Santos' growth strategy: will it deliver for shareholders?

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Santos CEO Kevin Gallagher on delivering shareholder value

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We're looking at every avenue to unlock shareholder value, we're very frustrated at our share price .... it's stalled, and we need to unstall it.

Santos CEO, Kevin Gallagher, 2023 Investor Briefing Day.

Executive summary

Commencing with the final investment decision for the Barossa project in late March 2021, Santos Ltd (Santos) departed from a low cost operating model (2016-2020) and pivoted to a growth phase, increasing capex by 142% (2021-2023). This period of growth has coincided with chronic share price underperformance relative to oil and gas peers - a source of frustration for shareholders and management alike.

This report examines if production growth is the optimum strategy for Santos' investors, and if not, whether there is an alternate pathway to "unlock" shareholder value.

To assess this, ACCR undertook an asset-level, risk-adjusted financial analysis of Santos' unsanctioned growth portfolio.[1] We selected for analysis all projects with a publicly stated target Final Investment Decision (FID) date, which includes Narrabri gas project, Papua LNG, and the Dorado oil and gas project.[2] We found these projects appear to generate modest value accretion for shareholders, face a host of challenges, and are sensitive to cost overruns.

Examining an alternative strategy to production growth, we found share buybacks appear to offer higher value than delivering the selected unsanctioned projects, with lower risk and fewer emissions - therefore better aligning with shareholder interests.

To test whether these projects are Paris-aligned, we undertook a global industry, least-cost evaluation of their alignment with the IEA's NZE pathway. We found that none of the three are Paris-aligned, nor are they cost competitive compared to other unapproved oil and gas projects.

The conclusion from our analysis is that Santos' current capex-heavy production growth strategy, in an industry that is in long-term structural decline, is not the optimal strategy to maximise shareholder returns.

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[1] Using Rystad raw data and ACCR analysis. Methodology, data and assumptions are in Appendix A.

[2] In order to avoid comment on potential issues in ACCR v Santos Ltd (NSD858/2021), we have limited the scope of the report to those unsanctioned projects where Santos has announced target FID dates by 2025. Project descriptions are in Appendix C.

[3] Santos CEO Kevin Gallagher, 2018 Investor Briefing Day.

Santos CEO Kevin Gallagher on growth

“”

Our industry has got a habit of blowing themselves up when they go into growth mode.

But we've spent so much effort putting in place a disciplined operating model to ensure we do not drop the ball on our operations.

Santos CEO, Kevin Gallagher, 2018 Investor Briefing Day.

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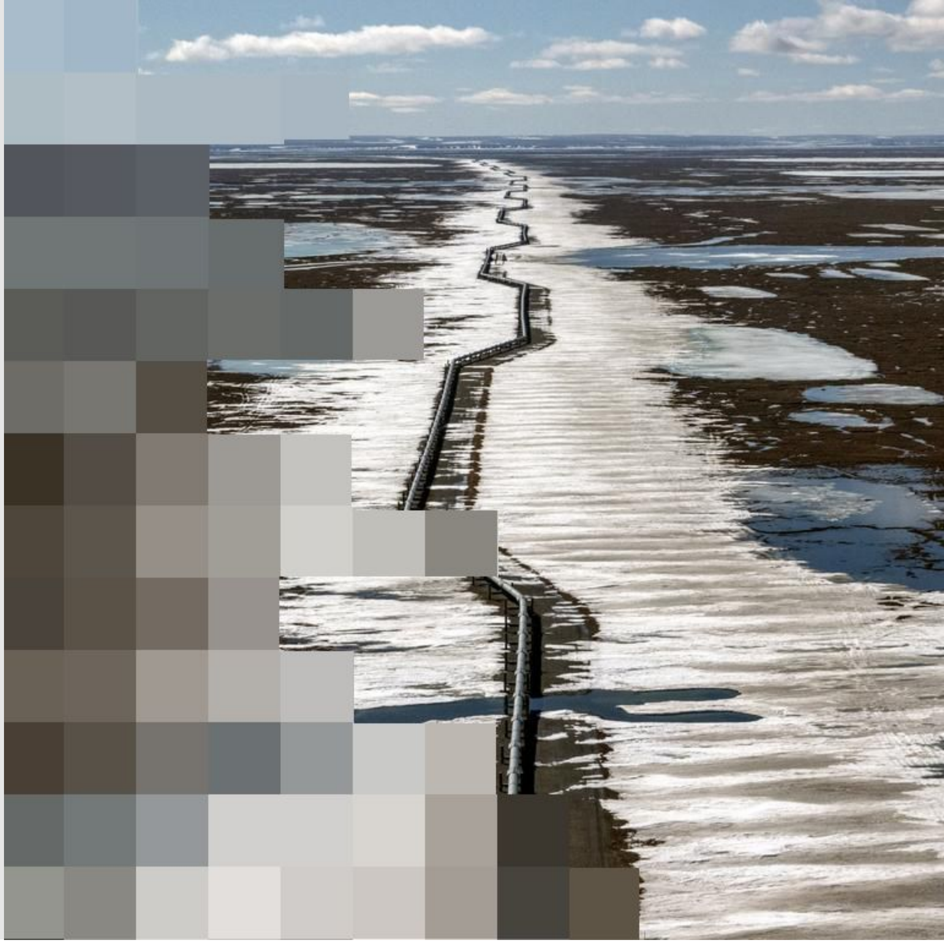

