



To	Company Announcements Office	Facsimile	1300 135 638
Company	ASX Limited	Date	16 February 2017
From	Helen Hardy	Pages	48
Subject	<b>Investor Presentation for Half Year Results</b>		

Please find attached the investor presentation relating to Origin Energy's Results for the half year ended 31 December 2016.

Regards

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

Helen Hardy  
Company Secretary

02 8345 5000

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origin

# 2017 HALF YEAR RESULTS

Half year ended 31 December 2016

**Frank Calabria** CEO, **Gary Mallett** CFO

16 February 2017

personnel only

# Important Notices

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

# Outline

**1** Performance Highlights Frank Calabria

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**2** Financial Review Gary Mallett

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**3** Operational Review Frank Calabria

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**4** Outlook Frank Calabria

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**5** Appendix



# PERFORMANCE HIGHLIGHTS

Frank Calabria

# Origin's key priorities



## REDUCING DEBT AND IMPROVING RETURNS

- Maximise earnings and operating cash flow
- Limit capital expenditure
- Execute IPO of conventional upstream business
- Complete asset sales program



## LEADERSHIP IN ENERGY MARKETS

- “Digital first”
- Customer experience, lifetime value and innovative products
- Gas portfolio advantage
- Growing renewable energy
- New energy solutions



## LEADERSHIP IN INTEGRATED GAS

- Transition from project to operations
- Leverage scale and capability in unconventional gas
- Improve productivity and reduce unit costs

## HIGH PERFORMANCE CULTURE

- Customer-oriented, performance-driven culture



# Delivering on key commitments

## H1 FY2017

- ✓ **Completed APLNG** project
- ✓ Announced intention to **IPO** conventional upstream assets
- ✓ Increased **earnings and operating cash flow**
- ✓ Reduced **capex and contributions to APLNG**
- ✓ Progressed **asset sales**

## H2 FY2017

- Continued growth in **earnings and operating cash flow**
- Lower **working capital**
- Higher **APLNG** production
- Complete **asset sales** program – target of \$800 million on track

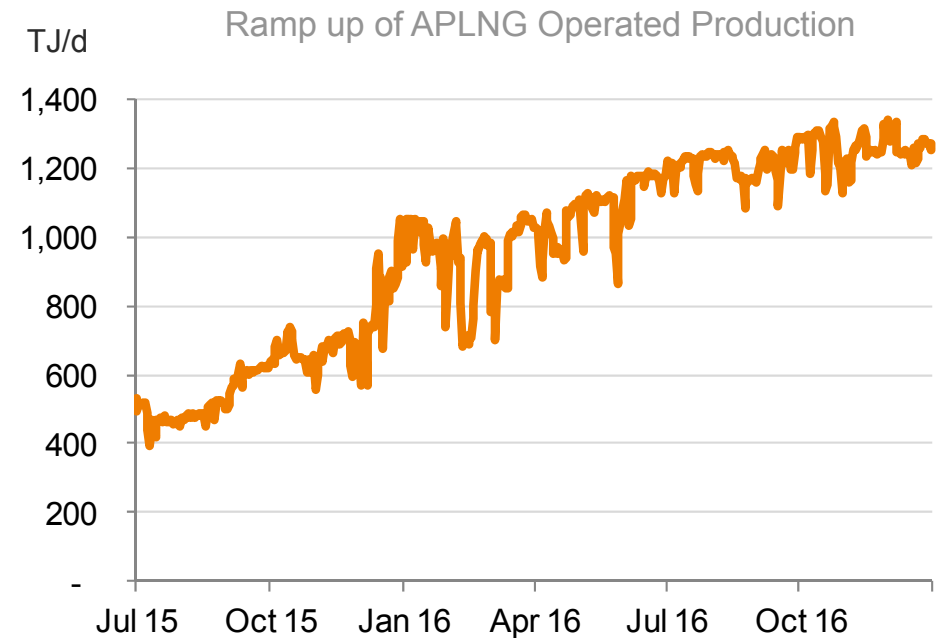
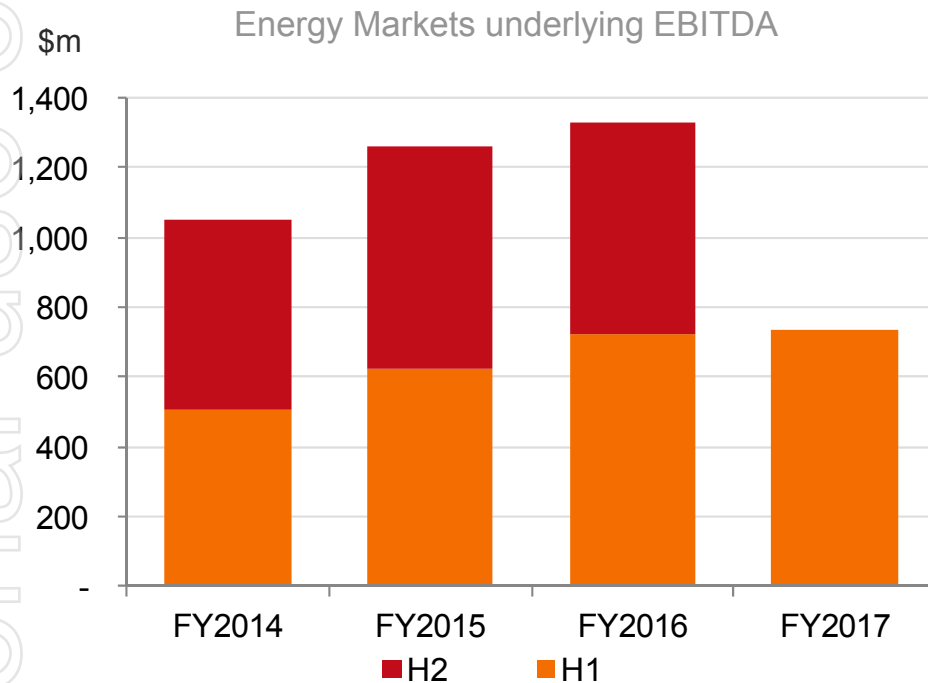
## FY2017 Targets

- **Underlying EBITDA** guidance improved to \$2.450 - \$2.615 billion, subject to market conditions
- **Adjusted Net Debt** well below \$9 billion by 30 June 2017 (excluding NewCo IPO)
- Remaining **contributions to APLNG** \$0.3 billion (\$0.2 billion below prior guidance)

# Solid operational performance in Energy Markets and Integrated Gas

Increasing earnings  
in Energy Markets

Completion of development projects and  
transition to operations in Integrated Gas






## 2017 Half Year Financial Highlights

### Statutory Loss

**\$(1.68) billion**  
(95.6) cps

 Down \$1.4 billion on H1 FY2016  
Impairments of \$1.9 billion after tax


### Underlying EBITDA

**\$1,145 million**

 Up \$277 million on H1 FY2016  
All segments contributed to  
EBITDA growth


### Underlying Profit

**\$184 million**  
10.5 cps

 Down \$70 million on H1 FY2016  
Reflects recognition of APLNG  
D&A and financing costs


### Operating cash flow

**\$495 million**

 Up \$27 million on H1 FY2016


### Adjusted Net debt

**\$9.1 billion**

 Stable on June 2016

### Interim Dividend

**Nil**

 10 cps on H1 FY2016

## Non-cash impairment of \$1.9 billion (post-tax)

Assets	Post –tax impairment (\$m)
Assets held by APLNG	1,031
Browse Basin	578
NewCo conventional exploration assets	170
Investment in Energia Austral SpA	114
<b>Total</b>	<b>1,893</b>

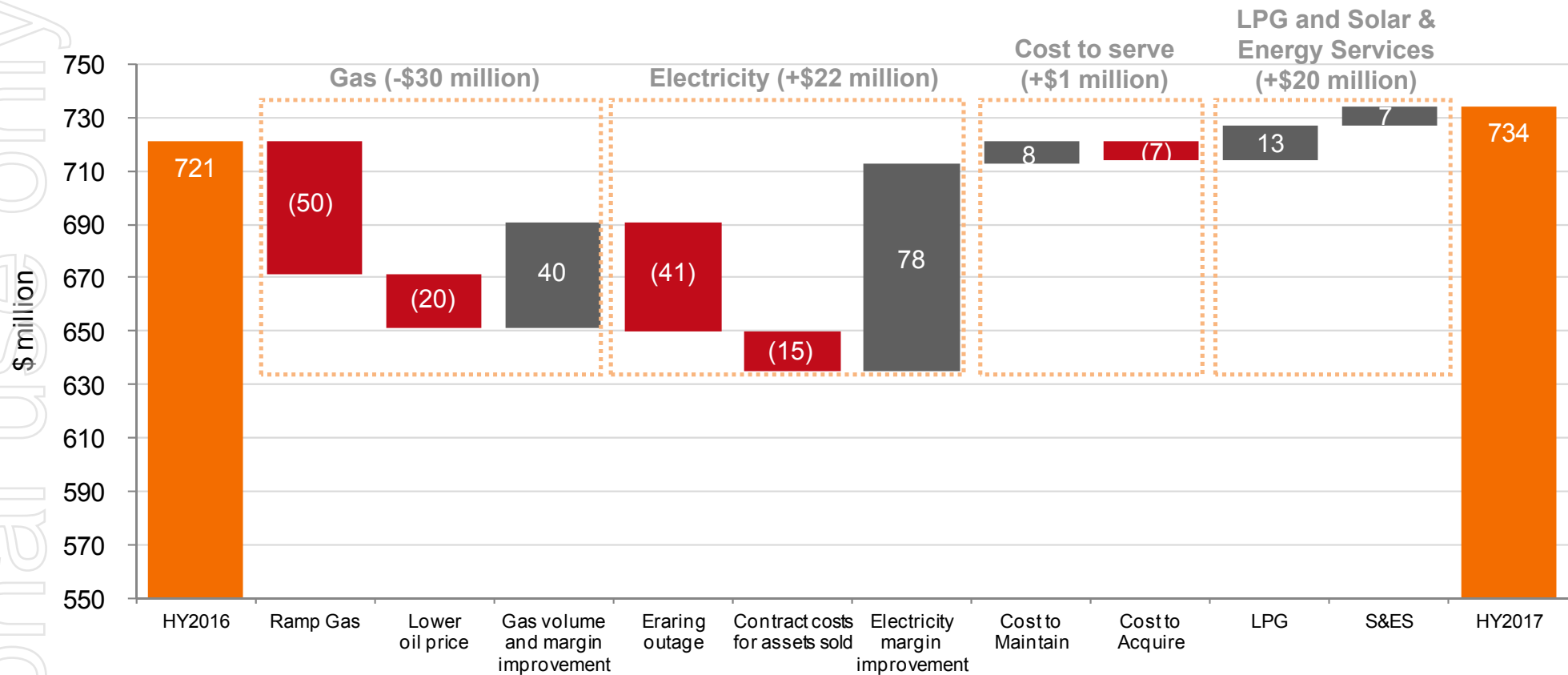
- **Browse Basin** impaired following an assessment of likely timing and potential. Based on new information, Origin has formed the view that the Caldita-Barossa fields are now the lead prospects to be developed to backfill Darwin LNG and other commercialisation alternatives are unlikely in the near term
- **NewCo conventional exploration assets** that primarily offer low growth have been impaired
- **Energía Austral** reflects reduced prospects of asset sale proceeding following an extended sale process

