

# Origin Energy

## 2020 Half Year Results

Half year ended 31 December 2019

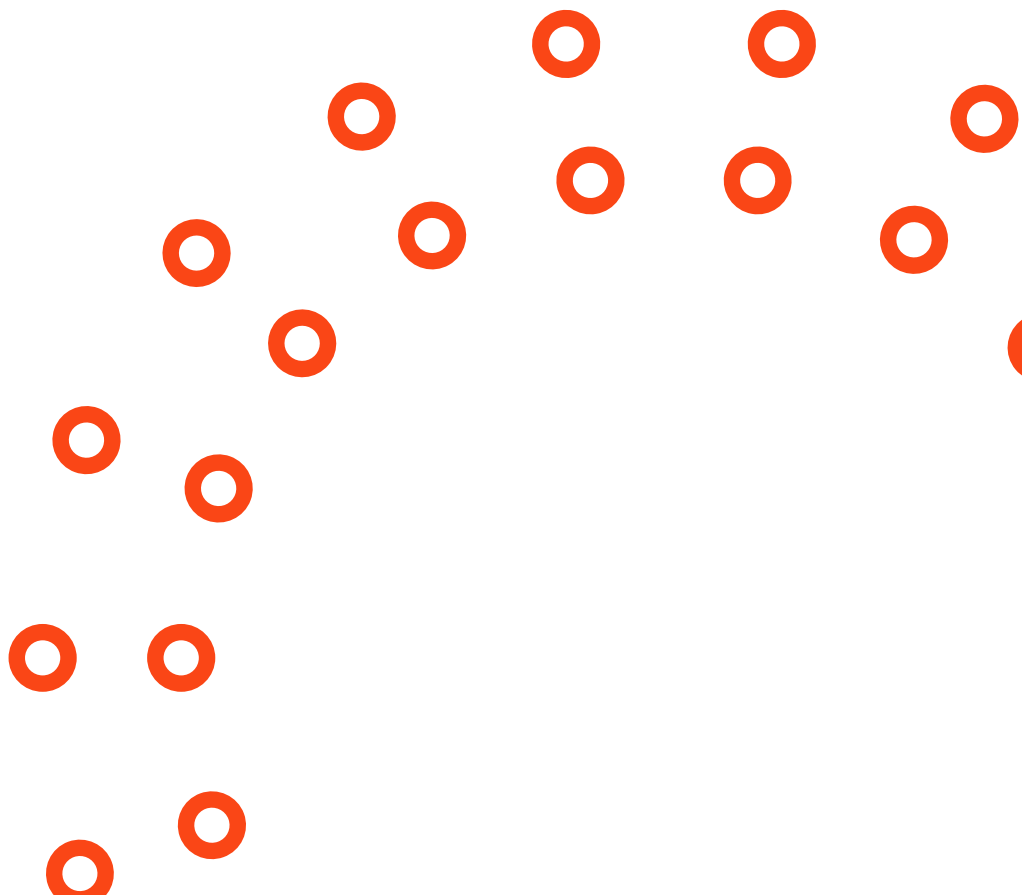


Frank Calabria, CEO & Lawrie Tremaine, CFO

20 February 2020

# Outline

1. **Performance Highlights**
  - Frank Calabria
2. **Financial Review**
  - Lawrie Tremaine
3. **Operational Review**
  - Frank Calabria
4. **Outlook**
  - Frank Calabria





# Performance Highlights

Frank Calabria,  
CEO

# HY2020 financial highlights



## Statutory Profit



**\$599**

million  
(34.0 cps)



25% decrease including lower net gain on fair value and FX movements

## Underlying Profit



**\$528**

million  
(30.0 cps)



11% decrease: introduction of regulated retail electricity prices and generation outages

## Underlying ROCE

12 month rolling



**8.3%**



0.3% decrease on December 2018

## Free Cash Flow



**\$680**

million



22% increase including higher distribution from APLNG

## Adjusted Net Debt



**\$5.1**

billion



\$342 million decrease from June-19 (excluding \$540 million lease liability under AASB 16 first recognition)

## Interim dividend



**15** cps

Fully franked



Up from 10 cps  
39% of Free Cash Flow

All comparisons relate to HY2019 unless stated otherwise.

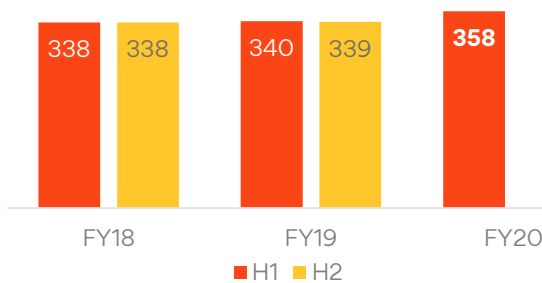
# Strong operational performance in HY2020



## Integrated Gas

- Record half year production - improved upstream field and facility performance
- ERIC pipeline brought online, improving utilisation of processing capacity
- Gas processing facility reliability of 99.6%<sup>1</sup>
- APLNG unit production costs<sup>2</sup> reduced to \$3.5/GJ, down 13% from HY2019

APLNG production (PJ)

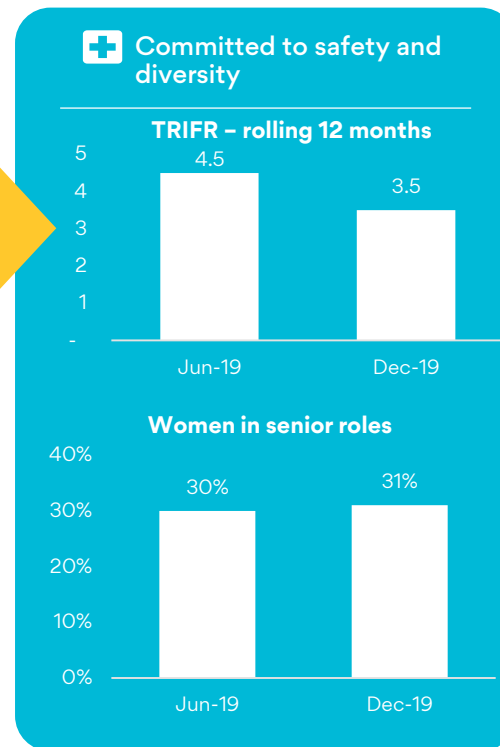
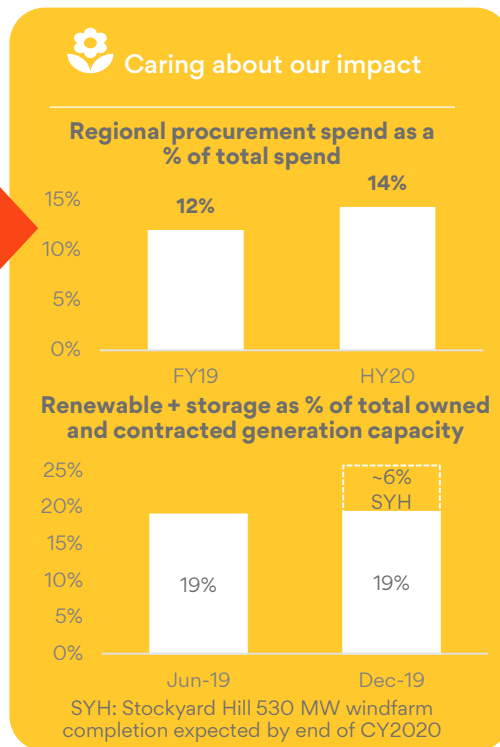
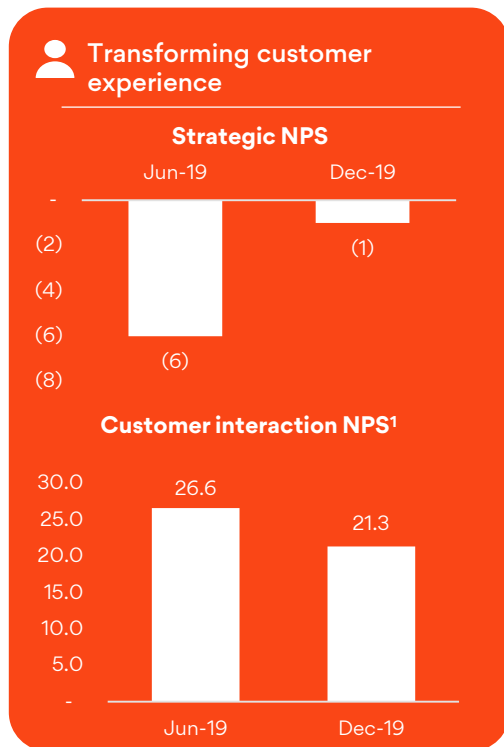


## Energy Markets

- Unplanned generation outages detracted from an otherwise strong operational performance
- Mortlake generation unit returned to service in December 2019 and portfolio performing reliably during summer peaks
- Disciplined approach to managing for customer lifetime value
- Gas portfolio benefiting from lower wholesale gas prices
- Further \$28 million reduction in cost to serve
- Retail digital transformation on track with online sales, e-billing and digital interactions continuing to increase

1) Average monthly electric gas processing facility reliability (excludes legacy gas fired processing facilities) measured as operating time divided by the sum of operating time + unplanned down time.  
2) Includes capex + operating cash costs, excluding Ironbark acquisition costs and purchases, and reflecting royalties payable at the breakeven oil price. Royalties payable increases as oil price increases

# We are committed to delivering for our stakeholders



NPS: Net Promoter Score

TRIFR: Total recordable Injury Frequency Rate

1) Interaction NPS includes both LiveChat and voice interactions



# We are driven by our Purpose of “Getting energy right”



## ... for our Customers

- Moving to a simpler, digitised customer experience
- VDO extended beyond regulatory requirements from 1 January 2020
- Assisting customers facing hardship, including \$4 million set aside for bushfire relief package
- APLNG supporting domestic manufacturers with an additional 16 PJ sales agreed

## ... for our Communities

- >\$200 million direct and indirect regional spend in HY2020
- >\$870,000 donated to drought and bushfire relief and recovery
- Origin Foundation celebrating 10 years, donated >\$25 million to good causes in education and addressing disadvantage over that time

## ... for the Planet

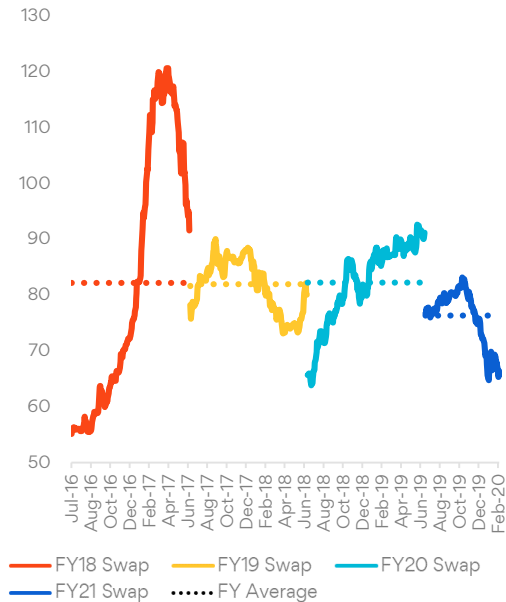
- 1.5°C scenario analysis published for wholesale electricity portfolio
- Support national goal of net zero emissions in the electricity sector by 2050 or earlier
- On track for >25% of owned and contracted generation capacity from renewables + storage by the end of calendar year 2020
- Pursuing opportunities in new low carbon fuels and products