Key findings

- **Santos' current capex-heavy, production growth strategy is not the optimal strategy to maximise shareholder returns.**

- **The oil & gas projects up for FID within the next two years appear to generate minimal shareholder value.**

- **A capital return strategy - share buybacks - offers higher value, lower risk and fewer emissions than delivering the selected unsanctioned projects.**
    - Unsanctioned portfolio's total NPV is $803m, equivalent to just 5% of Santos' market capitalisation, while forecast capex is over $6 billion.
    - Re-allocating capital from these unsanctioned projects to share buybacks would generate an estimated $730m of value.
    - We estimate a $1.7bn upside available from ceasing fossil fuel developments because it reduces costs and risk for Santos.

- **The three projects up for imminent FID face a range of risks, and the portfolio as a whole is sensitive to cost overruns typical of the Aus LNG sector.**
    - Assuming a 20% capex overrun, with average exceedance of Australian LNG sector at 35%, a further $541m of NPV would be eroded from the portfolio.

Key findings (continued)

- **Based on a global industry, least-cost evaluation of alignment with the IEA's NZE pathway, no project is Paris-aligned or low-cost.**

- **Analysis of 30 years of Santos' shareholder returns shows production growth does not seem to positively correlate with shareholder returns.**

- **Shareholder returns have been significantly stronger when Santos is operating under a low-cost operating model.**
  - In the low-cost operating phase (2016-2021), shareholder returns outperformed the MSCI World Energy Sector Index by 162%.
  - In the current growth phase (2021-2023), capex more than doubled and returns lagged the MSCI World Energy Sector Index by 69%.

- **In 2023 Santos' dividend and share buyback yield was 7.4%, well below the 11% average of a group of nine Australian and global peers.**

- **Santos uses a higher medium term oil price assumption than any of the nine companies in this peer group - risking making unsanctioned projects appear more attractive.**

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Santos' unsanctioned project portfolio

Total Net Present Value (NPV)

Santos' unsanctioned (FID targeted) project portfolio appears to generate modest incremental value.[4]

