



10 February 2022

Athena Gas Plant

# Bell Potter Unearthed 2022



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This Presentation contains information on petroleum reserves and resources which is based on and fairly represents information and supporting documentation prepared under the supervision of 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, 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.

The estimates of petroleum reserves and contingent resources contained in this presentation are as at 30 June 2021. Cooper Energy is not aware of any new information or data that materially affects the estimates of reserves and contingent resources and the material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. Cooper Energy prepares its petroleum reserves and contingent resources estimates in accordance with the 2018 Petroleum Resources Management System (PRMS) sponsored by the Society of Petroleum Engineers (SPE). Unless otherwise stated, all references to petroleum reserves and contingent resources quantities in this presentation are Cooper Energy's net share. Reference points for Cooper Energy's petroleum reserves and production are defined points within Cooper Energy's operations where normal exploration and production business ceases, and quantities of produced product are measured under defined conditions prior to custody transfer. Fuel, flare and vent consumed to the reference points are excluded.

Petroleum reserves are aggregated by arithmetic summation by category and as a result, proved reserves may be a very conservative estimate due to the portfolio effects of arithmetic summation. Petroleum reserves are typically prepared by deterministic methods with support from probabilistic methods. Petroleum reserves replacement ratio is the ratio of the change in petroleum reserves (excluding production) divided by production. Organic reserves replacement ratio excludes net acquisitions and divestments. Conversion factors used to evaluate oil equivalent quantities are sales gas and ethane: 1PJ of sales gas and ethane equals 171,937 boe; 1 tonne of LPG equals 8.458 boe; 1 barrel of condensate equals 0.935 boe; 1 barrel of crude oil equals 1 boe.

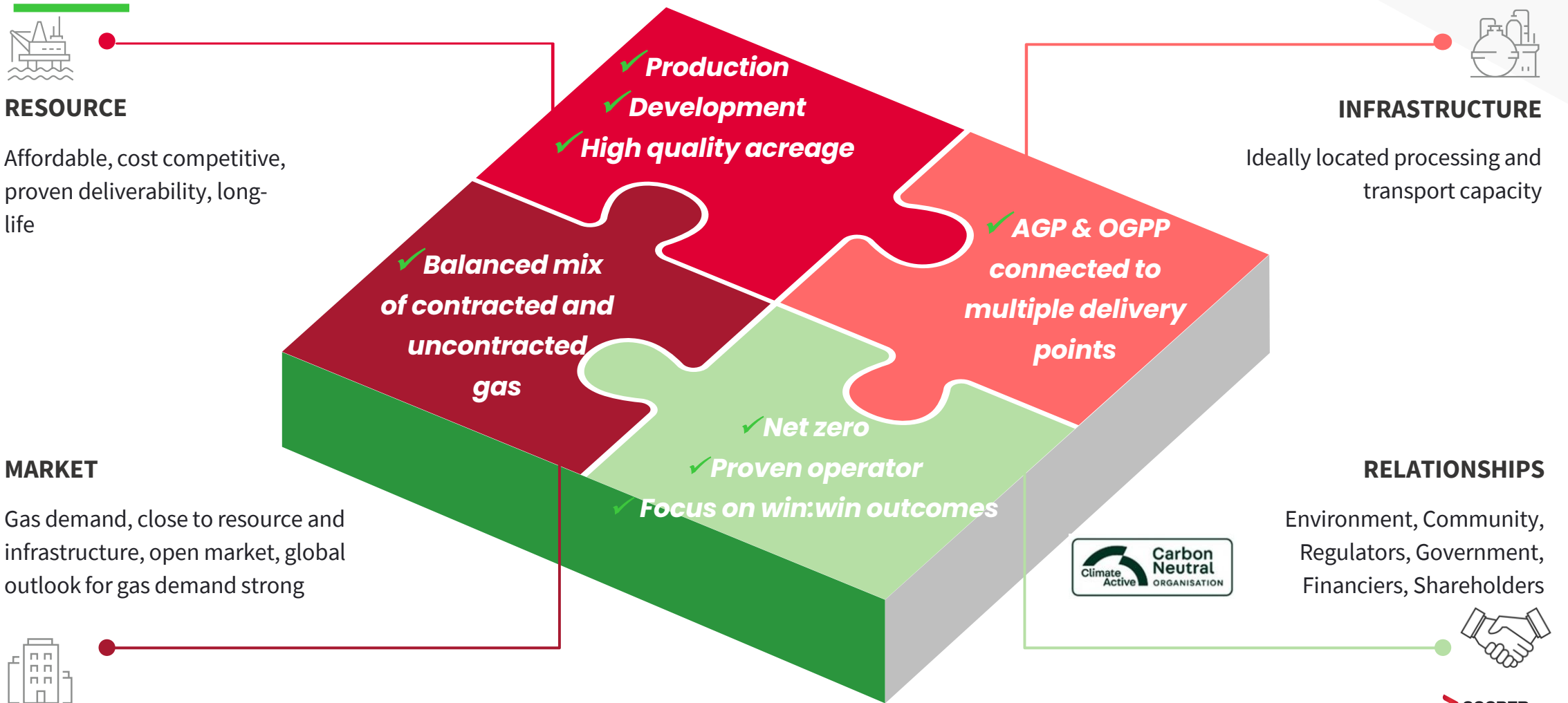
Numbers in this presentation have been rounded. As a result, some figures may differ insignificantly due to rounding and totals reported may differ insignificantly from arithmetic addition of the rounded numbers.