Delivering on our Purpose creates value for all our stakeholders

# We operate in a rapidly changing energy market

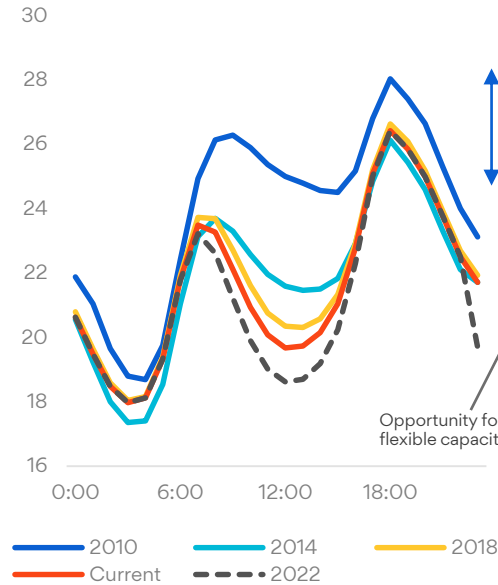


### NEM forward prices declining (NSW \$/MWh)



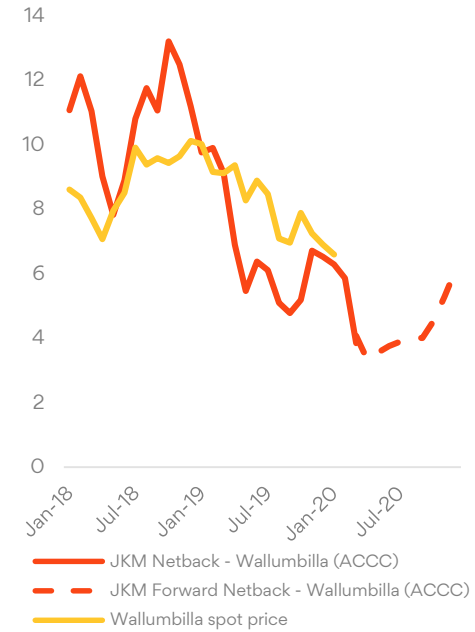
Source: AEMO/Bloomberg

### Renewables impacting intra-day volatility (Average NEM demand July- Sep (GWh))



Source: AEMO

### Gas prices declining (A\$/GJ)



Source: ACCC, AEMO





# Executing our strategy to deliver value in a changing energy market



## Executing a clear strategy



## Building a track record

- ✓ Transforming culture
- ✓ Simplified portfolio
- ✓ Operational capability
- ✓ Rebasing cost structure
- ✓ Capital discipline

## Positioned for growth

### Energy Markets

- >\$100m retail cost out on-track, planning next wave of transformation
- Building a digital IoT capability, customer demand products launched
- New revenue streams – CES, broadband, solar and storage
- Brownfield generation opportunities - increasing flexibility and capacity
- Pursuing opportunities in E-mobility

### Integrated Gas

- APLNG exploring multiple plays and focusing on further cost efficiencies
- Replicating low cost upstream model to develop Beetaloo resource
- Interest in Cooper-Eromanga Basin
- Pursuing opportunities in hydrogen and LNG for transport

Connecting customers to the energy and technologies of the future

# Operational performance driving returns for shareholders in FY2020



## Operational performance driving strong free cash flow

- ✓ APLNG targeting in FY2020:
  - Improved production at upper end of 690-710 PJ range
  - Lower distribution breakeven at US\$29-US\$321/boe, including ~US\$8/boe project finance principal repayment
  - Higher cash distributions to Origin of \$1.1-1.3 billion
- ✓ Expect improved generation performance in H2 FY2020
- ✓ Continue to target \$150 million company-wide cost out by FY2021
  - >\$100 million from Energy Markets cost to serve (\$43 million realised to HY2020)

## Capital management

- ✓ 15 cps fully franked dividend determined up from 10 cps HY2019
- ✓ Disciplined approach to capital management

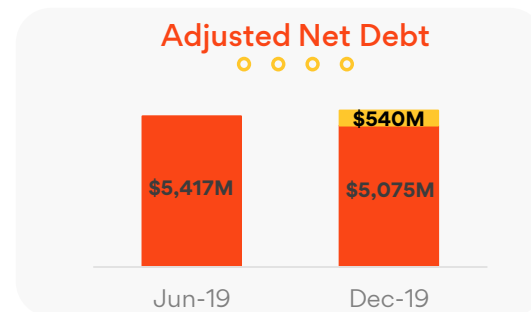
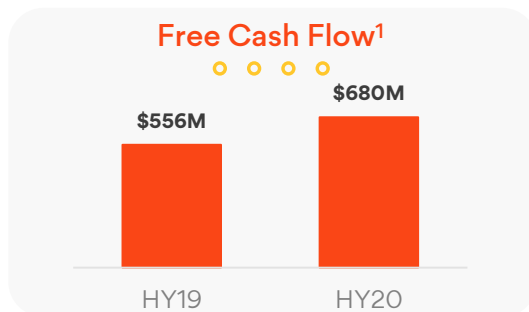
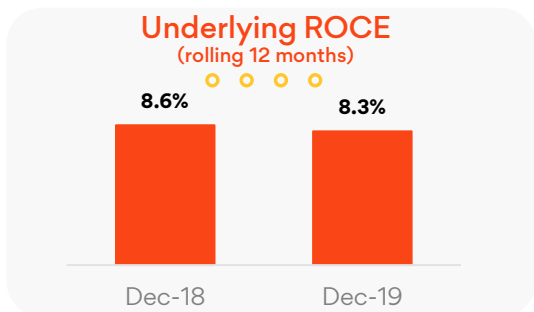
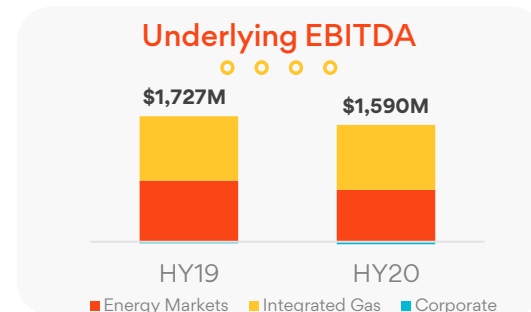
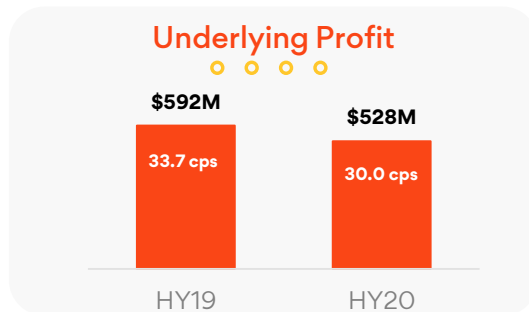
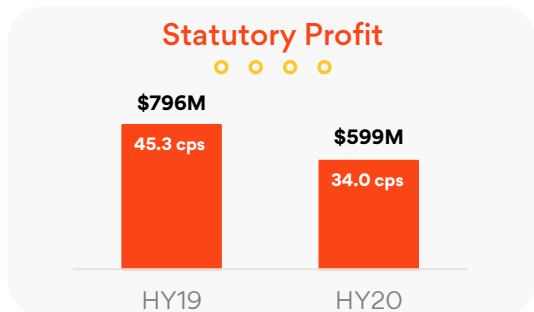
1) FX rate: 0.70 AUD/USD, excludes Ironbark acquisition costs



# Financial Review

Lawrie Tremaine,  
CFO

# HY2020 financial highlights



■ Lease liability under AASB 16 (first recognition)

1) Free Cash Flow is defined as cash from operating activities and investing activities (excluding major growth projects), less interest paid.

# Accounting changes adopted from 1 July 2019



## AASB 16 Leases

- Adopted from 1 July 2019, prospectively
- Lease liability and corresponding right-of-use asset recognised
- Lease expense in EBITDA replaced by depreciation and interest expense
- Lease payments and interest recognised as financing cash flow, no change to net cash

Impact to Underlying Profit	\$m
Energy Markets	30
Integrated Gas – Share of APLNG	2
Integrated Gas – Other	5
Corporate	5
<b>EBITDA</b>	<b>42</b>
Depreciation and amortisation	(41)
Share of ITDA from APLNG	(3)
Net financing costs	(9)
Income tax expense	3
<b>Net impact</b>	<b>(8)</b>

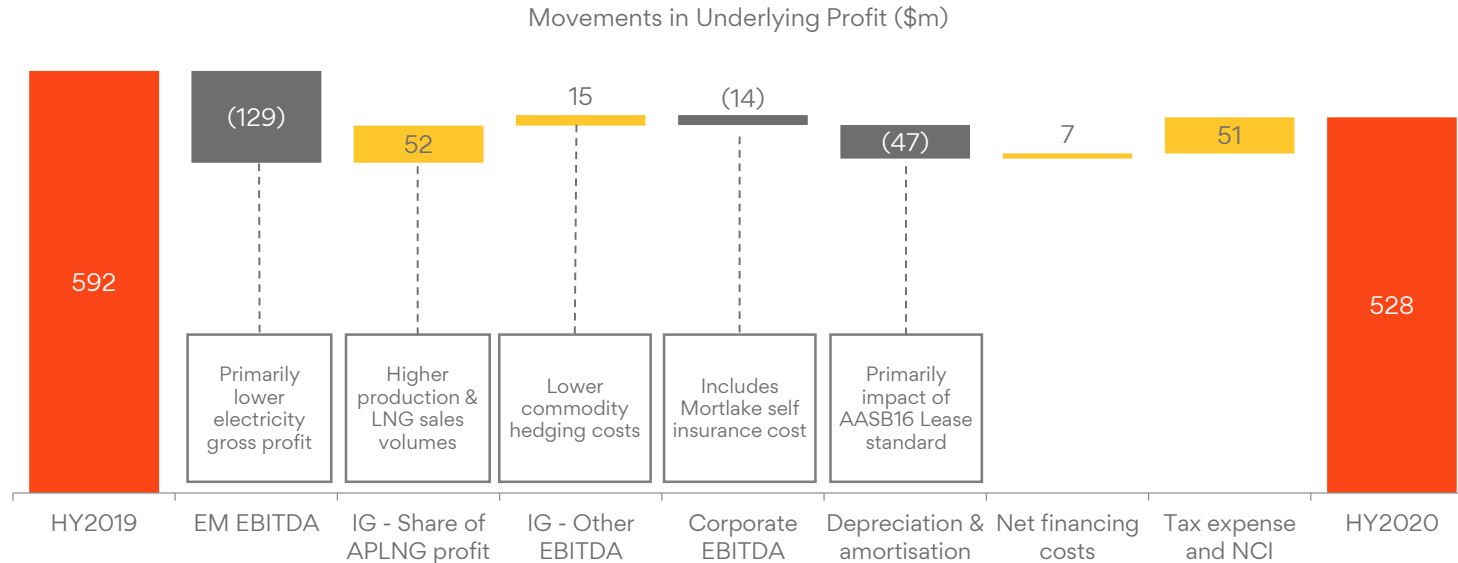
## APLNG dewatering and workover costs:

- Change in treatment from 1 July 2019, prospectively
- Previously capitalised
- Now expensed as incurred as, following a period of embedding steady state operations, these costs are considered ongoing and operational in nature going forward
- Recognised within operating cash flow, no change to net cash

Impact to Underlying Profit	\$m
Integrated Gas - EBITDA	(56)
Depreciation and amortisation <sup>1</sup>	66
Income tax expense <sup>1</sup>	(3)
<b>Net impact</b>	<b>7</b>

1) Included within Origin Share of ITDA.