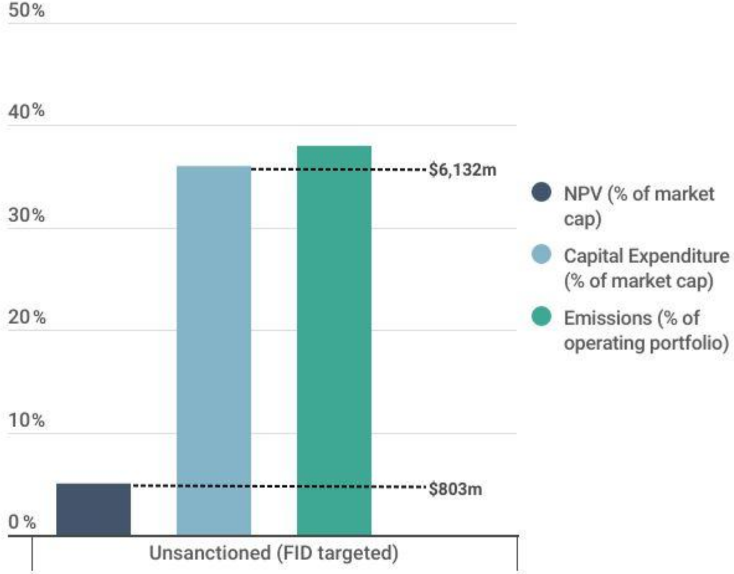
The aggregate NPV of Santos' unsanctioned projects is $0.8bn, equivalent to just 5% of market capitalisation,[5] despite an estimated capex cost of over $6bn.

These projects are forecast to emit 136 $MtCO_2e$ of greenhouse gases, equivalent to 38% of the operating portfolio.

Unsanctioned Project	Location	Capex ($m)	Discount rate[6]	Project NPV ($m)	Lifetime Emissions ($MtCO_2e$)
Narrabri	Australia	$1,348	12.4%	$215	33
Papua LNG	PNG	$2,073	15.2%	-$74	40
Dorado	Australia	$2,711	10%	$662	62
Total		**$6,132**		**$803**	**136**

Source: Rystad data, ACCR analysis

NPV and capex of Santos' unsanctioned projects with FID date announced



Source: Rystad data

[4] For methodology, see Appendix A.
[5] Santos' market capitalisation is $16,871 million as of 31 December 2023.
[6] ACCR estimates. Calculations of the discount rate for each project is included in Appendix B.

Papua LNG project

Exposed to the risk of an oversupplied market

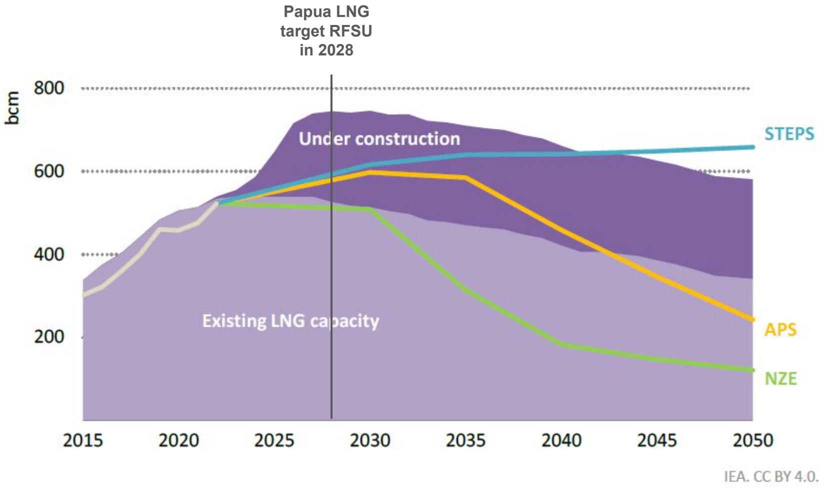
Papua LNG is targeting first production in 2028, when the IEA and others[7] forecast a sustained period of LNG market oversupply. According to the IEA:

- there's already more LNG capacity operating or under construction than will be needed until 2040, in every IEA scenario
- around two-thirds of projects under construction are at risk of not recovering their capital investment under the APS.[8]

This LNG supply glut will see export utilisation rates drop to 59% under the NZE scenario and 70% under the APS - both lower than the 78% utilisation rate in 2020 that saw LNG spot prices drop below $2/MMbtu.[9]

The project is therefore particularly exposed to risks of an oversupplied market, with dropping LNG prices impacting project returns.

