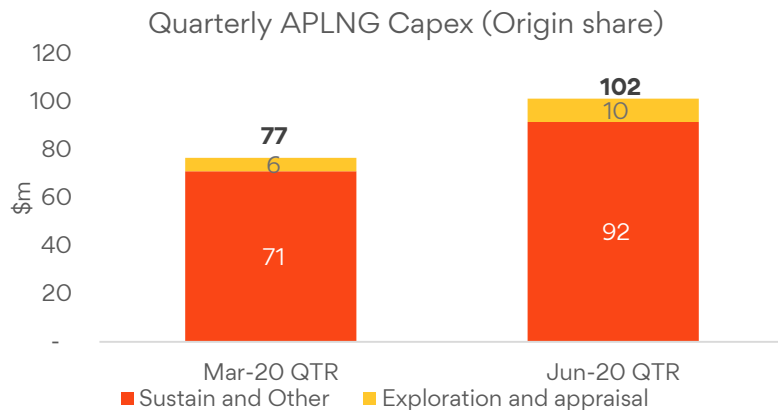
# APLNG revenue down 3% from prior quarter



- APLNG revenue down 3% on Mar-20 quarter with lower LNG revenue partially offset by higher domestic revenue
  - LNG revenue down 5% due to fewer contracted cargoes scheduled and lower spot volumes and prices, partially offset by higher realised oil prices
  - Domestic revenue up 14% with more gas directed to short term domestic sales

- FY2020 APLNG revenue down 5% from prior year with increased production offset by lower purchases and gas inventory movements
  - LNG revenue down 4% driven by a higher proportion of sales into a weaker spot market
  - Domestic gas revenue down 12% due to lower sales volumes and lower average prices

# APLNG capital expenditure (Origin share)

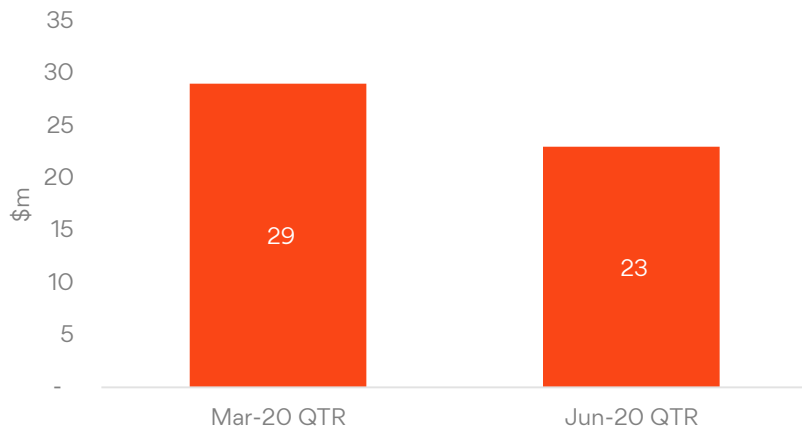


- Sustain and other capex is higher due to purchase of spares for maintenance and increased activity following wet weather impacts last quarter
- E&A spend in the quarter primarily related to two Condabri Deep pilot wells, production testing of South Burunga 2 and restoration and preparatory activities
  - South Burunga 2 results did not achieve commercial targets, as such the exploration costs were written off (\$21 million Origin share)

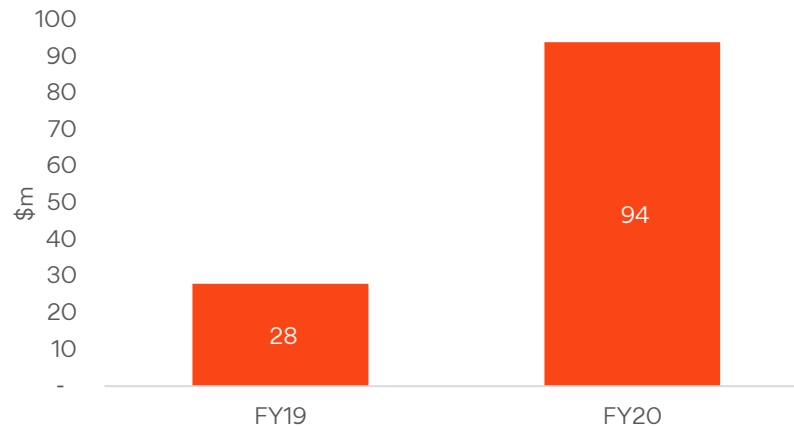
- Workover costs are directly expensed as incurred from FY2020
- FY2020 sustain and other capex was down \$45 million (Origin share) on FY2019 driven by
  - Lower operated spend primarily related to infrastructure with the ERIC pipeline build in FY2019
  - \$19 million benefit in FY2020 related to settlement of a claim in respect of initial project construction work
  - Lower non-operated spend due to lower well development activity.