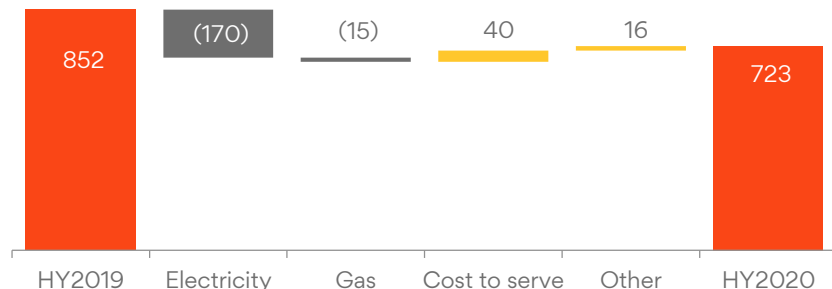
# Underlying Profit decreased 11%



NCI: Non-controlling interest

# Energy Markets Underlying EBITDA down 15%

Movements in Underlying EBITDA (\$m)



	HY20	HY19	Change
<b>Underlying EBITDA (\$m)</b>	<b>723</b>	<b>852</b>	<b>(129)</b>
<b>Electricity</b>			
Volumes sold (TWh)	17.0	18.2	(1.2)
<b>Gross profit (\$m)</b>	<b>549</b>	<b>719</b>	<b>(170)</b>
Gross Profit (\$/MWh)	32.3	39.6	(7.3)
<b>Gas</b>			
External volumes sold (PJ)	104.6	125.5	(20.8)
<b>Gross profit (\$m)</b>	<b>383</b>	<b>398</b>	<b>(15)</b>
Gross Profit (\$/GJ)	3.7	3.2	0.5

## Electricity gross profit down \$170 million or 24% to \$549 million:

- Regulation: VDO/DMO price impact (-\$55 million)
- One off unplanned outages: Mortlake and Eraring (-\$44 million), Mortlake costs expected to be recovered through insurance
- Lower volumes (-\$46 million):
  - expiration of Business contracts (-\$15 million)
  - lower usage from solar uptake and efficiency (-\$14 million); and
  - changes in customer numbers and mix (-\$17 million)

## Gas gross profit down \$15 million or 4% to \$383 million:

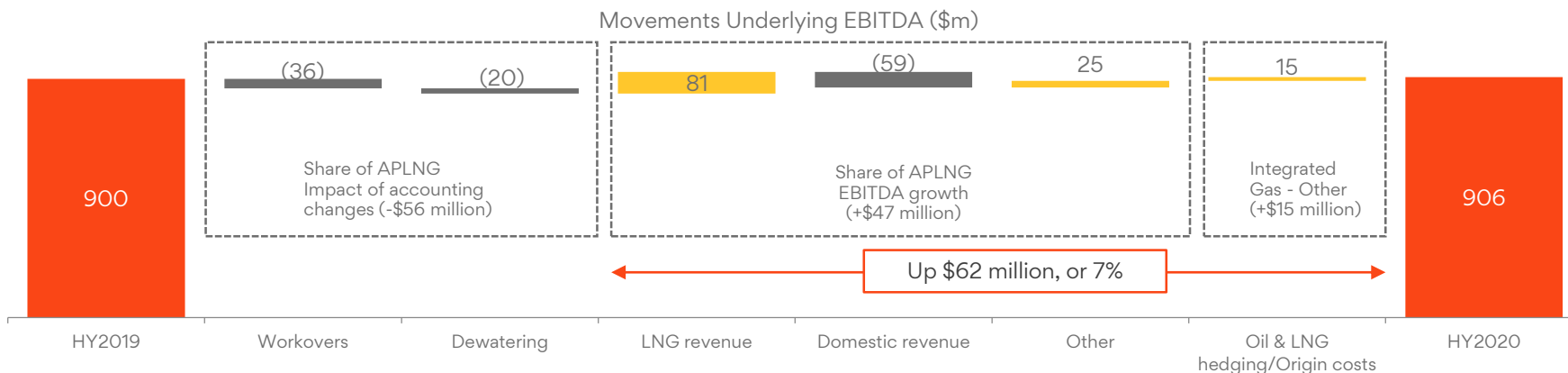
- Lower supply costs & repricing of Business contracts in late 2018 (+\$51 million)
- Lower volumes: Roll-off of short-term wholesale contracts (-\$66 million)

## Cost to serve down \$40 million or 13% to \$267 million:

- Benefit from adoption of AASB 16 Leases (\$12 million)
- Lower labour and other variable costs (\$28 million)

**Other (+\$16 million):** Primarily impact of adopting AASB 16 Leases in other divisions

# Integrated Gas Underlying EBITDA up 7%, excl. accounting change



	HY20	HY19	Change
- Share of APLNG (\$m)	1,033	1,042	(9)
- Integrated Gas Other (\$m)	(127)	(142)	15
<b>Underlying EBITDA (\$m)</b>	<b>906</b>	<b>900</b>	<b>6</b>

## APLNG 100%

Sales volumes (PJ)			
- Domestic Gas	88	104	(16)
- LNG	255	236	19
Realised price (A\$/GJ)			
- Natural Gas	4.42	5.20	(0.78)
- LNG	13.18	13.28	(0.10)

## Share of APLNG EBITDA down \$9 million to \$1,033 million:

- Impact of change in accounting treatment (-\$56 million), more than offset in ITDA
- Higher proportion of contracted LNG due to customer nominations, and lower purchases (+\$47 million)

## Integrated Gas (Other) costs reduced by \$15 million to \$127 million:

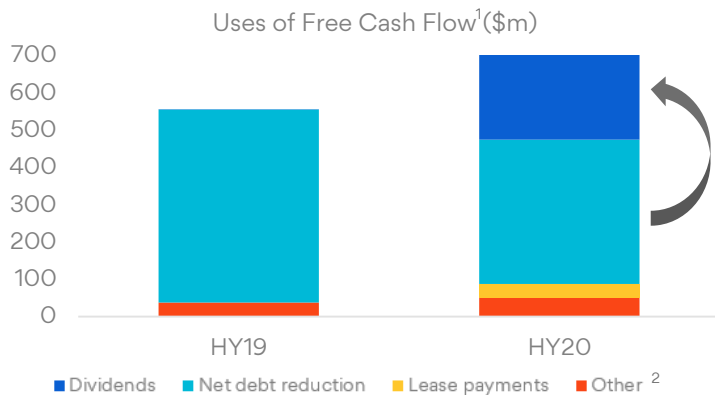
- Lower oil and LNG hedging and trading costs (+\$43 million)
- Agreement to reduce share of overriding royalty in the Beetaloo (-\$15 million)
- Other costs net of APLNG recoveries (-\$13 million)



# Free cash flow up 22% on APLNG performance

(\$m)	HY20	HY19	Change
<b>Cash from operating activities</b>	<b>351</b>	<b>553</b>	<b>(202)</b>
Distributions from APLNG	520	393	127
Capital expenditure	(258)	(189)	(69)
(Acquisitions)/disposals	225	(4)	229
Net interest paid	(159)	(198)	39
<b>Free cash flow</b>	<b>680</b>	<b>556</b>	<b>124</b>

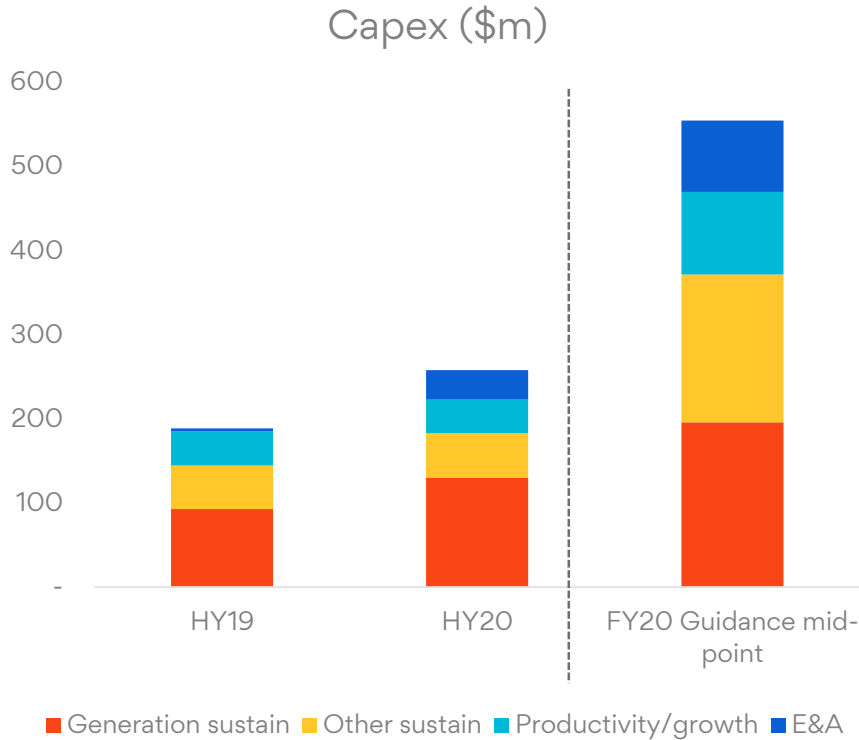
- Operating cashflow down 37% to \$351 million
  - Underlying EBITDA (-\$137 million)
  - Tax payments (-\$115 million)
- Distributions from APLNG up 32% to \$520 million
- Capital expenditure higher driven by generation maintenance and Beetaloo appraisal
- Proceeds from the sale of Ironbark (\$231 million)



Ability to allocate more Free Cash Flow to shareholder distributions or growth going forward

1) Free Cash Flow is defined as cash from operating activities and investing activities (excluding major growth projects), less interest paid.  
 2) Includes on market purchase of shares, operator cash calls, and close out of FX contracts

# FY2020 capex driven by generation maintenance and Beetaloo

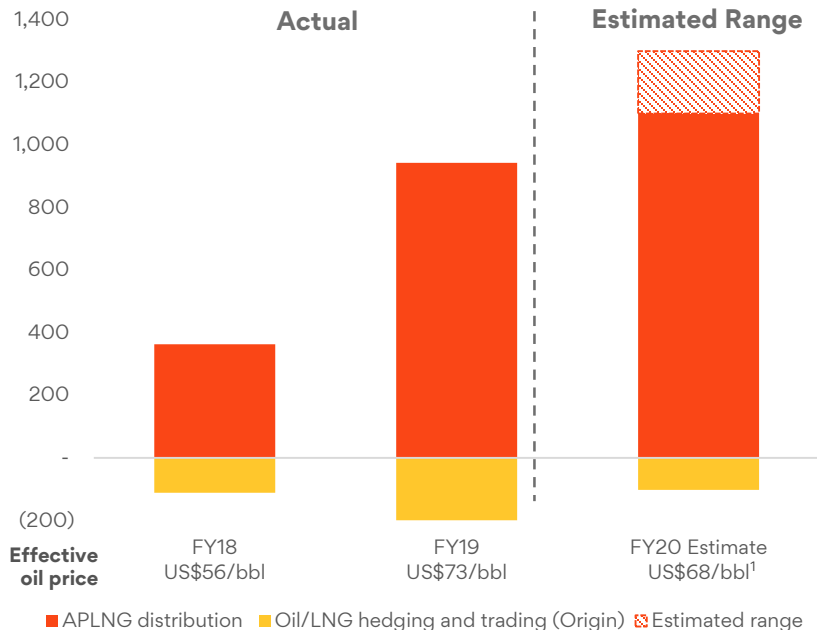


- Majority of FY2020 **generation sustain** spend occurred in HY2020 (Mortlake repairs, Earing maintenance, major overhaul at Uranquinty)
- **Other sustain** weighted to H2 FY2020 (LPG capex, ERP system and spend associated with regulatory market reforms)
- **Productivity & Growth** includes generation upgrades, investment in retail capability, CES and solar
- **E&A** primarily relates to Beetaloo Stage 2 appraisal and preparation for Stage 3, weighted to H2 FY2020

# APLNG cash flow increasing, oil & LNG hedging/trading costs reducing



APLNG estimated distribution and Origin oil/LNG hedging and trading (A\$m)