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

Level 8, 70 Franklin Street, Adelaide 5000

# The elements for gas development in south east Australia

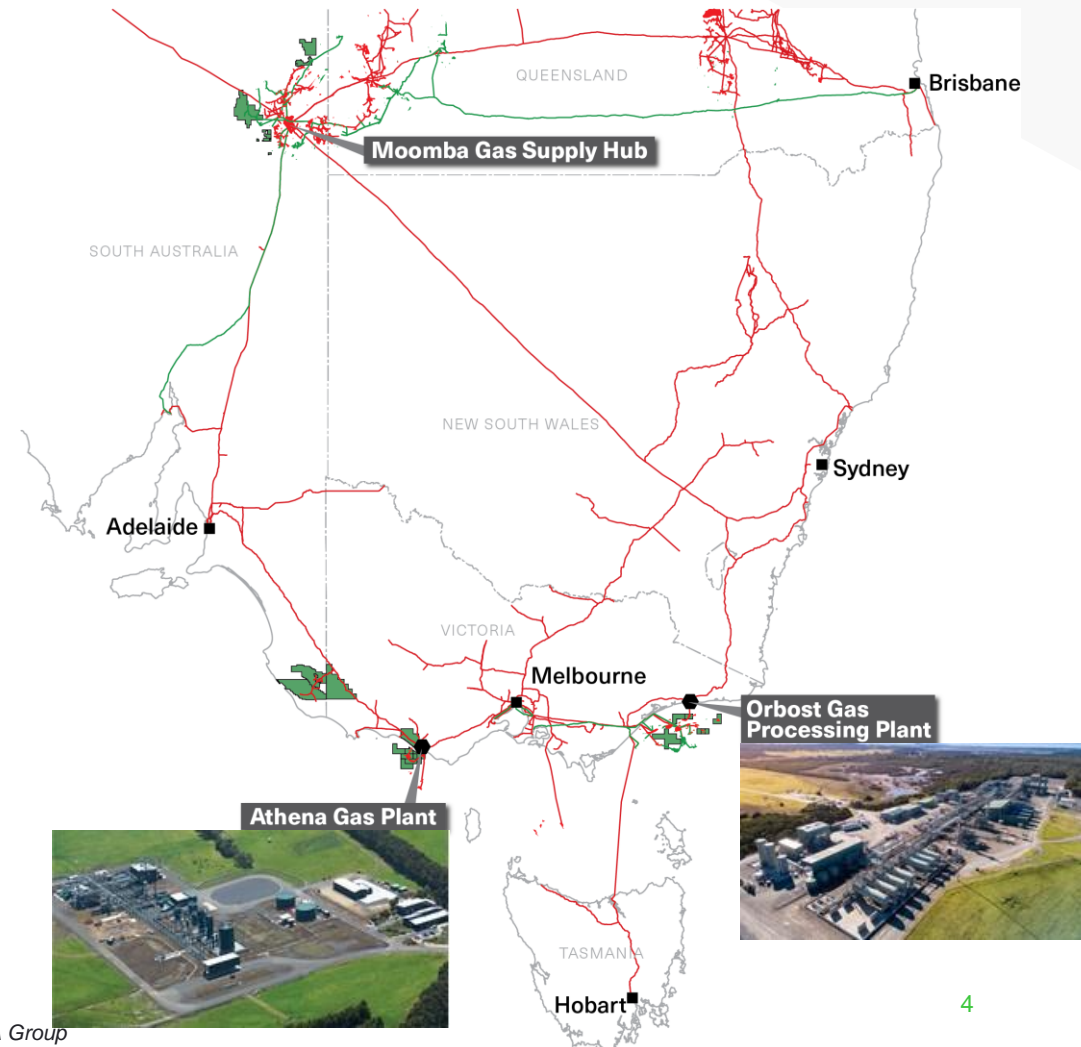
Cooper Energy has 'set' the key pieces in place and growth is underway



# Twin gas hub strategy driving sustainable growth

## Concentration around processing hubs in the Otway and Gippsland basins




- ✓ Proven, cost competitive hydrocarbon basins connected to south-eastern markets
- ✓ Athena Gas Plant<sup>1</sup> returned to service on 10 December 2021
  - Currently processing at 28 TJ/day, optimisation underway
  - Low-cost, owned and operated gas processing infrastructure
  - ~150 TJ/day gas processing capacity
- ✓ Orbest Gas Processing Plant<sup>2</sup> - performance improvements resulted in an increased processing rate of 50TJ/d from January; with processing rates above 50TJ/d to be trialled in February
- ✓ Gas supply tight; prices rising with increasing influence of LNG prices
- ✓ Global energy outlook supports the market's long-held view that gas will be required for decades to come



1. Cooper Energy: 50% operated ownership interest; Mitsui E&P Australia: 50% 2. Orbest Gas Processing Plant owned and operated by APA Group

# Our producing assets

Expansive acreage position across three proven producing basins<sup>1</sup>

	Offshore Otway Basin	Offshore Gippsland Basin	Cooper Basin
			
<b>Ownership</b>	50% and operator	100% and operator	25%
<b>Joint venture partner</b>	Mitsui E&P Australia	–	Beach Energy (operator)
<b>2P Reserves (30 June 2021)<sup>2</sup></b>	54 PJ	227 PJ	1.1 MMboe
<b>2C Resources (30 June 2021)<sup>2</sup></b>	49 PJ	135 PJ	0.5 MMboe
<b>Production (FY21)</b>	4.7 PJ	10.4 PJ	157 kbbl
<b>Processing infrastructure</b>	Athena Gas Plant	Orbost Gas Processing Plant	Moomba plant

1. Maps of all Cooper Energy tenements are included in the supporting information - page 19 of this document

2. For further information on Reserves and Contingent Resources, refer to ASX announcements dated 23 August 2021 (Reserves and Contingent Resources as 30 June 2021)

