## **Santos**

## **ASX / Media Release**

19 November 2024

# Santos announces updated capital allocation framework and carbon storage growth target

Santos today announced an updated capital allocation framework that will target returns to shareholders of at least 60 per cent of all-in free cash flow from 2026, following a period of major capital investment to bring significant new production online from the Barossa and Pikka projects.

In addition, Santos announced a carbon storage growth target to build and operate a commercial carbon storage business that would permanently store approximately 14 million tonnes of third-party CO2e per annum by 2040.1

The target is equivalent to around 50 per cent of Santos' 2023 equity Scope 3 emissions from the combustion and use of our products.

The successful startup of Santos' 1.7 million tonnes per annum Moomba Carbon Capture and Storage (CCS) project last month, with the technology and reservoirs performing as expected, demonstrates the potential for future phases to provide safe, low-cost, permanent carbon storage for customers and hard-to-abate industries.

Speaking at the company's Investor Day in Sydney, Managing Director and Chief Executive Officer Kevin Gallagher said today's announcement confirms Santos' commitment to prioritise shareholder returns when new production comes online and to support the global energy transition while generating new revenue streams for the business.

"Santos has been unrelenting in sticking to its strategy and implementing its disciplined operating model," Mr Gallagher said.

This continues to deliver strong production and project execution to backfill our infrastructure with highlights including:

- Angore wells in PNG now online with two wells successfully commissioned and connected, supplying up to
   350 million standard cubic feet of gas per day to sustain PNG LNG production
- Commencing drilling of the highly prospective Hides Footwall structure
- + Barossa now 84 per cent complete with first gas expected in third quarter 2025
- Pikka now ~70 per cent complete with first oil expected by the first half of 2026.

Santos' world-class LNG portfolio is backed by long-term contracts with tier one buyers and flexible contract terms to provide risked upside potential.

"The proximity of our projects to Asian markets provides a significant shipping cost and emissions advantage compared to supply from east coast US and Middle East suppliers," Mr Gallagher said.

"We are delivering on our strategy to develop upstream production to backfill and sustain our leading infrastructure position, decarbonise our operations and build a commercial carbon management services and low-carbon fuels business to meet future demand.

"With Barossa and Pikka coming online, Santos' production is expected to increase by more than 30 per cent by 2027 compared to 2024, significantly lowering unit production cost which will support strong free cash flow generation throughout the commodity price cycle.

<sup>&</sup>lt;sup>1</sup> This is a target not a forecast and is a growth target for gross storage from Santos operated carbon storage projects. The target is ambitious and subject to substantial engineering, finance, commercial and policy work to establish enabling frameworks with customers, governments, regulators and other stakeholders. The potential projects that would enable achieving the target remain at an early phase of planning and commercial and economic viability is still to be confirmed.



"The simplified capital allocation framework announced today reflects our commitment to prioritise shareholder returns following the company's investment over recent years in new production from Barossa and Pikka.

"From 2026 we will return at least 60 per cent of all-in free cash flow to shareholders, and when gearing is below our target range of 15-25 per cent, 100 per cent of free cash flow will be returned to shareholders in the form of dividends and/or buybacks.

"The market outlook for LNG into Asia, domestic gas in Australia and liquids remains strong out to 2040 and beyond.

"2024 is set to be another peak consumption year for hydrocarbon fuels globally, making it increasingly clear that decarbonisation of their production and use is critical to the world's net zero goals.

"Santos has a leading infrastructure and adjacent resource position that makes it well placed to meet ongoing demand with low-cost production.

"We have a wealth of backfill options to sustain production at our Gladstone and PNG LNG plants, which will be Santos' top priority for future development capital – provided it fits within our capital allocation framework following the startup of Barossa and Pikka.

"These options include unlocking new geological plays in the Cooper Basin, which we have been appraising over the last few years, and prolific gas resources in the McArthur (Beetaloo) Basin shales in the Northern Territory as well as in the PNG Hela, Eastern Highlands and Gulf Provinces.

"Very importantly, our gas resources and LNG facilities are close to large-scale, relatively low-cost carbon storage resources and existing infrastructure that can be repurposed for CCS.

"The International Energy Agency's Net Zero Emissions by 2050 (IEA NZE) scenario assumes that 70 per cent of global gas demand will be served with abated gas through CCS.

"We are extremely proud of the performance to date of the first phase of Moomba CCS that has now stored more than 150 thousand tonnes of CO2.

"Moomba CCS is groundbreaking as one of the world's largest and lowest-cost CCS projects, dedicated to permanent CO2 storage.

"This first phase of Moomba CCS will safely and permanently store up to 1.7 million tonnes of CO2 per year, depending on CO2 availability.

"That is equivalent to 70 per cent of Australia's total annual net emissions reduction in 2023."2

"The IEA NZE scenario assumes more than 2.5 billion tonnes of CO2 will be stored globally each year by 2035, about 50 times more than today.

"The success of Moomba CCS to date and the strong outlook for CCS demand growth gives us a high level of confidence in setting our new carbon storage growth target to build and operate a commercial carbon storage business.

"With a strong balance sheet, line of sight to long-term, cash-generative production and a healthy portfolio of sustainable backfill and expansion options, I am confident Santos can continue to deliver superior value for shareholders over the long term," Mr Gallagher said.

#### **Guidance**

There is no change to Santos 2024 production, unit cost and capital expenditure guidance.

Santos will provide 2025 guidance with our 2024 fourth quarter report in January 2025.

#### **Live Webcast**

A live webcast of the 2024 Investor Day will be available on the Santos website at <a href="www.Santos.com">www.Santos.com</a> from 8.30am ACDT today.

ENDS.

This ASX announcement was approved and authorised for release by Kevin Gallagher, Managing Director and Chief Executive Officer.

<sup>&</sup>lt;sup>2</sup> https://www.abs.gov.au/statistics/measuring-what-matters/measuring-what-matters-themes-and-indicators/sustainable/emissions-reduction



**Santos** 

**November 2024** 



## **Disclaimer and important notice**

This presentation contains forward looking statements that are subject to risk factors associated with the oil and gas industry, and the carbon capture and storage and carbon emissions reduction technologies industries. It is believed that the expectations reflected in these statements are reasonable, but they may be affected by a range of variables which could cause actual results or trends to differ materially, including but not limited to: price fluctuations on any products we produce, store, trade or capture, actual demand, currency fluctuations, geotechnical factors, drilling and production results, gas commercialisation, development progress, operating results, engineering estimates, reserve estimates, loss of market, industry competition, environmental risks, carbon emissions reduction and associated technology risks, physical risks, legislative, fiscal and regulatory developments, economic and financial markets conditions in various countries, approvals, conduct of joint venture participants and contractual counterparties and cost estimates. The forward-looking information in this presentation is based on management's current expectations and reflects judgements, assumptions, estimates and other information available as at the date of this document and/or the date of Santos' planning processes. Except as required by applicable regulations or by law, Santos does not undertake any obligation to publicly update or review any forward looking statements, whether as a result of new information or future events. Forward looking statements speak only as of the date of this presentation or the date planning process assumptions were adopted, as relevant. Our strategies and targets will adapt given the dynamic conditions in which we operate; it should not be assumed that any particular strategies, targets or implementation measures are inflexible or frozen in time.

No representation or warranty, express or implied, is given as to the accuracy, completeness or correctness, likelihood of achievement or reasonableness of any forward looking information contained in this presentation. Forward looking statements do not represent guarantees or predictions of future performance, and involve known and unknown risks, uncertainties and other factors, many of which are beyond Santos' control, and which may cause actual results to differ materially from those expressed in the statements contained in this presentation.

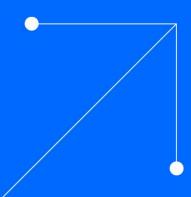
All references to dollars, cents or \$ in this document are to United States currency, unless otherwise stated.

Underlying profit, EBITDAX (earnings before interest, tax, depreciation, depletion, exploration and evaluation expensed, change in future restoration assumptions and impairment) and free cash flow from operations (operating cash flows less investing cash flows net of acquisitions and disposals and major project capex, less lease liability payments) are non-IFRS measures that are presented to provide an understanding of the performance of Santos' operations. The non-IFRS financial information is unaudited however, the numbers have been extracted from the audited financial statements. Free cash flow breakeven is the average annual US\$ oil price at which cash flows from operating activities (before hedging) equals cash flows from investing activities. Excludes one-off restructuring and redundancy costs, costs associated with asset divestitures and acquisitions, and major project capex. Includes lease liability payments. Forecast methodology uses corporate assumptions.

The estimates of petroleum reserves and contingent resources contained in this presentation are as at 31 December 2023. Santos 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). The reserves and resources information in this presentation is based on, and fairly represents, information and supporting documentation prepared by, or under the supervision of, Paul Lyford, who is a full-time employee of Santos and is a member of the SPE. Dr Lyford meets the requirements of a QPRRE and is qualified in accordance with ASX Listing Rule 5.41. Conversion factors: 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.

This is a target not a forecast and is a growth target for gross storage from Santos operated carbon storage projects. The target is ambitious and subject to substantial engineering, finance, commercial and policy work to establish enabling frameworks with customers, governments, regulators and other stakeholders. The potential projects that would enable achieving the target remain at an early phase of planning and commercial and economic viability is still to be confirmed.

Santos acknowledges that we are meeting on the traditional land of the Gadigal people of the Eora Nation and we pay our respects to Elders past and present.



# **Agenda**

Session one	Session two	
09:00am  Welcome Kevin Gallagher, Managing Director and CEO	10.30am Capital management and finance Sherry Duhe, Chief Financial Officer	
09:10am  Portfolio update  Kevin Gallagher, Managing Director and CEO	10.45am  LNG portfolio backfill and growth Brett Darley, EVP Eastern AU & PNG	
10.00am  Market outlook Sean Pitt, Vice President Marketing	11.05am  Santos Energy Solutions  Alan Stuart-Grant, EVP Santos Energy Solutions	
10:15am Morning tea break	Close & Q&A Kevin Gallagher, Managing Director and CEO	

## **Santos**

# PORTFOLIO UPDATE





## Personal and process safety performance

Safety is a core value for Santos, we are focused on continuous improvement



LTIR improved over last 3 years since COVID



Majority of incidents from contractors. Increased focus on contractor management and frontline leadership



Held company-wide annual Stand Together for Safety in November



Introduced a Behavioural Based Safety Programme across all operations throughout 2024



Continued reduction in loss of containment events resulting from a focus on asset integrity maintenance strategies

## Lost time injury rate<sup>1</sup>

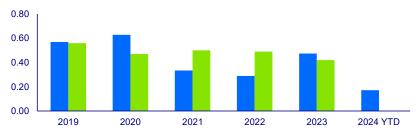
Rate per million hours worked



#### Loss of containment incident rate<sup>2</sup>, Tier 1 and 2

Rate per million hours worked





<sup>1.</sup> Lost Time Injury Rate is the number of Lost Time Injuries per million work hours

<sup>2.</sup> Loss of containment incident is a sub-set of loss of primary containment, where the unplanned or uncontrolled release of hydrocarbon from primary containment has also breached secondary containment or risk is people/environment and the incident could have been reasonably or practicably prevented by Santos through design, installation or maintenance

## **Business overview**

Strong base business and disciplined operating model to deliver to domestic and Asian markets



# **LNG** operational update

#### World class LNG infrastructure portfolio to meet growing Asian demand



Producing

LNG customers - Sinopec, Osaka, CPC and Jera

## Operational highlights

**Customers** 

Status

- 79 cargoes delivered year to date as at 31
   October 2024. On track to deliver 98 cargoes by year end
- Sale of a 2.6 per cent interest in PNG LNG to Kumul Petroleum Holdings Limited completed on 4 November 2024
- Strong production with Santos operated assets producing 8.9 mmboe (Santos share) YTD as at 31 October 2024, up 12 per cent on the same period last year
- 21 per cent of PNG LNG supply delivered from Santos operated project gas
- · Angore online



#### **Producing**

LNG customers – Petronas and Kogas GLNG committed to swapping 18 PJ (gross) of gas to the domestic market in 2024