1) APLNG capex is reported on an accrual basis. For the purpose of comparability FY2019 workover costs have been shown separately. These costs are expensed as incurred from FY2020

### Quarterly Integrated Gas - Other Capex



### Financial Year Integrated Gas - Other Capex



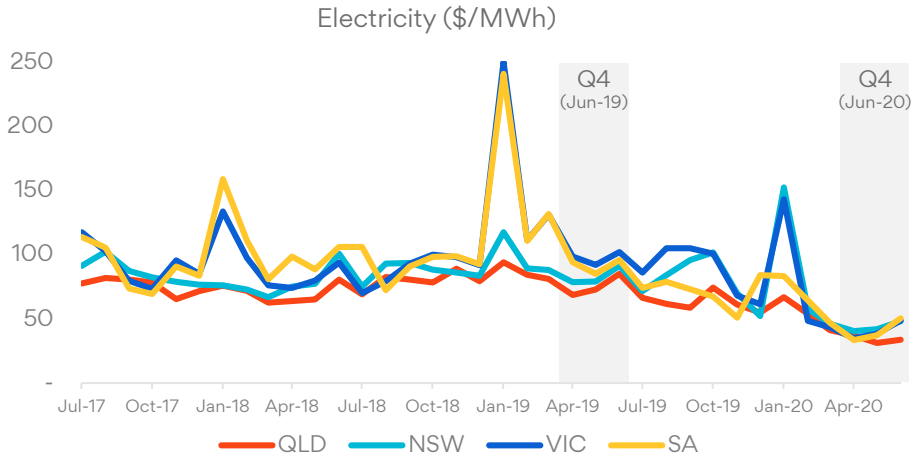
- During the Jun-20 quarter, capex primarily relates to E&A spend on the Kyalla drilling program prior to the decision to pause due to COVID-19 as well as demobilisation and stand-by costs

- Capex spend primarily relates to Beetaloo E&A activity including Kyalla and Velkerri civil works, rig mobilisation and Kyalla drilling
- Results to date from the Kyalla well demonstrate good reservoir continuity, conductive natural fractures, and continuous gas shows