# Gas processing infrastructure

Dedicated plants for processing Cooper Energy gas

## Otway Basin



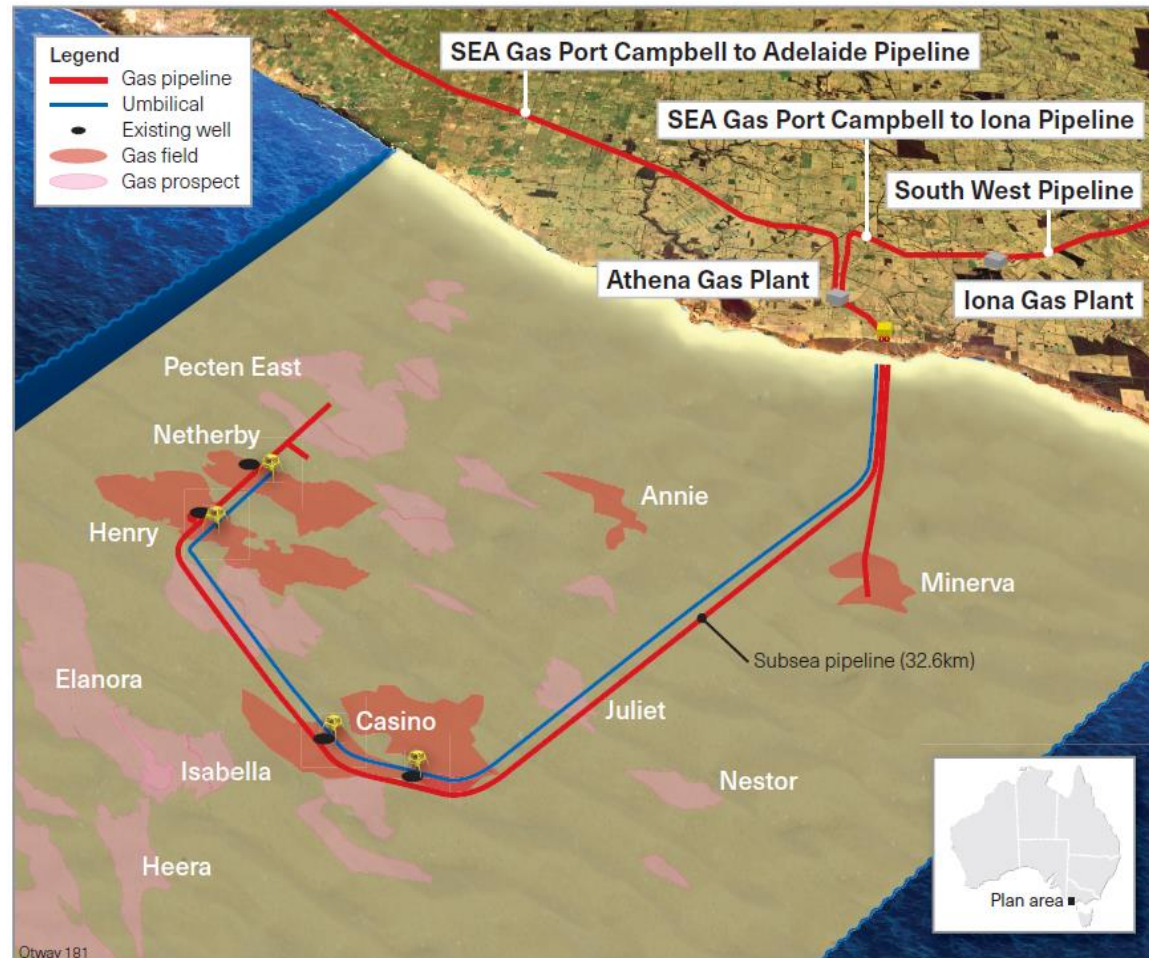
## Gippsland Basin



<b>Facility</b>	Athena Gas Processing Plant	Orbost Gas Processing Plant
<b>Ownership</b>	Cooper Energy (50%)	APA Group (100%)
<b>Operator</b>	Cooper Energy	APA Group
<b>Supplying gas fields</b>	Casino, Henry, Netherby	Sole
<b>Markets supplied to</b>	South-eastern Australia	South-eastern Australia
<b>Processing capacity</b>	150 TJ/day	Currently 50 TJ/day
<b>Current processing rates</b>	Commissioning up to 30-32 TJ/day	46 TJ/day (Jan'22 average)

# Otway Basin gas hub

Integrated operation enabling growing gas supply and free cash flow with high quality prospects

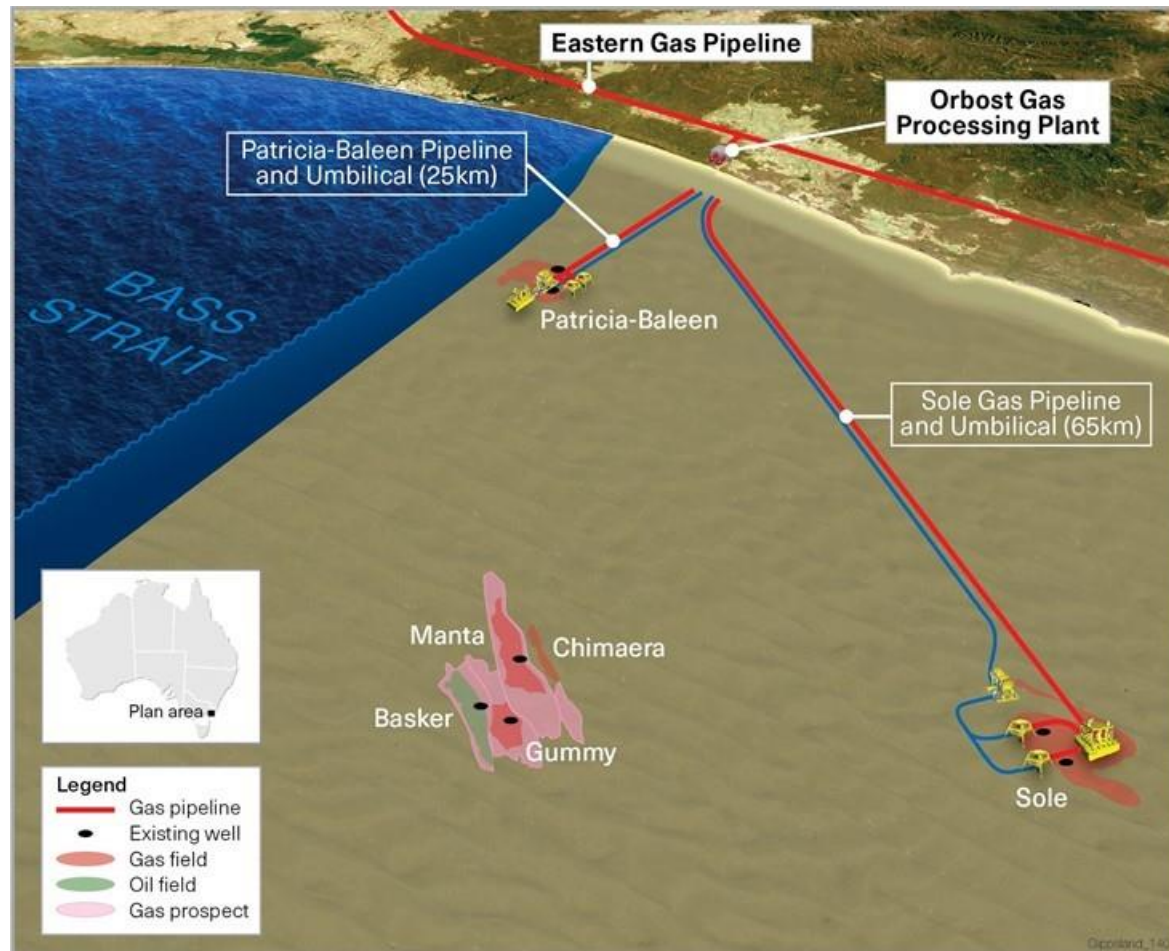


- ✓ Proven cost competitive hydrocarbon basin connected to south-eastern markets
- ✓ Athena Gas Plant returned to service in Q2 FY22
  - Low-cost, owned and operated gas processing infrastructure
  - ~150 TJ/day gas processing capacity
  - Significant economies of scale from increasing gas throughput
- ✓ Significant potential for bringing new gas supply online
  - Otway Phase 3 Development (OP3D)
  - Seismic amplitude supported (low-risk) exploration prospects adjacent to existing production infrastructure
  - New reprocessed 3D seismic data has improved quality of prospect interpretation
  - Elanora prospective resource estimate upgraded to 161 Bcf (Gross mean)
  - The aggregated prospective resource estimate of five amplitude supported exploration prospects is 585 Bcf (Gross mean estimate)<sup>1</sup>