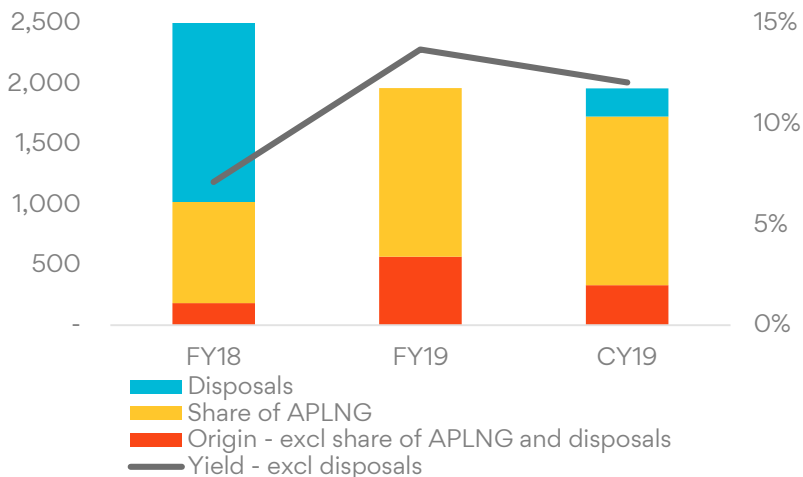
- Estimated FY2020 APLNG cash distribution to Origin of \$1.1 - \$1.3 billion
  - Assumes performance is consistent with production & breakeven guidance
  - As at 29 January 2020, 93% of APLNG JCC oil exposure has been priced at US\$68/bbl
- Estimated net loss on oil and LNG hedging and trading in FY2020 of \$102 million (as previously guided)

1) Estimated FY2020 effective oil price of US\$68/bbl and AUD/USD of 0.68, based on actual pricing and FX to 29 January 2020 and forward prices thereafter

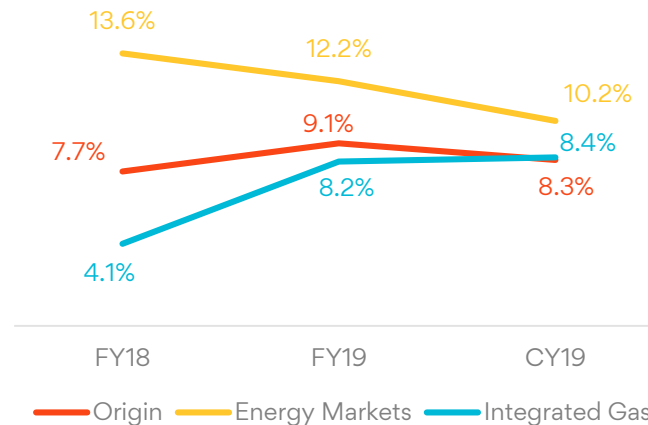
# Proportionate free cash flow and returns



Proportionate Free Cash Flow and Yield<sup>1</sup>



Underlying ROCE



- Proportionate free cash flow stable, reflecting lower Energy Markets and higher tax paid, offset by Ironbark sale proceeds
- Energy Markets and Origin ROCE impacted by lower electricity gross profit
- Sustained improvement in Integrated Gas returns underpinned by business performance, stable A\$ commodity price environment and reduced oil and LNG hedging costs

<sup>1)</sup> Proportionate Free Cash Flow is prepared on the basis of proportional consolidation of APLNG. Proportionate Free Cash Flow Yield is based on 30 day VWAP as at 18 February 2020 (\$8.01 per share).

# Continuing to optimise debt book for cost and tenor



Debt maturity profile - excluding lease liabilities (A\$b)



- Adjusted Net Debt / Adjusted Underlying EBITDA 2.7x (2.5x excluding impact of lease accounting change)
- Active refinancing during HY2020 to lower interest rates and increase tenor:
  - Average term to maturity of 4.1 years, up from 3.0 years at 30 June 2019
  - HY2020 average interest rate of 5.6%, down from 5.9% at FY2019. Full year estimate in low 5% range
- ~\$80 million reduction in net financing costs expected in FY2020 (including impact of leasing standard)
- Undrawn liquidity reduced but maintained at high level to fund FY2021/FY2022 maturities



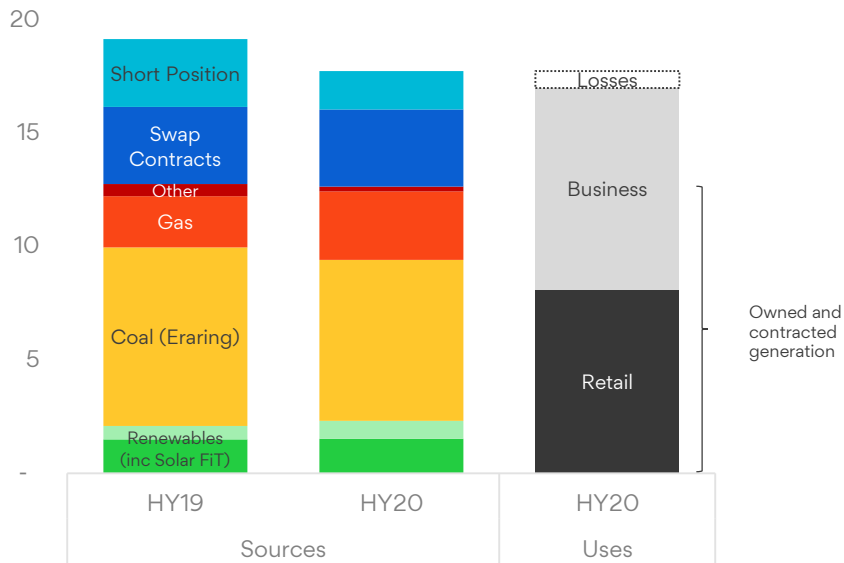
# Operational Review

Frank Calabria, CEO

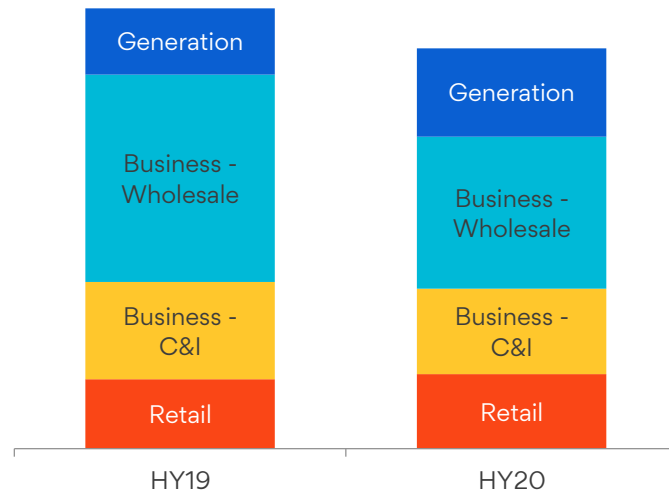


# Lower sales volume, stable generation

## Electricity sources and uses (TWh)



## Natural Gas sales (PJ)



- Volumes down 7% due to expiry of Business contracts and changes in Retail usage (solar and efficiency), customer numbers and mix
- Owned and contracted generation remained stable
  - Lower output at Eraring due to planned and unplanned outages offset by increased utilisation of gas fleet

- Volumes down 9% due to roll-off of short term wholesale trading contracts in Queensland, partially offset by higher Retail and internal generation volumes



# Mortlake back in service, peak capacity improvements installed



Old rotor being removed at Mortlake



New stator on-site at Mortlake



Replacement rotor unloaded at Avalon airport, and transported to site



Final stages of commissioning

## Unit outage

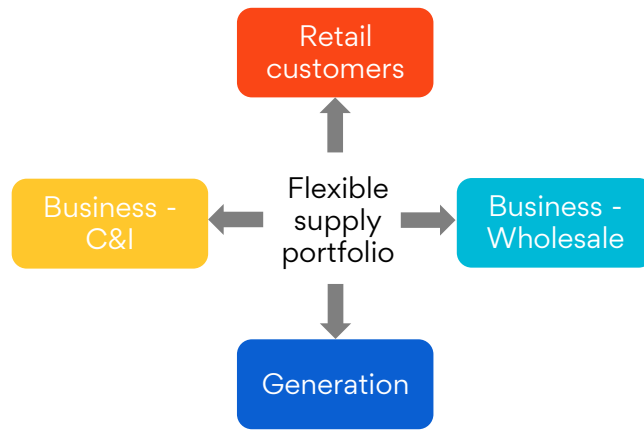
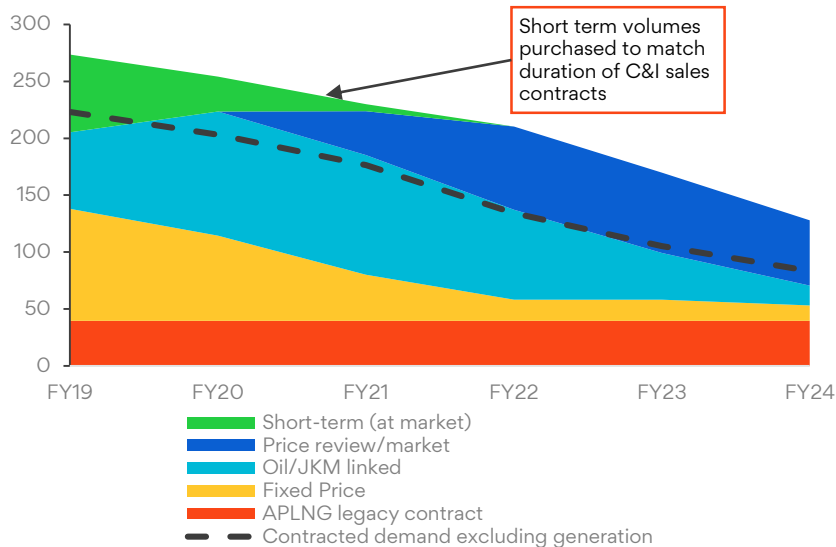
- One of the two units at Mortlake was damaged by an electrical fault on 8 July 2019 and was repaired and returned to service on 24 December 2019
- Improvements made to increase capacity by up to 20 MW per unit in hot weather
- Costs associated with the repairs and business interruption are expected to be recovered through insurance

## Brownfield growth opportunity

- Assessing the potential to expand capacity in response to tightening market in Victoria
- Option for additional fast start gas turbines and adjacent grid scale battery (~200 MW total)