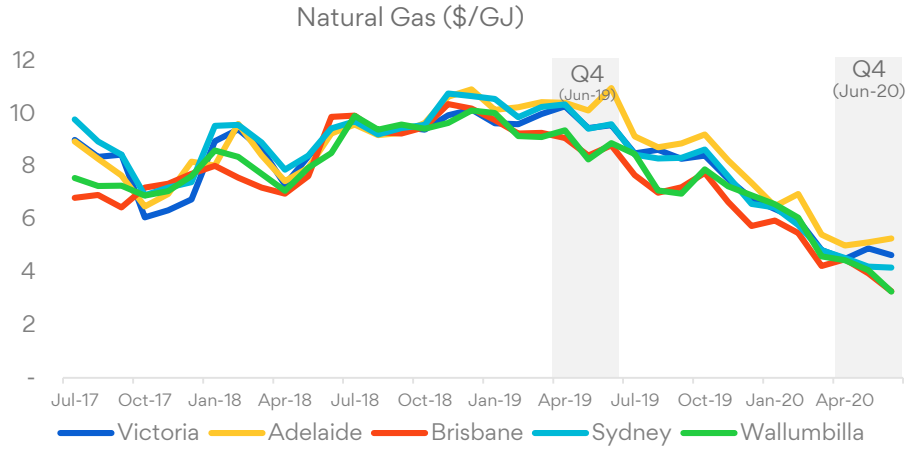




# Electricity and natural gas markets



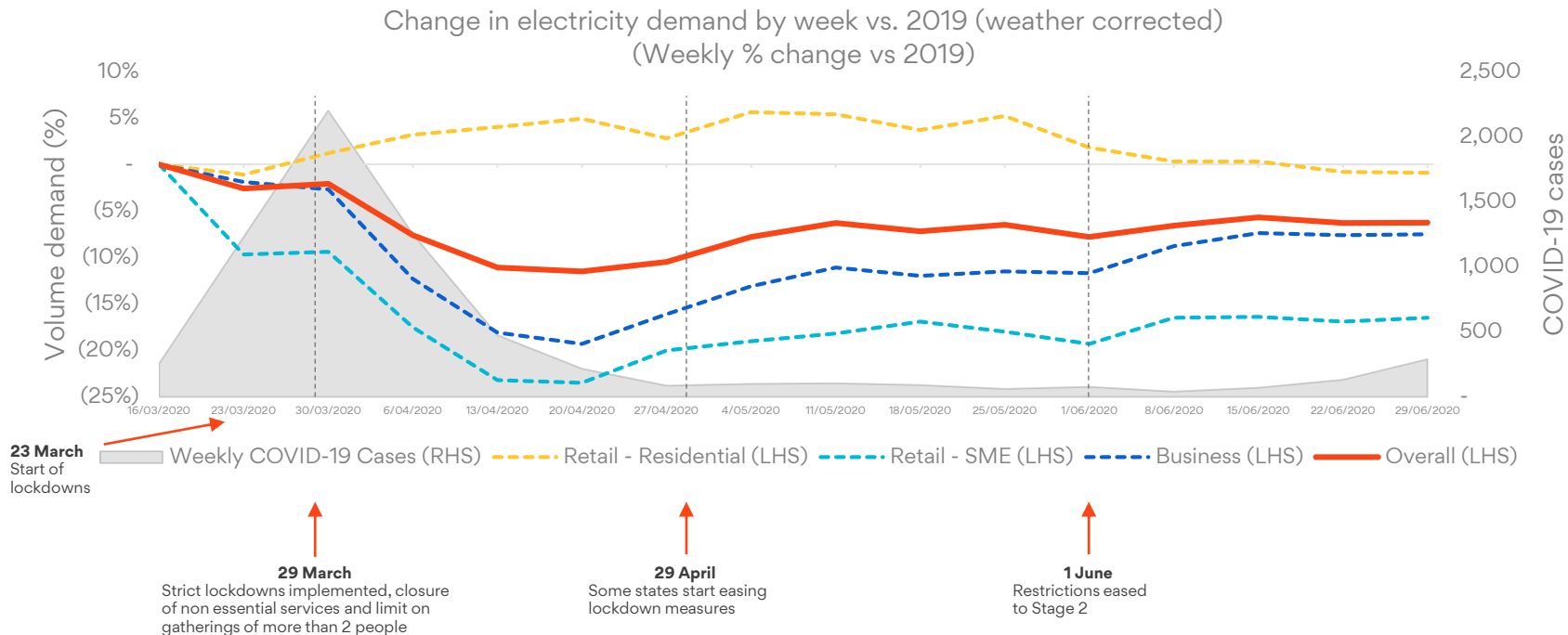
Source: AEMO



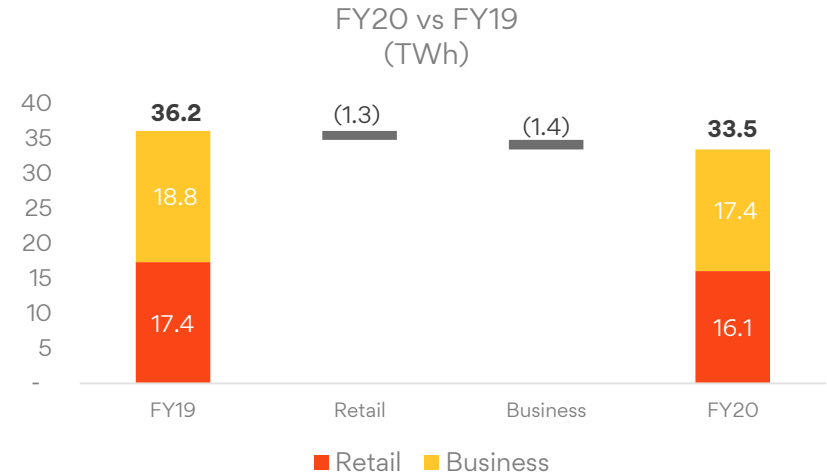
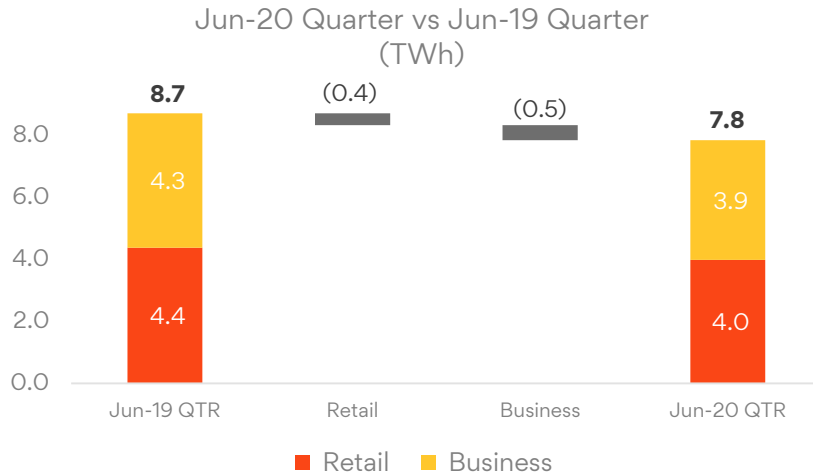
Source: AEMO