- 80 cargoes delivered year to date, as at 31 October 2024, on track to deliver 100 cargoes by year end (~6 Mtpa)
- · GLNG Train 1 shutdown successfully executed
- GLNG 2024 expected gas supply mix:
  - 62 per cent GLNG upstream equity gas
  - 15 per cent other Santos equity gas (including Cooper Basin)
  - 23 per cent other third-party gas supply
- On track to drill >330 wells across GLNG and Cooper Basin acreage in 2024



First Gas Q3 2025

LNG customers – Diamond International (Mitsubishi)

- Barossa progress is 83.5 per cent complete as at 31 October 2024
- DLNG
  - DLE progress is 67 per cent complete as at 31 October 2024
- Bayu-Undan
  - Continues to produce into NT domestic market

# **PNG** operational insights

## PNG reliability at all-time record levels and PNG drilling surprising on the upside



**Production**: Strong production from operated fields. Record oil production rates supported by most recent infill oil well drilled



**Drilling activities**: Angore drilled and online. Infill oil drilling program completed. Spudded Hides Footwall 2



Reliability improvement: Record operated equipment reliability in 2024



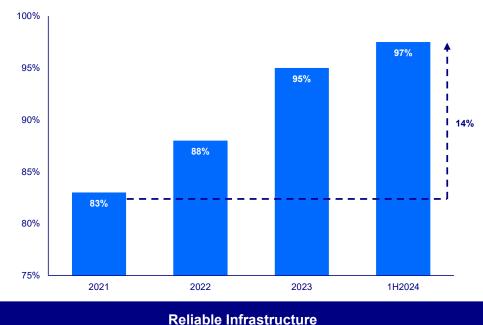
**Price reviews**: Three of four long-term price reviews completed in 2024



Sell-down completion: Successfully completed sale of 2.6 per cent of PNG LNG to Kumul on 4 November 2024

#### **Operated CPF reliability**

High reliability increases gas volumes to PNG LNG facility



# Angore gas development project

## **Exciting next phase of major LNG development for PNG**

STO interest	39.9 per cent <sup>1</sup>
Production	PNG LNG Project production levels to be supported by up to 350 mmscf/d <sup>2</sup>
Resource	~1 tcf³ gas field (gross)
Reservoir	Conventional
Project status	Online as of November 2024
Development	Export to PNG LNG facility via ~11 km pipeline to Hides Gas Conditioning Plant
Wells	2 'big bore' gas wells across 1 drill centre
Highlights	~US\$1.2 billion development



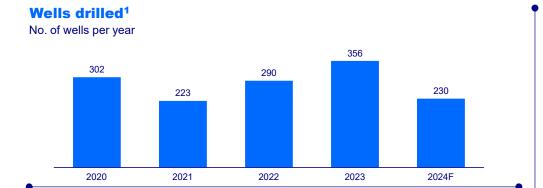
<sup>1.</sup> Post Kumul sell-down of 2.6 per cent

<sup>2.</sup> Gros

<sup>3.</sup> ExxonMobil release as PNG LNG operator dated 15 November 2024 (project cost PGK 5 billion)

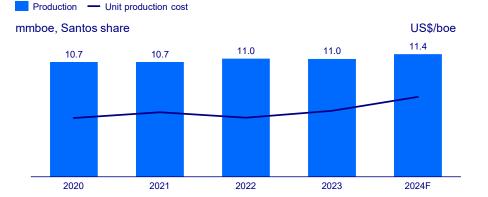
## **GLNG** upstream performance

GLNG on track to deliver 230 wells drilled this year and production continues to build across upstream fields





1. Indicative forecast only. Should not be construed as guidance

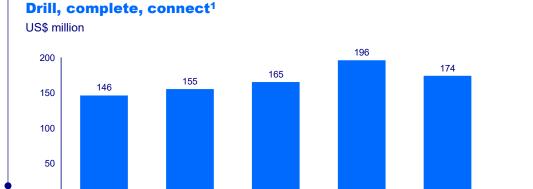


· Queensland CSG hitting record production rates

2021

2020

- Repeated success drilling extended reach (4km) horizontal wells in Arcadia Valley; 20 per cent increase in drilling efficiency across the campaign
- Significant improvement in Roma drill, complete and connect cycle times, despite a ~35 per cent increase in average well depth
- Latest Fairview development drilling program delivering production above average pre-drill expectations



2022

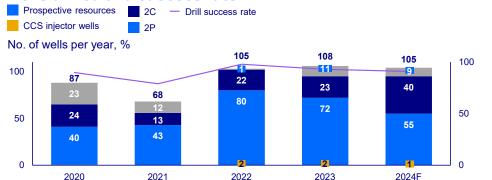
2023

2024F

## **Cooper Basin upstream performance**

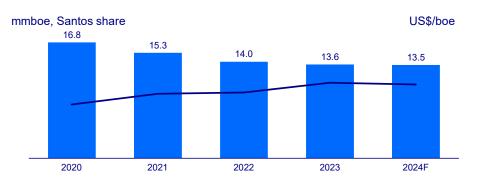
## Continued focus on development and operational efficiencies to sustain the long-life asset

#### Wells drilled and success rate<sup>1</sup>



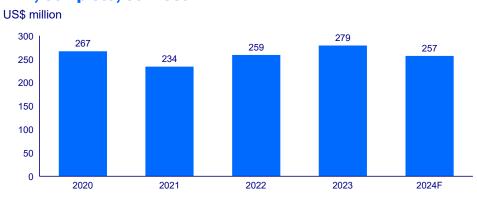
#### **Production and unit production costs<sup>1</sup>**

Production — Unit production cost



- · Fifth supply field for GLNG
- On track to drill >100 wells in 2024
- Ongoing success with Granite Wash and Deep Coal appraisal activities; including high-side initial rates on Moomba 304
- · Continued focus on cost-out and efficiency to offset inflationary pressures
- Digital technologies employed to defend and enhance production

## **Drill, complete, connect<sup>1</sup>**



<sup>1.</sup> Indicative forecast only. Should not be construed as guidance

# **Barossa Gas Project**

## Significant progress across all scopes

STO interest	• 50 per cent
Production <sup>1</sup>	3.7 Mtpa of LNG and 2.7 mmboe of Condensate
Reserves and Resources	<ul><li>2P Reserves 374 mmboe</li><li>2C Contingent 24 mmboe</li></ul>
Reservoir	Conventional
Project status	<ul><li>83.5 per cent complete as at 31 October 2024</li><li>Targeting first gas Q3 2025</li></ul>
Development	FPSO facility with export pipeline to Darwin LNG facility for LNG export
Wells	6 wells across 3 drill centres
Highlights	<ul> <li>Gas Export Pipeline 100 per cent complete</li> <li>Darwin Pipeline Duplication 55 per cent overall, with 30 per cent of installation complete</li> <li>Darwin Life Extension 67 per cent complete</li> <li>SURF 89 per cent complete</li> </ul>
Targets	<ul> <li>First three wells to be drilled and completed end-2024</li> <li>Fourth well completed in Q1 2025</li> <li>FPSO in commissioning yard, ready for sail away Q1 2025</li> </ul>



## Integrated oil and gas portfolio

#### Diversified portfolio with development opportunities to backfill and sustain production



**Status** 

Development project with first oil expected mid 2026

Assets / projects

Pikka Phase 1

Operational Highlights

- Alaskan North Slope (ANS) crude oil targeting SE Asian customers.
- · Expected premium to dated Brent
- Well activities
  - · Currently drilling 15th well
  - · 10 wells stimulated
  - 10 wells flowed back
- State of Alaska Department of Natural Resources approved Santos' application to expand the Pikka Unit acreage in September 2024



Producing current rates of 250 mmscf/d and 6,300 bbl/d

Varanus Island Hub Macedon/ Pyrenes

Late life assets: Devil Creek, Van Gogh, Barrow Island

- Successfully drilled Halyard infill well: EUR 20 per cent higher than P50 expectation. Online Q2 2025
- M&T activities delivering higher realised gas prices
- Continued late life production from Ningaloo Vision and Devil Creek
- Decommissioned Campbell platform, greater than 99 per cent recycled
- · Decommissioned offshore wells
  - 13 around Varanus Island
  - 4 across the Mutineer, Exeter, Fletcher and Finucane fields

## **Pikka Phase 1**

## High productivity across all scopes of work over the 2023/2024 winter season

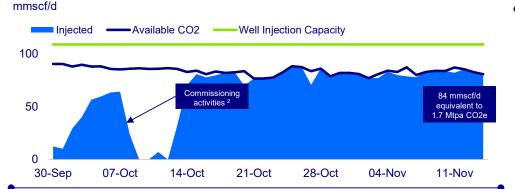
STO interest	• 51 per cent
Production	80,000 bopd with plateau of 5-6 years
Reserves	2P Reserves 165 mmboe
Reservoir	Conventional
Project status	<ul><li>69.3 per cent complete as at 31 October 2024</li><li>First oil mid 2026</li></ul>
Development	Single drill site, electrified operations
Wells	<ul> <li>Currently drilling 15<sup>th</sup> well</li> <li>10 wells stimulated</li> <li>10 wells flowed back</li> </ul>
Highlights	Strong drilling and completions performance     NPT improvement trend continues;     recent wells <10 per cent     Improved fracture stimulation efficiency     Well results to date in line with expectations
Targets	<ul> <li>Grind and inject facility operational in Q1 2025</li> <li>Pipeline installation complete in Q2 2025</li> <li>Seawater plant sail from Indonesia in July 2025</li> <li>26 total well stock by first oil</li> </ul>



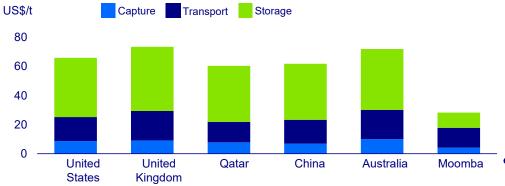
# **Moomba Phase 1 – online and storing CO2e**

#### Capturing, injecting and storing CO2e at Moomba in depleted reservoirs

#### Moomba CCS Injection (gross)<sup>1</sup>



## Average levelised costs by country for plants equivalent to Moomba<sup>3</sup>



#### What we said...

"...Moomba CCS Project will be one of the biggest in the world and will safely and permanently store 1.7 million tonnes of carbon dioxide per year in the same reservoirs that held oil and gas in place for tens of millions of years"

Kevin Gallagher, Managing Director and Chief Executive Officer
October 2021



Online and storing CO2e in Cooper Basin depleted reservoirs



169,148 tonnes of CO2e captured and stored YTD with capacity to store up to 1.7 Mtpa (gross)



Catalyst to build momentum for the CCS industry in Australia and globally

- 1. Provisional data subject to third party verification
- 2. Commissioning activities include removal of commissioning strainers and plant tuning
- 3. Wood Mackenzie Levelised costs for a 1.7 Mtpa natural gas processing plant with offshore storage in a saline aquifer, Nov-2024. Capture, transport and storage are levelised costs in US\$/t

## **Net-Zero target**

Santos announces new third-party carbon storage growth target of ~14 Mtpa, equivalent to 50 per cent of Santos' 2023 equity Scope 3 emissions from combustion and use of our products<sup>1,2</sup>

2040

Reduced emissions across the Cooper Basin and Queensland by

>5 per cent

Increased liquified natural gas exports to at least

4.5 Mtpa

30 per cent
Reduction in Scope 1 & 2 emissions³

40 per cent
Reduction in Scope 1 & 2 emissions intensity⁴

Reduce customers' emissions, Santos Scope 3 by at least

1.5 Mtpa of CO2e5
from the supply of low carbon fuels and carbon management services

Aiming for near zero methane emissions6

Zero routine flaring7

Net-Zero
Scope 1 & 2 emissions
(equity share)

Build and operate a
commercial carbon
storage business, safely
and permanently storing
~14 Mtpa of third-party
CO2e, equivalent to 50 per
cent of Santos' 2023
equity estimated
downstream Scope 3
emissions<sup>8</sup>