- Origin's 37.5% share of **APLNG's** impairment charge
  - Assumptions such as oil price, AUD/USD exchange rates, discount rates and costs have impacted the valuation over time. The cumulative net effect of these has reduced the valuation but had not warranted a revision of the carrying value until now
  - Since 30 June 2016, there has been a change in a number of assumptions but principally an increase in US dollar interest rates, increasing the discount rate from 9.0% to 10.2% (pre-tax)<sup>1</sup>. As a result, APLNG is now recognising an impairment
  - Origin's own assessment of the carrying value of its equity accounted investment in APLNG identified that no further impairment was required, based on the same discount rate as APLNG, and using Brent oil and AUD/USD forward curves at 31 December 2016 over the short term, stepping up to US\$71/bbl (real) and AUD/USD of 0.70 from FY2021

(1) The discount rate calculation uses the current market observed interest rate on the US Government 20 year bond as the risk free rate

# Energy Markets EBITDA of \$734 million increased by \$13 million

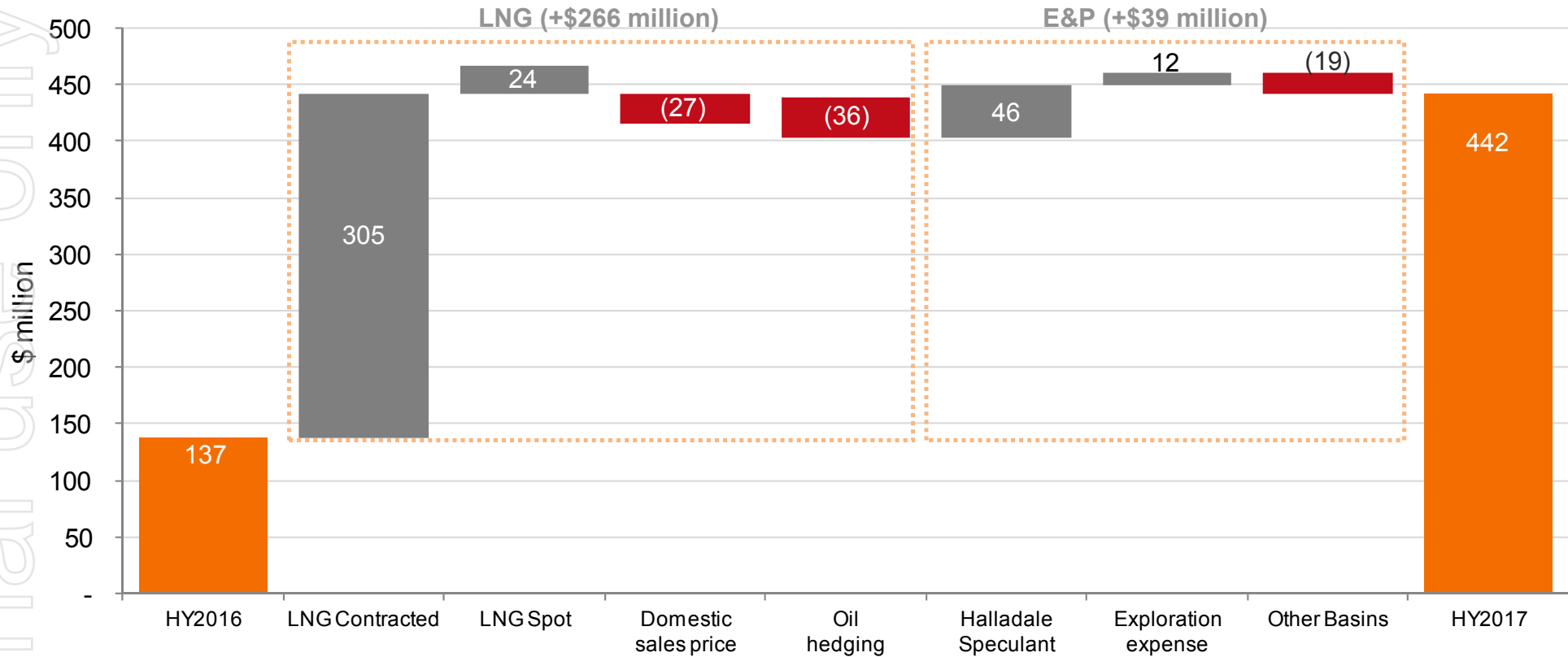
Movements in Energy Markets Underlying EBITDA



- H1 FY2016 benefited from low cost ramp gas
- H1 FY2017 impacted by one in 20 year maintenance outage at Eraring and contract costs for assets recently sold
- Focus on operating costs resulted in a reduction in Cost to Maintain and increased LPG earnings. Cost to Acquire increased reflecting higher acquisition activity and growing customer numbers

# Integrated Gas EBITDA of \$442 million increased by \$305 million

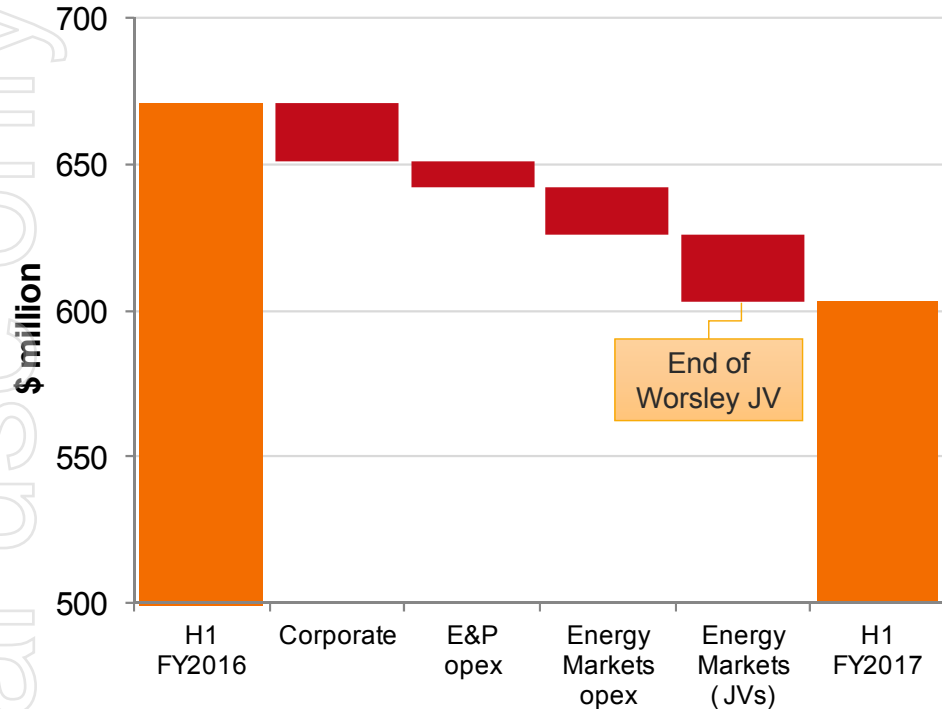
Movements in Integrated Gas Underlying EBITDA



- LNG sales (contracted & spot) contributed \$329 million (effective oil price of US\$42.3/bbl)
- Domestic sales were impacted by lower realised prices (on a lower volume) of oil linked gas sales to QGC
- Oil hedging reflects amortisation of the Oil Puts Origin entered into in December 2015, net of pay-out
- Growth from Halladale/Speculant partly offset by lower well deliverability, field decline and maintenance shutdowns in Other basins

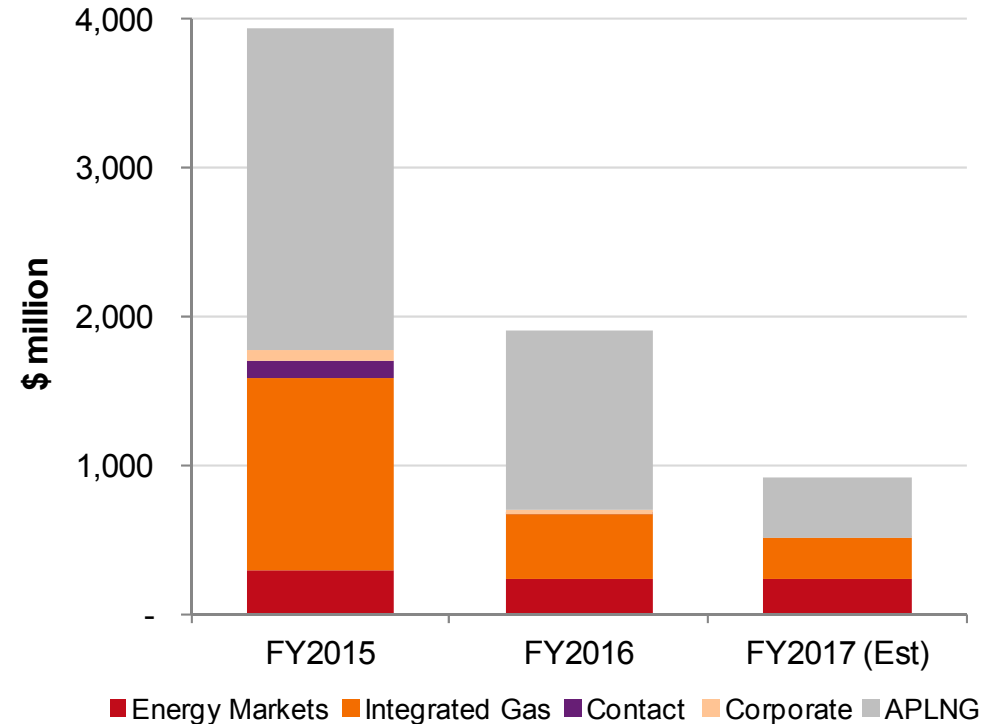
# Origin continues to focus on reducing operating and capital costs

Movements in operating costs  
(H1 FY2016 to H1 FY2017)



Note: Energy Markets includes operating costs relating to Generation, Cost to Serve, LPG and Solar & Energy Services combined

Capital Expenditure and Cash Contributions to APLNG<sup>1,2</sup>



- Focus on cost management yielding results
- Headcount reduction savings realised from H2 FY2016

- Reduced spend in both Energy Markets and Integrated Gas
- \$0.3 billion remaining contribution to APLNG from January 2017 (reduced by \$0.2 billion from previous guidance<sup>3</sup>)

(1) Forward looking numbers based on management's estimates of expenditure (committed and likely to proceed). Numbers exclude capitalised interest and assume NewCo remains in Origin for FY2017  
 (2) Forward looking APLNG numbers represent Origin's expected cash contributions (net of MRCPS interest income), rather than Origin's share of total APLNG capital expenditure.  
 (3) Previous guidance of Origin's remaining contribution to APLNG was \$0.6 billion from 1 July 2016 less \$124 million contributed in the six months to 31 December 2016

# 2

## FINANCIAL REVIEW

Gary Mallett

Underlying EBITDA increased by \$277 million to \$1,145 million  
 Underlying EBIT relatively stable (excluding the impact of Contact)

(\$ million)	Underlying EBITDA			Underlying EBIT		
	HY2017	HY2016	Change	HY2017	HY2016	Change
Energy Markets	734	721	13	576	557	19
Integrated Gas	442	137	305	(100)	(63)	(37)
LNG	287	21	266	(122)	(43)	(79)
E&P	155	116	39	22	(20)	42
Corporate	(31)	(51)	20	(31)	(51)	20
Contact	-	61	(61)	-	41	(41)
<b>Total</b>	<b>1,145</b>	<b>868</b>	<b>277</b>	<b>445</b>	<b>484</b>	<b>(39)</b>
<b>Total (ex-Contact)</b>	<b>1,145</b>	<b>807</b>	<b>338</b>	<b>445</b>	<b>443</b>	<b>2</b>

- EBIT (excluding Contact) stable despite growth in EBITDA, as LNG revenue was insufficient to offset the increase in APLNG ITDA due largely to low oil prices and the ramp up to full production