1. Refer *Otway Basin Exploration Prospective Resource Update* announced to the ASX on 9 February 2022

# Gippsland Basin gas hub

Prolific hydrocarbon basin connected to south-eastern markets



- ✓ Production, appraisal and exploration opportunities
- ✓ Potential new exploration play from deeper prospects
- ✓ 100% Cooper Energy ownership of all permits
- ✓ APA undertaking Phase 2B works at OGPP
- ✓ Recent performance improvement processing rate to 50TJ/d



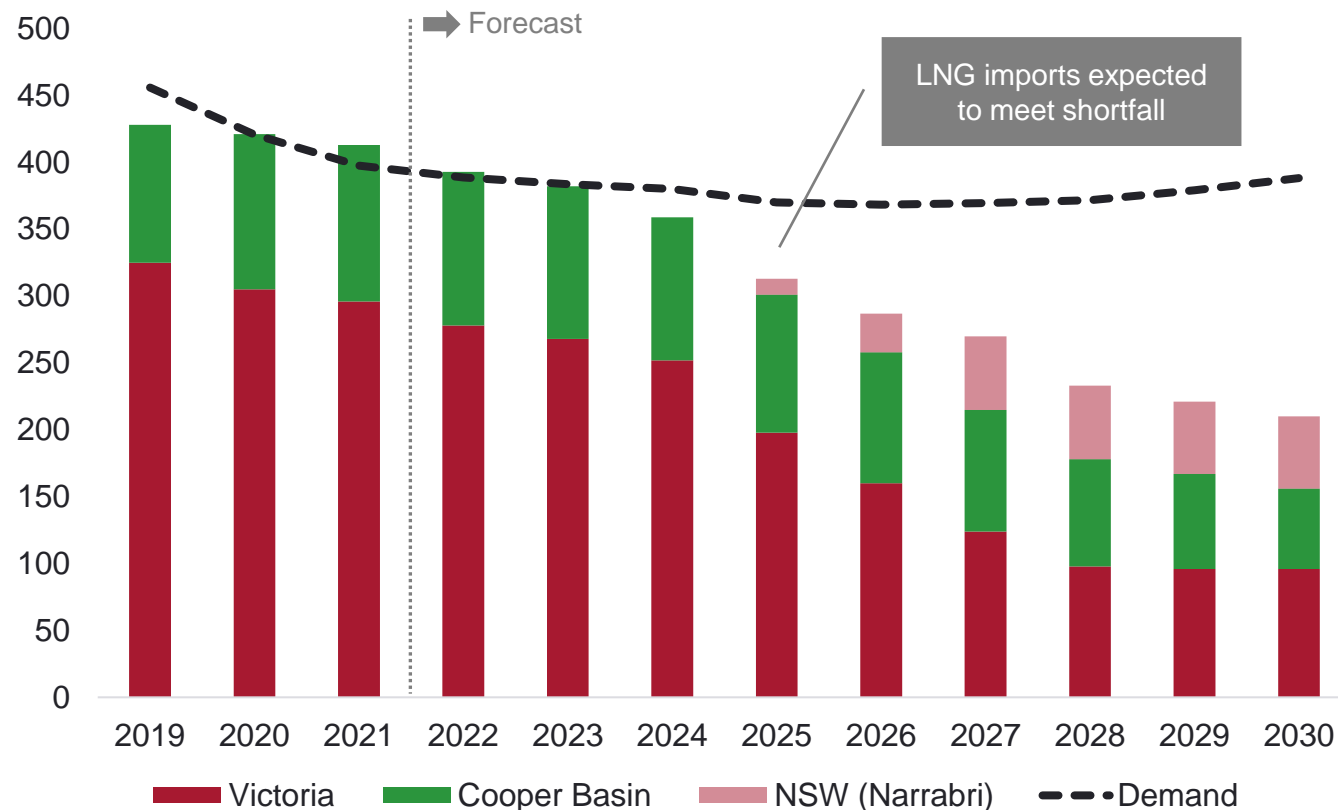
Orbost Gas Processing Plant, owned and operated by APA



# Domestic gas market dynamics support new developments

Continuing trend of tight gas supply and rapidly declining southern gas production

Southern gas production and demand (PJ)<sup>1</sup>



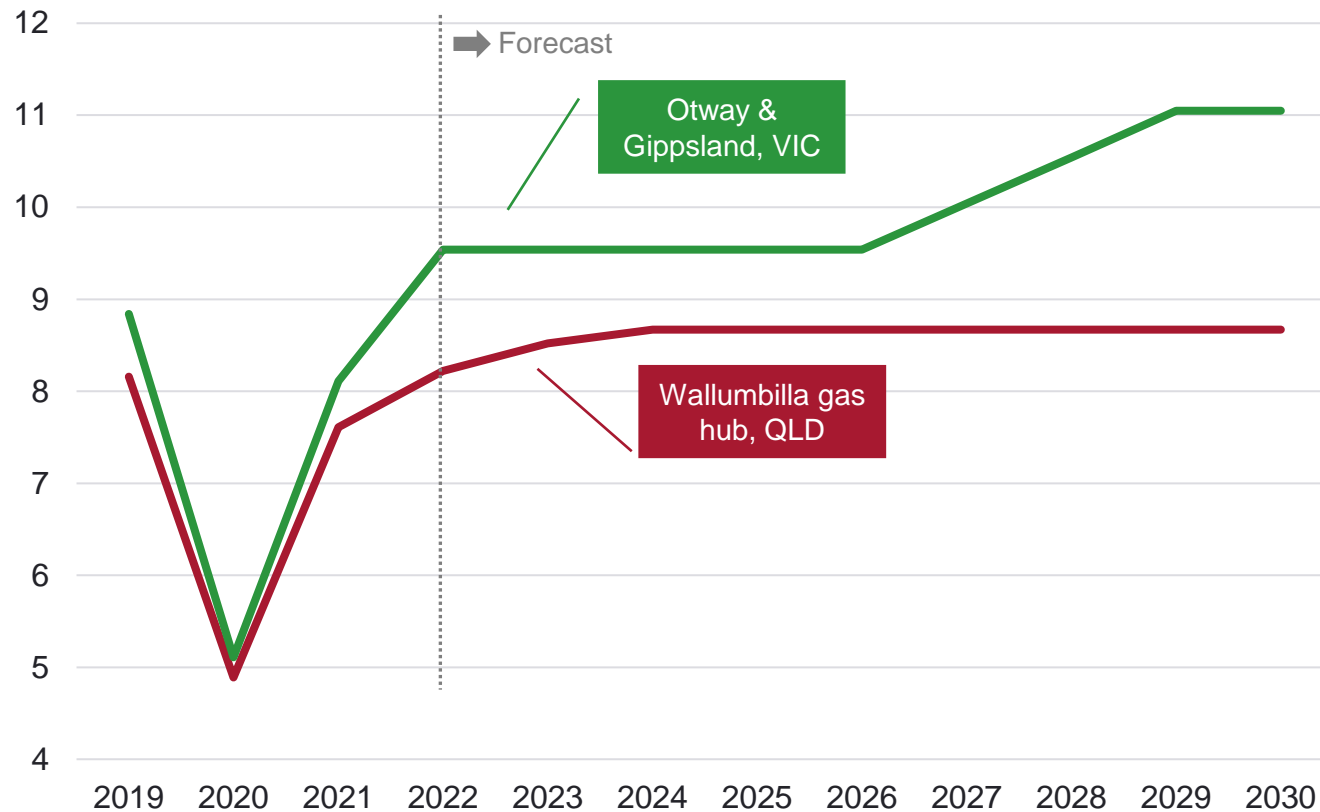
- Tight domestic supply demand balance
- Projected supply shortfall of ~60 PJ by 2025 and rapidly growing
- Victoria gas production forecast includes yet to be developed Cooper Energy fields; OP3D, Elanora and Manta
- Queensland CSG and LNG imports expected to meet shortfall