NEW

Beyond —

Aspiration to store more carbon than we emit across Scope 1, 2 and 3 emissions



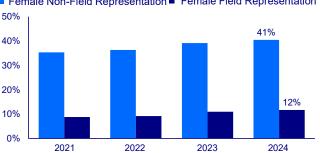
- 1. Refer to disclaimer in last paragraph on slide 2
- 2. Actual volumes depend on availability of CO2 for storage
- 3. 30 per cent absolute reduction is from the Santos and Oil Search combined 2019-20 equity Scope 1 and 2 emissions baseline of 5.9 MtCO2e, representing a reduction to 4.1 MtCO2e or lower by 2030
- 4. 40 per cent intensity reduction is equity share of Santos Scope 1 and 2 emissions intensity from a 2019-20 baseline of 55 ktCO2e/mmboe, representing a reduction to 33 ktCO2e/mmboe or lower by 2030
- From the supply of low carbon fuels and carbon management services
- 6. Methane emissions intensity of <0.20 per cent from operations, calculated as a percentage of marketed natural gas
- 7. Zero routine flaring from Santos' operated oil assets where economically viable
- 8. The target equates to 50 per cent of Santos' reported 2023 downstream Scope 3 emissions

# **Creating stronger communities**

Building respectful relationships and supporting our local communities for 70-years<sup>1</sup>

## Local employees<sup>2</sup> ■ Timor-Leste ■ Papua New Guinea ■ United States 100% 80% 60% 40% 20% 2022 2021 2023 2024 Female representation - workforce



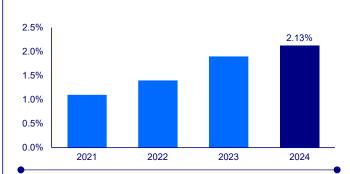




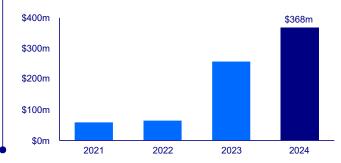
#### 20241

- Cultural heritage assessments: 283
- Cultural heritage discoveries: 125
- Site management actions implemented: 51
- Cultural heritage officers employed: 183





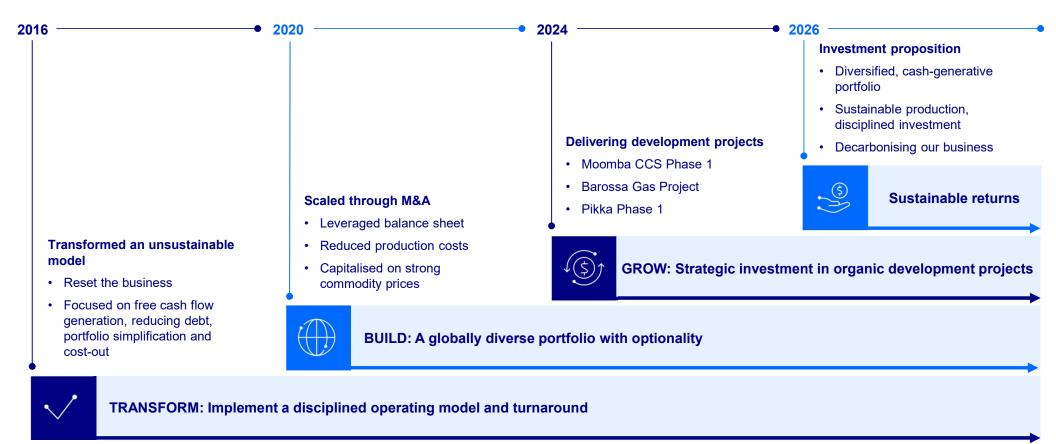
#### Total indigenous spend4



- All figures comprise data up to 30 September 2024
- Local employment in PNG, Timor-Leste and United States recorded as number of employees on local employment contracts, versus those on expatriate assignment. Whole numbers reflect number of local employees Timor-Leste figures only reflect Dili. Additional 19 Timorese locals on Bayu-Undan
- Indigenous employment refers only to Australian Indigenous employees
- Includes direct and indirect spend across all operations (Australia, Alaska and PNG) Santos gross operated

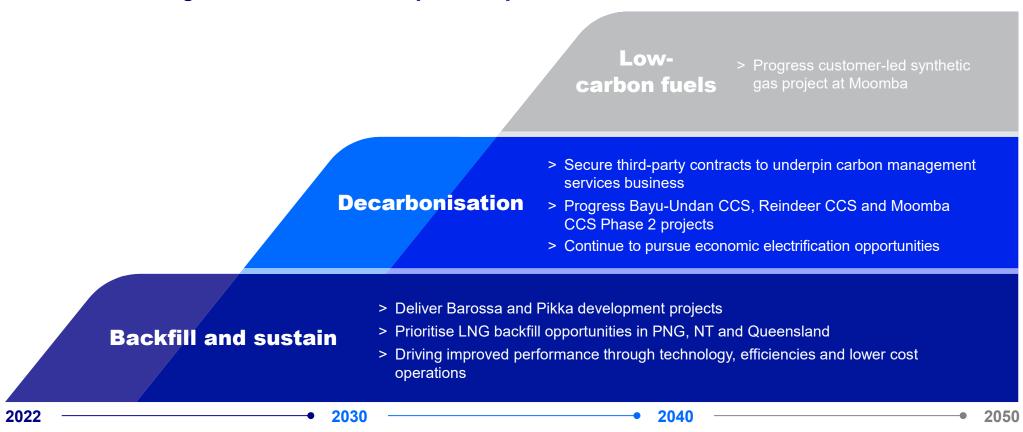
## **Transformation journey**

Demonstrated success of Santos' strategy leading to shareholder value creation



# **Santos' strategy**

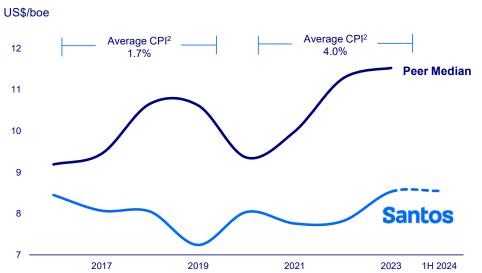
Driving the disciplined low-cost operating model and maximising existing infrastructure to sustainably grow returns over the longer term in line with our updated capital allocation framework



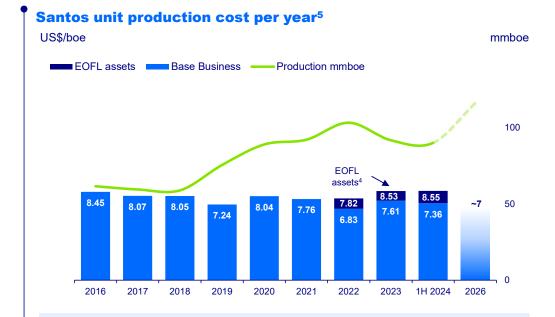
# **Disciplined operating model**

## Santos maintains financial discipline through high inflationary periods

#### Reported unit production cost v peers<sup>1</sup>



Source: Wood Mackenzie, Corporate Benchmarking Tool 2024 (with the addition of Santos 1H 2024³)

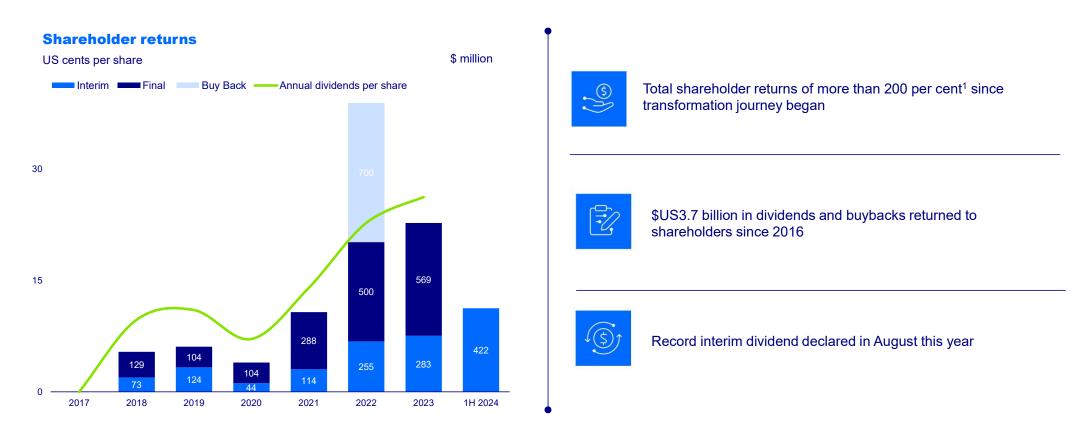


Targeting production costs of around ~\$7/boe once end of field life assets cease production, and Barossa Gas Project and Pikka Phase 1 online

- 1. Peer group includes mid and large capital international companies from Wood Mackenzie's peer group definition
- 2. Australian annual CPI sourced from the Australian Bureau of Statistics
- 3. Santos 1H 2024 reported production cost per boe is consistent with half-year 2024 financial report. 1H 2024 production mmboe based on full year production guidance per Q3 2024 ASX release
- 4. 2022 and 2023 End Of Field Life (EOFL) assets include: Bayu-Undan; 1H 2024 EOFL assets include: Bayu-Undan, Barrow, Reindeer/Devil Creek, Ningaloo Vision
- 5. Includes indicative forecast. Not to be construed as guidance

# **Delivering shareholder returns**

Generated more than 200 per cent TSR since 2016<sup>1</sup>



<sup>1.</sup> TSR is calculated based on the movement between the average adjusted closing share price for the month of January 2016 and October 2024 plus dividends paid over the period



# **Delivering on our commitments**

#### **Achieving our 2024 strategic priorities**

#### What we said we would do...

# Deliver safe and reliable production in the base business



Backfill and sustain production across our East Coast and Western Australian assets

Deliver Moomba CCS

Progress Bayu-Undan and Reindeer CCS projects

Progress low carbon fuels studies

#### What we've done



- 24 per cent reduction in total recordable injury rate YTD compared to end of Q3 2023
- Queensland CSG hitting record production rates
- PNG reliability at all-time record levels. Angore online



- Barossa 83.5 per cent complete<sup>1</sup> (up from 67.4 per cent FY23), on track for Q3 2025 first gas
- Pikka Phase 1 69.3 per cent complete<sup>1</sup> (up from 37.4 per cent FY23)



- Halyard infill well success: gas resource 20 per cent higher than expected (online Q2 2025)
- GLNG to deliver 6 Mtpa LNG in 2024, on track to drill >330 wells across GLNG and Cooper



- Moomba CCS Phase 1 is online, reducing Moomba plant emissions by more than 50 per cent
- Running at full injection rates, injected ~ 150 ktCO2e YTD
- Generating ACCUs for next 25 years with lifecycle breakeven costs of ~US\$29/tonne



- Bayu-Undan FEED is well progressed. Reindeer FEED is progressing
- On 7 November 2024 Australia ratified legislation adopting amendments to the London Protocol amendment



- Study agreement signed with Japanese customers for concept select Pre-FEED studies on synthetic gas utilising imported CO2e
- Initial study completed on CCS pipelines for Moomba CCS Phase 2

1. As at 31 October 2024

## **Santos**

# MARKET OUTLOOK



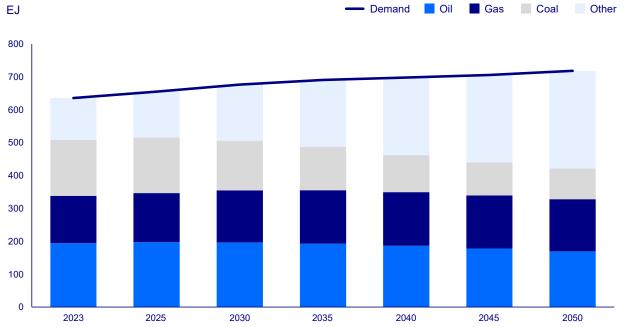




# **Global energy demand**

#### Oil and gas remain an essential part of this energy mix up to 2050

## Primary energy demand<sup>1</sup>





Economic development and population growth are driving increasing global energy demand



Generative AI utilisation queries are expected to grow from 1b per day to 10b per day by 2027<sup>2</sup>