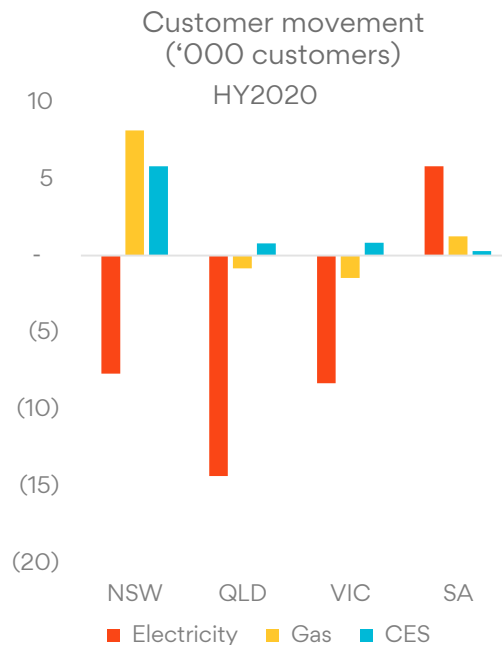
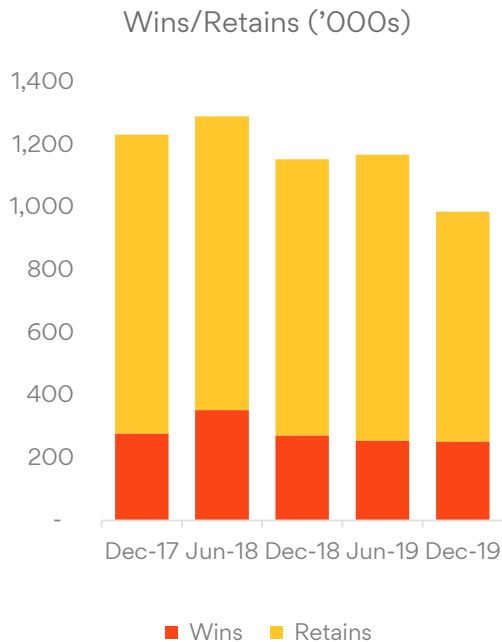
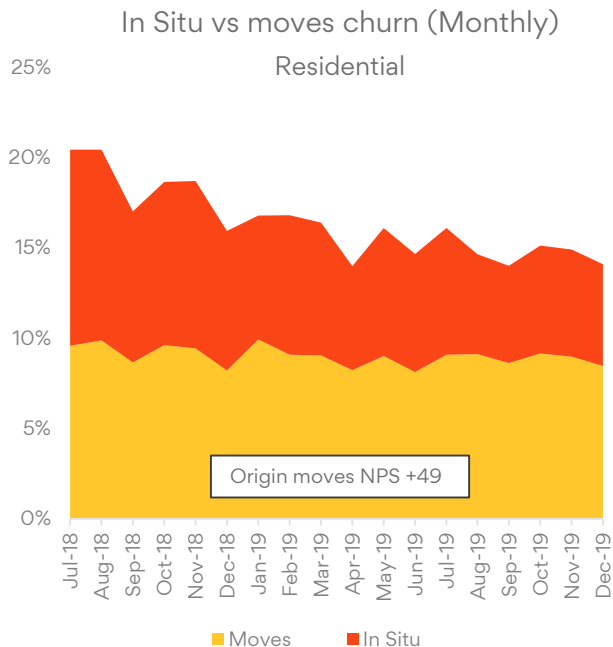
# Strong gas supply position benefiting from lower market prices

Energy Markets East Coast Gas Supply (PJ)



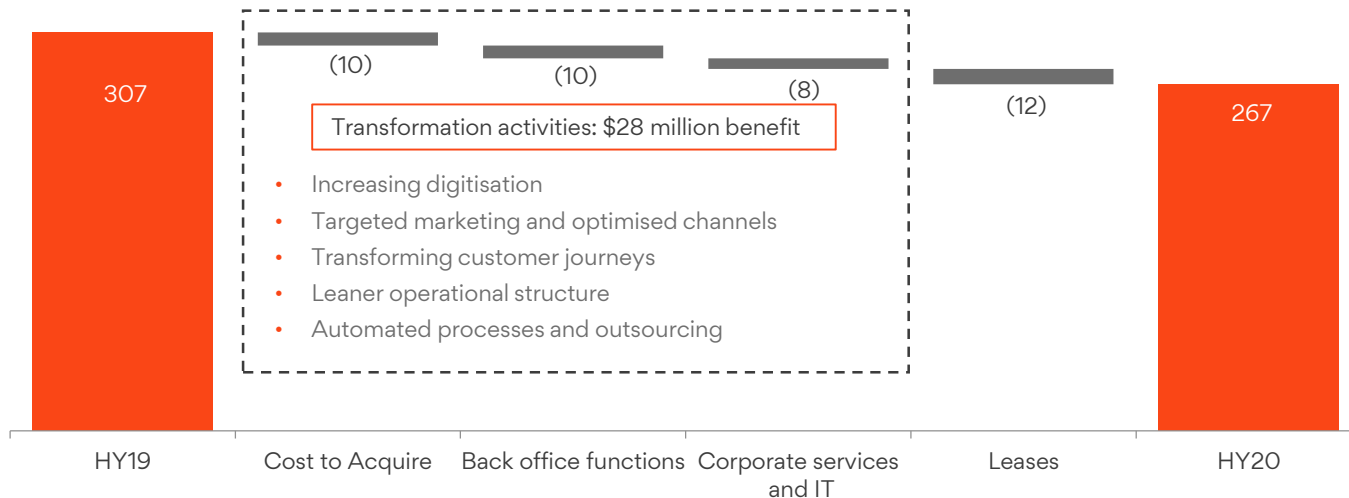
- Portfolio well supplied medium term, with pipeline and storage flexibility enabling us to direct gas to where it is most needed
- East coast market well supplied with prices declining due to suppressed Asia region LNG pricing and expanded domestic supply
- ~70 PJ to undergo price reviews over FY2021-22 which typically have regard to standard terms of comparable long term wholesale contracts (e.g. volume, term and capability of sellers' facilities)

# Disciplined approach to managing for Customer Lifetime Value



- Customer activity reducing with lower in situ churn increasing the importance of moves and new connections
- Net loss of 19,000 electricity customers with continued heightened competition, including large tenders; and a gain of 9,000 natural gas customers primarily in NSW during HY2020

# Cost to serve reducing in line with our >\$100 million target

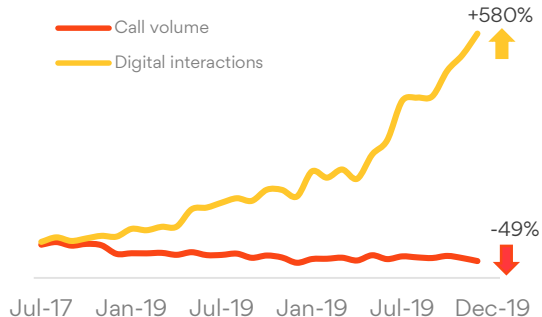


- On track to achieve >\$100 million reduction in cost to serve on FY2018 baseline by FY2021
- Customer activity reduced, however regulatory reforms temporarily adding to workload and cost
- Planning underway for next wave of transformation on customer experience and cost



## Transform customer experience

### Digital Interactions/Call volumes

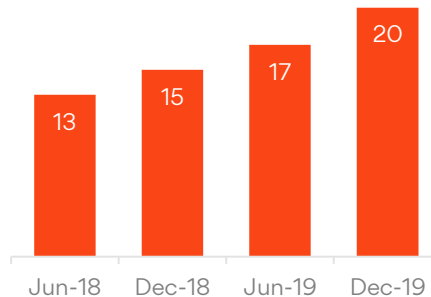


- Simple products and customer journeys
- Origin iOS/Android apps rated #1 of energy retailers (Feb 2020)
- Moves NPS +49, Renewals NPS +27



## Target market leading cost position

### Online sales (%)

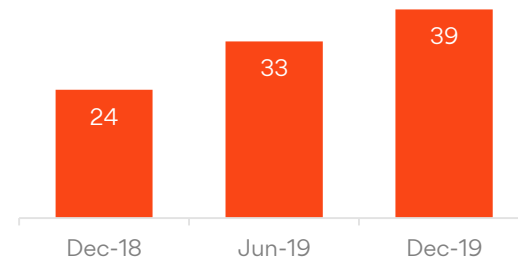


- \$43 million cost-to-serve savings realised since FY2018
- E-billing customers 65% (up from 63% at Jun-19)
- Increasing automation and offshore capability



## Grow new revenue streams

### CES Gross Profit (\$ million) Six months ended



- Broadband customers up 6K to 14K customers as at Dec-19
- Residential solar installs up from 17 MW in HY2019 to 19 MW in HY2020

# Medium term drivers in Energy Markets



Key Drivers	Market context	Origin context
Wholesale prices	<ul style="list-style-type: none"><li>Forward electricity and LGC prices trending down</li></ul>	<ul style="list-style-type: none"><li>Relatively fixed cost generation position on 15-20 TWh of supply</li><li>Fixed cost PPA position on ~3 million certificates p.a. (prior to including Stockyard Hill)</li></ul>
Fuel costs (coal and gas)	<ul style="list-style-type: none"><li>Spot coal and gas prices have both declined year on year</li></ul>	<ul style="list-style-type: none"><li>Coal: ~4 mtpa contracted to 2022 out of ~7 mtpa current usage</li><li>Gas: Lower prices benefit our supply position</li></ul>
Firming capacity	<ul style="list-style-type: none"><li>Higher levels of intra-day volatility requires flexible fast-start generation</li></ul>	<ul style="list-style-type: none"><li>Covered for peak demand</li><li>Flexible portfolio: Ability to generate more in higher price periods and be short in lower price periods</li></ul>
Volume demand	<ul style="list-style-type: none"><li>We estimate flat grid demand - customer growth offset by usage (solar penetration, efficiency)</li><li>Demand can also fluctuate with market and weather conditions and changes in customer numbers and mix</li></ul>	<ul style="list-style-type: none"><li>More leveraged to solar due to incumbency in areas where penetration rates are lower and properties are well suited to solar</li><li>Disciplined customer lifetime value approach</li></ul>

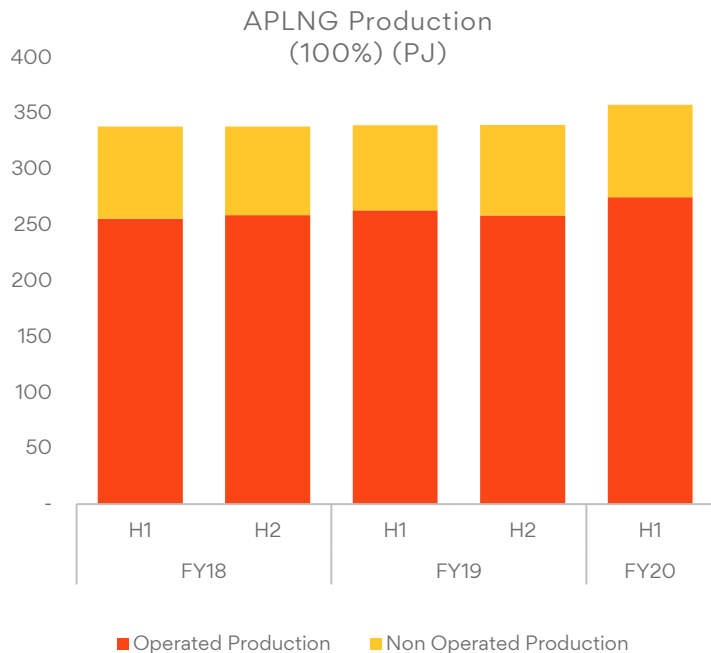




Integrated Gas



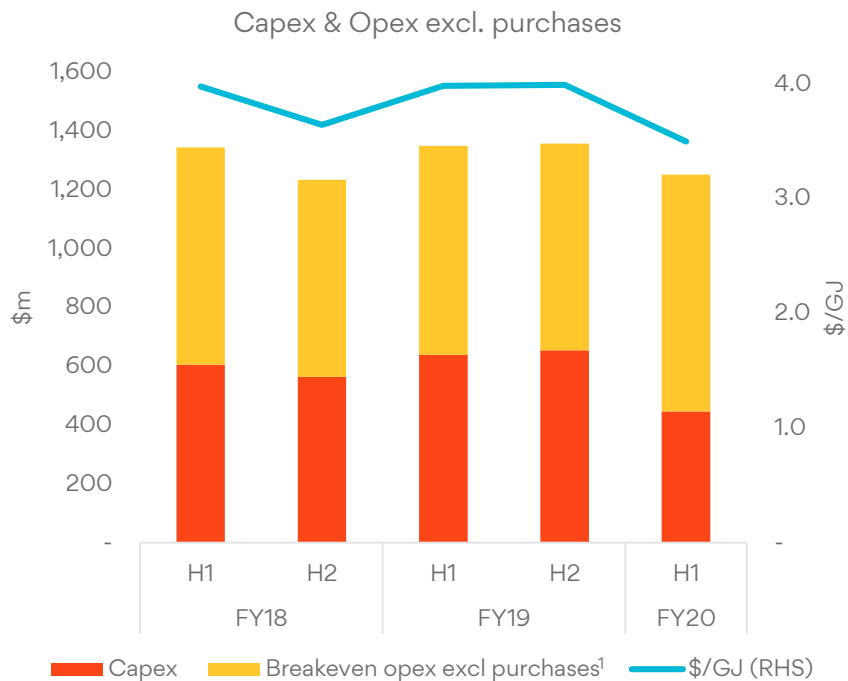
# Record APLNG production from improved field & facility performance