1. Source of production forecasts: EnergyQuest; Source of demand forecasts: Central scenario, AEMO Gas Statement of Opportunities 2021

# A strengthening domestic gas price outlook

## LNG netback an increasing influence on domestic gas prices

Forecast gas prices (\$/GJ)<sup>1</sup>



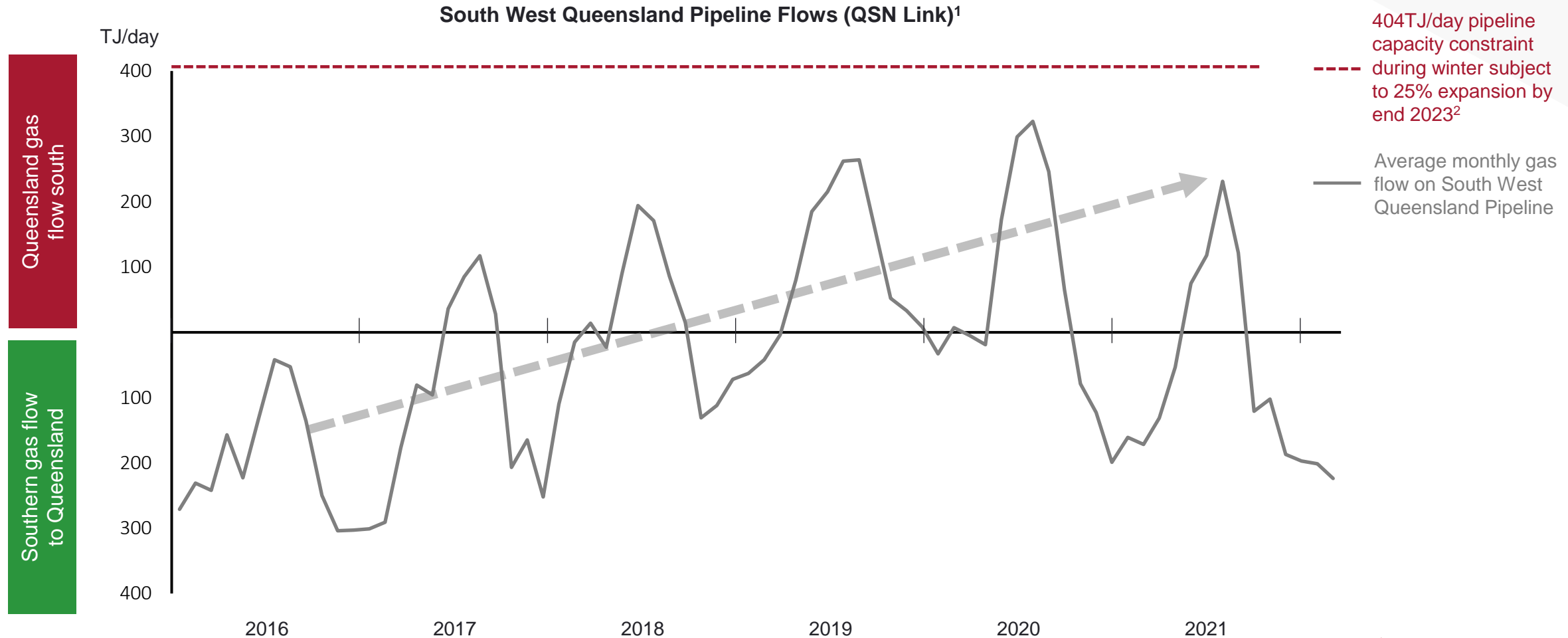
- Increasing influence of global LNG prices on domestic gas prices
- LNG netback price is becoming the point of indifference for domestic gas supply
  - Average 2023 ACCC forecast LNG netback price of \$23.71/GJ<sup>2</sup>
  - ACCC moving to commence reporting of long-term LNG netback price series following consultation
- Queensland CSG and LNG imports expected to meet shortfall and represent the marginal cost of supply
- Long term LNG imports prices not expected to be less than A\$10/GJ

1. Source: EnergyQuest

2. Source: ACCC as at 1 February 2022; LNG netback price is ACCC's measure of an export parity price that a gas supplier can expect to receive for exporting its gas

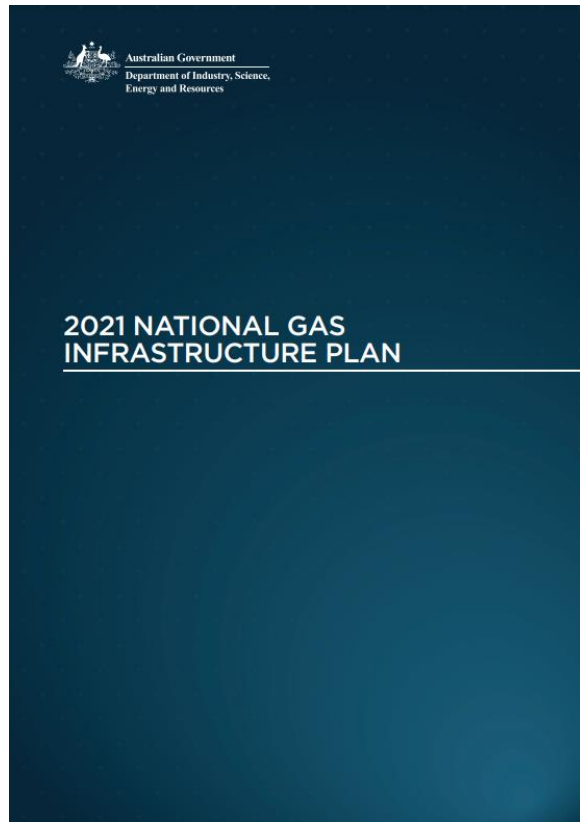
# Increasing reliance on Queensland gas to meet southern demand

Growing influence of LNG pricing on domestic gas prices as southern supply declines