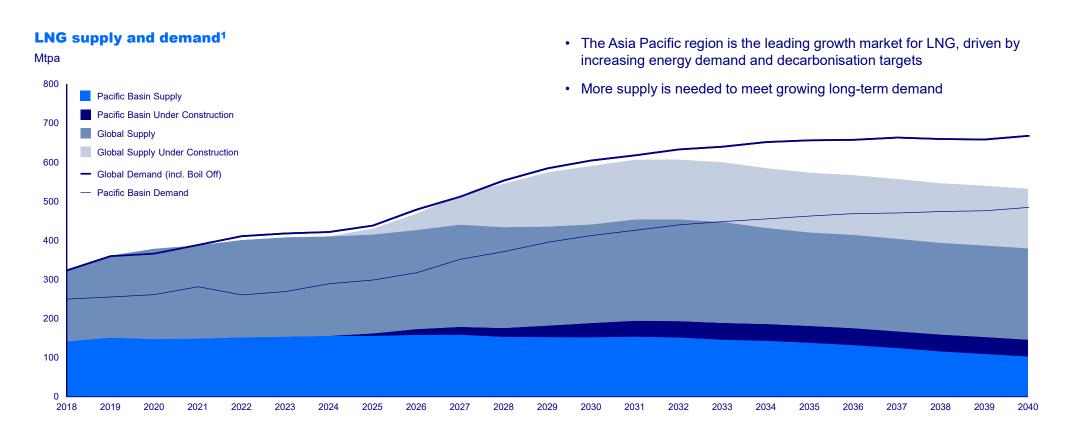
Oil and gas is critical to support the transition away from coal and to support renewables out to 2050

<sup>1.</sup> S&P Global Commodity Insights, Inflections (2.4°C temperature rise by 2100)

<sup>2.</sup> Sources: Our World in Data, Apr-2024.and Thunder Said Energy, Energy and Al: the power and the glory? April 24

# **Strong long-term LNG demand**

Santos is strategically positioned to supply lower cost, lower carbon LNG to the Asia Pacific region



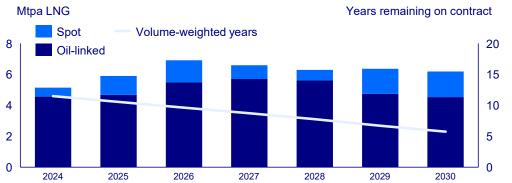
## **Strong position in Asian market**

Superior LNG pricing achieved through contracting strategy and low-cost / low-emission shipping position

#### Proximal to Asian demand centres<sup>1</sup>



#### Long-term LNG contracts with highly rated Asian LNG buyers<sup>2</sup>



#### **Strengths of Santos' LNG portfolio**

- Strategically located portfolio proximal to Asian demand centres
- · Low-cost and low-emission shipping
- Largely contracted LNG portfolio, with uncontracted volumes available for future demand
- · LNG sold under contract to high-quality counter-parties
- High-quality LNG with high heating value resulting in higher realised prices

#### Realised LNG pricing<sup>3</sup>



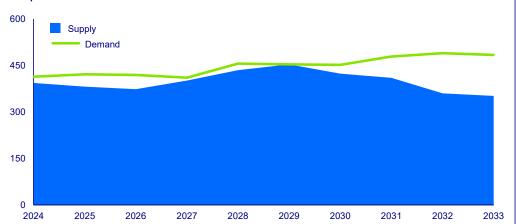
- 1. Kpler Platform for global trade intelligence. Estimated shipping duration to Futtsu Japan at vessel speed of 17 knots
- 2. Includes the GLNG joint venture option to extend an agreement for a five-year period
- 8. US Exports to Asia sourced from Wood Mackenzie LNG Tool, Q3 2024, DES contracts delivered to Japan & South Korea. Total Aust LNG Exports sourced from Energy Quest plus a 50c/mmBtu shipping charge added

# Domestic gas supply critical for energy security

New supply is needed to meet long-term demand, keep the lights on and manufacturing running

#### West coast domestic gas market<sup>1</sup>

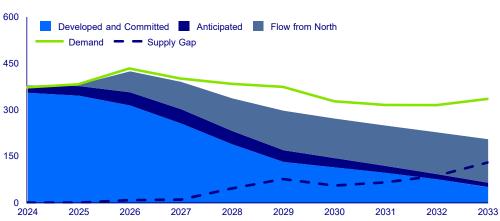
PJ per annum



- Tight market forecast this decade, moving to an increasing supply deficit from 2030
- New gas supply required to meet forecast demand in all scenarios
- Western Australian assets have backfill opportunities (e.g. Corvus)

#### East coast domestic gas market (southern regions)<sup>2</sup>

PJ per annum



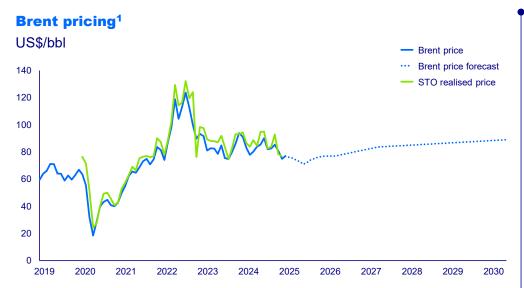
- Risk of shortfalls on extreme peak demand days from 2025
- Potential seasonal supply gaps forecast from 2026
- Additional supply available via Narrabri Gas Project

WA GSOO Expected scenario WA gas market balance, AEMO, Dec 2023. Potential gas supply and domestic gas demand shown

Data includes the southern regions only (NSW, VIC, ACT, TAS, SA). GSOO Step Change (2.0°C) Scenario, AEMO, March 2024

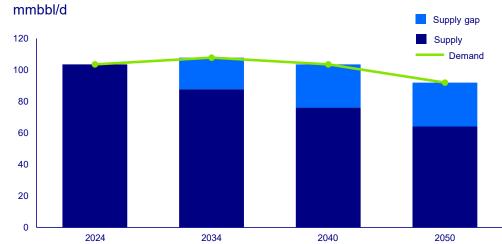
# Oil demand growing this decade

#### **Developing Alaska to meet oil demand this decade**



- Santos' portfolio of high-quality liquids reliably trades at a premium to Brent.
- In 2024, this premium has averaged US\$3.60 per barrel year to date





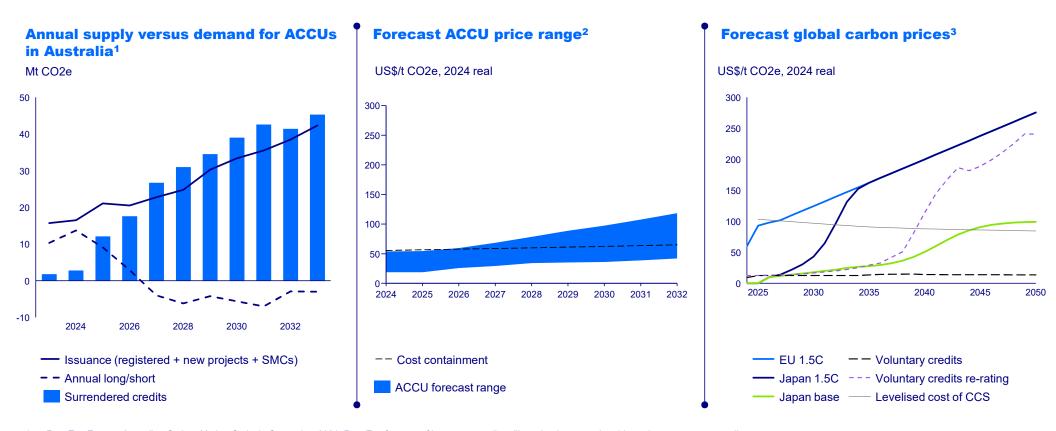
- By 2034, additional supply will be required to meet growing demand as existing production declines
- Demand growth shifts to India and emerging Asian economies post 2030
- Non-energy (or non-combustion use i.e. for petrochemical feedstock) is forecast to continue to grow beyond the 2030s

<sup>1.</sup> S&P Commodity Insights, Global Crude Oil Markets Short Term Outlook Fundamentals, October 2024. S&P Global Fundamentals Crude Oil Markets Price Long-Term Outlook, Q3 2024, nominal prices. Dated Brent, FOB North Sea

<sup>2.</sup> Wood Mackenzie, Macro oils strategic planning outlook 2024, November 2024. Supply includes onstream and under development projects. In this analysis, Wood Mackenzie do not account for the spare capacity that OPEC has withheld from the market to avoid interference from changing OPEC behaviour; OPEC spare capacity is effectively held flat

## **Carbon credit markets**

Forecast demand growth for emissions reduction units. ACCU market short from 2027 and prices increasing



<sup>1.</sup> RepuTex Energy, Australian Carbon Market Outlook, September 2024. RepuTex forecast of how many credits will need to be surrendered in each year to meet compliance targets

<sup>2.</sup> Generic ACCU price forecasts from Aurecon MAG, RepuTex Energy and Wood Mackenzie

<sup>3.</sup> S&P Global Commodity Insights, Climate and Energy Scenarios July 2024. BNEF Voluntary Carbon Offsets Outlook February 2024, Wood Mackenzie Levelised Cost of CCUS September 2024

## **Marketing portfolio overview**

Santos' marketing strategy is well positioned to deliver value



## Strategic location of LNG portfolio

Close to Asian customers, shorter shipping duration through safe passage

Lower shipping emissions and cost

Offer longer term emission capture and storage solutions



#### **High value LNG**

Majority of portfolio with high heating value, commanding a premium

Range of mid-term, long-term and spot contracts reducing market risk

Oil linked 83 per cent, JKM linked 17 per cent<sup>1</sup>

Leveraged existing infrastructure



## Well positioned to supply domestic market

New supply needed to meet demand

New supply to market is available from our portfolio (e.g. Corvus and Narrabri)



## Well placed to supply new oil demand

Oil demand globally remains strong with additional supply required in 2030s

Santos liquids realise premiums to Brent

Alaska captures strong interest for oil in SE Asia at a premium to Brent

1. Year to date as at 30 September 2024

## **Santos**

# CAPITAL MANAGEMENT AND FINANCE





# What you will hear today

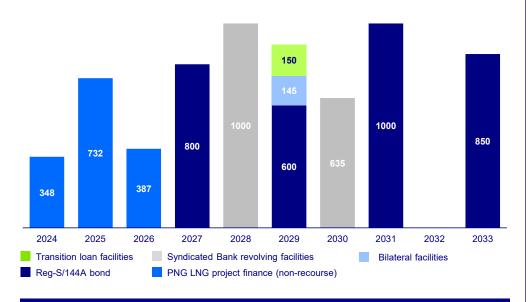
- 1 Updated Capital Allocation Framework prioritising shareholder returns
- Continue to drive the disciplined low-cost operating model
- 3 Development optionality enabling decades of sustainable returns

# Strong balance sheet, balanced portfolio

Recent financing demonstrates the strength and diversity of the portfolio, target gearing remains a priority

#### Drawn debt maturity profile<sup>1</sup>

**US\$** million



#### Targeting 15-25 per cent gearing through the cycle

#### Successful recent financing activity in 2024

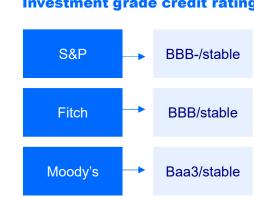
- Execution of Moomba CCS transition loan \$150 million (February)
- · Revolving syndicated facility increased to \$850 million (September)
- New syndicated bank loan facilities totalling \$800 million for Darwin LNG life extension works<sup>2</sup> (October)
- Completion of 2.6 per cent sale of PNG LNG to Kumul Petroleum Holdings Ltd (November)



\$4.27b

\$2,215m cash

\$2,060m committed undrawn facilities



<sup>1.</sup> Debt maturity profile as at 31 October 2024

<sup>2.</sup> Santos' 43.43 per cent interest in Darwin LNG Pty Ltd is accounted for as an equity accounted investment in an associate

### **Updated capital allocation framework**

From 2026: Prioritised shareholder returns supported by sustained profitable production and constrained capex

Shareholder returns Disciplined capital reinvestment \$\int\$ **Strong balance sheet Existing** Update from 2026<sup>1</sup> Target gearing range maintained 15 - 25% Prioritised shareholder returns Target shareholder returns At least 60% and up to 100% >= 40% of all-in Free Cash Flow (FCF)3 of FCF from operations<sup>2</sup> **Prioritised Shareholder Returns supported by:** Long term indicative annual production profiles Sustainable annual production target range 2026-2030 ~100 - 140 mmboe ~100 - 120 mmboe Annual sustaining and development capital expenditure Sustaining and development capital expenditure Cyclical Constrained by capital ceiling<sup>4</sup>