- Record production of 358 PJ in HY2020, up 5% from HY2019:
  - Record operated daily production rate of 1,612 TJ/day achieved on 3 December 2019
- Higher production due to:
  - Improved performance across operated and non-operated fields driven by higher well availability and facility reliability
  - Commissioning of the ERIC pipeline improved utilisation of processing capacity



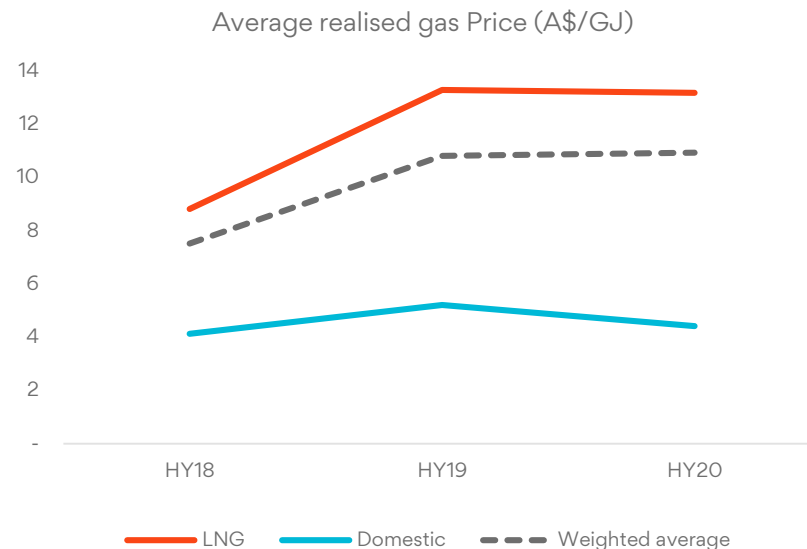
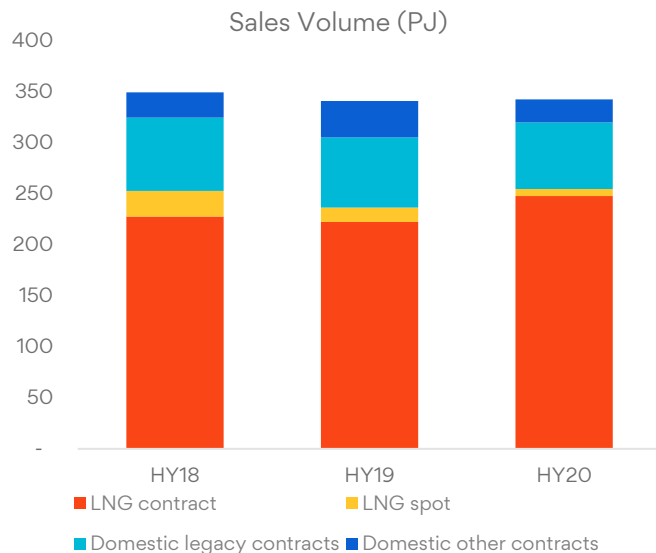
# Record production and lower capex resulted in lower unit costs



- Unit costs reduced to \$3.5/GJ, down 13% from HY2019
- Lower costs due to:
  - operated cost per well<sup>2</sup> down from \$1.7 million to \$1.2 million
  - operated costs<sup>3</sup> down from \$1.1/GJ to \$1.0/GJ
  - lower non-operated spend due to lower level of development activity
  - \$50 million claim settlement in respect of initial project construction work
- Focusing on further cost efficiencies
- Operating costs stable other than reclassification of workover costs

1) Operating cash costs excludes Ironbark acquisition costs and purchases and reflects royalties payable at the breakeven oil price. Royalties payable increases as oil price increases  
 2) Standard unfracked vertical Surat well  
 3) Excludes pipeline and major turnaround maintenance costs

# APLNG sales mix and realised prices



- No Downward Quantity Tolerance (DQT) declared for calendar year 2019 meant higher proportion of contract LNG to meet customer nominations, offset by lower short term domestic sales in HY2020
- Total realised gas price increased slightly reflecting change in sales mix
  - Average LNG price relatively stable in A\$ terms
  - Average domestic price lower due to a reduction in short-term sales volumes and prices, and flat volumes from lower priced legacy sales contracts

# Upstream field performance underpins upgraded FY2020 guidance



APLNG (100%)	FY18	FY19	FY20 previous guidance	FY20 updated guidance
Production (PJ)	676	679	690 - 710	690 - 710
Capex + opex, excl. purchases <sup>1</sup> (A\$bn)	2.6	2.7	2.8 - 3.0	2.5 - 2.7
Unit cost A\$/GJ	3.8	4.0	3.9 - 4.3	3.5 - 3.9
Distribution breakeven (US\$/boe) <sup>2</sup>	39	36	31 - 34	29 - 32

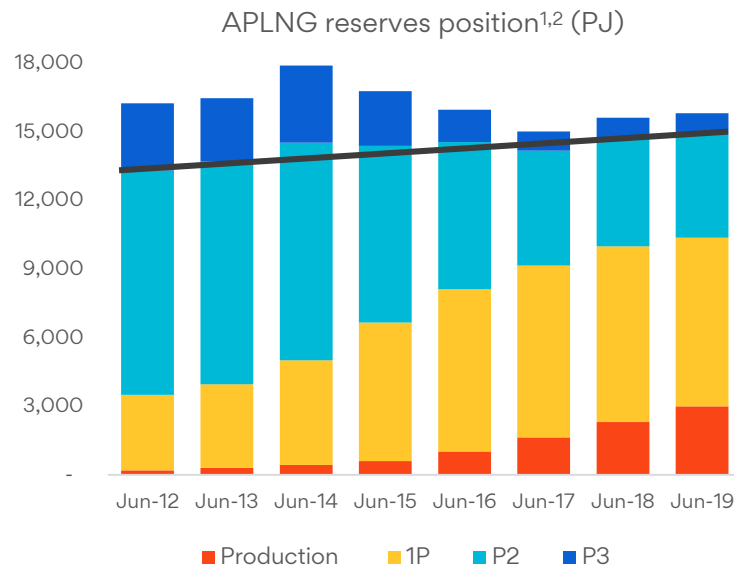
- **Improved upstream performance underpins estimated higher production and lower costs**
- **Targeting upper end of 690-710 PJ production**
  - Improved operated and non-operated field and facility performance, including less upstream maintenance and improved processing infrastructure utilisation
- **Estimated APLNG costs and distribution breakeven reduced** from previous guidance reflecting:
  - Improved field performance resulting in lower costs as scope and schedules are optimised, including the decision to defer or not participate in less economic non-operated well packages while still meeting our production targets
  - Lower well workover spend due to better field recovery post planned maintenance
  - \$50 million benefit from project construction claim
- **Estimated FY2020 APLNG cash distribution to Origin of \$1.1 - \$1.3 billion**

1) Operating cash costs excludes Ironbark acquisition costs and purchases and reflects royalties payable at the breakeven oil price. Royalties payable increases as oil price increases

2) FY20 FX rate: 0.70 AUD/USD, excludes Ironbark acquisition costs

- Long term LNG customers have declared DQT for calendar year 2020
- Cash flow from calendar year 2019 deferred cargoes received in January 2020
- The first price review under APLNG's LNG contract with Sinopec has recently been triggered and discussions are currently underway in accordance with the terms of the SPA
- No Force Majeure notification has been received from our LNG contract counterparties in respect of Coronavirus outbreak in China
- Queensland Government has introduced a 14 day quarantine period for ships departing China. APLNG is currently effectively working within this condition with no significant disruption expected to the cargo schedule based on current circumstances
- Tri-Star proceedings
  - APLNG's position remains unchanged since 2014 that reversion has not occurred
  - APLNG expects to file its defences and counter claims to Tri-Star's September 2019 amended statements of claim during H2 FY2020
  - Next step will then be for Tri-Star to file its reply and answer. Once pleadings are finalised the usual court process would involve a period of document disclosure, potentially court ordered mediation and then finally a hearing

# Reserves base continuing to perform well



- Reserves converging towards 3P since FID
- Field performing in line with expectations
- Continue to mature the resource and reserves base via acquisitions (Ironbark), exploration and appraisal such as the East Bowen Deep play
- East Bowen Deep:
  - opportunity to leverage existing infrastructure
  - gas in place confirmed, two vertical deep wells drilled in December 2019

1) Reserves are 100% APLNG as reported in FY2019 Reserves Report released to the ASX on 22 August 2019

2) Some of APLNG's CSG reserves and resources are subject to reversionary rights and ongoing interest in favour of Tri-Star. Refer to appendix 6 of the Operating and Financial Review released to the ASX on 20 February 2020 for further information





## Kyalla shale liquids rich gas play

- Vertical section successfully drilled in November 2019
- Operational issues encountered on initial horizontal section
- New horizontal section successfully drilled in February 2020, preparations are underway for the next phase
- The well has been drilled to a total measured depth of 3,809 metres, which includes a 1,579 metre lateral section
- Results to date demonstrate good reservoir continuity, conductive natural fractures, and continuous gas shows
- Results from the production test expected over Q4 FY2020 and Q1 FY2021

## Velkerri shale liquids rich gas play

- Environmental approval to drill and fracture stimulate granted in December 2019
- Drilling of the Velkerri Flank is planned to begin in the dry season (Q4 FY2020)

## Stage 2 objective

- Flow liquids rich gas to surface during the production test



# Outlook

Frank Calabria, CEO

Provided on the basis that market conditions do not materially change and the regulatory and political environment do not adversely impact on operations

		FY19	FY20 previous guidance	FY20 updated guidance
<b>Energy Markets</b>				
Underlying EBITDA	A\$m	1,574	1,400 - 1,500	1,400 - 1,500
<b>Integrated Gas – APLNG 100%</b>				
Production	PJ	679	690-710	690 - 710
Capex + opex, excl. purchases <sup>1</sup>	A\$m	2,691	2,800 - 3,000	2,500 - 2,700
Unit capex + opex, excl. purchases <sup>1</sup>	A\$/GJ	4.0	3.9 - 4.3	3.5 - 3.9
Distribution breakeven <sup>2</sup>	US\$/boe	36	31 - 34	29 - 32
<b>Integrated Gas – Other</b>				
Oil/LNG hedging & trading	A\$m	(199)	(84)	(102) <sup>3</sup>
<b>Corporate</b>				
Underlying costs	A\$m	(234) <sup>4</sup>	(60 - 70)	(70 - 80)
Capex (incl. investments)	A\$m	(405)	(530 - 580)	(530 - 580)

- 1) Operating cash costs excludes Ironbark acquisition costs and purchases and reflects royalties payable at the breakeven oil price. Royalties payable increases as oil price increases
- 2) FY20 FX rate: 0.70 AUD/USD, excludes Ironbark acquisition costs
- 3) Based on forward market prices as at 29 January 2020
- 4) Includes \$170 million relating to a non-cash provision increase in legacy site remediation

- **Energy Markets (unchanged)**, lower than FY2019 reflecting:
  - Electricity down \$200-230 million
    - DMO/VDO impact, lower renewable certificate prices in Business tariffs, and lower volumes
    - H2 improvement vs H1 with outages not repeating and Mortlake cost recovery via insurance
  - Gas gross profit relatively stable
  - \$40-50 million savings in cost to serve
  - \$50-60 million benefit from AASB 16 Leases
- **APLNG -Improved upstream performance underpins estimated higher production and lower costs**
  - Estimated FY2020 APLNG cash distribution to Origin of \$1.1 - \$1.3 billion.
  - Targeting upper end of 690-710 PJ production
  - Refer to slide 34
- Current FY2020 oil/LNG hedging & trading cost estimated at \$102<sup>3</sup> million
- Higher corporate costs due to Mortlake self-insurance and ERP