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

# Federal government report highlights value of Cooper Energy's assets

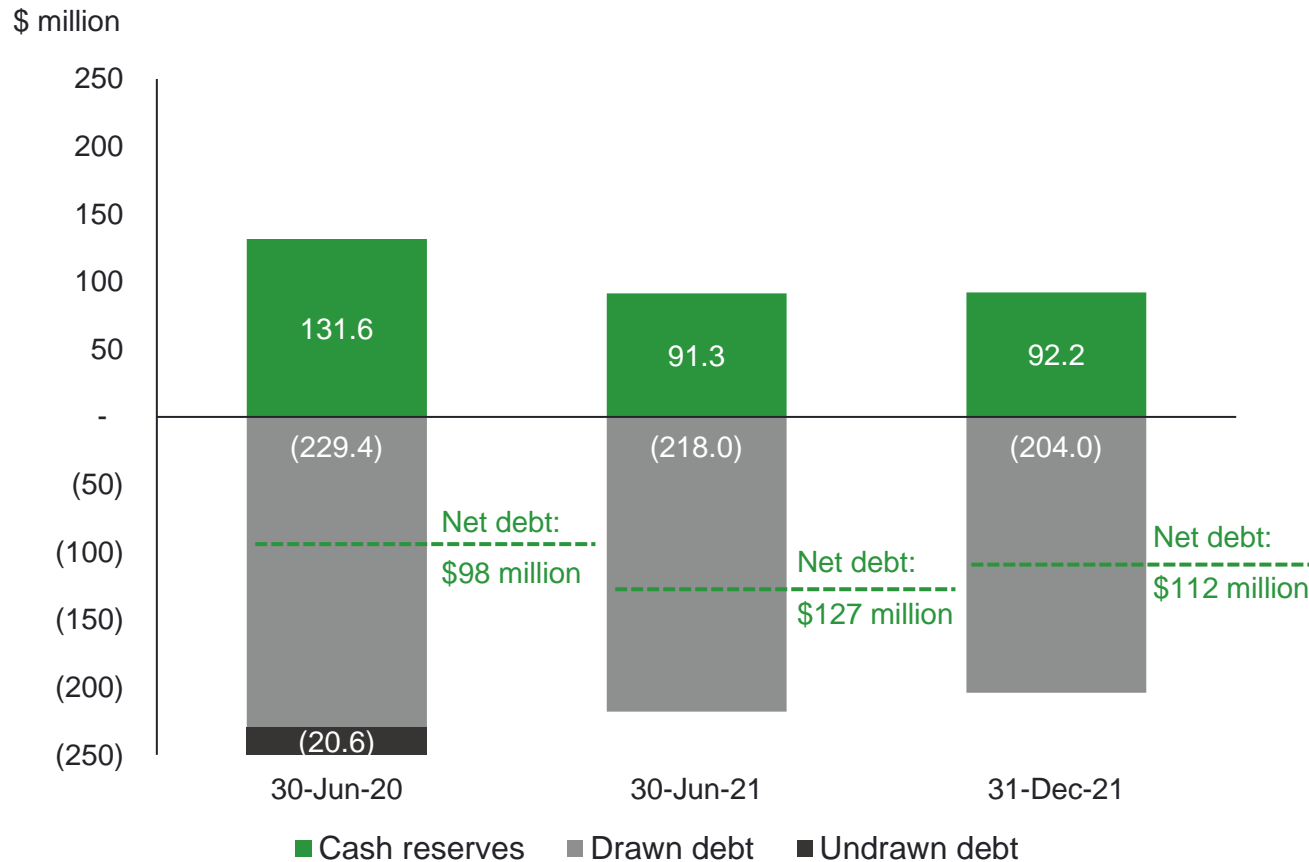


*“New production from the Bass and Otway basins should be prioritised to come online by 2025 to deliver much needed gas to southern customers”*

*“These new southern fields have a relatively low assumed upstream cost of supply and have the added advantage of lower pipeline tariffs for transport to Melbourne. As a result, new supply from these offshore basins is the lowest-cost way to alleviate the remaining 12 PJ of annual shortfall in 2026 on a ‘delivered cost of new supply’ basis.”*

# Demonstrated liquidity management

Strengthened cash flows since commencement of the Sole Gas Sales Agreements



- Ample liquidity maintained during execution of the Sole development
- Debt facility repayments now underway
- Strict focus on optimal capital and cost management across the business
- Ongoing lender support during OGPP commissioning
- Realigned principal repayments for lower Orbost processing rates

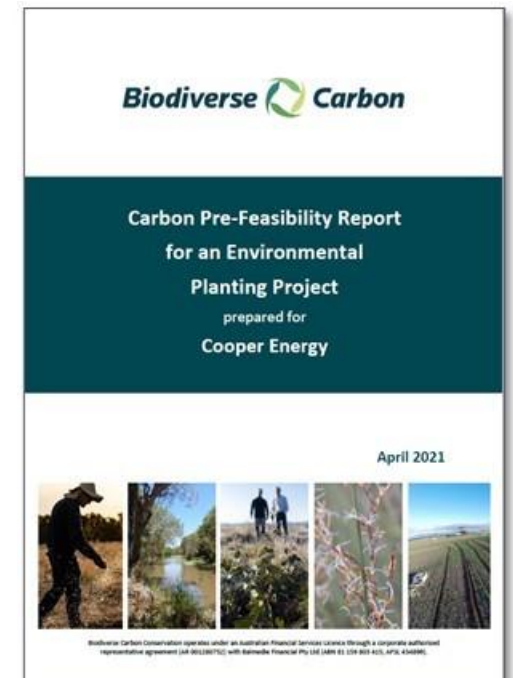
Cooper Energy lending syndicate



# Australia's first carbon neutral domestic gas producer

## Climate Active carbon neutral certification

- ✓ Emissions fully offset with Australian Carbon Credit Units (ACCUs)
  - Scope 1, Scope 2 and controllable Scope 3 emissions
- ✓ Climate Active certification
- ✓ Objective to maintain operational net zero carbon emissions
  - Building a tradable carbon credit portfolio and partner in renewable projects
- ✓ 2020 South Australian Premier's Environment Award
- ✓ Assessing partnerships, opportunities and emissions reduction initiatives to maintain net zero long-term
  - New offset projects in south-eastern Australia
  - Wholesale customer initiatives for Scope 3 emissions
  - Potential grid scale solar at Athena for own electricity needs