<sup>1.</sup> Updated capital allocation framework effective following the delivery of Barossa gas project, and Pikka Phase 1, estimated HY26. Existing policy remains until that time

<sup>2.</sup> Free Cash Flow from operations is defined as operating cash flows less investing cash flows net of acquisitions and disposals and major growth capital expenditure less lease liabilities

<sup>3.</sup> All-in Free Cash Flow is defined as operating cash flows less investing cash flows net of acquisitions and disposals

<sup>4.</sup> Capital expenditure ceiling is subject to annual Board approval

### **Capital allocation framework principles**

From 2026: Simplified framework<sup>1</sup> prioritises shareholder returns and strong balance sheet



<sup>1.</sup> Updated capital allocation framework effective following the delivery of Barossa Gas Project, and Pikka Phase 1, estimated HY26. Existing policy remains until that time

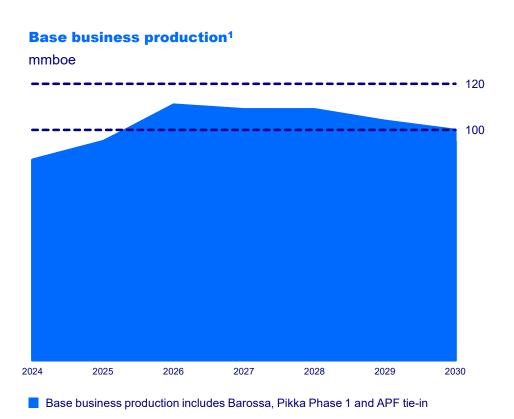
<sup>2. 2026</sup> to 203

<sup>3.</sup> Capex constrained via capex ceiling includes spend across the Upstream Oil and Gas and Santos Energy Solutions portfolios

<sup>4.</sup> All-in Free Cash Flow is defined as operating cash flows less investing cash flows net of acquisitions and disposals

### Target annual production range 100-120 mmboe

Demonstrated delivery from current development projects maintains target production range





Culmination of three horizon strategy results in our ability to produce sustainably above 100 mmboe annually from 2026



Current committed projects enable sustaining production in this range through to 2030 with no additional major development projects required



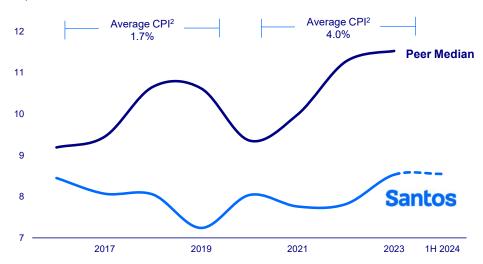
Healthy portfolio funnel has potential to sustain production range well beyond 2030, via continued disciplined capital investment in support of prioritised shareholder returns

### **Disciplined operating model**

#### Santos is committed to sustaining our low-cost operating model as we complete a major growth phase

#### Reported unit production cost v peers<sup>1</sup>

US\$/boe



Source: Wood Mackenzie, Corporate Benchmarking Tool 2024 (with the addition of Santos 1H 2024<sup>3</sup>)

#### Company-wide cost-out is a focus area in 2025



Emerging from a major growth phase following several significant acquisitions



Timely to reset total operating cost performance, as we continue to drive our disciplined low-cost operating model



Target setting and cost reduction actions planned in 2025, to enable reset of annual cost base targeted for full year 2026



Priority action areas will include simplification, procurement, automation, and other innovation-based efficiencies

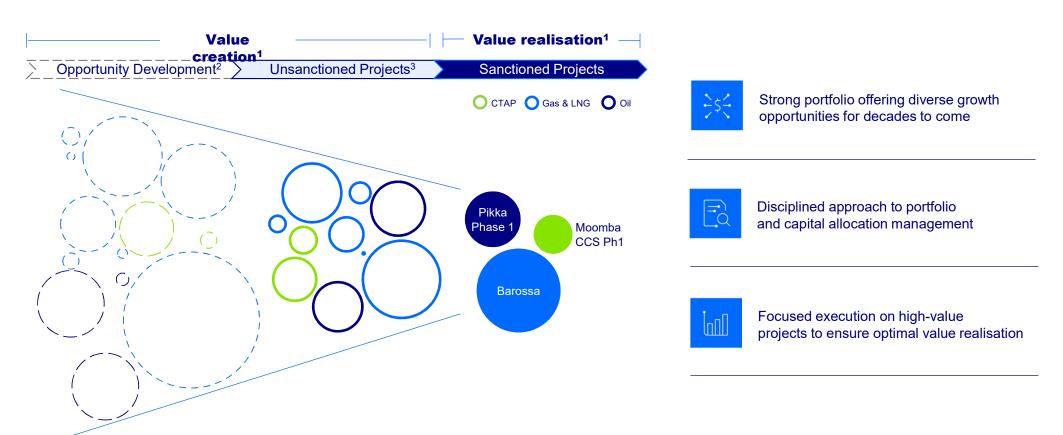
<sup>1.</sup> Peer group includes mid and large capital international companies from Wood Mackenzie's peer group definition

<sup>2.</sup> Australian annual CPI sourced from the Australian Bureau of Statistics

<sup>3.</sup> Santos 1H 2024 reported production cost per boe in line with half-year 2024 financial report

### Project portfolio enables decades of returns

#### Disciplined and rigorous assessment applied to phased capital allocation



<sup>1.</sup> Size of bubble approximates relative size of market or resource

<sup>2. &#</sup>x27;Opportunity Development' includes, but is not limited to, Bedout Basin, Caldita, Quokka, Horseshoe, P'nyang and McArthur

<sup>3. &#</sup>x27;Unsanctioned Projects' includes, but is not limited to, Pikka Phase 2, Narrabri, Dorado, APF tie-in, Corvus and Moomba CCS Phase 2

### **Santos**

# LNG PORTFOLIO BACKFILL AND GROWTH





### What you will hear today

- 1 Infrastructure and resource recap
- World-class LNG portfolio with significant optionality
- 3 Sustainable backfill and lower-cost expansion options



#### **Project status**

**Production** 

Producing since 2014

Capacity

6.9 Mtpa nameplate capacity

8.3 Mtpa / ~3.3 Mtpa<sup>1</sup> annualised run rate

**Current producing fields** 

Hides

Associated Gas fields: Kutubu, Gobe

Angore (online Q4 2024)

Development

Conventional

Decarbonisation

Low CO2 asset, potential nature-based options

**Santos** 

1. Post completion of 2.6 per cent sell down to Kumul

### **PNG** facility overview

#### Integrated Operated and Non-Operated Assets maximising resource value in PNG



#### **Non-Operated Assets**

#### Hides Conditioning Plant

Exporting to PNG LNG

#### **PNG LNG Plant**

· Annualised run rate capacity 8.3 Mtpa

#### **Operated Assets**

#### **Agogo Production Facility**

· Gas reinjection until APF Tie-in Project online

#### **Central Production Facility**

Exporting to PNG LNG

#### **Gobe Production Facility**

Exporting to PNG LNG

#### **Kumul Marine Terminal**

· Liquids export

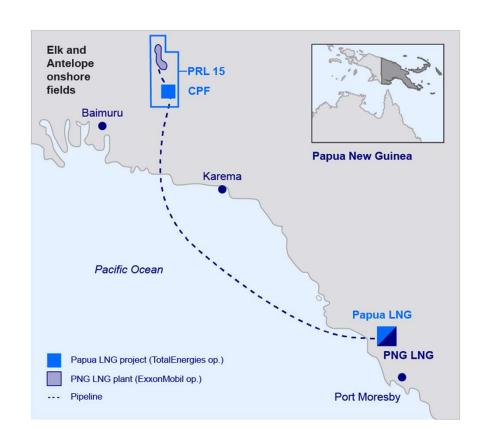
#### **Kutubu Pipeline System FSO (KPS FSO)**

Project to support long term integrity for PNG liquids export

### Papua LNG project overview

#### Continued growth in supply of low intensity LNG to meet Asian demand

Expected Capacity	Up to 6 Mtpa
Current Development	9 production wells, 1 water injection well, 1 CO2 well, 1 gas processing plant, 320km of pipeline (of which 60km are onshore)
Resources	<ul> <li>2C Contingent Resource:</li> <li>1,274 mmboe (Gross)</li> <li>291 mmboe (Santos share)<sup>1</sup></li> </ul>
Production	Subject to FID timing
LNG Plant	<ul> <li>Electrical LNG trains with a cumulative capacity of 4 Mtpa to be developed within the existing liquefaction plant in Caution Bay, in which it has secured up to 2 Mtpa additional capacity</li> </ul>
Status	<ul><li>Re-bid</li><li>FID 2025</li></ul>
Carbon	Reservoir CO2 reinjection from first day of operation
Santos interest	17.7 per cent (post state back-in) <sup>1</sup>
Integrated Benefit	PNG LNG will receive:  • An access fee upon first gas  • Pro-rata opex sharing  • Ongoing processing toll revenue



### **Near term PNG LNG backfill strategy**

#### PNG LNG to be kept full until end of decade and beyond

### **CPF Optimisation**

Supply of associated gas from Kutubu exceeding expectations with 16 bcf¹ accelerated year to date

Ongoing as required



### Angore Development

~1 tcf¹ Angore successfully developed, with 2 wells tied into PNG LNG, delivering up to 350 mmscf/d¹

Online Q4 2024



#### Hides F2 Drilling

Currently drilling Footwall target for potential incremental volumes up to ~160 mmscf/d¹ within Hides field

Targeting ready for startup 2025



### APF Tie-In Project

Development of associated gas from Agogo and Moran oil fields to supply ~0.8 tcf¹ gas to PNG LNG delivering up to 250 mmscf/d¹

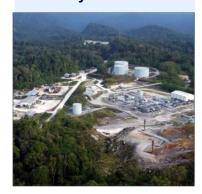
Target FID ready 2026 for startup 2028



### Gobe Extension of Field Life

Extend field life by optimising existing infrastructure and unlocking potential reserve additions

Target extension beyond 2028



1. Gross

### **PNG** development opportunities

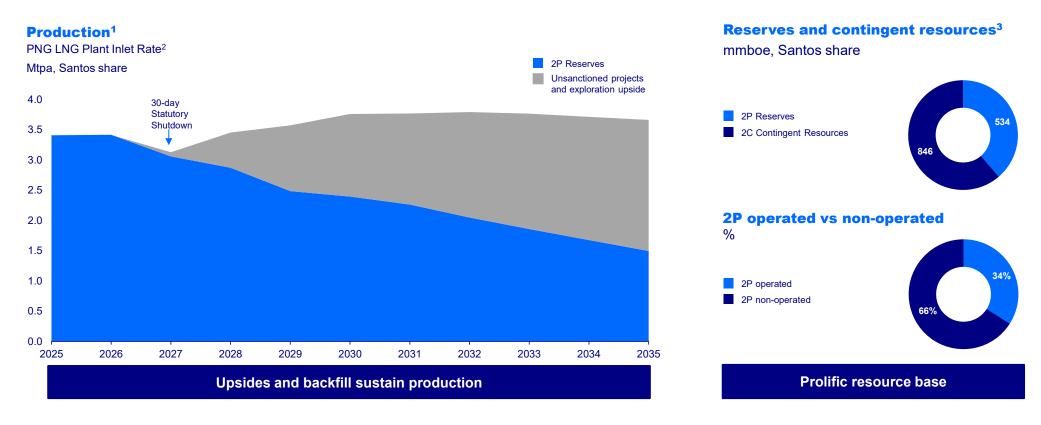
#### Strong portfolio of development projects and exploration opportunities to backfill and sustain