# Appendix



# Segment summary



(\$m)	Energy Markets		Integrated Gas - Share of APLNG		Integrated Gas - Other		Corporate		Total	
	HY20	HY19	HY20	HY19	HY20	HY19	HY20	HY19	HY20	HY19
Underlying EBITDA	723	852	1,033	1,042	(127)	(142)	(39)	(25)	1,590	1,727
Underlying EBIT	484	657	359	307	(139)	(150)	(39)	(25)	665	788
Underlying Profit/(Loss)	484	657	359	307	(44)	(35)	(272)	(336)	528	592
Operating cash flow	703	816	-	-	(123)	(139)	(229)	(124)	351	553
Investing cash flow	(219)	(180)	-	-	712	383	9	(2)	501	201
Interest paid	-	-	-	-	-	-	(173)	(199)	(173)	(199)
<b>Free cash flow</b>	<b>484</b>	<b>636</b>	<b>-</b>	<b>-</b>	<b>589</b>	<b>244</b>	<b>(393)</b>	<b>(325)</b>	<b>680</b>	<b>556</b>



# Underlying ROCE – rolling 12 months



As at	31 Dec 2019 (\$m)	31 Dec 2018 (\$m)	Change (\$m)	Change (%)
<b>Capital Employed</b>				
Net Assets	13,733	12,788	945	7
<i>including:</i>				
<i>Investment in APLNG</i>	<i>7,323</i>	<i>6,590</i>	<i>733</i>	<i>11</i>
<i>MRCPS issued by APLNG</i>	<i>2,662</i>	<i>3,445</i>	<i>(783)</i>	<i>(23)</i>
Non-cash fair value uplift	(24)	(26)	2	(8)
Adjusted net assets	13,709	12,761	948	7
Adjusted Net Debt	5,615	6,096	(481)	(8)
Net derivative liabilities	330	771	(441)	(57)
Origin's share of APLNG net debt (project finance less cash)	2,996	3,220	(224)	(7)
<b>Capital employed</b>	<b>22,648</b>	<b>22,848</b>	<b>(200)</b>	<b>(1)</b>
Origin's Underlying EBIT	1,186	1,334	(148)	(11)
Origin's equity share of APLNG interest and tax	693	609	84	14
Dilution depreciation adjustment	2	2	-	-
<b>Adjusted EBIT</b>	<b>1,881</b>	<b>1,945</b>	<b>(64)</b>	<b>(3)</b>
<b>Average capital employed - continuing operations</b>	<b>22,729</b>	<b>22,535</b>	<b>194</b>	<b>1</b>
<b>Underlying ROCE</b>	<b>8.3%</b>	<b>8.6%</b>		<b>(0.3)</b>
Energy Markets	10.2%	13.4%		(3.2)
Integrated Gas	8.4%	5.8%		2.6

# Reconciliation of Adjusted Net Debt



	Issue Currency	Issue Notional	Hedged Currency	Hedged Notional	AUD \$m 31-Dec-19	AUD \$m 31-Dec-19	AUD \$m 31-Dec-19
					Interest-bearing liabilities	Debt and CCIRS fair value adjustments	Adjusted Net Debt
AUD debt	AUD	803	AUD	803	803	-	803
USD debt left in USD	USD	1,191	USD	1,191	1,701	-	1,701
EUR debt swapped to AUD	EUR	2,300	AUD	3,264	3,726	(461)	3,264
NZD debt swapped to AUD	NZD	141	AUD	125	135	(10)	125
<b>Total</b>					<b>6,365</b>	<b>(471)</b>	<b>5,893</b>
Lease liabilities	AUD	540	AUD	540	540	-	540
<b>Total (including lease liabilities)</b>					<b>6,905</b>	<b>(471)</b>	<b>6,433</b>
Cash and cash equivalents <sup>1</sup>							(819)
<b>Adjusted Net Debt</b>							<b>5,615</b>

1) Excludes \$13 million cash held on behalf of APLNG as upstream operator.

## FY2020 oil and LNG hedging and trading

- FY2020 estimated underlying oil price of US\$68/bbl<sup>1</sup> compared to US\$73/bbl in FY2019
- FY2020 oil and LNG hedging and trading costs expected to be \$97<sup>2</sup> million lower than FY2019, driven by lower hedge losses and reduced option premium spend

\$m	FY20 estimate	FY19
Hedging premium	(28)	(34)
Gain/(loss) on oil hedging	8	(81)
Gain/loss on LNG hedging/trading <sup>3</sup>	(82)	(84)
<b>Total</b>	<b>(102)</b>	<b>(199)</b>

## FY2021 oil hedging

- Oil hedging positions:
  - 3.1 mmbbl A\$90/bbl fixed price swaps
  - 0.4 mmbbl US\$57/bbl fixed price swaps<sup>4</sup>
- Oil hedging to protect investment grade credit rating

1) As at 29 January 2020 with approximately 93% of APLNG related JCC pricing realised and the remaining 7% subject to floating market prices

2) As at 29 January 2020

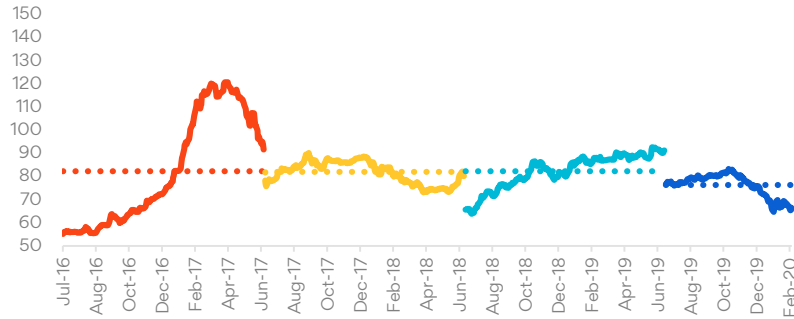
3) FY2020 estimate includes \$60 million relating to closed LNG hedge positions and \$22 million relating to LNG trading positions

4) Internal hedge between Integrated Gas and Energy Markets

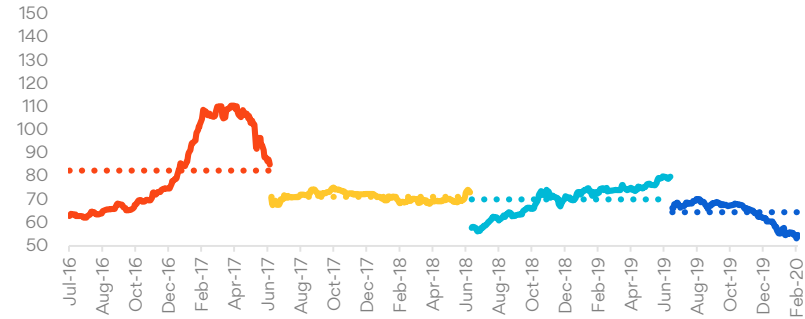
# Electricity forward price by state (A\$/MWh)