- Average NEM spot electricity price for the Jun-20 quarter dropped significantly to \$39.6/MWh, down from both \$70.6/MWh in the Mar-20 quarter and \$86.8/MWh in the Jun-19 quarter:
  - Lower demand continued across the quarter driven by milder weather in April and the continued impact of COVID-19, while electricity supply increased as baseload plants previously offline returned in April, falling spot gas prices resulted in higher gas generation, and renewable generation continued to increase
  - Refer to slide 10 for further details on the impact of COVID-19 on Origin's electricity demand
- Average domestic spot gas price for the Jun-20 quarter was \$4.39/GJ, compared to \$5.74/GJ in the Mar-20 quarter and \$9.53/GJ in Jun-19 quarter:
  - Decrease driven by linkage to lower Asian LNG prices, exacerbated by impacts of COVID-19 on demand and storage levels.

# COVID-19 impacts on Origin electricity demand



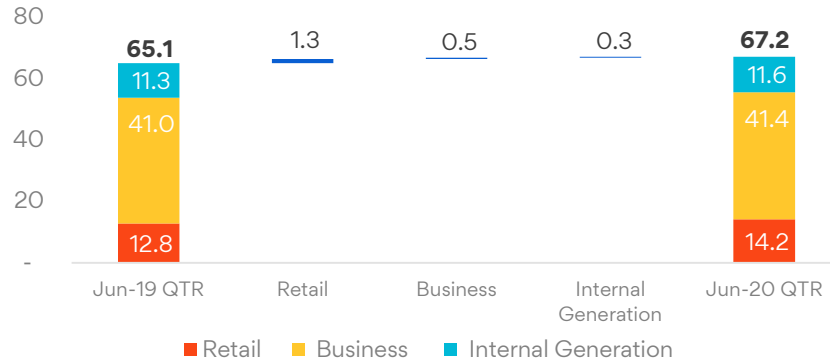
Source: Weekly Cases: Australian Government, Department of Health; Electricity Demand (weather corrected): Origin internal analysis



- Retail volumes down 9% on Jun-19 quarter due to
  - lower usage from solar/energy efficiency and COVID-19, partially offset by cooler weather (~0.1 TWh)
  - lower SME customers from large tenders (~0.1 TWh) and prior period market revisions (~0.2 TWh)
- Business volumes were down 11% on Jun-19 quarter due primarily to lower demand impacts from COVID-19

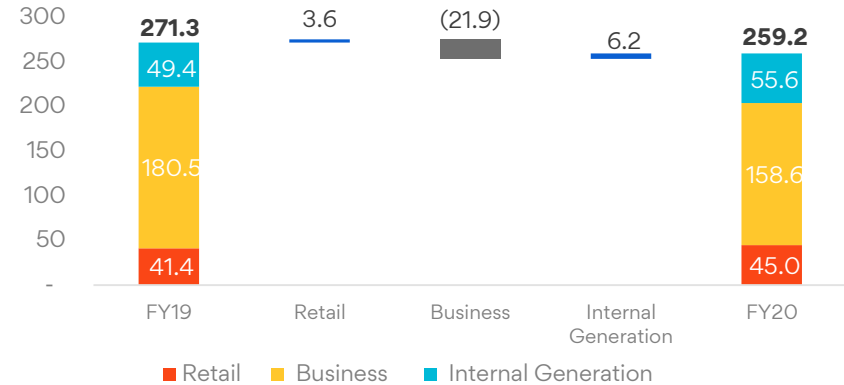
- Retail volumes down 7% on FY2019 due to
  - lower usage from milder weather (~0.3 TWh), solar uptake / energy efficiency (~0.3 TWh) and COVID-19 (~0.2 TWh)
  - lower SME customers from large tenders (~0.4 TWh) and changes in residential customer mix (~0.1 TWh)
- Business volumes down 7% due to the expiration of contracts, and lower demand impacts from COVID-19