	Papua LNG	P'nyang	Muruk	Juha	Eastern Fold Belt
Status	Unsanctioned, discovered resource	Unsanctioned, discovered resource	Unsanctioned, discovered resource	Unsanctioned, discovered resource	Unsanctioned, prospective resource
Capacity, Santos share	~1 Mtpa <sup>1</sup>	~1.5 Mtpa²	Early stage	Early stage	Early stage
Reservoir type	Conventional	Conventional	Conventional	Conventional	Conventional
Backfill and sustain	Progressing FEED Progressing key contracts re-bid process Regulatory licence application submitted	Progressing Concept Select Gas Agreement and Fiscal Stability Agreement executed Backfill to PNG LNG	Concept Select on hold  Potential synergies with P'nyang  Backfill to PNG LNG  Gas Agreement / Fiscal Stability Agreement to be negotiated	Concept Select on hold Potential synergies with P'nyang Backfill to PNG LNG Captured under PNG LNG Gas Agreement	Potential synergies with Papua LNG & PNG LNG Stand-alone and/or backfill opportunities Gas Agreement / Fiscal Stability Agreement to be negotiated
2C Contingent Resource Size		750 mmboe <sup>3</sup> / ~ <sup>1</sup>	12.8 tcf (gross)		

- 1. Based on 5.6 Mtpa capacity at 17.7 per cent STO share, post PNG government back-in
- 2. Based on 4.4 Mtpa capacity at 29.85 per cent STO share, post PNG government back-in
- 3. YE23 position excludes any impact of government back-in or sell-down of 2.6 per cent to Kumul

### **PNG** asset is world-class

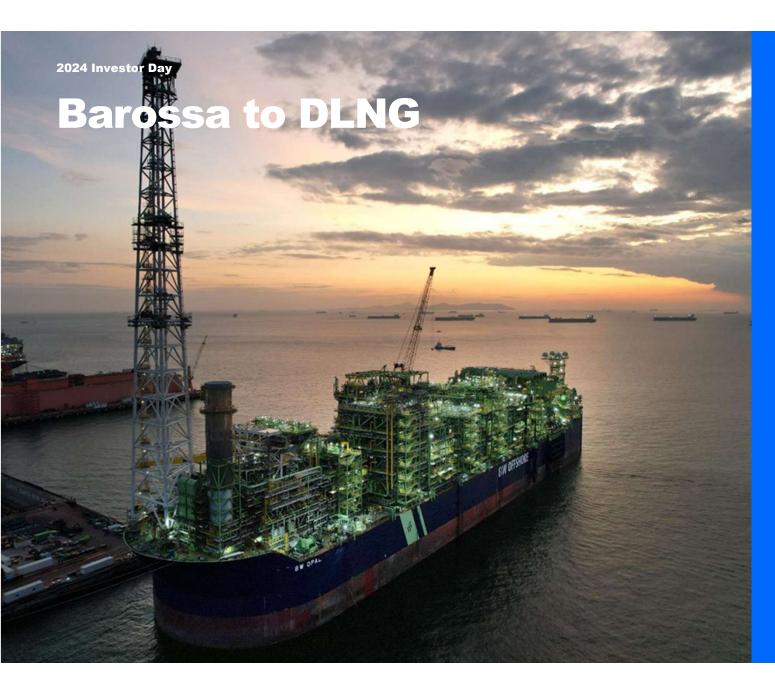
#### Prolific resource base to provide reliable, long-term, low-cost LNG to Asian markets



<sup>1.</sup> Indicative forecast only. Not to be construed as guidance

<sup>2.</sup> Includes DomGas and Naphtha. PNG LNG equity at 39.9 per cent post Kumul sell-down

<sup>3.</sup> YE23 position pre-sell down of 2.6 per cent PNG LNG to Kumul



#### **Project status**

Production<sup>1</sup> 1.85 Mtpa of LNG

#### Reserves

2P Reserves 374 mmboe 2C Contingent Resources 24 mmboe

#### Reservoir

**Conventional Gas** 

#### **Status**

83.5 per cent complete<sup>2</sup>

#### Development

FPSO facility with export pipeline to existing Darwin LNG facility for LNG export

STO equity of 50 per cent
 As at 31 October 2024



### **Darwin Train 1 full out to 2040**

#### FEED ready Darwin Train 2 allows for LNG expansion up to 10 Mtpa



Barossa project tracking to plan, over 83.5 per cent complete



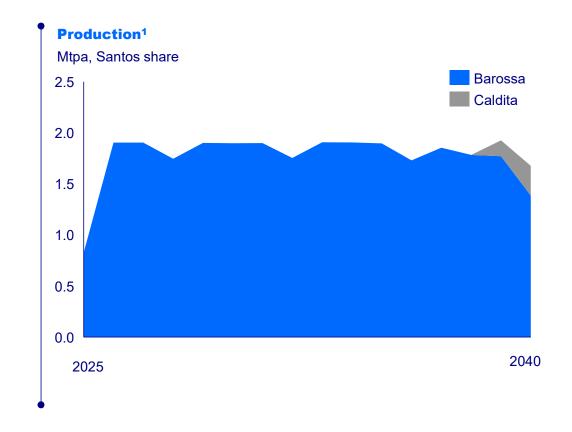
Barossa gas will fully utilize Darwin Train 1 until 2040, Caldita tie-back can support future backfill



Darwin Train 2 has existing approvals to underpin future expansion up to 10 Mtpa and is FEED ready



Potential for abated LNG production from Darwin via Bayu-Undan carbon capture and storage



1. Indicative forecast only. Not to be construed as guidance



#### **Project status**

**Production** 

GLNG producing since 2015

Resources

Queensland:

2P Reserves 319 mmboe 2C Contingent Resources 142 mmboe Surat and Bowen Basins

Cooper Basin:

2P Reserves 128 mmboe

2C Contingent Resources 252 mmboe

Nameplate capacity

7.8 Mtpa / ~2.3 Mtpa<sup>1</sup>

Max capacity 8.6 Mtpa

**Development** 

**Unconventional & Conventional** 

Wells

Targeting 230 unconventional wells drilled in 2024 in GLNG

1. STO equity of 30 per cent



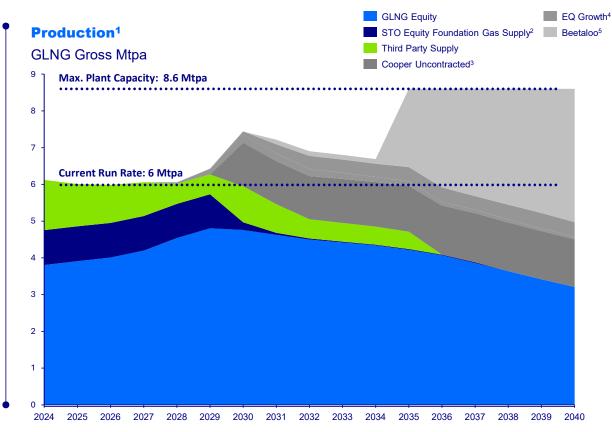
### **East Coast LNG**

#### Five upstream operating fields and options for backfill of available ullage at GLNG

**CSG equity gas** – Record production in 2024, displacing third-party gas purchases.

2 STO equity gas – From 2030, STO equity foundation gas supply contract rolls off. Significant equity gas position available for both LNG and domestic gas markets

Beetaloo – Potential backfill opportunity from Santos operated Northern Territory acreage from mid-2030



I. Indicative forecast only. Not to be construed as guidance

STO equity includes current Horizon, Combabula and Spring Gully contracts

<sup>3.</sup> Cooper gas profiles excludes domestic contract volumes, includes 2C and prospective resource conversion

<sup>4.</sup> EQ growth includes Mahalo, Arcadia West, Kia Ora, Yoorooga

<sup>5.</sup> Beetaloo assumes 500TJ/d full development rate

### **Cooper Basin overview**

### Foundation gas supply for GLNG unlocking material new resources to underpin longevity of the strategically positioned asset



Horizon foundation contract supply ~50 PJ per annum to GLNG¹, ~1 Mtpa of GLNG sales volumes



Well-priced parity between LNG and East Coast domestic gas markets offers value upside post 2030



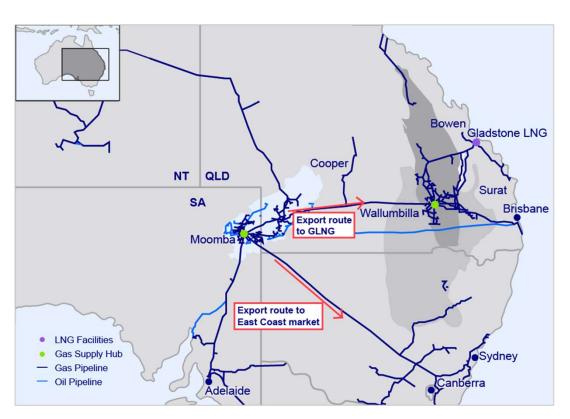
Technology advances continue to unlock new plays, significant running room remain in the basin



Optimise and modernise infrastructure around future resource plays

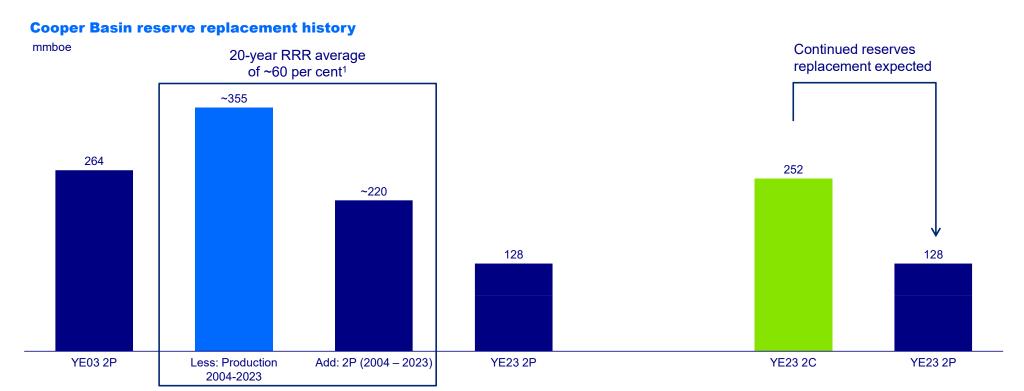


Moomba CCS online enables low carbon intensity operations



### More than just a 2P value proposition

Cooper Basin has a demonstrated history of continuous 2C and 2P replacement with significant running room remaining in the basin



Has the potential to deliver another 20+ years of field life

<sup>1.</sup> Reserves replacement ratio is the change in petroleum reserves (excluding production) divided by production

### **Cooper Basin**

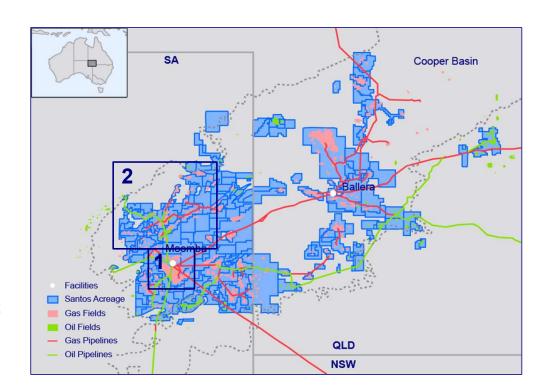
#### Extending the life of the Cooper Basin by developing low-cost material plays in Central fields

#### 1. Central fields strategy

- Moomba Central Optimisation Project to reset cost base and un-constrain surface infrastructure
- Unlock material reserves and resource positions in Patchawarra and Granite Wash currently constrained
- · Position for future renewable penetration to free up more sales gas

#### 2. Northern fields

- Unlock Deep Coal resource through targeted appraisal strategy
- Future surface infrastructure optimization aligned to Deep Coal development



### **Moomba Patchawarra**

#### Increasing recoverable volumes through technology advancements and driving down cost



**Simultaneous Operations** improving efficiency of drilling and completions operations and driving down cycle times



**Real time drilling analytics tools** driving continuous improvements in drilling performance



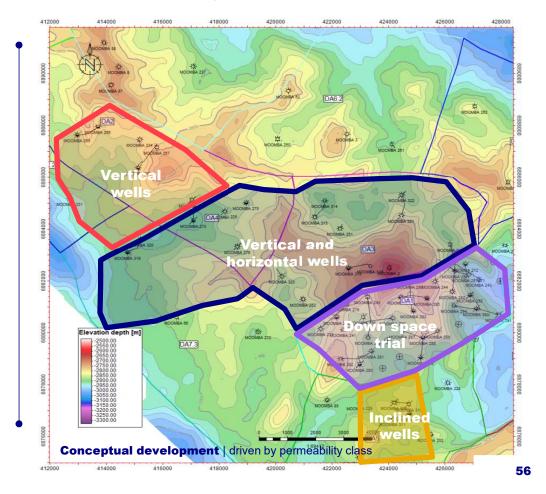
**Slim-hole well designs** delivering reduced well construction costs



**Equipment enhancements** in rig fleet, drill bits and bottom hole assemblies



**Machine learning** used to reduce evaluation requirements and optimising fracture stimulation target selection



### **Moomba Granite Wash**

#### Unlocking material additional resources through horizontal drilling through high temperature reservoir



**Proven unconventional resource** currently being produced in 80 wells



**Horizontal drilling** has potential to increase rates from Granite Wash by 10-15x that of a single vertical frac stage



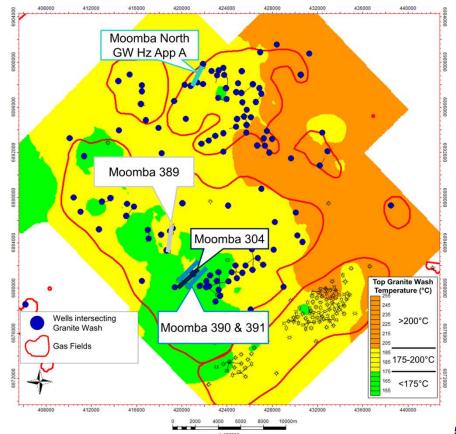
**High temperature drilling** technical success enabling access to hotter parts of the field (up to 200°C)



**Moomba 304** delivered a high-side initial rate from a 1.5km lateral and 10 frac stages. **Moomba 389** confirmed geological model and tested alternate well orientation.