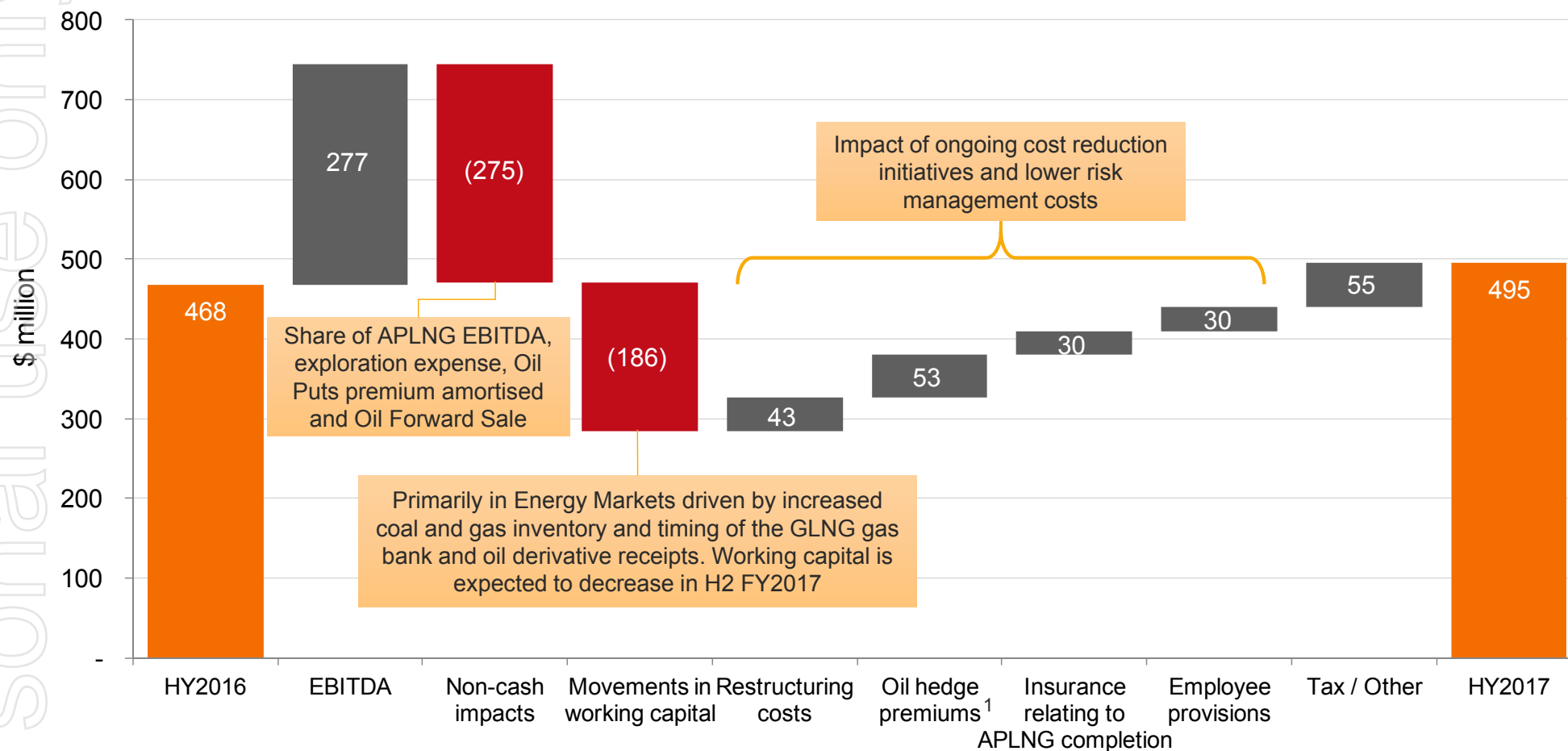
## Underlying profit of \$184 million decreased by \$70 million

(\$ million)	HY2017	HY2016	Change	
<b>Underlying EBITDA</b>	<b>1,145</b>	<b>868</b>	<b>277</b>	
D&A – E&P	(133)	(136)	3	➔ NewCo D&A ceased from 7 December (in line with accounting standard requirements)
D&A – Energy Markets, Corporate, Contact	(167)	(191)	24	➔ Contact D&A of \$20 million in prior year
Share of MRCPS* interest expense	(85)	-	(85)	} Increased due to commencement of LNG revenue and cost recognition (six months of Train 1, two months of Train 2). H2 FY2017 will include six months of ITDA from both Trains
Share of APLNG ITDA* (excluding MRCPS)	(315)	(57)	(258)	
<b>Underlying EBIT</b>	<b>445</b>	<b>484</b>	<b>(39)</b>	
MRCPS interest income <sup>1</sup> (offset in ITDA)	85	-	85	} Recognition of LNG related interest previously excluded from underlying earnings. H2 FY2017 underlying profit will include all remaining financing costs currently in 'Items Excluded from Underlying Profit'
Interest expense related to APLNG funding <sup>1</sup>	(171)	-	(171)	
Other net financing costs <sup>1</sup>	(54)	(46)	(8)	
Tax expense	(120)	(170)	50	
Non-controlling interest	(1)	(14)	13	
<b>Underlying Profit</b>	<b>184</b>	<b>254</b>	<b>(70)</b>	
Underlying EPS	10.5 cps	18.1 cps		

(1) Net financing costs in the financial accounts represents the sum of MRCPS interest income, interest expense related to APLNG funding and other net financing costs  
 \* Refer to Appendix for Glossary

# Operating cash flow of \$495 million increased by \$27 million

## Movements in Cash Flow From Operating Activities

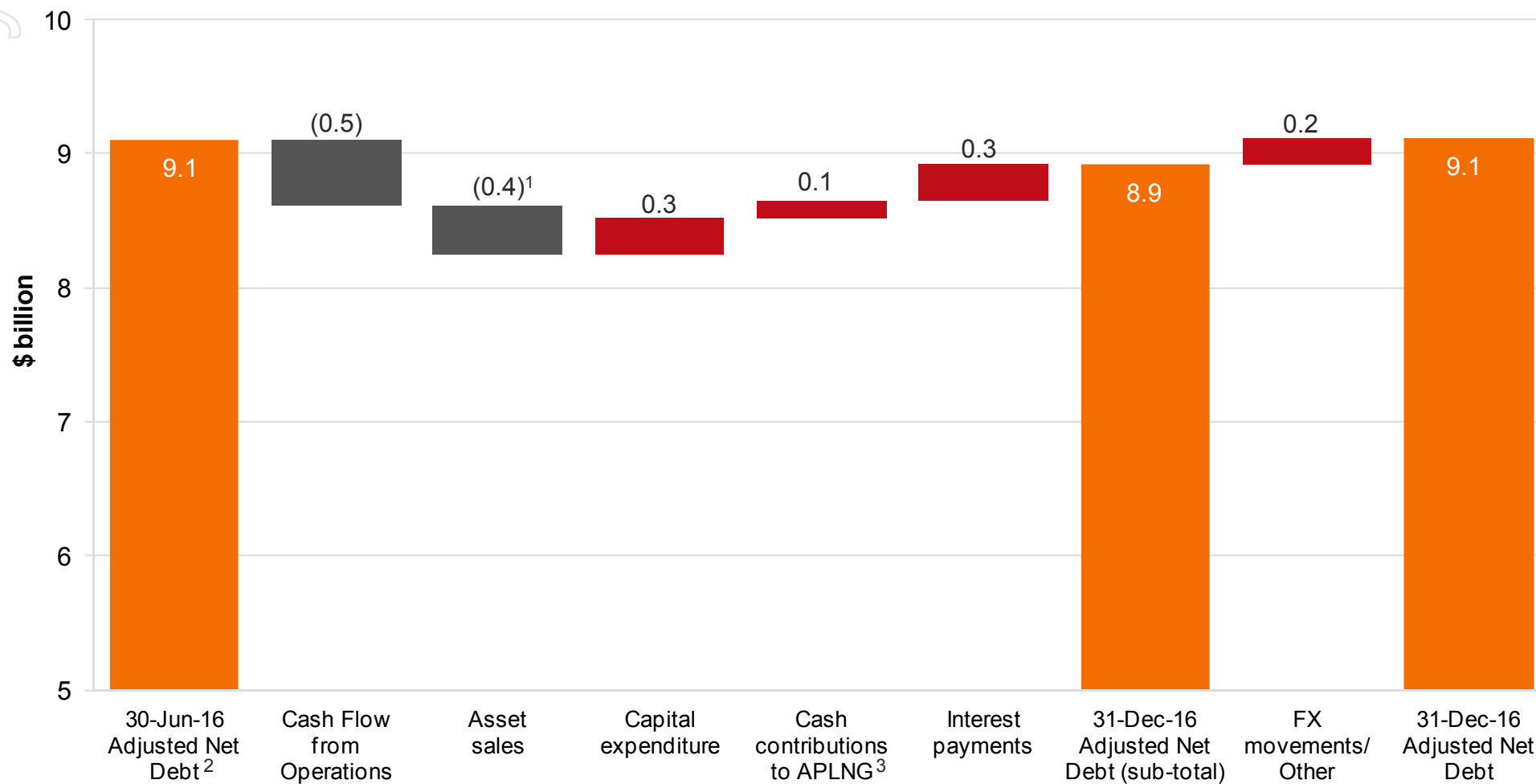


(1) Oil hedge premiums of A\$64 million (pre-tax) in H1 FY2017 (compared to A\$117 million in H1 FY2016)

- 20 million barrels hedged in FY2018 using a combination of puts and collars with a floor strike of US\$45/bbl. The collar hedge consists of 12 million barrels capped at an average rate of US\$71/bbl

## Adjusted net debt stable at \$9.1 billion

Movements in Adjusted Net Debt - 30 June 2016 to 31 December 2016



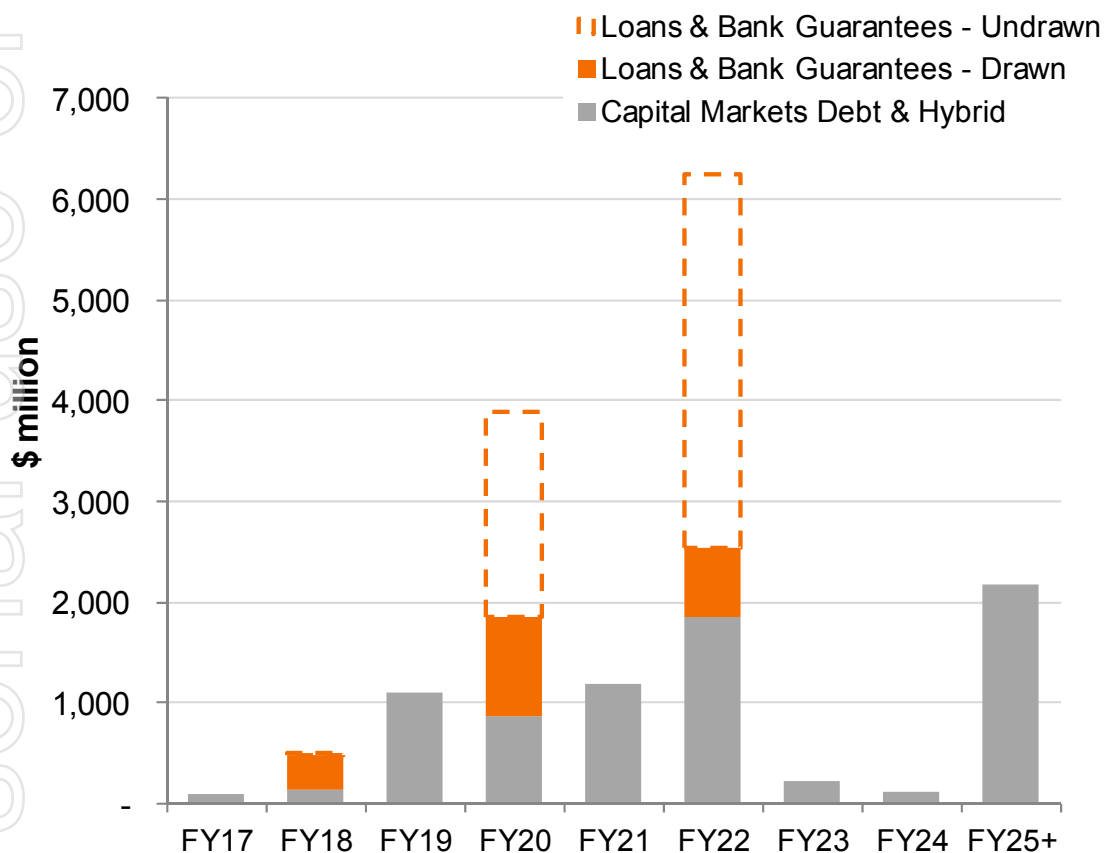
(1) Of the \$483 million in asset sales announced in FY2016, \$118 million in proceeds were received in FY2016, with the remaining \$365 million received in H1 FY2017.