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



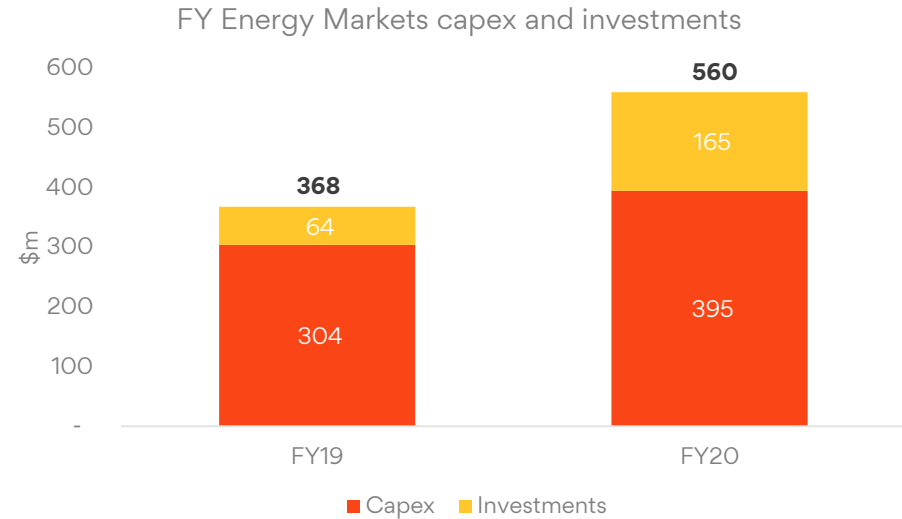
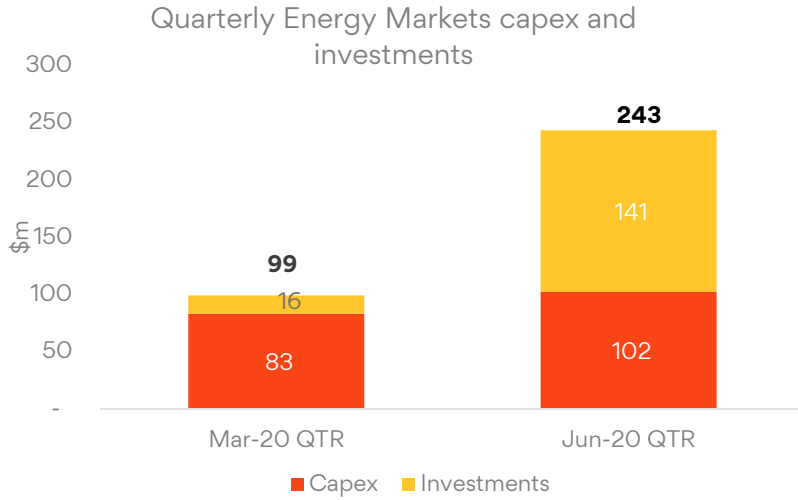
- Retail volumes up 10% on Jun-19 quarter due to cooler weather in Victoria (1.1 PJ), and higher customer numbers (0.6 PJ), partially offset by COVID-19 impacts with increased residential demand more than offset by lower SME demand (-0.3PJ)
- Business volumes up 1% with new Business contracts (1.7PJ) partially offset by the impact of COVID-19 (-1.2PJ)
- Gas to generation up 3% on Jun-19 quarter reflecting the non-repeat of an outage at Darling Downs power station in the Jun-19 quarter

FY20 vs FY19  
(PJ)



- Retail volumes up 9% on FY2019 due to cooler weather in Victoria (2.0 PJ), and higher customer numbers (1.9 PJ), partially offset COVID-19 impacts with increased residential demand more than offset by lower SME demand (-0.3 PJ)
- Business volumes down 12% due to the roll-off of short term wholesale contracts in Queensland and expiration of C&I contracts.
- Gas to generation up 13% reflecting cover for Eraring outages, and the roll-off of short term contracts which diverted gas from generation in FY2019

# Energy Markets Capital expenditure



- Jun-20 capex included generation maintenance, Community Energy Services development spend, digital initiatives, and initial Kraken IT platform spend
- Jun-20 investments primarily reflect initial payments relating to the 20% equity interest in Octopus Energy, including transaction costs (\$128 million)

- As expected, capex is up 30% or \$91 million on the prior year due to higher generation spend with major inspections at Eraring and Uranquinty and unplanned maintenance at Eraring and Mortlake
- FY2020 investments reflect initial payments relating to the 20% equity interest in Octopus Energy, deferred payment for OC Energy as well as other Future Energy investments, compared with the OC Energy and Intertrust investments in the prior year

A decorative background consisting of a 5x10 grid of circles. Most circles are light orange, but two circles in the second row, second and third columns, are bright yellow.