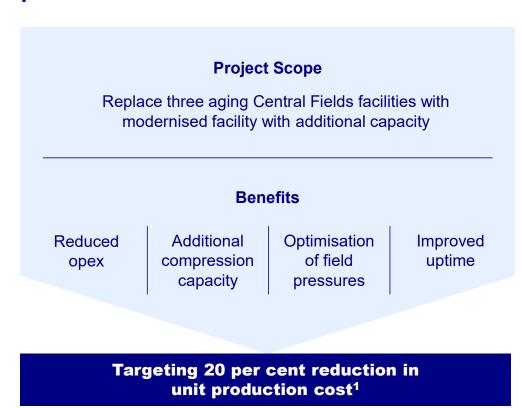


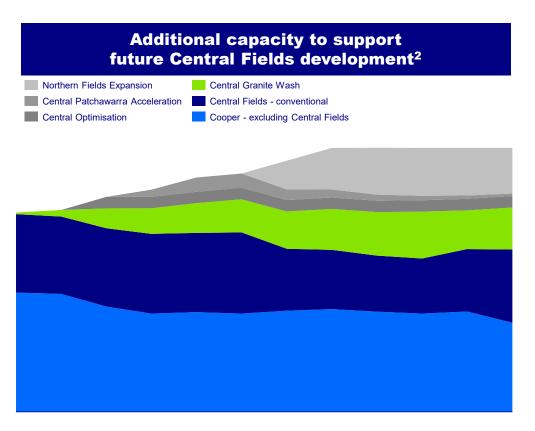
**Additional wells being drilled** in 2024 and 2025, targeting 2km lateral sections and 10-15 frac stages



### **Moomba Central Optimisation**

Subsurface opportunities will drive future development, with cost-effective infrastructure upgrades to support production and reduce costs





<sup>1.</sup> Targeting 20 per cent reduction in unit production cost compared to forecast without Moomba Central Optimisation

<sup>2.</sup> Indicative forecast only. Not to be construed as guidance

### **Northern Fields: Deep Coal**

#### Leveraging recent learnings to build development plans to unlock a multi TCF resource



**Proven unconventional resources** within the current producing Patchawarra formation



Currently being produced in 60+ vertical wells



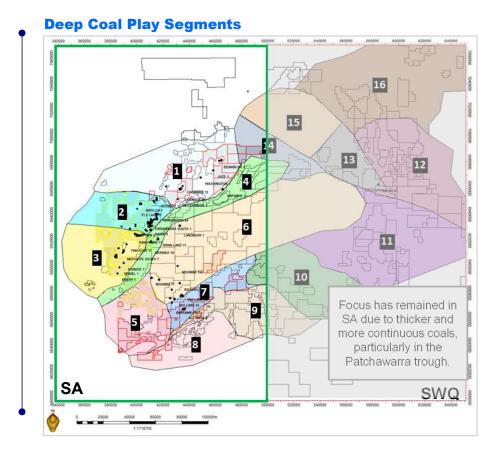
**Potential for significant contribution** to Cooper Basin production from early 2030s



**Gloss 1** well successfully intersected 3 Patchawarra coals and a Patchawarra sand. Well currently producing 1.7 mmscf/d



Two deviated wells planned for 2025/2026



### **Beetaloo: Northern Australia onshore shales**

Beetaloo Sub-Basin, part of the greater McArthur Basin, is estimated to contain more than 200 TCF in-place<sup>1</sup>



EP161 is recognised as the geological "sweet spot" in the Beetaloo with 1.4 tcf gross (1.1 tcf, Santos share) 2C Resource booked from 2 wells



Normalised production from more than 20 wells are analogous to the Marcellus and Utica onshore US Shale plays<sup>2</sup>



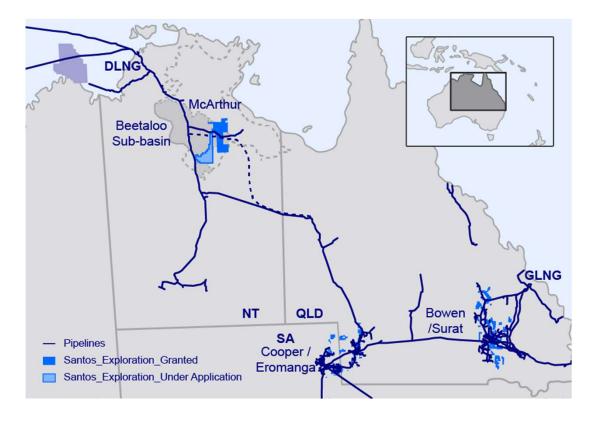
Large and scalable supply for tight, well-priced Eastern and Northern LNG export and domestic gas markets



Appraisal campaign in EP161 planned for 2026



Supportive jurisdiction with published plan for development of resource<sup>3</sup>



<sup>1.</sup> Munson TJ, 2014. Petroleum geology and potential of the onshore Northern Territory, 2014. Northern Territory Geological Survey, Report 22

<sup>2.</sup> Rose and Associates Santos Internal Review and Evaluation 2023

<sup>3.</sup> Northern Territories Strategic Basin Plan (https://www.industry.gov.au/publications/beetaloo-strategic-basin-plan)

### **Beetaloo: A stacked shale play**

World-class geological characteristics analogous to the Utica and Marcellus Shales



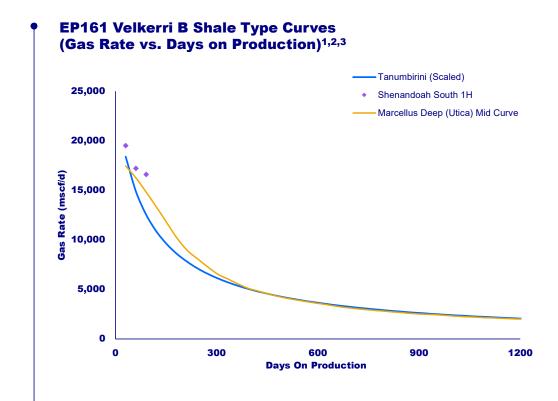
Extensive, high-quality stacked shale units in Velkerri Formation, with recent focus on production tests of Velkerri B unit



When scaled to match the proposed development well design, appraisal production test flowrates and forecast recoverable volumes compare favourably with the P50 outcomes from the successful US Deep Marcellus (Utica) shale play



Reservoir Properties are comparable with the Marcellus Shale: high gas contents and brittle nature, improving stimulation performance



<sup>1.</sup> Tanumbirini forecast production curve normalized to lateral length and stimulation design

Shenandoah South 1H data extracted from Tamboran Resources Investor Day Presentation July 2024

<sup>3.</sup> P50 Marcellus Deep (Utica) curves from Novi Labs database

### **World-class LNG portfolio**

Significant low-cost backfill optionality to expand the portfolio further

**Advantaged LNG Portfolio** 

Three operational LNG plants

Growing Asian demand

Comparative advantage

PNG sustained and growing

Production upsides

Near-term, low-cost backfill

Future expansion potential

**GLNG** backfill opportunities

Five upstream fields
6 Mtpa out to 2030
Exciting backfill potential

Cooper Basin longevity

20-year history of 2C conversion

New technology unlocking new resource plays

### **Santos**

## SANTOS ENERGY SOLUTIONS





### What you will hear today

Using midstream cashflows to develop the portfolio for the future

- 1 Established cash flow generating assets that represent privileged infrastructure
- 2 Our focus on building towards commercial carbon management services at scale
- 3 Disciplined portfolio development and carbon price exposure

### **Strong midstream base**

#### Refocused portfolio of strategic assets well-suited to backfill and repurposing

	Eastern A	Australia	Northern Australia¹
	Moomba	Port Bonython	Darwin LNG
Nameplate throughout capacity	Gas: 400 TJ/d Storage: 70 PJ	Liquids: 20 mmboe p.a.	LNG: 3.7 Mtpa, approvals up to 10 Mtpa <sup>1</sup>
2024 throughput (gross) <sup>3</sup>	239TJ/d	6.3 mmboe	nil
WAL <sup>4</sup>	< 5 years rolling	< 5 years rolling	< 15 years rolling
Existing tolling structure	Internal and external tolls	Internal and external tolls	Internal tolls

<sup>1.</sup> Weighted Average Life and Existing Tolling Structure for Northern Hub relate to future Barossa volumes

Approvals referring to development of potential Train 2 and Train 3 at Darwin LNG

<sup>2024</sup> throughput (gross) year to date, as at 31 October 2024

Weighted Average Life of Contracts

### **Building a profitable and targeted portfolio**

Developing commercial carbon management services at scale to decarbonise Santos and third-party assets

### Strong midstream base

- Established cash flow generating assets
- Moomba CCS
   Phase 1 online and on track to generate ACCUs

Focused portfolio build towards commercial carbon management services leveraging infrastructure and CCS capability

#### **CCS** portfolio

- Bayu-Undan CCS FEED technical engineering activities nearing completion
- Reindeer CCS entered FEED in 1H 2024
- Developing Moomba CCS Phase 2 concept

#### **Technology development**

- Pursuing partnerships with DAC<sup>1</sup> technology vendors for additional trials in the Cooper Basin
- Investigating point source capture technologies

### **Customer-led future growth**

- Progressing joint study for low carbon fuels with Tokyo Gas, Osaka Gas and Toho Gas
- Developing concept for domestic use of low carbon fuels, including Santos' assets

1. Direct Air Capture 65

### **Three operated CCS hubs**

An extensive infrastructure position that can be repurposed for decarbonisation<sup>1</sup>

#### **Darwin & Bayu-Undan Hub**

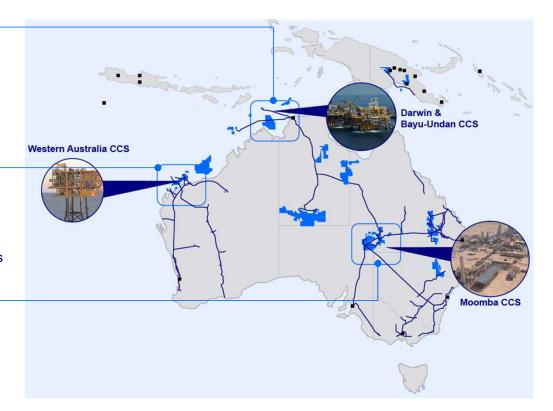
- Up to ~10 Mtpa CO2e storage
- Targeting FID readiness in 2025
- Four MOUs signed for >10 Mtpa volume
- Timor-Leste government developing regulatory regime for CO2e storage