(2) See Appendix for details of Adjusted Net Debt

(3) Net of MRCPS interest income received

# Origin continues to hold sufficient liquidity for all foreseeable funding requirements

Origin Debt & Bank Guarantee Pro-forma Maturity Profile as at 31 December 2016



- \$5.7 billion<sup>1</sup> of undrawn committed bank facilities and cash at 31 December 2016
- During the period Origin:
  - Extended the maturity of \$4.5 billion<sup>2</sup> of syndicated bank loans by 34 months to October 2021
  - Redeemed the A\$900 million Subordinated Notes on 22 December 2016
- Origin's current credit ratings are:
  - BBB- / stable (S&P)
  - Baa3 / negative outlook (Moody's)
- Given the focus on debt reduction, the Board has determined to not pay a dividend in respect of earnings for H1 FY2017

(1) Excludes bank guarantees

(2) AUD equivalent at an AUD/USD rate range of 0.73-0.77

# 3

## OPERATIONAL REVIEW

Frank Calabria


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# ENERGY MARKETS

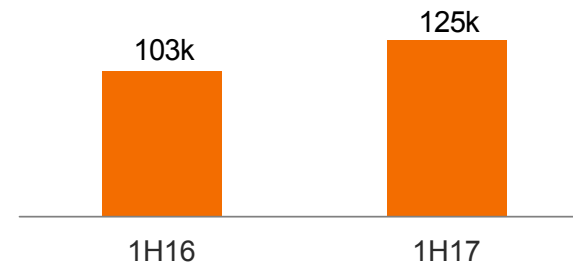
# Digital first - product and service innovation, driving customer experience and lifetime value

## Product innovation

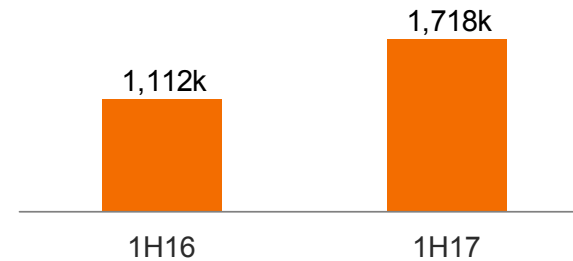
- 
  - ✓ Predictable Plan
- 
  - ✓ Solar as a Service
  - ✓ Solar Boost
- 
  - ✓ Quick and Easy Moves
  - ✓ Direct Movers
- 
  - ✓ Tesla Powerwall Batteries
- 
  - ✓ New meters and installations
  - ✓ Origin Trades home services

## Increasing online interaction

### Online sales increased 21%



### eBilling accounts increased 55%

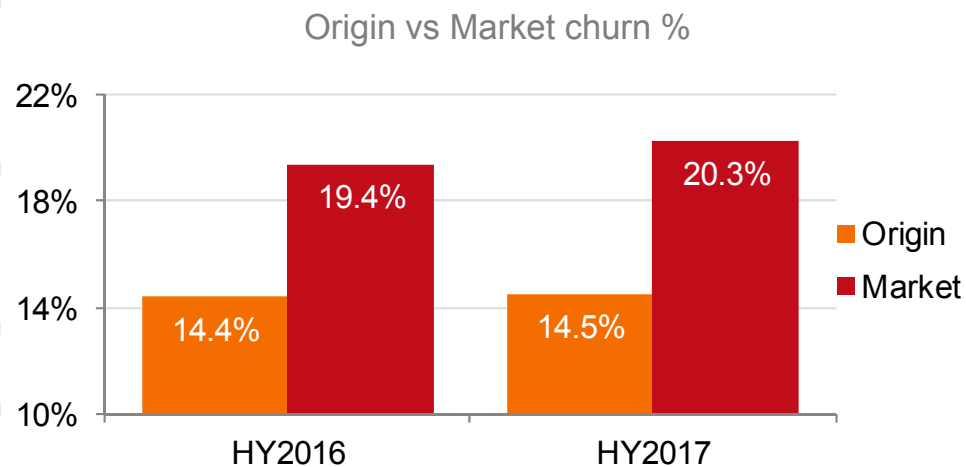
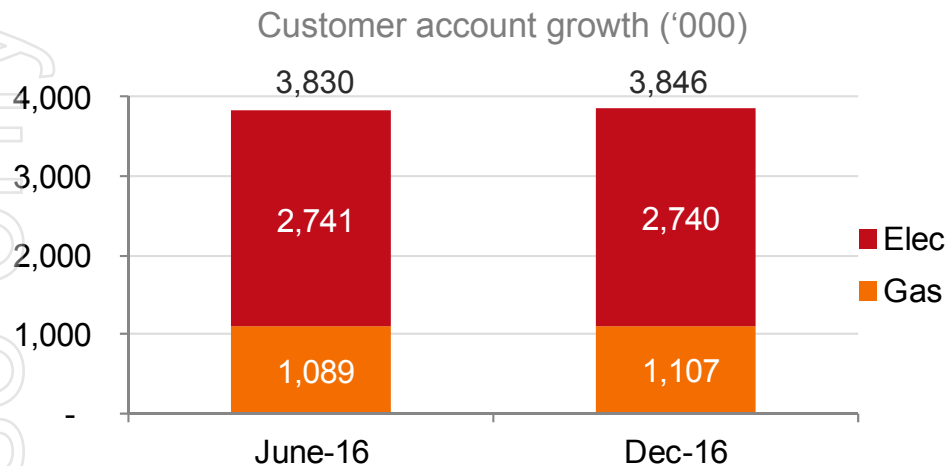


- ✓ Significant growth in digital capability has enabled an uplift in delivery of key projects and an improved speed-to-market
- ✓ More customers are choosing to self-service using My Account with visitation increasing by 30%

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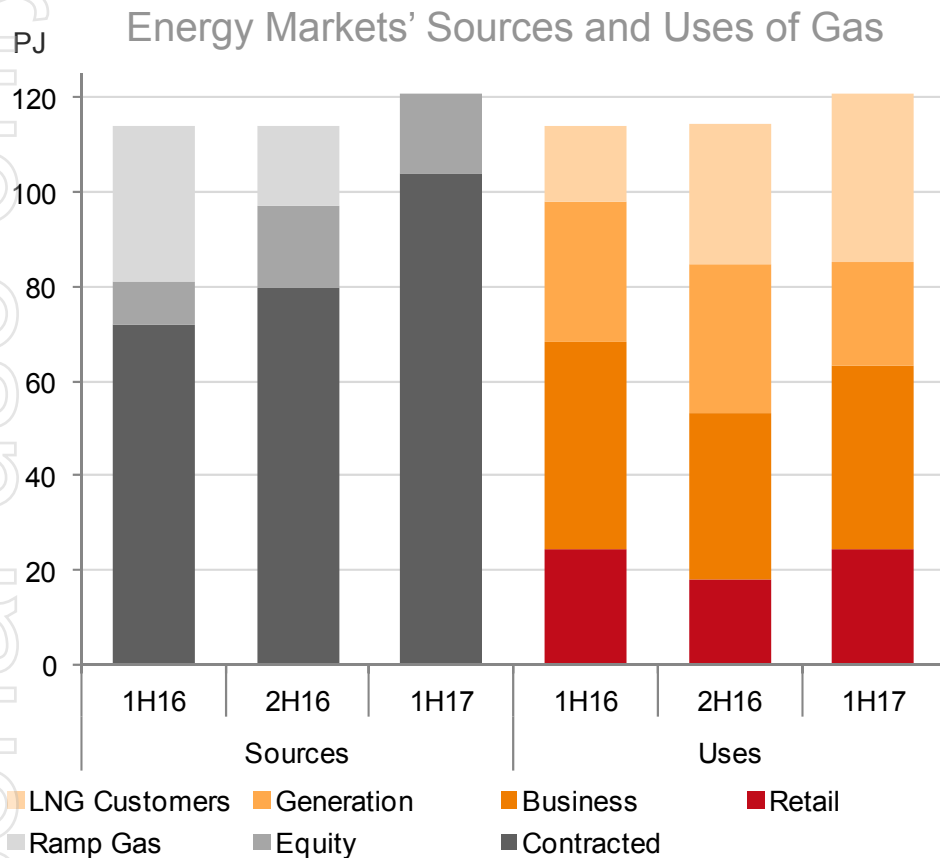
## Customer - Improved experience, competitiveness and margins



- Improved customer experience:
  - Customer NPS (Interactive) up 4 points to +13
  - Ombudsmen complaints down from 3.9 to 2.6 per thousand customers
- Improved competitiveness:
  - Increased customer accounts by 17,000
  - Origin churn flat as market churn rises
- Improved Retail margins per customer:
  - Customer value management



## Natural Gas - Sustainable volume growth, long term competitive cost of supply and transportation flexibility

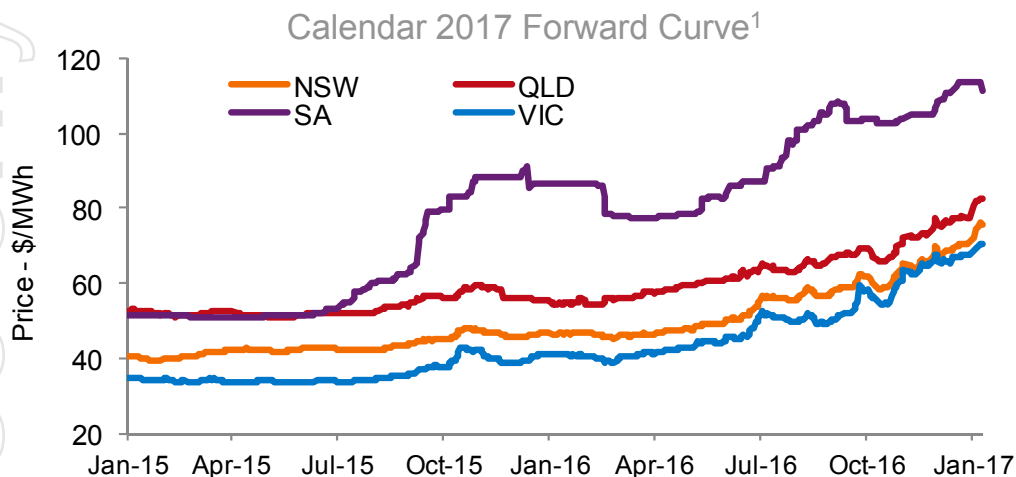


- Increased volumes to LNG customers with oil price linkage
- Ramp gas replaced with contracted gas, maintaining a competitive cost of supply in a rising cost market
- Competitive gas position supported by supply length beyond 2020
- Flexible transport and storage capacity supporting changing gas flows
- Upside exposure to increased oil prices

