

# **Australian Domestic Gas Outlook Conference**

**Creating new gas hubs and enabling new supply for southern Australia** David Maxwell

24 March 2021



# Three basic ingredients for successful new gas development



### 1. Resource

Affordable, cost competitive, proven deliverability, long-life



### 2. Infrastructure

Processing and transportation capacity



### 3. Market

Gas demand, close to resource and infrastructure, open market, policy support

Qualified operator



+ Other ingredients



Bankable business case



# **Cooper Energy strategy aligned to fundamentals**



# Disciplined approach to executing upstream gas strategy

Long-term cycle for delivery of gas developments<sup>1</sup>



# Sole: Discovered in 1973; uneconomic until 2016

The first Final Investment Decision for an offshore gas development in southern Australia in ~10 years

### Sole gas field: Cooper Energy (100% owner and operator)





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# Sole gas project regulatory figures

6 years Regulatory approvals process

25 regulators >150 engagements

# 129 regulatory approvals





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# **Transformational gas strategy**

Focus on southern gas markets has delivered a step-change in production and sales volumes



- From no domestic gas production in FY16 to 60 TJ/day today
- Working towards a >100% increase in gas production rates from H1 FY21 levels
- Further production increases from existing projects
  - Athena Gas Plant
  - Otway Phase 3 Development
  - Manta appraisal and development

# **Opportunities in place for growing gas reserves**

Clear pathway for new discoveries and converting contingent and prospective resources into reserves<sup>1</sup>



1. For further information on reserves and resources, refer to ASX announcements dated 31 August 2020 (reserves and contingent resources as at 30 June 2020; Annie 2C contingent resources), 12 August 2019 (Manta 2C contingent resources), 8 November 2018 (Elanora prospective resources) and 4 May 2016 (Manta Deep, Chimaera East prospective resources); there have been no material changes to information or assumptions contained in these announcements

2. VIC/P72 and VIC/P75 (Gippsland Basin); VIC/P44 and VIC/P76 (Otway Basin) 3. Unrisked best estimate (P50)

# Twin gas hub strategy now in place

Optimising supply source to a portfolio of contracts

![](_page_8_Figure_3.jpeg)

- Mixture of utility and industrial customers
- Competitive operating cost production utilising remotely operated subsea tieback
- Concentration around processing hubs at Orbost and Athena gas plants
- Capacity to expand throughput

![](_page_8_Picture_8.jpeg)

![](_page_8_Picture_9.jpeg)

# The gas supply shortage story remains the same

By 2024, southern gas production expected to lag demand by 113 PJ (~5x annual Sole production)

![](_page_9_Figure_3.jpeg)

![](_page_9_Picture_5.jpeg)

# Increasing reliance on Queensland gas to meet southern demand

Growing influence of LNG pricing on domestic gas prices

![](_page_10_Figure_3.jpeg)

1. Source: Australian Energy Regulator 2. Refer APA website for further information

# Critical macro settings to support exploration and development

- Understanding of supply-side fundamentals
- Recognition that abundance of low-cost gas is gone
- Fair prices to support new developments
- Government support for exploration and development activity
- Customer support through long-term contracting and potential risk sharing of new developments
- Energy policy desperately needed
  - encourage transparency and open price market
  - support the exit of multinationals without disruption
  - respect critical and long-term role of gas as a low-carbon transition fuel
  - clarity regarding future restoration liabilities

![](_page_11_Picture_12.jpeg)

# Net zero carbon emissions for FY20

Pursuing partnerships and emission reductions for long-term net zero carbon objectives

- In partnership with Greening Australia and BioDiverse Carbon and their Coorong Biodiversity Project
- Purchased 11,410 Australian Carbon Credit Units (ACCU) through the partnership in H1 FY21
- 10,022 ACCU retired to fully offset FY20 Scope 1, Scope 2 and controllable Scope 3 emissions
- Seeking formal accreditation of carbon neutral status from ClimateActive
- Progressing other strategic partnerships and opportunities to reduce and offset emissions from day-to-day operations
- Further details available in Cooper Energy's Sustainability Report 2020 (<u>Link</u>)

### **Coorong Biodiversity Project**

- Environmental plantings, reforestation and revegetation of 600 ha of degraded farmland in the Coorong wetlands region of South Australia
- Restoring native vegetation and wildlife habitats, including threatened Malleefowl and migratory shorebirds, and improving the condition of subcoastal wetlands
- A registered Emissions Reduction Fund project

![](_page_12_Picture_13.jpeg)

## Wrap up

- Three basic ingredients for successful new gas development
  - resource, infrastructure, market
- Plus critical enablers
  - stable policy, bankable business case, qualified operator
- Significant gas supply shortfalls forecast for southern Australia
  - with increasing reliance on gas from Queensland
- Otway and Gippsland basins superior sources of new gas supply for southern Australia
- Cooper Energy's twin gas hub strategy is part of the solution for growing new gas supply

![](_page_13_Picture_10.jpeg)

### Appendix

![](_page_14_Picture_1.jpeg)

![](_page_14_Picture_2.jpeg)

# Sole gas project

### Production stabilising with improved gas plant performance

### Offshore project – Sole gas field (Cooper Energy 100% owner and operator)

- Two production wells and subsea tie-back
- 65km pipeline, umbilicals and shore crossings
- Commissioned on time and below budget
- 238 PJ 2P reserves<sup>1</sup>