## Data tables

# Integrated Gas – APLNG 100%



APLNG	Unit	Jun-20	Mar-20	% Mvt	Jun-19	% Mvt	FY20	FY19	% Mvt
Total production	PJ	172.0	178.1	(3%)	170.7	1%	707.6	679.1	4%
Total sales	PJe	159.4	166.0	(4%)	166.1	(4%)	668.3	676.2	(1%)
<b>LNG</b>									
Production	kt	1,936.4	2,145.7	(10%)	2,132.8	(9%)	8,712.8	8,652.4	1%
Sales	kt	1,952.5	2,138.1	(9%)	2,116.0	(8%)	8,686.8	8,684.3	0%
Commodity Revenue	\$m	1,376.0	1,455.5	(5%)	1,476.7	(7%)	6,187.7	6,453.4	(4%)
Average realised price	US\$/mmbtu	8.80	8.56	3%	9.31	(5%)	9.12	10.12	(10%)
<b>Domestic Gas</b>									
Sales	PJ	51.2	47.6	8%	48.9	5%	187.1	195.1	(4%)
Commodity Revenue	\$m	251.1	220.4	14%	239.0	5%	861.5	982.8	(12%)
Average realised price	\$/GJ	4.90	4.63	6%	4.89	0%	4.61	5.04	(9%)
<b>APLNG capex<sup>1</sup></b>									
E&A	\$m	26	15	73%	14	86%	88	102	(14%)
Sustain and Other	\$m	245	190	29%	226	8%	834	954	(13%)
Workovers	\$m	-	-	n/a	82	(100%)	-	237	(100%)

1) APLNG capex is reported on an accrual basis. For the purpose of comparability Mar-19 and FYTD-19 workover costs have been shown separately.



# APLNG sources of gas – APLNG 100%



Production volumes	Units	Jun-20	Mar-20	% Change	Jun-19	FY20	FY19
<b>Operated</b>							
Spring Gully	PJ	25.3	26.3	(4%)	25.8	104.0	105.0
Peat	PJ	0.6	0.9	(33%)	0.7	3.0	2.4
Denison	PJ	-	-	n/a	-	-	0.5
Talinga	PJ	16.3	17.7	(8%)	18.2	72.8	73.8
Orana	PJ	16.4	17.0	(4%)	17.5	68.4	65.5
Condabri	PJ	30.3	31.9	(5%)	32.3	128.3	126.2
Combabula/Reedy Creek	PJ	41.2	43.6	(6%)	35.6	165.9	148.4
<b>Total operated production</b>	<b>PJ</b>	<b>130.0</b>	<b>137.5</b>	<b>(5%)</b>	<b>130.1</b>	<b>542.4</b>	<b>521.8</b>
<b>Non-operated</b>							
Fairview (GLNG)	PJ	8.4	8.5	(1%)	9.0	34.6	37.0
Arcadia (GLNG)	PJ	0.4	0.3	33%	0.2	1.2	0.7
Angry Jungle (GLNG)	PJ	0.7	0.9	(22%)	-	1.7	-
Anya (QGC)	PJ	0.4	0.4	n/a	0.5	1.7	1.2
Kenya East (QGC)	PJ	14.6	14.5	1%	15.2	59.2	58.2
Kenya (QGC)	PJ	16.4	15.1	9%	14.9	62.9	57.1
Bellevue (QGC)	PJ	1.1	0.8	38%	0.9	3.8	3.1
<b>Total non-operated production</b>	<b>PJ</b>	<b>42.0</b>	<b>40.6</b>	<b>3%</b>	<b>40.6</b>	<b>165.2</b>	<b>157.3</b>
<b>Total upstream production</b>	<b>PJ</b>	<b>172.0</b>	<b>178.1</b>	<b>(3%)</b>	<b>170.7</b>	<b>707.6</b>	<b>679.1</b>
Natural gas purchases	PJ	3.6	3.0	20%	5.2	17.5	32.5
Changes in Upstream gas inventory/other	PJ	(8.2)	(4.4)	86%	0.6	(15.2)	1.2
<b>Total sources of natural gas</b>	<b>PJ</b>	<b>167.4</b>	<b>176.7</b>	<b>(5%)</b>	<b>176.5</b>	<b>709.9</b>	<b>712.7</b>