Q&A

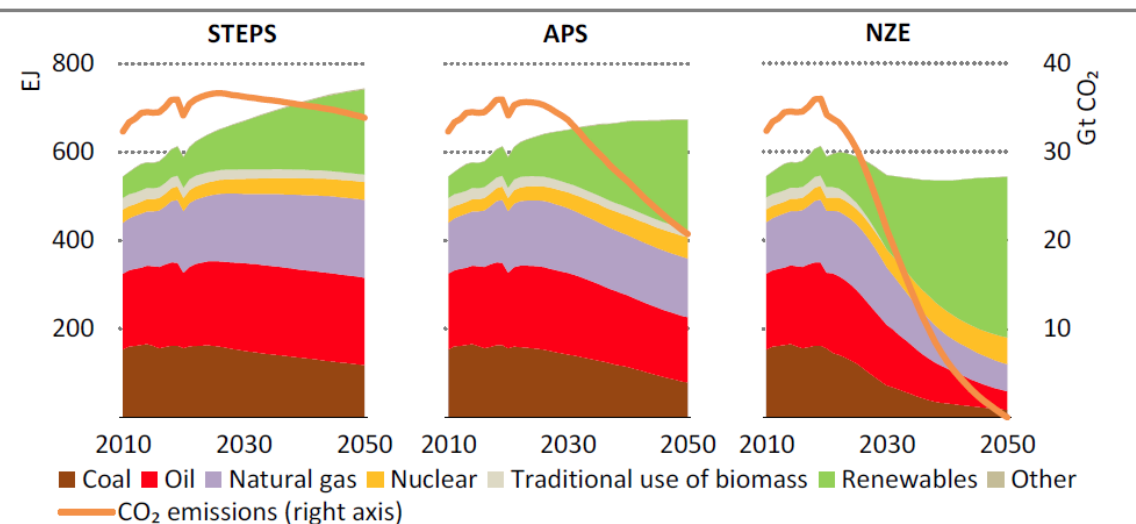


# The role of gas to 2050

Gas will have a leading role in the global energy mix for decades to come

- Demand for gas continues to grow in the near term and remains strong to 2050 under all IEA scenarios
- Gas supports the integration of renewable into the power mix over the coming decades by supplying firming power
- Gas is expected to be a key source of heat for industry well into the future

**Figure 4.1** ▶ Total primary energy supply by fuel and scenario



IEA. All rights reserved.

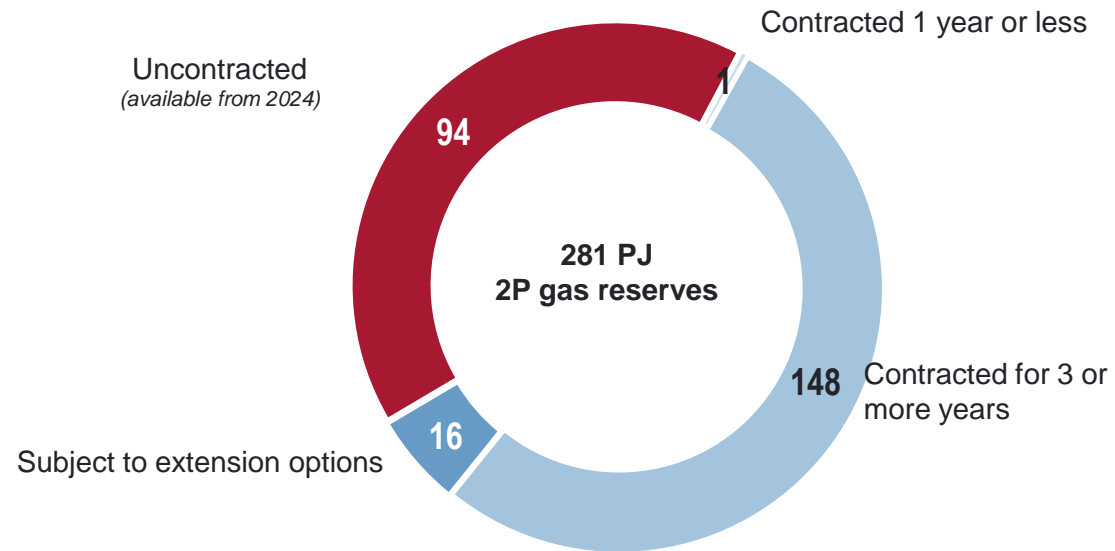
*Closing the implementation gap between STEPS and APS requires achieving current pledges; new pledges are needed to close the “ambition gap” from the APS to NZE*

Source: IEA World Energy Outlook, 2021



# GSA portfolio profile

2P gas reserves, contracted and uncontracted by term (PJ) as at 30 June 2021



## Gas contract portfolio

Customer	Source	Start	End <sup>1</sup>	PJ/pa
AGL (amended)	Sole	January 2022	December 2030	6
Energy Australia	Sole	January 2021	December 2025	5
Alinta Energy	Sole	January 2021	December 2024	2
Visy Glass	Sole	December 2020	December 2028	1
Visy Paper	Sole	December 2020	March 2025	2
AGL	CHN <sup>2</sup>	January 2022	Refer footnote 3	Remaining production

1. Extension rights or frameworks in place to agree extensions beyond GSA end dates
2. Existing Casino, Henry and Netherby wells in the Otway Basin
3. End date is the earlier of cessation of production from the existing Casino, Henry and Netherby wells, or first production from OP3D