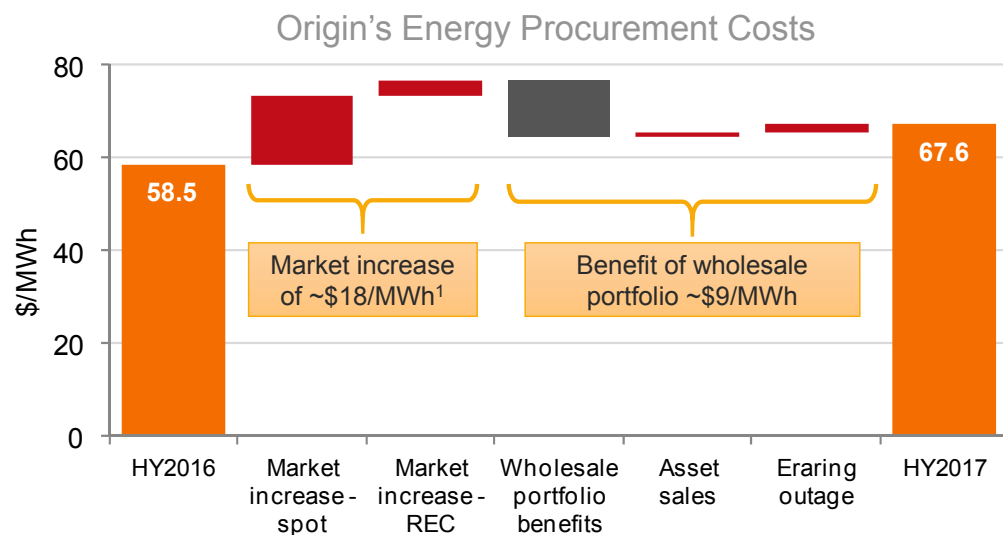


# Electricity – In a rising wholesale market, a flexible fuel and generation portfolio delivered a competitive cost of energy

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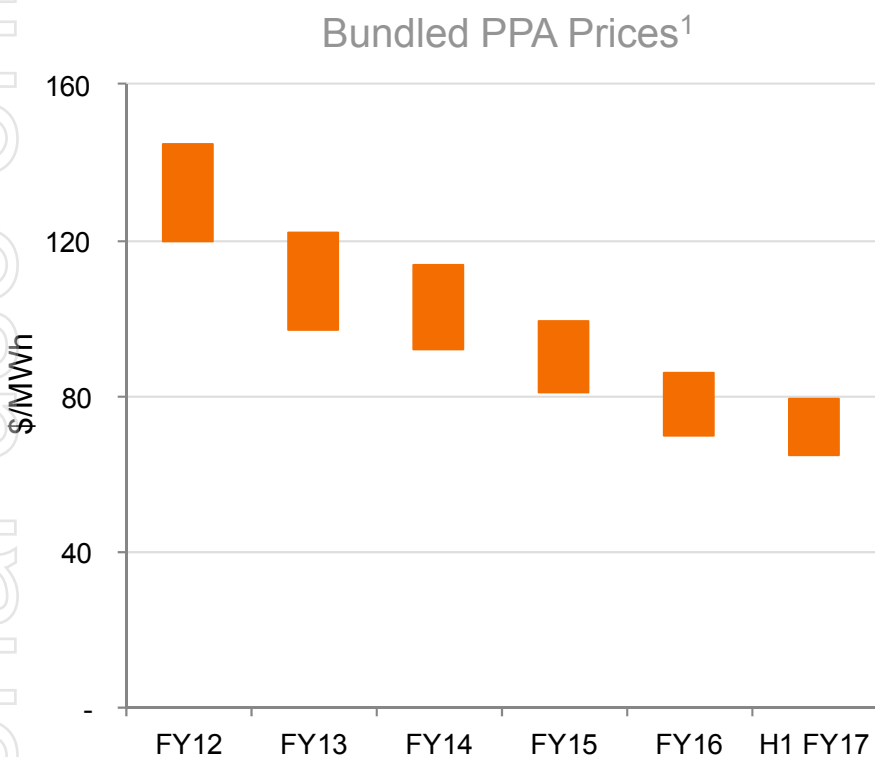
- Rising forward curve continues to be reflected in tariffs
- Flexible wholesale and generation portfolio outperformed rising forward curve, despite Eraring outage
- Cost of energy increased \$9/MWh vs ~\$18/MWh increase in market prices (black and green)
- Eraring outage added \$2.1/MWh to wholesale cost (\$41 million impact)



(1) Source: AEMO



## Renewables - Growing position supports a competitive cost of energy and adds value to our gas position

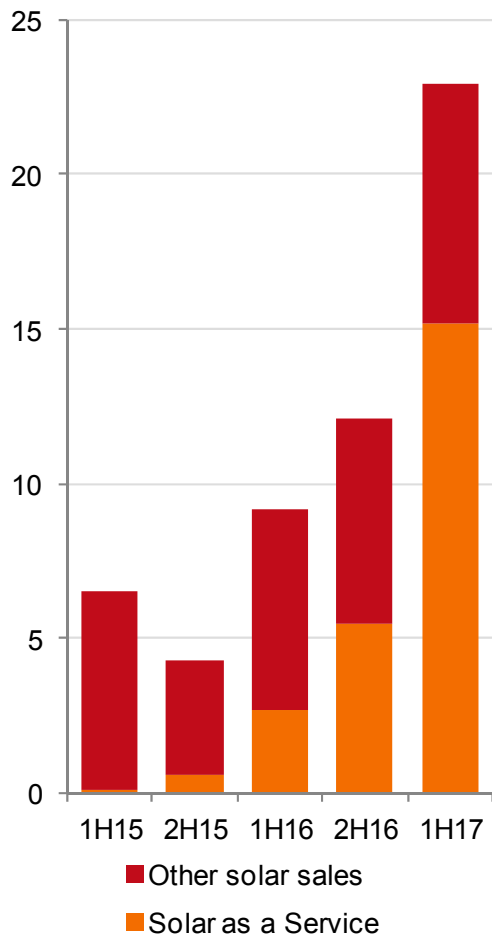


- Origin's short generation and REC position provides an opportunity to contract renewable PPAs at attractive prices, enabling Origin to maintain a competitive cost of energy
- Signed 275 MW of PPAs in H1 FY2017 at Clare, Bungala, Lakeland and Degrussa, bringing the total of signed PPAs yet to come into production to 375 MW
- 732 MW of renewable PPAs in production
- Growing renewables increases intermittency and improves value of gas peaking generation
- Minimal asset stranding risk with Eraring as a flexible black coal generator able to perform role of balancing intermittency

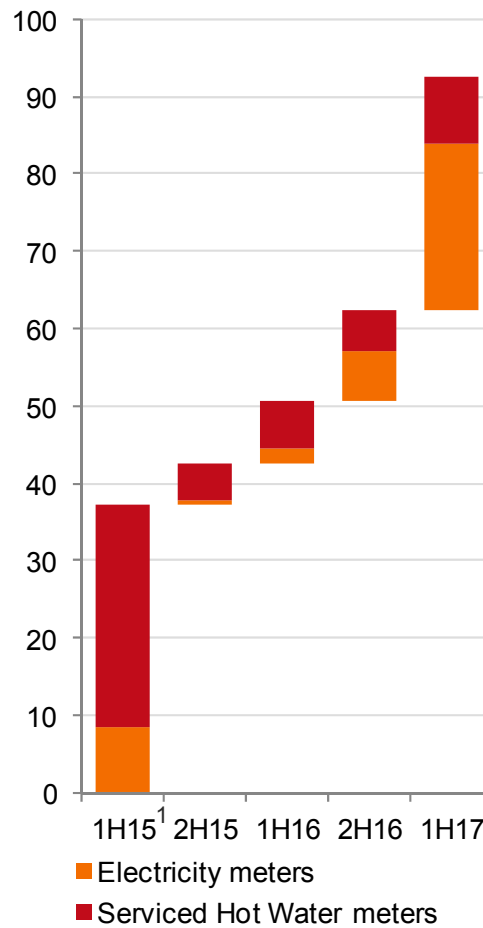
(1) Origin and publicly released third party data

# New Energy Solutions - Continues to grow

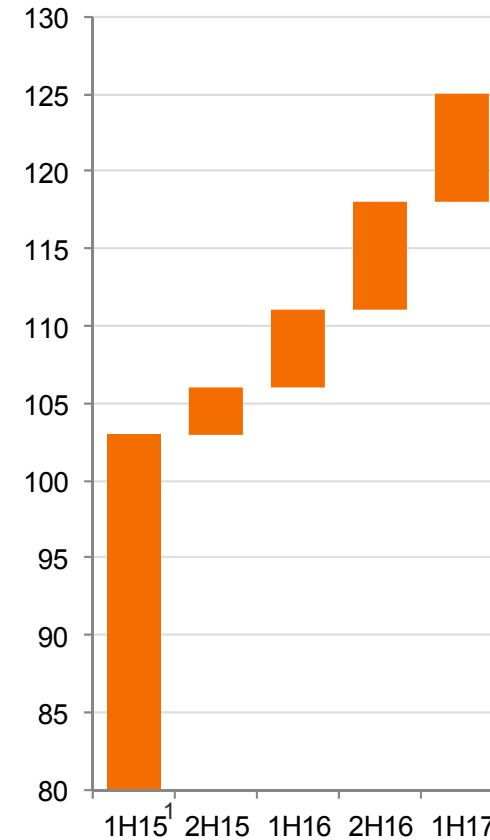
Solar Sales (MW)



Acumen Meters ('000)



Centralised Energy Services Customers ('000)



(1) Opening balance

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**INTEGRATED GAS**

## APLNG and Halladale/Speculant were completed during the period bringing to an end a long period of significant capital expenditure

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**APLNG Train 2 First Cargo, APLNG Project Complete**



Sinopec's new custom-built LNG tanker CESI Gladstone arrives at the Australia Pacific LNG facility on Curtis Island (courtesy of ConocoPhillips).

**Halladale/Speculant brought online August 2016**



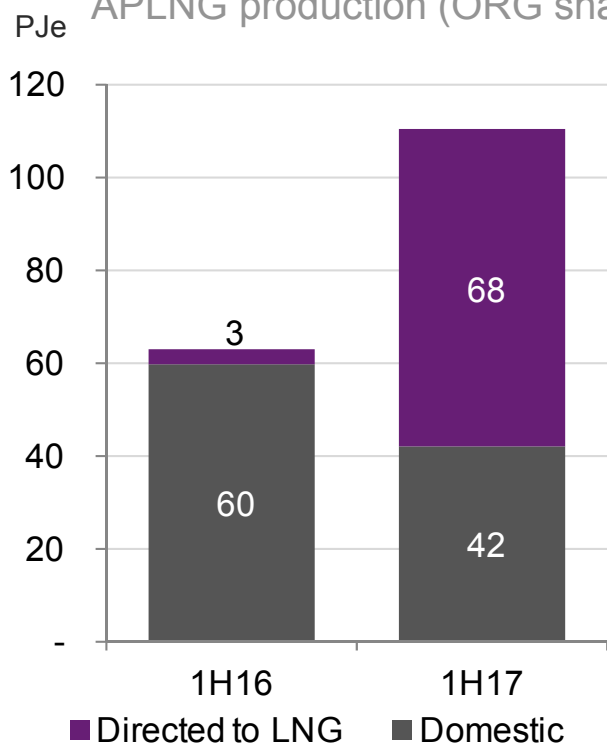
Aerial view of Halladale/Speculant well site

- Integrated Gas now moves into an operational phase, focusing on productivity, cost management and returns