### Onshore project – Orbost Gas Processing Plant (APA 100% owner and operator)

- Construction completed in 2019
- Unexplained foaming and fouling impaired production capacity and reliability
- Sulphur absorbers reconfigured in late 2020
- Currently producing at 45 TJ/day with focus on reaching planned production rate of 68 TJ/day

### **Commercial and financial**

- Long-term Gas Sales Agreements initiated 1 December 2020 and 1 January 2021
- Contracted gas supply of 19.75 PJ in 2021
- Long term take or pay contracts in place for 67% of forecast production
- Mixture of utility and industrial customers
- Senior bank debt facility in place with five Australian and international banks

### Offshore Sole gas field (Cooper Energy)

![](_page_15_Picture_20.jpeg)

#### **Orbost Gas Processing Plant (APA)**

![](_page_15_Picture_22.jpeg)

![](_page_15_Picture_23.jpeg)

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# **Athena Gas Plant Project**

Increasing margins, free cash flow generation, gas processing capacity and flexibility

#### The opportunity

- Low-cost processing hub for Casino Henry and new discoveries
- Ownership of processing capacity enables • marketing of firm gas supply terms
- Capacity to support increased daily production rates
- Productivity gains from lower inlet pressure plant

#### **Develop Phase completed**

- FID taken July 2020 ٠
- \$37 million capital cost (gross; Cooper Energy 50%)
- Plant modifications include compressor and • control upgrades
- Pipeline tie-in

![](_page_16_Picture_13.jpeg)

#### **Execute Phase underway**

- Commenced October 2020
- Targeting first gas in Q1 FY22
  - subject to no material COVID-19 impacts on supply chain and travel
- ~60% complete at 28 February 2021

### **Project benefits upon commissioning**

- ~\$0.50/GJ targeted operating cost saving<sup>1</sup>
- ~3 TJ/day (net) production uplift<sup>2</sup>
- Increased processing capacity for future gas developments

![](_page_16_Figure_23.jpeg)

![](_page_16_Figure_24.jpeg)

1. Estimate of operating cost saving for current production based on forecast Athena Gas Plant costs relative to existing Iona Gas Plant processing tariffs 2. Based on existing wells and infrastructure; increased production attributable to lower Athena Gas Plant inlet pressure relative to the Iona gas plant

# **Otway Phase 3 Development Project (OP3D)**

Developing Henry-3 and Annie-2 via the Athena Gas Plant

![](_page_17_Figure_3.jpeg)

### **OP3D** indicative development concept

![](_page_17_Figure_5.jpeg)

- Potential drilling of Henry-3 and Annie-2 in the second half of CY2022, subject to FID and joint venture approval
- · Currently in Select phase; preparing to enter FEED
- Targeting FID in H1 FY22

![](_page_17_Picture_9.jpeg)

# **Abbreviations**

\$	Australian dollars
APA	APA Group (ASX: APA)
bbl	Barrels
Bcf	Billion cubic feet of gas
bopd	Barrels of oil per day
Cooper Energy	Cooper Energy Limited ABN 93 096 170 295
FEED	Front End Engineering and Design
FID	Final Investment Decision
GSA	Gas Sales Agreement
kbbl	Thousand barrels
km	Kilometres
km m	Kilometres Metres
km m MMboe	Kilometres Metres Million barrels of oil equivalent
km m MMboe MMscf/day	Kilometres   Metres   Million barrels of oil equivalent   Million standard cubic feet of gas per day
km m MMboe MMscf/day n/m	Kilometres   Metres   Million barrels of oil equivalent   Million standard cubic feet of gas per day   Not meaningful
km m MMboe MMscf/day n/m NOPTA	Kilometres   Metres   Million barrels of oil equivalent   Million standard cubic feet of gas per day   Not meaningful   National Offshore Petroleum Titles Administrator
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km   m   MMboe   MMscf/day   n/m   NOPTA   OGPP   PEL   PEP	KilometresMetresMillion barrels of oil equivalentMillion standard cubic feet of gas per dayNot meaningfulNational Offshore Petroleum Titles AdministratorOrbost Gas Processing PlantPetroleum Exploration LicencePetroleum Exploration Permit

PPL	Petroleum Production Licence
PRL	Petroleum Retention Lease
scf	Standard cubic feet of gas
TJ	Terajoules
YTD	Year to date

![](_page_18_Picture_3.jpeg)

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Qualified petroleum reserve and resources evaluator: This Presentation contains information on petroleum reserves and resources which is based on and fairly represents information and supporting documentation reviewed by Mr Andrew Thomas who is a full time employee of Cooper Energy holding the position of General Manager, Exploration & Subsurface, holds a Bachelor of Science (Hons), is a member of the American Association of Petroleum Geologists and the Society of Petroleum Engineers and is qualified in accordance with ASX Listing Rule 5.41 and has consented to the inclusion of this information in the form and context in which it appears. P50 as it relates to costs is best estimate; P90 as it relates to costs is high estimate. Information on the company's reserves and resources and their calculation are provided in the appendices to this Presentation.

Numbers in this report have been rounded. As a result, some figures may differ insignificantly due to rounding and totals reported may differ insignificantly from arithmetic addition of the rounded numbers.

Approved and authorised for release by David Maxwell, Managing Director, Cooper Energy Limited.

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![](_page_19_Picture_9.jpeg)