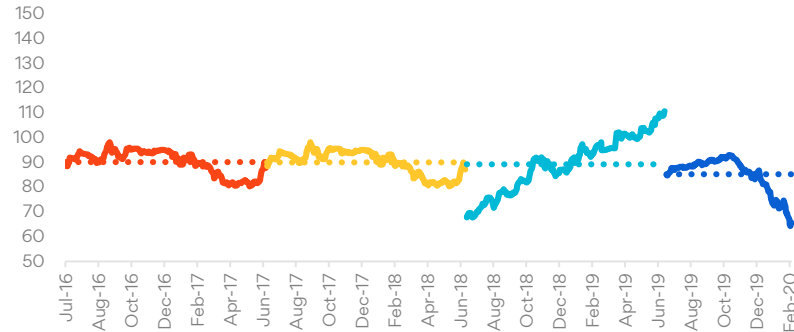
### NSW forward baseload energy prices



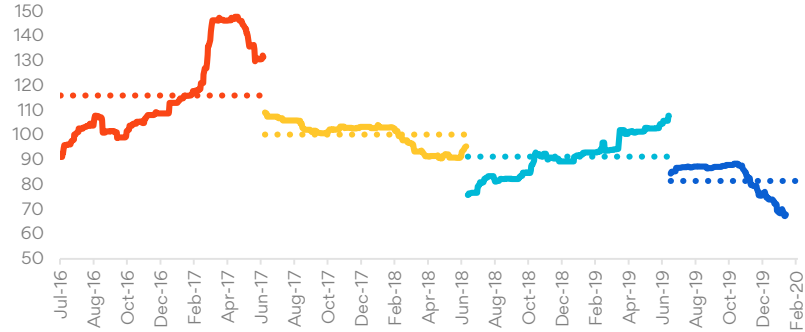
### QLD forward baseload energy prices



### Vic forward baseload energy prices



### SA forward baseload energy prices

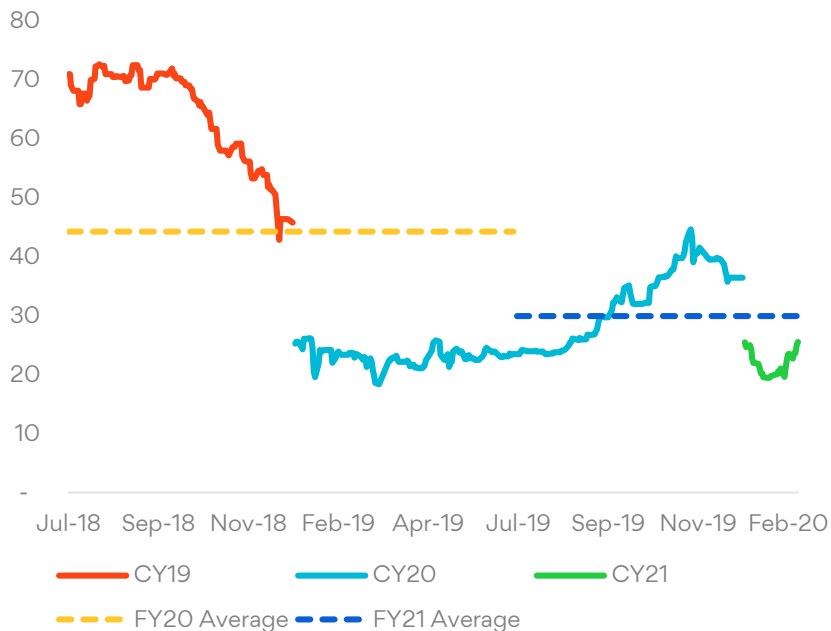


Source: AEMO/Bloomberg

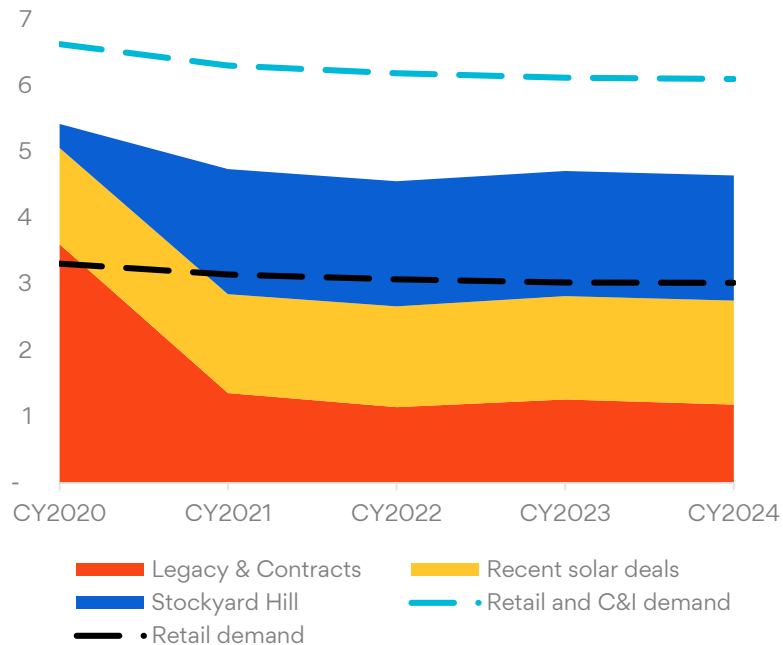


# LREC prices and LREC position

## LREC forward prices (\$/cert)



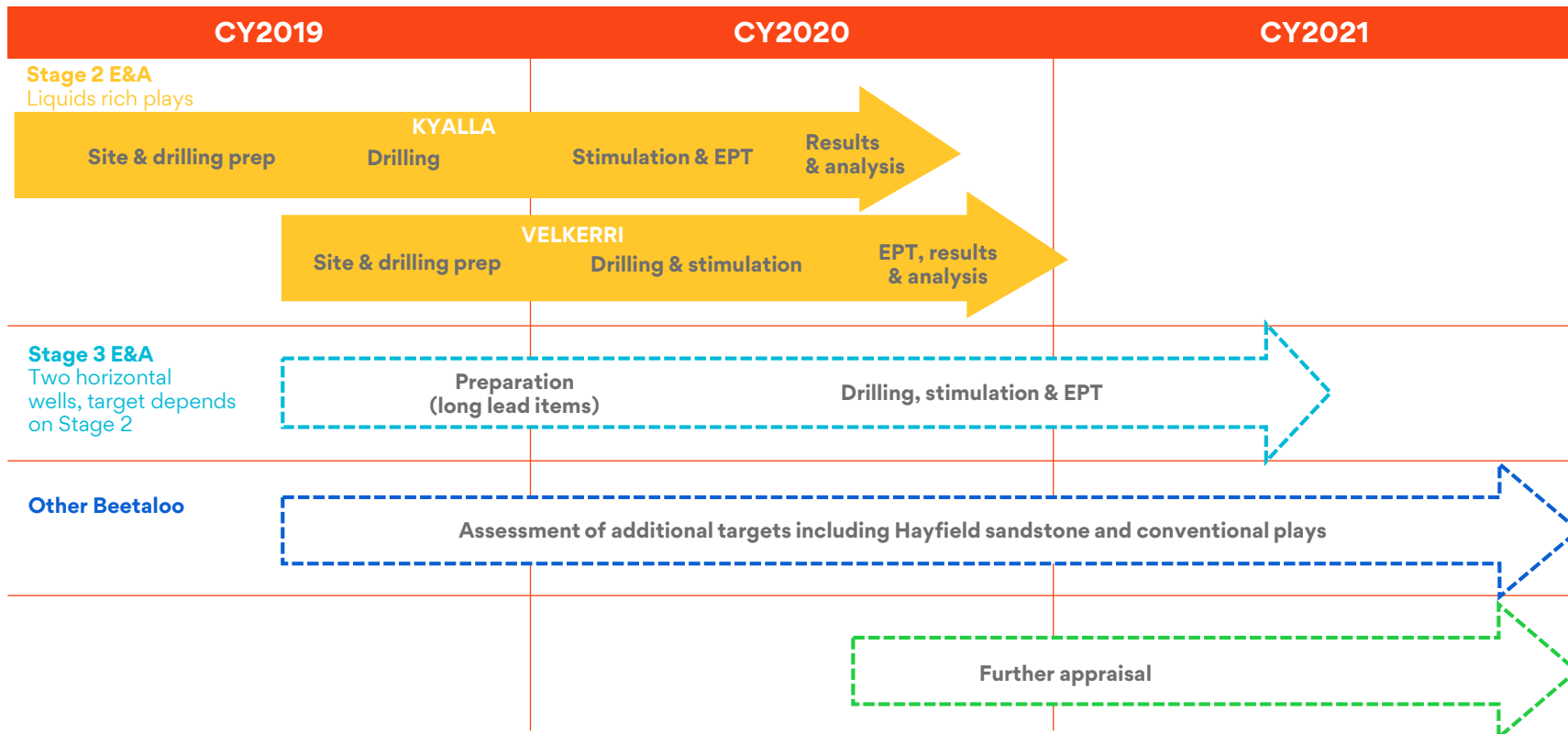
## Origin's LREC position



Source: HVB



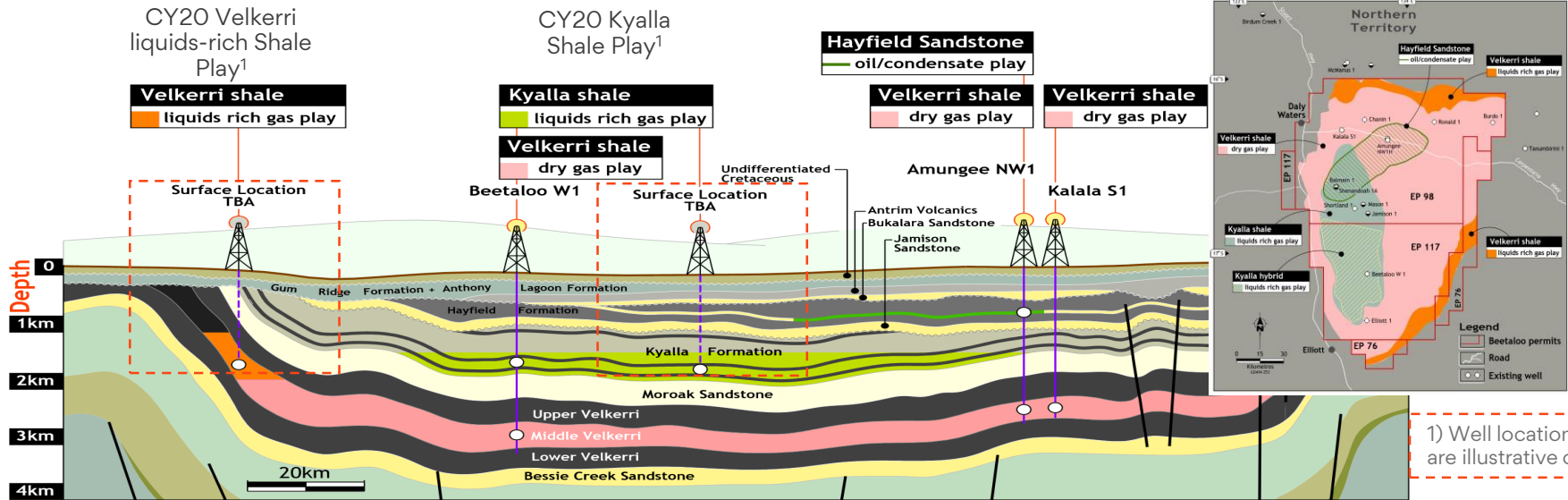
# Beetaloo timeline



EPT: Extended Production Test



# Beetaloo – multiple stacked plays increases chance of success



## Stage 2 targeting Kyalla and Velkerri liquids rich gas plays

- Kyalla shale liquids rich gas play:
  - Depth 1,500 – 2,000 metres
  - Estimated CGR of 15-60 bbl/MMscf<sup>1</sup>
  - Potentially material play
- Velkerri shale liquids rich gas play:
  - Depth 1,500 – 2,000 metres
  - Estimated CGR of 5-40 bbl/MMscf<sup>1</sup>
  - Potentially material play

<sup>1</sup>) Based on pre 2017 well data. To be refined as part of the current appraisal program



## Forward looking statements

This presentation contains forward looking statements, including statements of current intention, statements of opinion and predictions as to possible future events. Such statements are not statements of fact and there can be no certainty of outcome in relation to the matters to which the statements relate. These forward looking statements involve known and unknown risks, uncertainties, assumptions and other important factors that could cause the actual outcomes to be materially different from the events or results expressed or implied by such statements. Those risks, uncertainties, assumptions and other important factors are not all within the control of Origin and cannot be predicted by Origin and include changes in circumstances or events that may cause objectives to change as well as risks, circumstances and events specific to the industry, countries and markets in which Origin and its related bodies corporate, joint ventures and associated undertakings operate. They also include general economic conditions, exchange rates, interest rates, regulatory environments, competitive pressures, selling price, market demand and conditions in the financial markets which may cause objectives to change or may cause outcomes not to be realised.

None of Origin Energy Limited or any of its respective subsidiaries, affiliates and associated companies (or any of their respective officers, employees or agents) (the Relevant Persons) makes any representation, assurance or guarantee as to the accuracy or likelihood of fulfilment of any forward looking statement or any outcomes expressed or implied in any forward looking statements. The forward looking statements in this presentation reflect views held only at the date of this presentation.

Statements about past performance are not necessarily indicative of future performance.

Except as required by applicable law or the ASX Listing Rules, the Relevant Persons disclaim any obligation or undertaking to publicly update any forward looking statements, whether as a result of new information or future events.

## No offer of securities

This presentation does not constitute investment advice, or an inducement or recommendation to acquire or dispose of any securities in Origin, in any jurisdiction.

All figures in this presentation relate to businesses of the Origin Energy Group (Origin, or the Company), being Origin Energy Limited and its controlled entities, for the reporting period ended 31 December 2019 (the period) compared with the reporting period ended 31 December 2018 (the prior corresponding period), except where otherwise stated.

Origin's Financial Statements for the reporting period ended 31 December 2019 are presented in accordance with Australian Accounting Standards. The Segment results, which are used to measure segment performance, are disclosed in note A1 of the Financial Statements and are disclosed on a basis consistent with the information provided internally to the Chief Executive Officer. Origin's Statutory Profit contains a number of items that when excluded provide a different perspective on the financial and operational performance of the business. Income Statement amounts presented on an underlying basis such as Underlying Consolidated Profit, are non-IFRS financial measures, and exclude the impact of these items consistent with the manner in which the Chief Executive Officer reviews the financial and operating performance of the business. Each underlying measure disclosed has been adjusted to remove the impact of these items on a consistent basis. A reconciliation and description of the items that contribute to the difference between Statutory Profit and Underlying Consolidated Profit is provided in the Operating and Financial Review.

This presentation also includes certain other non-IFRS financial measures. These non-IFRS financial measures are used internally by management to assess the performance of Origin's business and make decisions on allocation of resources. Further information regarding the non-IFRS financial measures and other key terms used in this presentation are included in the Operating and Financial Review Appendix. Non-IFRS measures have not been subject to audit or review.

Certain comparative amounts from the prior corresponding period have been re-presented to conform to the current period's presentation.

A reference to Australia Pacific LNG or APLNG is a reference to Australia Pacific LNG Pty Limited in which Origin holds a 37.5% shareholding. Origin's shareholding in Australia Pacific LNG is equity accounted.

A reference to \$ is a reference to Australian dollars unless specifically marked otherwise.

All references to debt are a reference to interest bearing debt only. Individual items and totals are rounded to the nearest appropriate number or decimal. Some totals may not add down the page due to rounding of individual components. When calculating a percentage change, a positive or negative percentage change denotes the mathematical movement in the underlying metric, rather than a positive or a detrimental impact. Measures for which the numbers change from negative to positive, or vice versa, are labelled as not applicable.

## For more information

---

### **Peter Rice**

General Manager, Capital Markets

Email: [peter.rice@originenergy.com.au](mailto:peter.rice@originenergy.com.au)

Office: +61 2 8345 5308

Mobile: + 61 417 230 306

### **Liam Barry**

Group Manager, Investor Relations

Email: [liam.barry@originenergy.com.au](mailto:liam.barry@originenergy.com.au)

Office: +61 2 9375 5991

Mobile: + 61 401 710 367

[www.originenergy.com.au](http://www.originenergy.com.au)