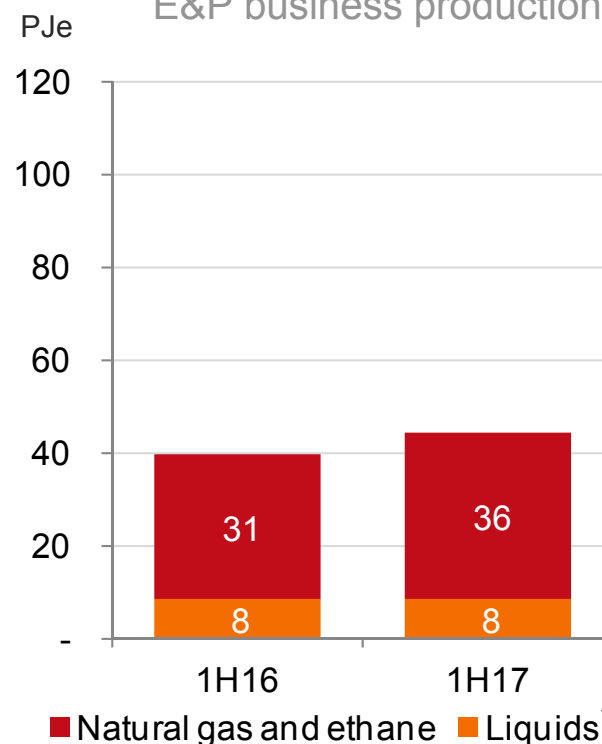


## APLNG production increased by 76% with the commencement of LNG E&P production increased by 12% driven by Halladale/Speculant

APLNG production (ORG share)



E&P business production



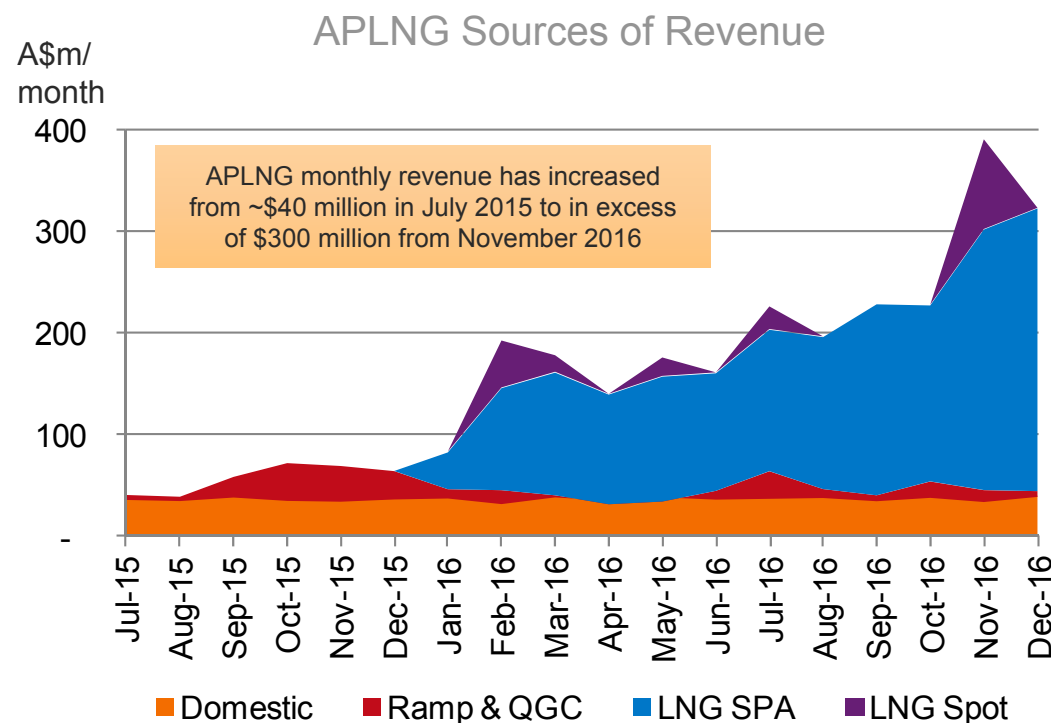
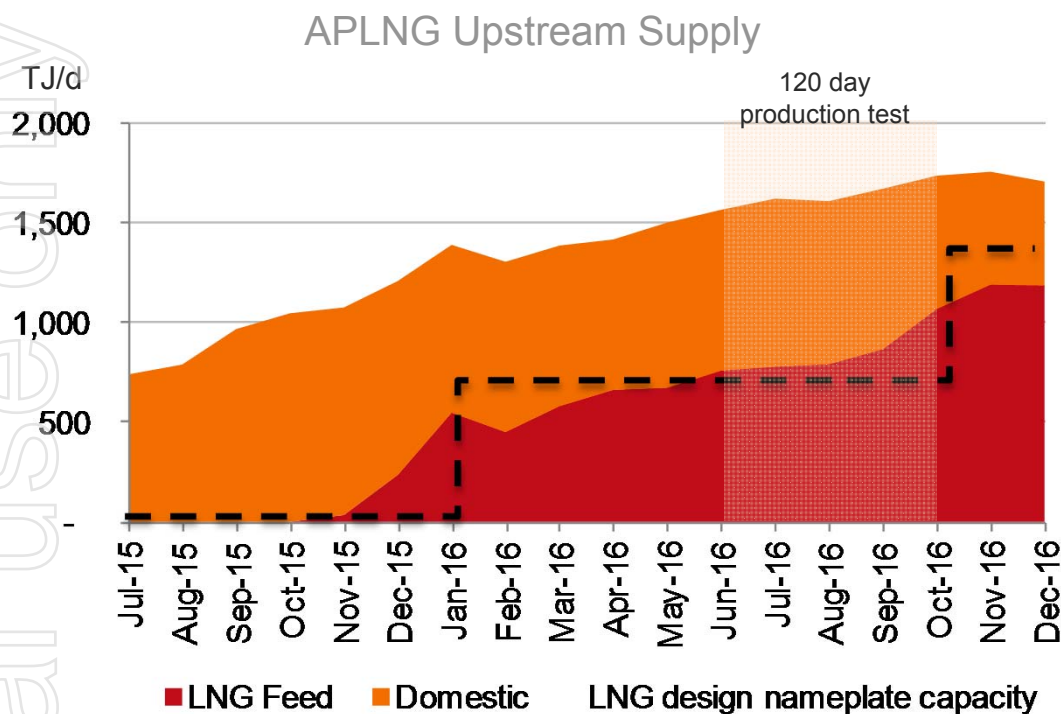
- LNG sales in H1 FY2017 at effective oil price of US\$42.3/bbl
- Decrease in domestic volumes due to gas previously sold under contract with QGC diverted to LNG and lower ramp sales volumes

- Production increase driven by commencement of Halladale/Speculant, partly offset by well deliverability, field decline and maintenance shutdowns in other basins

(1) Liquids production includes crude oil, condensate, and LPG.

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## APLNG Train 1 produced above design nameplate capacity through the 120 day production test and Train 2 commenced production in late 2016



- Production ramping up as expected ahead of the 90 day two train operational test in H1 FY2018
- Release of US\$5.1 billion (60%) of APLNG's project finance guarantees associated with Train 1
- Contracted LNG sales at an effective oil price of US\$42.3/bbl in H1 FY2017
- Spot LNG sales at an average price of US\$6.12/mmbtu in H1 FY2017
- First year planned shutdown for Train 1 expected for H2 FY2017 (3-4 week outage)

## APLNG break even cost update

100% APLNG (A\$bn)	FY17 Estimate	FY18 Estimate
Capital expenditure – Sustain	1.4	1.4
Capital expenditure – E&A	0.1	0.3
Operating expenses – pre capitalisation	1.4	1.5
Less: Domestic revenue	(0.7)	(0.5)
Less: LNG spot revenue <sup>1</sup>	(0.4)	(0.5)
<b>Operating breakeven</b>	<b>1.9</b>	<b>2.2</b>
Project finance interest	0.5	0.5
Project finance principal	0.3	1.0
<b>Distribution breakeven</b>	<b>2.7</b>	<b>3.7</b>
<b>Operating breakeven (US\$/boe)<sup>2</sup></b>	<b>28</b>	<b>27</b>
<b>Distribution breakeven (US\$/boe)<sup>2</sup></b>	<b>40</b>	<b>45</b>
AUD/USD	0.70	0.70

Volumes (APLNG (100%))	FY17 Estimate	FY18 Estimate
Domestic (PJ)	215	184
Spot LNG (PJ)	44	67
Contract LNG volumes (PJ)	354	432
<b>Contract LNG volumes (mboe)<sup>2</sup></b>	<b>47</b>	<b>57</b>

(1) Based on Facts Global Energy – January 2017 forecast for spot LNG prices.

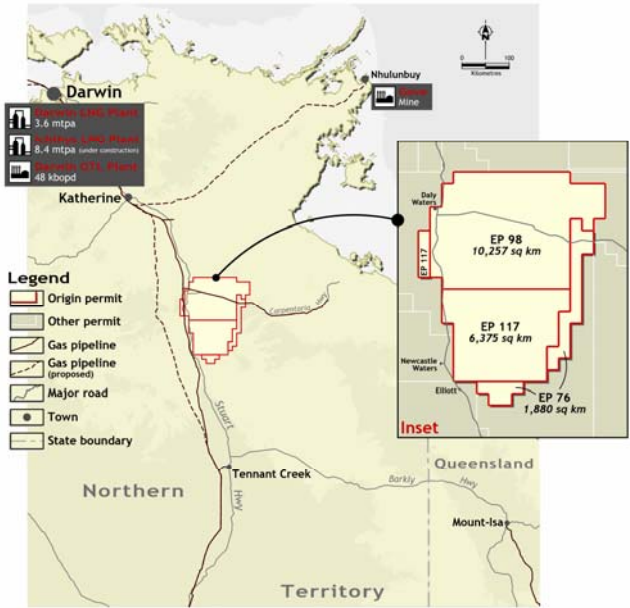
(2) Based on contract LNG sales volumes converted to barrels of oil equivalent adjusted for contract slope.

- Previous guidance of distribution break even target of US\$42/boe was based on an average of FY2017 to FY2023. Going forward, guidance will be provided on a nearer term outlook
- FY2017 reflects a part year of LNG contract volumes and lower debt repayments.
- FY2018 breakeven includes additional E&A spend of ~US\$2.50/boe as APLNG resumes activity to mature contingent and prospective resources. E&A spend is expected to reduce in subsequent periods
- Project finance interest is expected to reduce as principal is repaid
- Targeting reductions in operating costs in later periods as cost out initiatives annualise and transportation tariffs reduce
- Domestic and LNG spot revenue driven by ramp up and DQT (assumed for FY2018)
- Focus continues on improving productivity through capital efficiency and technology

# Beetaloo production test and drilling indicate material shale gas resource

Measured and Estimated Parameters	Units	Best Estimate
P50 area (from Contingent Resource area distribution)	km <sup>2</sup>	1,968
Original Gas In Place (OGIP) <sup>1</sup> (Gross)	TCF	61.0
2C Contingent Resource (Gross)	TCF	6.6
2C Contingent Resource (Net to Origin) <sup>2</sup>	TCF	2.3

Assessment of 2C Contingent Gas Resource Estimates for the Velkerri B Shale Pool within EP76, EP98, and EP117 as of 15 February 2017<sup>3</sup>



- As announced to the ASX on 15 February 2017, a Discovery Evaluation Report has been submitted to the NT government
- Drilling and seismic results across more than 10,000km<sup>2</sup> illustrate the continuity of the Velkerri Formation shale gas play
- Amungee NW-1H exploration well
  - ~1,100 metre in-zone horizontal well with 11 fracture stimulation stages across approximately 600 metres of the lateral section
  - Production test data confirms the ability of the Velkerri Formation “B Shale” to flow gas following hydraulic fracture stimulation
- Contingent Resources are potentially recoverable but not currently considered commercially recoverable due to one or more contingencies. See Glossary for details
  - Contingent Resource Estimate prepared on a statistical aggregation basis and in accordance with the SPE Petroleum Resources Management System (PRMS), using probabilistic methods and reservoir evaluation data, in addition to regional seismic data

(1) OGIP presented is the product of the P50 Area by the P50 OGIP per km<sup>2</sup>.  
 (2) Net to Origin’s 35% interest in EP76, EP98, and EP117.  
 (3) Origin is not aware of any new information or data that materially affects the information included in the announcement to the ASX on 15 February 2017 and all material assumptions and technical parameters underpinning these estimates continue to apply and have not materially changed.