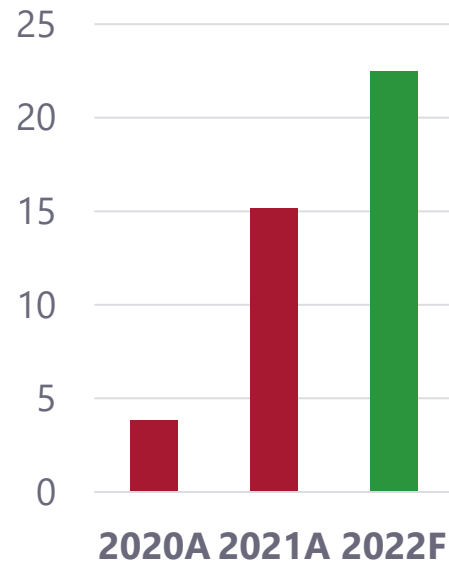


# Average Annual Spot Prices



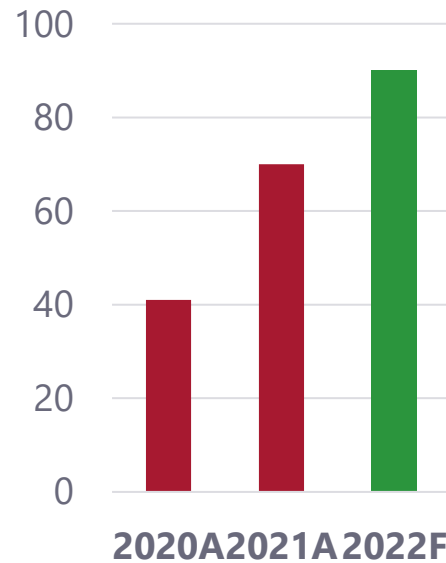
## JKM LNG

US\$/MMBtu



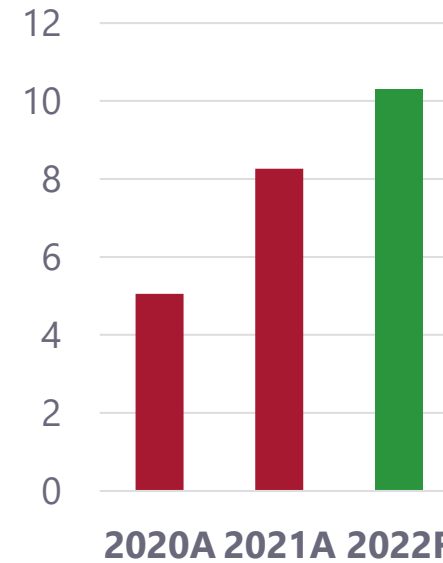
## Oil

US\$/bbl



## Victoria Spot Gas

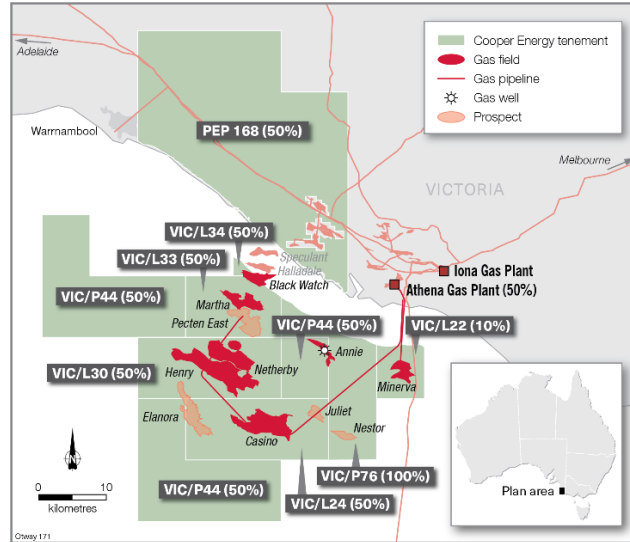
A\$/GJ



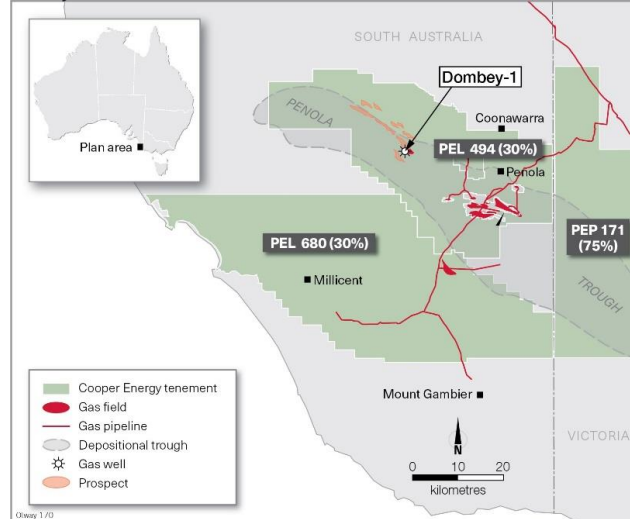
Source: Cooper Energy analysis of AEMO, ACCC LNG netback price series, and broker forecast data

# Cooper Energy tenements<sup>1</sup>

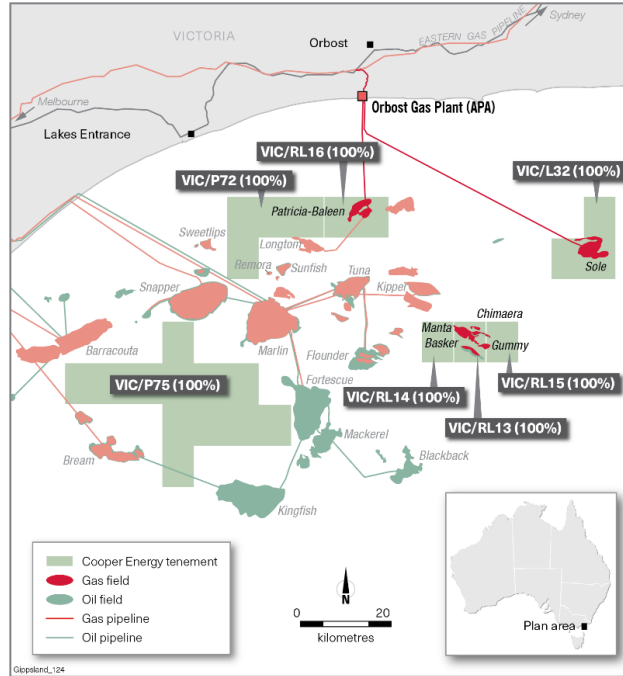
Otway Basin (Victoria):



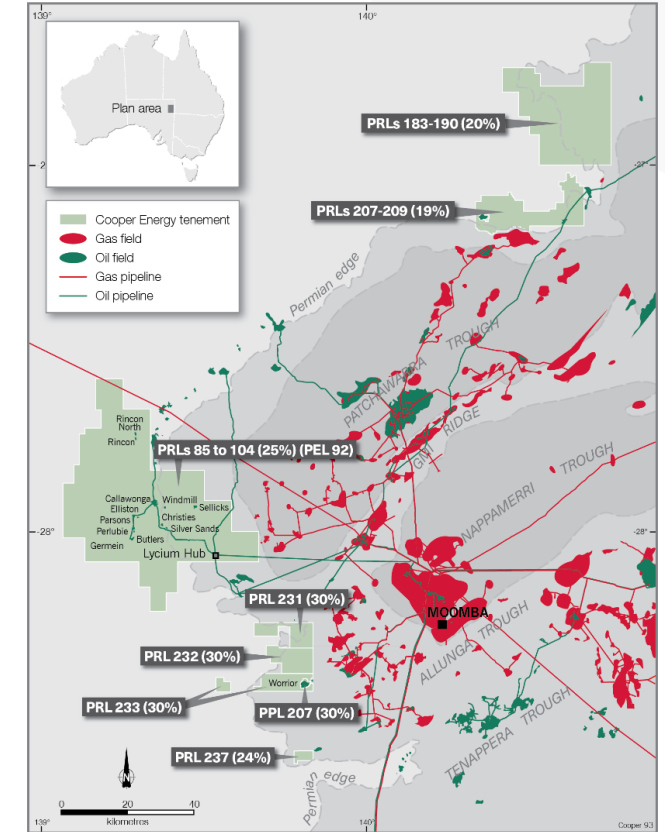
Otway Basin (onshore):



Gippsland Basin:



Cooper Basin:



<sup>1</sup>Please refer to Cooper Energy's 2021 Annual Report for further information regarding tenement interests