## APLNG Operated Production Wells

		Avg daily production (APLNG share)		Development Wells	
				Wells drilled	Wells commissioned
Bowen	Spring Gully	<b>278 TJ/d</b>	Jun-20 QTR FY20	0 15	2 20
	Peat	<b>7 TJ/d</b>	Jun-20 QTR FY20	- -	- -
	Denison	<b>0 TJ/d</b>	Jun-20 QTR FY20	- -	- -
Surat	Talinga	<b>179 TJ/d</b>	Jun-20 QTR FY20	1 13	- -
	Orana	<b>180 TJ/d</b>	Jun-20 QTR FY20	33 61	15 39
	Condabri	<b>332 TJ/d</b>	Jun-20 QTR FY20	6 39	24 55
	Combabula / Reedy Creek	<b>452 TJ/d</b>	Jun-20 QTR FY20	13 132	64 153
	<b>TOTAL</b>	<b>1429 TJ/d</b>	<b>Jun-20 QTR FY20</b>	<b>53 260</b>	<b>105 267</b>

# APLNG uses of gas – APLNG 100%



Uses of gas	Units	Jun-20	Mar-20	% Change	Jun-19	FY20	FY19
LNG feed gas	PJ	116.2	129.1	(10%)	127.6	522.8	517.7
Domestic sales	PJ	51.2	47.6	8%	48.9	187.1	195.1
<b>Total uses of natural gas</b>	<b>PJ</b>	<b>167.4</b>	<b>176.7</b>	<b>(5%)</b>	<b>176.5</b>	<b>709.9</b>	<b>712.7</b>

LNG	Units	Jun-20	Mar-20	% Change	Jun-19	FY20	FY19
LNG Production	kt	1,936.4	2,145.7	(10%)	2,132.8	8,712.8	8,652.4
Changes in LNG inventory	kt	16.1	(7.6)	(312%)	(16.8)	(26.0)	31.9
<b>Total LNG sales volume</b>	<b>kt</b>	<b>1,952.5</b>	<b>2,138.1</b>	<b>(9%)</b>	<b>2,116.0</b>	<b>8,686.8</b>	<b>8,684.3</b>
<b>LNG cargos sold</b>	<b>#</b>	<b>28</b>	<b>31</b>	<b>(10%)</b>	<b>30</b>	<b>125</b>	<b>124</b>

APLNG commodity revenue	Units	Jun-20	Mar-20	% Change	Jun-19	FY20	FY19
LNG	\$m	1,376.0	1,455.5	(5%)	1,476.7	6,187.7	6,453.4
Domestic Gas	\$m	251.1	220.4	14%	239.0	861.5	982.8
<b>Total Commodity Revenue</b>	<b>\$m</b>	<b>1,627.1</b>	<b>1,676.0</b>	<b>(3%)</b>	<b>1,715.7</b>	<b>7,049.2</b>	<b>7,436.2</b>

Sales – APLNG average realised prices	Units	Jun-20	Mar-20	% Change	Jun-19	FY20	FY19
LNG	\$/GJ	12.72	12.29	3%	12.60	12.86	13.42
Domestic Gas	\$/GJ	4.90	4.63	6%	4.89	4.61	5.04
<b>Average Commodity price</b>	<b>\$/GJe</b>	<b>10.21</b>	<b>10.09</b>	<b>1%</b>	<b>10.33</b>	<b>10.55</b>	<b>11.00</b>