# OUTLOOK

Frank Calabria

## Origin's FY2017 Underlying EBITDA range has improved to \$2,450 million - \$2,615 million, subject to market conditions

FY2017 Guidance (A\$m)	Previous	Current
Energy Markets	1,440-1,540	1,440-1,500
E&P <sup>1</sup>	350-400	350-400
LNG	650-750	730-780
Corporate	(70-75)	(65 - 70)
<b>Underlying EBITDA</b>	<b>2,370-2,615</b>	<b>2,450-2,615</b>
<b>Underlying NPAT</b>		<b>480-590</b>
<b>Adjusted Net Debt</b>	<b>well below \$9 billion</b>	

- **Current earnings guidance is based on<sup>2</sup>:**
  - Average FY2017 oil price of US\$52.33/bbl<sup>3</sup>
  - Average FY2017 AUD/USD rate of \$0.73
- **Excluding potential IPO proceeds, targeting Adjusted Net Debt well below \$9 billion by June 2017, driven by:**
  - Increased EBITDA in H2 FY2017
  - Lower working capital in H2 FY2017
  - Remaining asset sales to achieve the target of \$800 million
  - Remaining contributions to APLNG expected to be \$0.3 billion (\$0.2 billion lower than previous guidance<sup>4</sup>)

(1) E&P guidance is dependent on timing of the intended NewCo IPO. For the purpose of FY2017 guidance, NewCo is assumed to remain within Origin for the balance of the financial year

(2) Previous guidance based on average oil price of US\$52.90/bbl and AUD/USD exchange rate of \$0.74

(3) The associated effective oil price for oil linked LNG sales will incorporate the lag associated with LNG Sale and Purchase Agreements

(4) Previous guidance of Origin's remaining contribution to APLNG was \$0.6 billion from 1 July 2016 until APLNG was self funding, less \$124 million contributed in the six months to 31 December 2016

# Guidance commentary

## Energy Markets expectations

- Natural Gas gross profit to increase relative to FY2016 and prior guidance due to increased Business sales volumes and margins
- Electricity gross profit to increase relative to FY2016 due to margin expansion, however lower than previously guided due to extreme weather conditions in February. Record Queensland system demand (February month to date average maximum 11% higher than previous record<sup>1</sup>) leading to a short position combined with higher wholesale energy prices
- Cost to serve to be in line with FY2016 with operating efficiencies offset by increased acquisition/retention activity

## Integrated Gas expectations

- E&P Underlying EBITDA to be higher in H2 FY2017 (subject to timing of the IPO) reflecting 6 months of Halladale/Speculant and lower exploration expense
- LNG Underlying EBITDA range higher than previous guidance primarily due to earlier APLNG Train 2 revenue recognition (from November 2016) and lower volumes sold to QGC, partially offset by lower effective A\$ oil price and higher capitalised revenue in the first half FY2017 compared to prior guidance
  - H2 FY2017 to be higher than H1 FY2017 reflecting six months contribution from both Trains, and higher effective A\$ oil prices, partially offset by the planned first year shutdown of Train 1 in Q4 FY2017

## Underlying NPAT expectations

- E&P D&A ceased on 7 December 2016 following the announcement of intended IPO
- Increased share of ITDA and Underlying net financing costs in H2 FY2017 due to a full contribution from both LNG Trains
- All APLNG related net financing costs previously excluded from underlying profit will be recognised in underlying profit from H2 FY2017

(1) Source: AEMO



# THANK YOU

## For more information

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## APPENDIX

## Reconciliation of Statutory Loss to Underlying Profit

(\$ million)	HY2017	HY2016
<b>Statutory (Loss) – total operations</b>	<b>(1,677)</b>	<b>(254)</b>
Items Excluded from Underlying Profit		
Fair value and foreign exchange movements <sup>1</sup>	37	(82)
LNG items pre revenue recognition <sup>1</sup>	(36)	(154)
Disposals, dilutions and impairments <sup>1</sup>	(1,862)	(272)
<b>Total Items Excluded from Underlying Profit</b>	<b>(1,861)</b>	<b>(508)</b>
<b>Underlying Profit – total operations</b>	<b>184</b>	<b>254</b>

### Fair value and foreign exchange movements

- Non-cash impact of oil put options (-\$18 million)
- Non-cash financial instruments impacting Energy Markets (+\$36 million)
- Non-cash foreign exchange movements relating to LNG (+\$11 million)
- Non-cash gain due to appreciation of AUD (+\$8 million)

### LNG items pre revenue recognition

- Origin's net financing costs (-\$31 million)
- Pre-production costs unable to be capitalised (-\$5 million)

### Disposals, impairments and business restructuring

- Gains relating to asset sales (+\$71 million)
- Impairments relating to share of APLNG impairment (-\$1,031 million), Browse basin (-\$578 million), NewCo conventional exploration assets (-\$170 million) and Energia Austral (-\$114 million)
- Business restructuring costs (-\$40 million) associated with Origin's cost reduction programs and tax loss write offs

(1) Aggregation of items excluded from Underlying Profit has changed from the prior period.

## Reconciliation of adjusted net debt

	Issue Currency	Issue Notional	Hedged Currency	Hedged Notional	AUD \$'m Dec-16	AUD \$'m Dec-16	AUD \$'m Dec-16
					Interest-bearing liabilities	Fair value adjustments on FX hedging transactions	Adjusted net debt
AUD Debt	AUD	1,280	AUD	1,280	1,280	0	<b>1,280</b>
USD Debt Left in USD	USD	850	USD	850	1,175	0	<b>1,175</b>
USD Debt Swapped to AUD <sup>1</sup>	USD	895	AUD	1,004	1,244	(240)	<b>1,004</b>
EUR Debt Swapped to AUD <sup>1</sup>	EUR	2,700	AUD	3,727	4,040	(313)	<b>3,727</b>
EUR Debt Swapped to USD <sup>2</sup>	EUR	1,000	USD	1,372	1,456	441	<b>1,897</b>
NZD Debt Swapped to AUD <sup>1</sup>	NZD	246	AUD	218	237	(19)	<b>218</b>
<b>Total</b>					<b>9,432</b>	<b>(131)</b>	<b>9,301</b>
Cash and cash equivalents							(158)
<b>Adjusted net debt</b>							<b>9,143</b>

Origin continues to hold some USD debt

- Foreign currency debt has been largely hedged into either AUD or USD using cross currency interest rate swap (CCIRS) derivatives
- Accounting standards require the foreign currency debt and the linked CCIRS derivatives to be disclosed separately
- As at 31 December 2016, Origin's interest bearing liabilities were A\$9,432 million. The associated CCIRS was a net derivative asset of A\$131 million. The net of these two amounts reflect the quantum of debt Origin is required to repay upon maturity

(1) Since the inception of the CCIRS derivatives, the AUD has depreciated against the USD, EUR and NZD. This has meant that interest-bearing liabilities show a larger liability when the foreign debt is translated at current spot rates. The fair value of the CCIRS derivatives on the other hand increased, shown as a derivative asset (reduces the quantum of debt Origin is required to pay upon maturity)

(2) Conversely, the USD has appreciated relative to EUR since the inception of the EUR to USD CCIRS derivatives. This has meant that interest-bearing liabilities show a lower liability when the foreign debt is translated at the current spot rate. The fair value of the CCIRS derivatives on the other hand has decreased and is shown as a derivative liability.

# Energy Markets sales volumes

## Natural Gas sales volume (PJ)

Half year ended 31 December	2016	2015	Change (PJ)	Change %
<b>Retail</b>				
NSW	5.1	4.4	0.7	16.6
Victoria	14.8	15.1	(0.3)	(2.1)
Queensland	1.5	1.6	(0.0)	(3.1)
South Australia	3.0	3.1	(0.1)	(2.4)
<b>Total Retail volumes</b>	<b>24.5</b>	<b>24.2</b>	<b>0.3</b>	<b>1.2</b>
<b>Total Business volumes</b>	<b>74.6</b>	<b>60.1</b>	<b>14.5</b>	<b>24</b>
Internal Generation	21.9	29.6	(7.7)	(26)
<b>Total Natural Gas</b>	<b>120.9</b>	<b>113.9</b>	<b>7.0</b>	<b>6.0</b>

## Electricity sales volume (TWh)

Half year ended 31 December	2016	2015	Change (TWh)	Change %
<b>Retail</b>				
NSW	4.5	4.5	(0.0)	(0.2)
Victoria	1.7	1.9	(0.3)	(13.8)
Queensland	2.5	2.4	0.1	4.8
South Australia	0.5	0.5	(0.0)	(2.2)
<b>Total Retail volumes</b>	<b>9.2</b>	<b>9.4</b>	<b>(0.2)</b>	<b>(1.8)</b>
<b>Total Business volumes</b>	<b>10.2</b>	<b>9.3</b>	<b>0.9</b>	<b>10</b>
<b>Total Electricity</b>	<b>19.4</b>	<b>18.6</b>	<b>0.7</b>	<b>4</b>

# Energy Markets customer accounts

## Customer Accounts

Customer Accounts ('000)	31 December 2016			30 June 2016			Change
	Electricity	Natural Gas	Total	Electricity	Natural Gas	Total	
NSW <sup>1</sup>	1,233	260	1,493	1,240	252	1,492	1
Victoria	761	165	926	761	160	921	5
Queensland	561	481	1,041	566	478	1,044	(3)
South Australia <sup>2</sup>	185	201	386	174	199	372	14
<b>Total</b>	<b>2,740</b>	<b>1,107</b>	<b>3,846</b>	<b>2,741</b>	<b>1,089</b>	<b>3,830</b>	<b>17</b>

(1) Australian Capital Territory (ACT) customer accounts are included in New South Wales.

(2) Northern Territory customers are included in South Australia.