Existing and under-construction LNG liquefaction capacity and LNG trade by scenario, and Papua LNG target ready for start up (RFSU) date



Source: IEA, The Oil and Gas Industry in Net Zero Transitions, p45. ACCR analysis

[7] IEEFA, Papua LNG Project – Financiers taking the risk, May 2023.
[8] IEA, World Energy Outlook 2023, p140.
[9] S&P, S&P Global Commodity Insights, 2020.

Papua LNG project

Faces a range of risks beyond market pricing

Physical climate risks	The project is located in PNG's Gulf Province, where climate change has already heavily impacted coastal areas.[10]
Financing	**Debt finance -** Some global banks (e.g. BNP Paribas[11], Crédit Agricole[12]) are increasingly reluctant to fund the project, which may increase the cost of funding.[13] 50 global civil-society organisations are campaigning to prevent finance to this project.[14] **Partner finance -** PNG's national petroleum and energy company, Kumul Petroleum Holdings Limited, was unable to pay the full $0.5bn to increase its interest in nearby project PNG LNG,[15] so may struggle to fund the $2.5bn capex required to construct Papua LNG.
FID prioritisation	Papua LNG has the highest break-even price of the five LNG projects that the operator TotalEnergies discussed in its latest Investor Briefing, suggesting it may not be a project the joint venture prioritises in the coming years.[16]
Other risks	**Ecological risks** - The area has rich biodiversity which could be impacted by industrial development, including 48 new-to-science and 15 undescribed species.[18] **Human rights risks** - TotalEnergies references Free and Prior Informed Consent (FPIC) in various documents,[19] but no public information materials have come to light to show if communities have been explained their FPIC rights. **Land tenure** - A long-running dispute over land tenure and royalties resulted in armed conflict at the related PNG LNG project.[20 21] Land tenure issues have also arisen for Papua LNG, with PNG's former Energy Minister warning in January 2024 of a heightened risk of conflict "both in and out of court".[22]

[10] Piku Biodiversity Network, Climate Change Impacts in the Kikori River Delta, Nov 2020.
[11] BNP Paribas, BNP Paribas details and strengthens its energy transition ambitions, May 2023.
[12] France 24, Financement des énergies fossiles : et si le vent tournait en faveur de la transition écologique ?, Feb 2024.
[13] We have not included this risk in the project's WACC for this analysis..
[14] Reuters, Environmental groups ask lenders to avoid LNG project in Papua New Guinea, Dec 2023.
[15] Santos, Partial Completion of Sale of 2.6% of PNG LNG to Kumul, Feb 2024.
[16] TotalEnergies, Strategy and Outlook, Sep 2023, p27.
[17] Convention on Biological Diversity, Papua New Guinea Biodiversity Facts.
[18] Total E&P PNG Limited, Papua LNG Project Upstream EIS, p7-91.
[19] Total E&P PNG Limited, Papua LNG Project Upstream EIS, p6-1.
[20] Mongabay, Tensions mount at PNG gas project, July 2018
[21] ANU, Methods in the madness: the 'landowner problem' in the PNG LNG project, 2019.
[22] The Australian, PNG LNG project at risk: energy minister, Jan 2024.

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Narrabri gas project

Already delayed by at least six years, still facing multiple challenges

Since it told investors the project could reach “first gas by 2018”,[23] Santos has so far delayed FID by at least six years.

Other challenges include:

- Licensing and secondary environmental approvals are still required before the Narrabri gas project and the Hunter Gas Pipeline, upon which it depends, can reach FID.
- APA Group withdrew its proposal for a gas pipeline in Dec 2022 after landholder protests, with Santos taking full transport risk by buying the Hunter Gas Pipeline company.[24]
- In March 2024, Gomeroi Traditional Owners won an appeal in the Federal Court against the project, with the project now to be sent back to the Native Title Tribunal to consider public interest in relation to climate change, likely causing further delays.[25]
- In January 2022, Energy Australia returned its 20% share of Narrabri to Santos for a nominal sum.[26]

[24] Santos Investor Seminar, 2014
[25] The Australian, Blow for Santos’ Narrabri gas project, Mar 2024.
[26] AFR, Runway cleared for Santos to Narrabri gas, Jan 2022.