# Integrated Gas – Origin share



APLNG (ORG share)	Unit	Jun-20	Mar-20	% Mvt	Jun-19	% Mvt	FY20	FY19	% Mvt
Total production (ORG share)	PJ	64.5	66.8	(3%)	64.0	1%	265.3	254.7	4%
Total sales (ORG share)	PJe	59.8	62.3	(4%)	62.3	(4%)	250.6	253.6	(1%)
LNG (ORG share)									
Production	kt	726.2	804.6	(10%)	799.8	(9%)	3,267.3	3,244.7	1%
Sales	kt	732.2	801.8	(9%)	793.5	(8%)	3,257.6	3,256.6	0%
Commodity Revenue	\$m	516.0	545.8	(5%)	553.7	(7%)	2,320.4	2,420.0	(4%)
Average realised price	US\$/mmbtu	8.80	8.56	3%	9.31	(5%)	9.12	10.12	(10%)
Domestic Gas (ORG share)									
Sales	PJ	19.2	17.8	8%	18.3	5%	70.2	73.2	(4%)
Commodity Revenue	\$m	94.2	82.7	14%	89.6	5%	323.1	368.5	(12%)
Average realised price	\$/GJ	4.90	4.63	6%	4.89	0%	4.61	5.04	(9%)
Integrated Gas Other									
Origin only capex									
Capex	\$m	1	2	(50%)	2	n/a	9	11	(18%)
E&A	\$m	22	27	(19%)	6	267%	85	17	400%
Origin oil and LNG hedging/trading									
Hedge premium expense	\$m	1.3	(10.1)	(113%)	(13.0)	(110%)	(28.5)	(34.4)	(17%)
Gain / (Loss) on oil hedging	\$m	(0.1)	7.1	(101%)	(1.7)	(94%)	7.7	(80.6)	(110%)
Gain / (Loss) on LNG hedging/trading	\$m	11.6	(16.2)	(172%)	(21.2)	(155%)	(71.5)	(83.7)	(15%)
<b>Total oil and LNG hedging/trading</b>	<b>\$m</b>	<b>12.8</b>	<b>(19.2)</b>	<b>(167%)</b>	<b>(35.9)</b>	<b>(136%)</b>	<b>(92.3)</b>	<b>(198.7)</b>	<b>(54%)</b>

- Hedging/trading costs decreased quarter-on-quarter driven by favourable price impact on LNG trading positions and option premium receipts
- Lower FY2020 hedging/trading cost driven by oil and FX hedge gains, lower LNG hedging/trading cost and option premium spend

	Unit	Jun-20	Mar-20	% Mvt	Jun-19	% Mvt	FY20	FY19	% Mvt
<b>Sales volumes</b>									
Electricity – Retail	TWh	4.0	4.0	0%	4.4	(9%)	16.1	17.4	(7%)
Electricity – Business	TWh	3.9	4.7	(18%)	4.3	(11%)	17.4	18.8	(7%)
Natural gas – Retail	PJ	14.2	5.9	139%	12.8	10%	45.0	41.4	9%
Natural gas – Business	PJ	41.4	37.5	11%	41.0	1%	158.6	180.5	(12%)
Natural gas – Internal generation	PJ	11.6	14.3	(19%)	11.3	3%	55.6	49.4	13%
Capex	\$m	102	83 <sup>(1)</sup>	23%	66	54%	395	304	30%
Investments	\$m	141	16 <sup>(1)</sup>	n/a	-	n/a	165	64	158%

1) OC Energy payment of \$14 million has been reclassified from capex to investments.

## Electricity sales volume (TWh)

Volumes sold (TWh)	Jun-20 QTR		Mar-20 QTR		FY20		FY19	
	Retail	Business	Retail	Business	Retail	Business	Retail	Business
New South Wales	2.0	2.0	1.8	2.3	7.8	8.7	8.4	9.4
Queensland	0.9	0.8	1.2	1.0	4.1	3.6	4.6	3.5
Victoria	0.7	0.7	0.6	0.9	2.9	3.4	3.1	4.0
South Australia	0.3	0.4	0.3	0.4	1.3	1.7	1.3	1.9
<b>Total volumes sold</b>	<b>4.0</b>	<b>3.9</b>	<b>4.0</b>	<b>4.7</b>	<b>16.1</b>	<b>17.4</b>	<b>17.4</b>	<b>18.8</b>

## Natural Gas sales volume (PJ)

Volumes sold (PJ)	Jun-20 QTR		Mar-20 QTR		FY20		FY19	
	Retail	Business	Retail	Business	Retail	Business	Retail	Business
New South Wales	3.3	7.3	1.7	6.2	11.0	22.8	10.1	19.7
Queensland	0.7	14.7	0.7	19.1	3.1	66.9	3.3	92.3
Victoria	8.4	16.7	2.7	10.2	25.2	58.3	22.4	57.5
South Australia	1.7	2.7	0.8	2.0	5.7	10.6	5.6	11.0
<b>External volumes sold</b>	<b>14.2</b>	<b>41.4</b>	<b>5.9</b>	<b>37.5</b>	<b>45.0</b>	<b>158.6</b>	<b>41.4</b>	<b>180.5</b>
Internal sales (generation)		11.6		14.3		55.6		49.4
<b>Total volumes sold</b>		<b>67.2</b>		<b>57.7</b>		<b>259.2</b>		<b>271.3</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
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
mmboc	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