#### Western Australia Hub<sup>2</sup>

- Up to ~5 Mtpa CO2e storage
- Reindeer CCS targeting FID readiness in 2026
- Four MOUs signed, including a non-binding commercial agreement with an international customer for CO2 import into Santos' portfolio of CCS projects

#### **Moomba Hub**

- Up to ~20 Mtpa CO2e storage potential
- Moomba Phase 2 concept development in progress
- Three MOUs signed with domestic and international emitters and aggregators

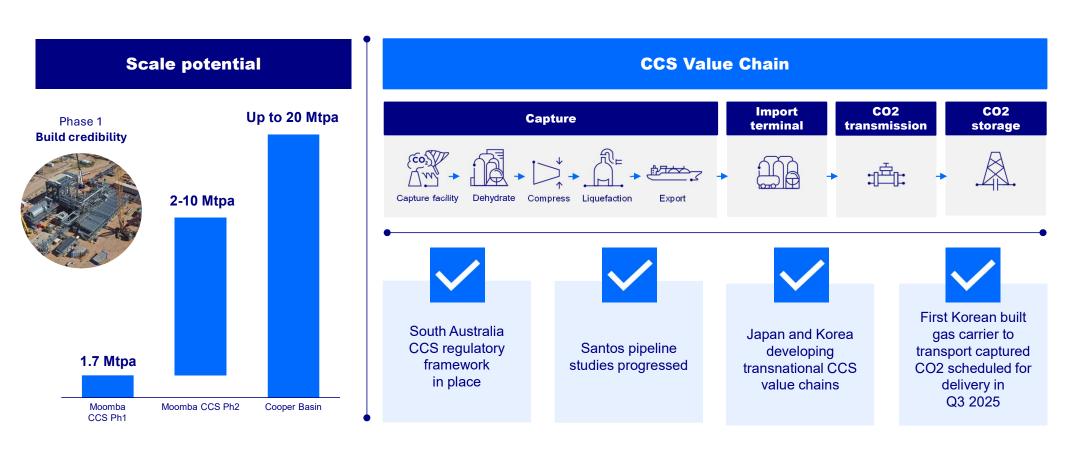


<sup>1.</sup> All injection rates are gross

<sup>2.</sup> Reindeer CCS Phase 1 approximately 1 Mtpa

### **Moomba Phase 2 – development concept**

Significant growth potential with up to 50-years of storage resource potential at up to 20 Mtpa CO2e



### **Bayu-Undan CCS**

#### Large, scalable project to be underpinned initially by Barossa CO2 volumes

Overview	Industrial decarbonisation of adjacent and international CO2 imports by leveraging the existing Bayu-Undan infrastructure and depleted reservoirs in Timor-Leste waters
Status	FEED nearing completion <sup>1</sup>
Timeline	Targeting FID readiness in 2025
First Injection	Targeting 2028
Annual CO2 storage	~10 Mtpa potential, Initial phase ~2.3 Mtpa from Barossa Potential expansion with nearby G-11
CO2 source	Barossa Joint Venture and third-party
Status of customer discussions	Four MOUs signed for >10 Mtpa volume

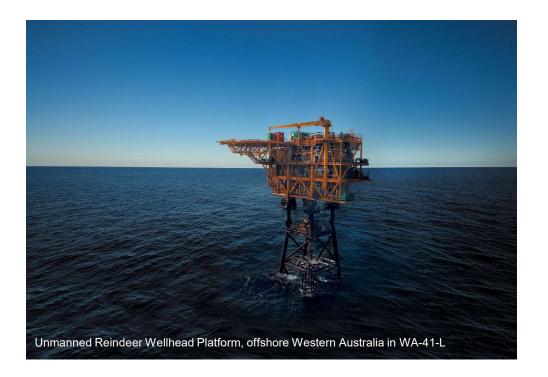


1. Technical engineering activities 68

### **Western Australia CCS**

#### Initial Reindeer CCS project will cater solely to third-party CO2 volumes

Overview	Industrial decarbonisation of adjacent emissions by leveraging the existing infrastructure and depleted reservoirs in Australian waters
Status	Entered FEED in 1H 2024
Timeline	Targeting FID readiness in 2026
First Injection	Targeting 2029
Annual CO2 storage	~5 Mtpa potential including nearby G9 field Initial project will be ~1 Mtpa
CO2 source	Third-party only
Status of customer discussions	Four MOUs signed, including a non-binding commercial agreement with an international customer for CO2 import into Santos' portfolio of CCS projects



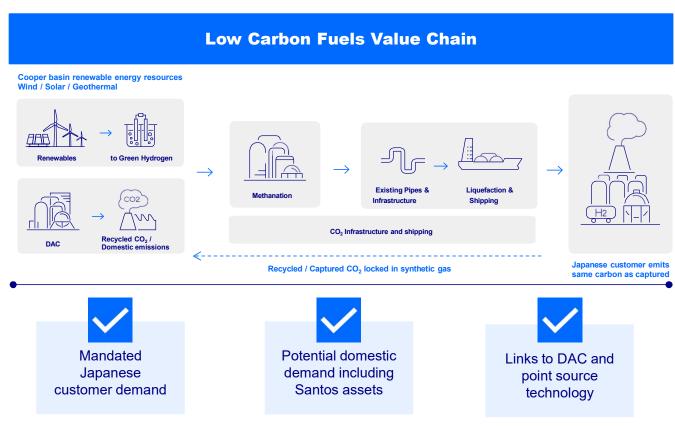
### Moomba low carbon fuels project

Developing a low carbon fuel which can be used in existing supply chains to backfill LNG projects over time or for domestic use

#### **Cooper Basin advantages**

- Excellent renewable energy resource potential (solar, wind, geothermal)
- Pipeline infrastructure for connection to domestic and export markets
- Strong regulatory regime with support for gas as a fundamental part of the energy transition





### **Carbon third-party storage growth target**

Gross storage target ~14 Mtpa, equivalent to 50 per cent of Santos' 2023 estimated downstream equity Scope 3 emissions<sup>1</sup>

By 2040 Store ~14 Mtpa third-party CO2e<sup>2</sup> Longer term aspiration
Store more carbon than
our Scope 1, 2 and 3 emissions

Scope 3 emissions equivalence mitigation

Build and operate a commercial carbon storage business

Safe and permanent CO2e storage

#### **Upstream**



Purchased goods and services



Capital goods



Fuel and energy related activities



Transportation and distribution



Waste generated in operations



Transportation and distribution



n Processing of sold products



**Downstream** 

Use of sold products



End-of-life treatment of sold products Leased

**Scope 3 Categories** 

- 1. Refer to disclaimer in last paragraph on slide 2
- 2. The target equates to 50 per cent of Santos' 2023 downstream equity Scope 3 emissions

### **Santos Energy Solutions summary**

Developing commercial carbon management services at scale to decarbonise Santos and third-party assets

Established cash flow and ACCU generating assets



Privileged infrastructure position



Building towards commercial carbon management services at scale

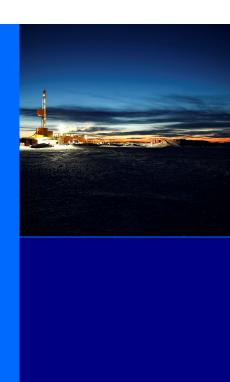


**Portfolio discipline** 



### **Santos**

# CLOSE & Q&A





### **2025 Strategic priorities**

Focused on driving shareholder returns by delivering our low-cost operating model and executing on major projects

Deliver safe, reliable and low-cost production from base business
Deliver first LNG from Barossa project
Progress Pikka project for first oil in 2026
Progress PNG LNG and East Coast LNG backfill opportunities
FID Moomba Central Optimisation and Cooper Midstream Optimisation Projects
Secure approvals to support FID readiness for CCS projects

### **Investment proposition**

Rapidly approaching inflection point, cash generative portfolio, driving shareholder returns and positioned for the energy transition



High quality, diversified portfolio

Geographic and product differentiated asset base

Current development projects proximal to existing infrastructure

Targeting production 100-120 mmboe<sup>1</sup>



**Superior returns** for shareholders

Committed to delivering predictable returns through the commodity cycle

Phasing and sequencing capital

Disciplined low-cost operating model

Strong balance sheet



Investment and commitment to decarbonisation

**Generating ACCUs** 

Decarbonising our assets while developing commercial carbon management services

# Santos

### **Definitions and Abbreviations**

Absolute	When used in reference to emissions reduction targets means reduction against the total emissions at the relevant point in time, rather than a relative or comparative amount
ACCU	Australian Carbon Credit Unit. Each ACCU issued represents one tonne of carbon dioxide equivalent (tCO2e)
Barrel (bbl)	The standard unit of measurement for all oil and condensate production: one barrel equals 159 litres or 35 imperial gallons
Carbon capture and storage (CCS)	Carbon Capture and Storage (CCS) is a process in which carbon dioxide (CO2) from industrial and energy- related sources is separated (captured), conditioned, compressed, transported and injected into a geological formation that provides safe and permanent storage deep underground
Community investment	Includes agreements with social outcomes, sponsorships, grants and donations
Critical fuels	Oil and natural gas, being hydrocarbon fuels that supply 80 per cent of the world's primary energy supply1. Hydrocarbon fuels are critical to meet current and forecast energy demand and to the manufacturing of everyday products
Decarbonise	To decarbonise is the process of avoiding, reducing or offsetting anthropogenic greenhouse gas emissions through operational activities or efficiencies, technology deployment and/or use of generated or acquired carbon credit units
Emissions intensity	The amount of greenhouse gas emissions per unit of specified output, such as production or facility throughput
Emissions reduction units	An emissions reduction unit represents one tonne of carbon dioxide equivalent (tCO2e) emissions reduction or removal
Gas	Natural gas
Liquid hydrocarbon (liquids)	A sales product in liquid form for example, condensate and LPG
Low carbon fuels	Fuels that Santos may seek to develop with materially lower net greenhouse gas emissions in their production, processing and use (including through reduction and / or equivalent emissions reduction units) compared to traditional fossil fuels. This term may encompass a range of fuels such as hydrogen, ammonia or e-methane
Lower carbon energy	Energy sources that have lower net greenhouse gas emissions in their production, processing and use (including through reduction and / or equivalent emissions reduction units) compared to traditional fossil fuels. This includes lower carbon domestic gas, LNG and hydrocarbon liquids, and may also include low carbon fuels as they are developed by Santos
Net Zero	In relation to greenhouse gas emissions, is achieved when anthropogenic emissions of greenhouse gases are balanced by anthropogenic removal of greenhouse gases through means such as operational activities or efficiencies, technology (e.g, CCS), offset through the use of carbon credit units, or other means

Net-zero Scope 1 and 2	Santos' equity share of net-zero Scope 1 and 2 greenhouse gas emissions
emissions / Net-zero emissions	
Oil	A mixture of liquid hydrocarbons of different molecular weights
Reserves	Those quantities of petroleum anticipated to be commercially recoverable by application of development projects to known accumulations from a given date forward under defined conditions. Reserves must satisfy four criteria: they must be discovered, recoverable, commercial, and remaining (as of a given date) based on the development project(s) applied.
Target	An outcome sought that Santos has identified a pathway, or pathways, toward delivery, subject to conditions and assumptions
CO2	Carbon dioxide
CO2e	Carbon dioxide equivalent, being a measure of greenhouse gases (e.g. carbon dioxide, methane, nitrous oxide) with the equivalent global warming potential as carbon dioxide when measured over a specific time
FEED	Front-end engineering and design
FID	Final investment decision
IEA	International Energy Agency
LNG	Liquified natural gas, being natural gas that has been liquified by refrigeration or pressure to store or transport it
boe	barrels of oil equivalent
mmbbl	million barrels
mmboe	million barrels of oil equivalent
mmBtu	million British thermal units
MtCO2e	million tonnes of carbon dioxide equivalent
Mtpa	million tonnes per annum
Synthetic gas	A drop-in replacement for natural gas that is produced using methanation or other processes to combine hydrogen and carbon dioxide to make methane which can be used in existing supply chains. Synthetic gas production by Santos is in the early planning phase, with aspects such as production technologies and emissions footprints being evaluated as part of the planning process. Based on current knowledge, synthetic gas has the

potential to be a low-carbon fuel, depending on the net emissions associated with its production, transport and

combustion or use