# Energy Markets generation

## Generation portfolio

Half year ended 31 December	Nameplate Capacity (MW)	Type <sup>1</sup>	Equivalent Reliability Factor <sup>2</sup>	Capacity Factor	Electricity Output (GWh)	Pool Revenue (\$m)	Pool Revenue (\$/MWh)
Eraring	2,880	Black Coal	88.7%	46%	5,841	322	55
Darling Downs	644	CCGT	98.5%	52%	1,490	95	64
Osborne <sup>3</sup>	180	CCGT	100.0%	41%	322	45	139
OCGT	2,037	OCGT	93.7%	6%	556	87	157
Shoalhaven	240	Pump/Hydro	91.6%	5%	57	7	121
Cullerin Range <sup>4</sup>	30	Wind	93.0%	60%	5	0	87
<b>Internal Generation</b>	<b>6,011</b>		<b>91.46%</b>		<b>8,272</b>	<b>557</b>	<b>67</b>
Renewable PPA's	732	Solar / Wind	n.a.	37%	1,209		

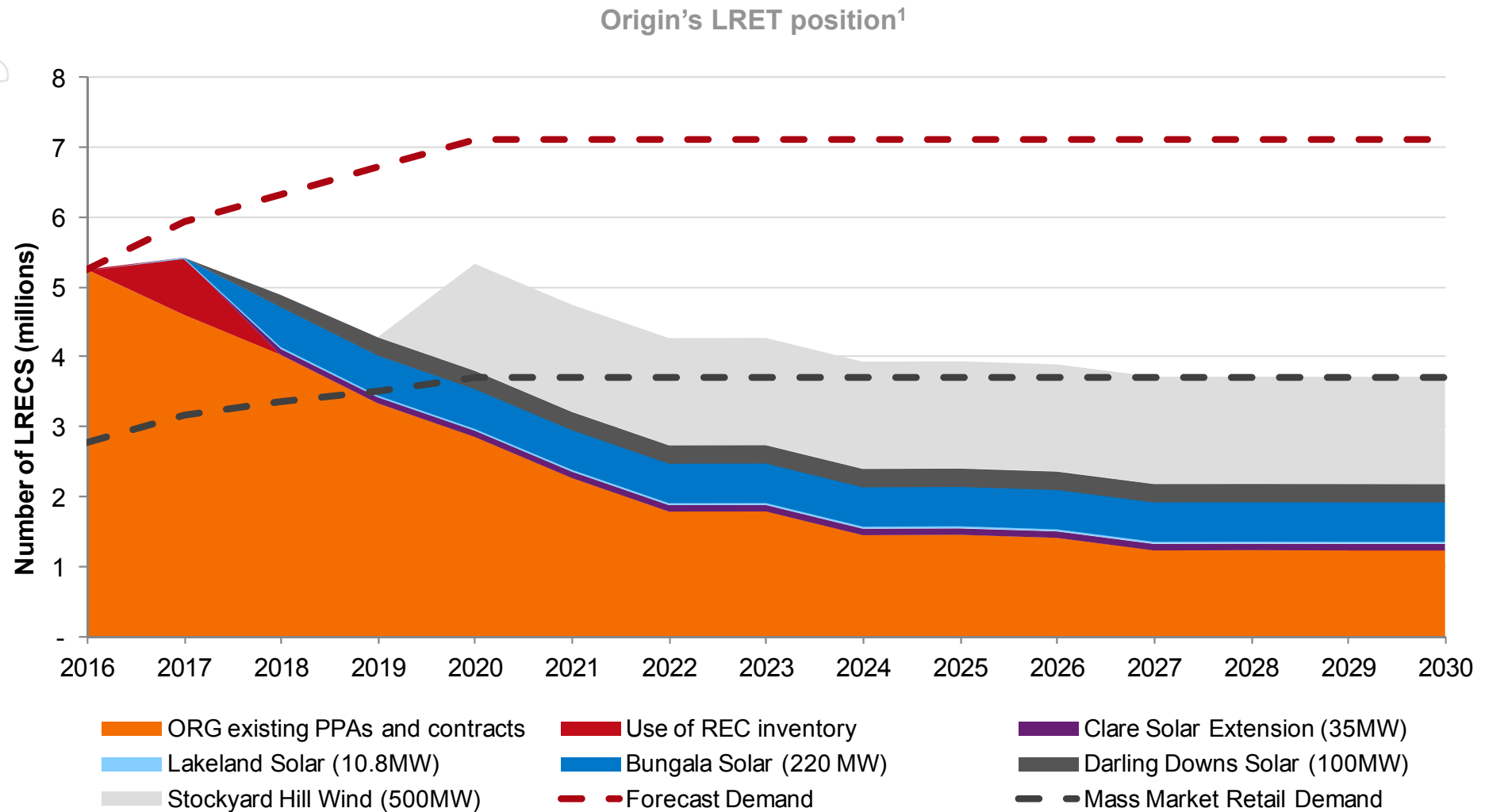
(1) OCGT = Open cycle gas turbine; CCGT = Combined cycle gas turbine.

(2) Availability for Eraring = Equivalent Availability Factor (which takes into account de-ratings).

(3) Origin has 50% interest in the 180MW plant and contracts 100% of the output.

(4) Cullerin Range Wind Farm sale was executed on 13th July 2016 (figures for Cullerin are for 12 days only)

# Renewable Power Purchase Agreements



(1) REC liability based on growth in line with AEMO's system demand

(2) Darling Downs Solar and Stockyard Hill Wind are based on management's estimates of the potential timing of development



## Important Notices

All figures in this report relate to businesses of the Origin Energy Group (Origin, or the Company), being Origin Energy Limited and its controlled entities, for the half year ended 31 December 2016 (the period) compared with the half year ended 31 December 2015 (the prior corresponding period), except where otherwise stated.

Origin's Financial Statements for the half year ended 31 December 2016 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 Interim Financial Statements and are disclosed on a basis consistent with the information provided internally to the Managing Director. 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 Managing Director 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 slide 38.

This report 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 is included in this 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.

On 10 August 2015, Origin divested its entire 53.09% interest in Contact Energy. As a consequence, Contact has been presented as a discontinued operation in the income statement. This investor presentation provides a discussion of the performance and operations of all of Origin's businesses during the half year ended 31 December 2016.

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.

## Glossary - Statutory Financial Measures

Statutory Financial Measures are measures included in the Interim Financial Statements for the Origin Consolidated Group, which are measured and disclosed in accordance with applicable Australian Accounting Standards. Statutory Financial Measures also include measures that have been directly calculated from, or disaggregated directly from financial information included in the Interim Financial Statements for the Origin Consolidated Group.

Term	Meaning
Statutory Profit/Loss	Net profit/loss after tax and non-controlling interests as disclosed in the Income Statement of the Origin Consolidated Interim Financial Statements.
Statutory earnings per share (EPS)	Statutory profit/loss divided by weighted average number of shares.
Cash flows from operating activities	Statutory cash flows from operating activities as disclosed in the Cash Flow Statement of the Origin Consolidated Interim Financial Statements.
Cash flows used in investing activities	Statutory cash flows used in investing activities as disclosed in the Cash Flow Statement of the Origin Consolidated Interim Financial Statements.
Cash flows from financing activities	Statutory cash flows from financing activities as disclosed in the Cash Flow Statement of the Origin Consolidated Interim Financial Statements.
External revenue	Revenue after elimination of intersegment sales on consolidation as disclosed in the Income Statement of the Origin Consolidated Interim Financial Statements
NCOIA	Net cash flow from operating and investing activities
Net debt	Total current and non-current interest bearing liabilities only less cash and cash equivalents.
Non-controlling interest	Economic interest in a controlled entity of the consolidated entity that is not held by the Parent entity or a controlled entity of the Group.
Statutory net financing costs	Interest expense net of interest income as disclosed in the Origin Consolidated Interim Financial Statements.

## Glossary - Non-IFRS Financial Measures

Non-IFRS Financial measures are defined as financial measures that are presented other than in accordance with all relevant Accounting Standards. Non-IFRS Financial measures are used internally by management to assess the performance of Origin's business, and to make decisions on allocation of resources.

Term	Meaning
Adjusted Net Debt	Net Debt adjusted to remove fair value adjustments on borrowings in hedge relationships.
Average Capital Employed	Shareholders Equity plus Origin Debt plus Origin's Share of APLNG Project Finance plus Non-cash fair value uplift plus net derivative liabilities. The average is a simple average of opening and closing in any year.
Gross Margin	Gross profit divided by Revenue.
Gross Profit	Revenue less cost of goods sold.
ITDA	Interest, Tax, Depreciation and Amortisation
Non-cash fair value uplift	Reflects the impact of the accounting uplift in the asset base of APLNG of \$1.9 billion which was recorded on the creation of APLNG and subsequent share issues to Sinopec. This balance will be depreciated in APLNG's income statement on an ongoing basis and, therefore, a Dilution Adjustment is made to remove this depreciation. The non-cash fair value uplift adjustments are disclosed and explained in Note C1.2 of the financial statements.
Prior corresponding period	6 month period to 31 December 2015.
Underlying Profit	Underlying net profit after tax and non-controlling interests as disclosed in note A1 of the Origin Consolidated Interim Financial Statements.
Underlying earnings per share	Underlying profit/loss divided by weighted average number of shares.
Items excluded from Underlying Profit	Items that do not align with the manner in which the Managing Director reviews the financial and operating performance of the business which are excluded from Underlying Profit.
Total Segment Revenue	Total revenue for the Energy Markets, Integrated Gas, Contact Energy and Corporate segments, including inter-segment sales, as disclosed in note A1 of the Origin Consolidated Interim Financial Statements.
Underlying average interest rate	Underlying interest expense for the current period divided by Origin's average drawn debt during the year (excluding funding related to Australia Pacific LNG).
Underlying EBITDA	Underlying earnings before underlying interest, underlying tax, underlying depreciation and amortisation (EBITDA) as disclosed in note A1 of the Origin Consolidated Interim Financial Statements.
Underlying depreciation and amortisation	Underlying depreciation and amortisation as disclosed in note A1 of the Origin Consolidated Interim Financial Statements.
Underlying EBIT	Underlying earnings before underlying interest and underlying tax (EBIT) as disclosed in note A1 of the Origin Consolidated Interim Financial Statements.
Underlying income tax expense	Underlying income tax expense as disclosed in note A1 of the Origin Consolidated Interim Financial Statements.
Underlying net financing costs	Underlying interest expense net of interest income as disclosed in note A1 of the Origin Consolidated Interim Financial Statements.
Underlying profit before tax	Underlying profit before tax as disclosed in note A1 of the Origin Consolidated Interim Financial Statements.
Underlying share of ITDA	The Group's share of underlying interest, underlying tax, underlying depreciation and underlying amortisation (ITDA) of equity accounted investees as disclosed in note A1 of the Origin Consolidated Interim Financial Statements.

## Glossary - Non-Financial Terms

Term	Meaning
APLNG	Australia Pacific LNG – an incorporated Joint Venture between Origin, ConocoPhillips and Sinopec
Bbl	Barrel – An international measure of oil production. 1 barrel = 159 litres
Boe	Barrel of oil equivalent
Capacity factor	A generation plant's output over a period compared with the expected maximum output from the plant in the period based on 100% availability at the manufacturer's operating specifications.
Contingent Resource	Contingent Resources estimates are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations by application of development projects but which are not currently considered to be commercially recoverable due to one or more contingencies. Contingent Resources are a class of discovered recoverable resources.
DQT	Downward Quantity Tolerance
Equivalent reliability factor	Equivalent reliability factor is the availability of the plant after scheduled outages.
GJ	Gigajoule = $10^9$ joules
GJe	Gigajoules equivalent = $10^6$ PJe
IPO	Initial Public Offering
Joule	Primary measure of energy in the metric system.
kT	kilo tonnes = 1,000 tonnes
kW	Kilowatt = $10^3$ watts
kWh	Kilowatt hour = standard unit of electrical energy representing consumption of one kilowatt over one hour.
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas
Mboe	million barrels of oil equivalent
Mmbtu	million British thermal units
MW	Megawatt = $10^6$ watts
MWh	Megawatt hour = $10^3$ kilowatt hours
NewCo	Conventional upstream exploration and production business that Origin announced on 6 December 2016 it intends to divest by IPO]
PJ	Petajoule = $10^{15}$ joules
PJe	Petajoules equivalent = an energy measurement Origin uses to represent the equivalent energy in different products so the amount of energy contained in these products can be compared. The factors used by Origin to convert to PJe are: 1 million barrels crude oil = 5.8 PJe; 1 million barrels condensate = 5.4 PJe; 1 million tonnes LNG = 55.4 PJe; 1 million tonnes LPG = 49.3 PJe; 1 TWh of electricity = 3.6 PJe.
Ramp Gas	Short term Queensland gas supply as upstream assets associated with CSG-to-LNG projects gradually increase production in advance of first LNG
SPE	Society of Petroleum Engineers
TCF	Trillion cubic feet
TJ/d	Terajoules per day (Terajoule = $10^{12}$ Joules)
TW	Terawatt = $10^{12}$ watts
TWh	Terawatt hour = $10^9$ kilowatt hours
Watt	A measure of power when a one ampere of current flows under one volt of pressure.