Dorado oil project

Delayed FID, no signs of material progress

Dorado was targeted for FID in 2022, but at the 2022 Full Year Results Presentation, Santos announced it was:

- making FID for Pikka
- undertaking “further Bedout appraisal and optimisation” for Dorado.[27]

Project partner Carnarvon criticised the delay of FID,[28] and
Santos does not appear to have made material progress since then.

"While I would like to thank the Carnarvon team who worked hard to prepare the Dorado asset for a Financial Investment Decision (FID), I would also like to record my personal frustration with the progress of development, especially around the delay to FID...
Our partner and operator of the Dorado development has not progressed development activity at a pace that Carnarvon wishes, despite best efforts by Carnarvon."

William Foster, Chair, Carnavon Energy

[27] Santos, 2022 Full Year Results Presentation, Feb 2023, p29.
[28] Carnarvon, Annual Report 2023, p2.

Sensitivity analysis

Santos' unsanctioned project portfolio appears to be sensitive to cost overruns.

Australia's LNG sector has historically exceeded the capex guidance provided at FID by an avg of 35%.[29]

For Santos' unsanctioned projects we assumed for downside risk sensitivity a 20% capex cost overrun, which reflects long-term industry trends,[30] finding:

- **this would erode $541m of NPV from the portfolio.**

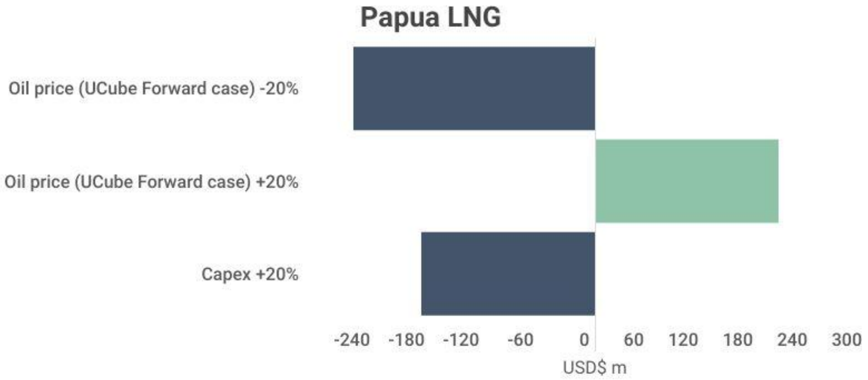
The following tornado charts model each unsanctioned project's sensitivity to a 20% capex overrun and a 20% increase/decrease in the oil price.

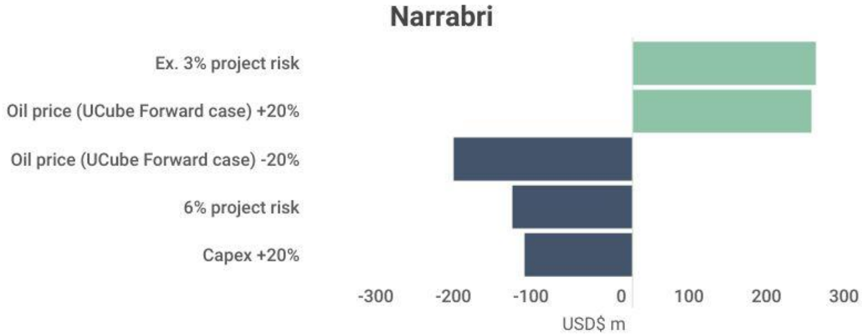
Because of the specific regulatory challenges that Narrabri faces:

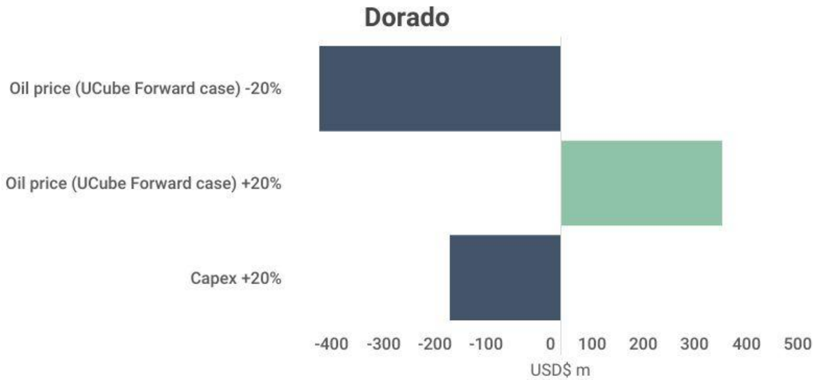
- we included a project specific risk of 3% in its discount rate. For comparison, this is the same project specific risk KPMG assumed applied to Woodside's Browse project[31]
- for transparency, we tested a sensitivity of 0% and 6% project risk.

[29] ACCR, Australia's LNG growth wave: did it wash for shareholders, Nov 2022.
[30] Merrow, Oil and Gas Industry Megaprojects: Our Recent Track Record, April 2012.
[31] KPMG, Independent Expert Report and Financial Services Guide, p247.

Project NPV sensitivity analysis
Tornado charts







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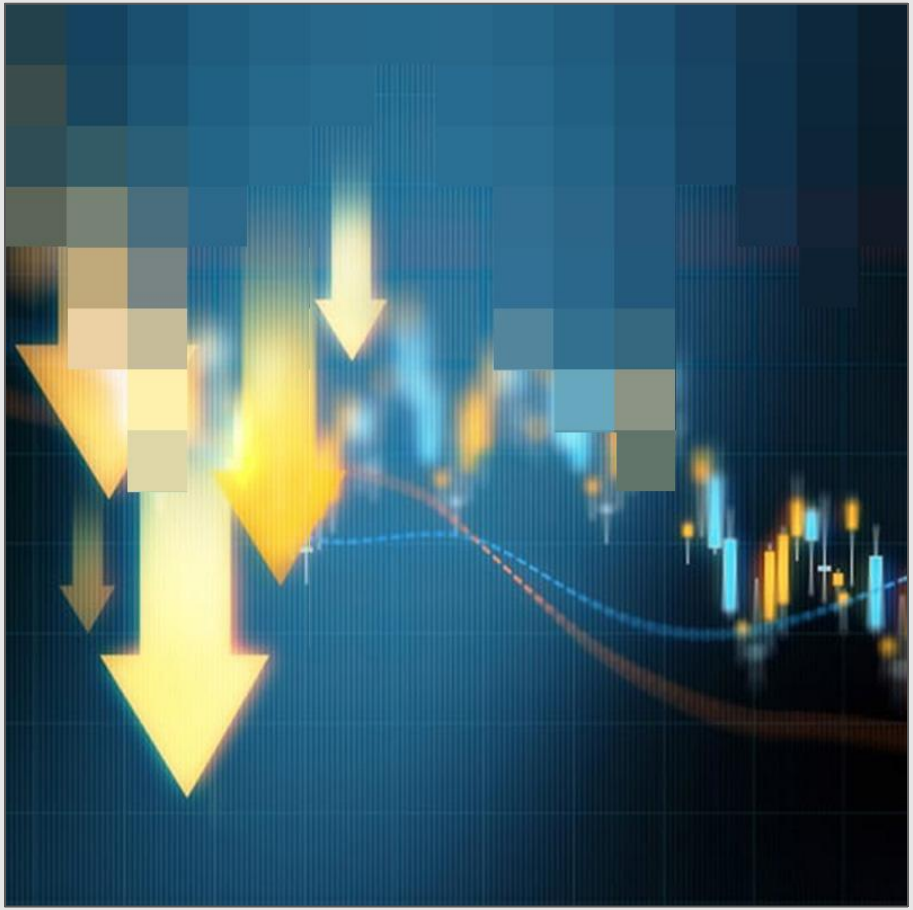
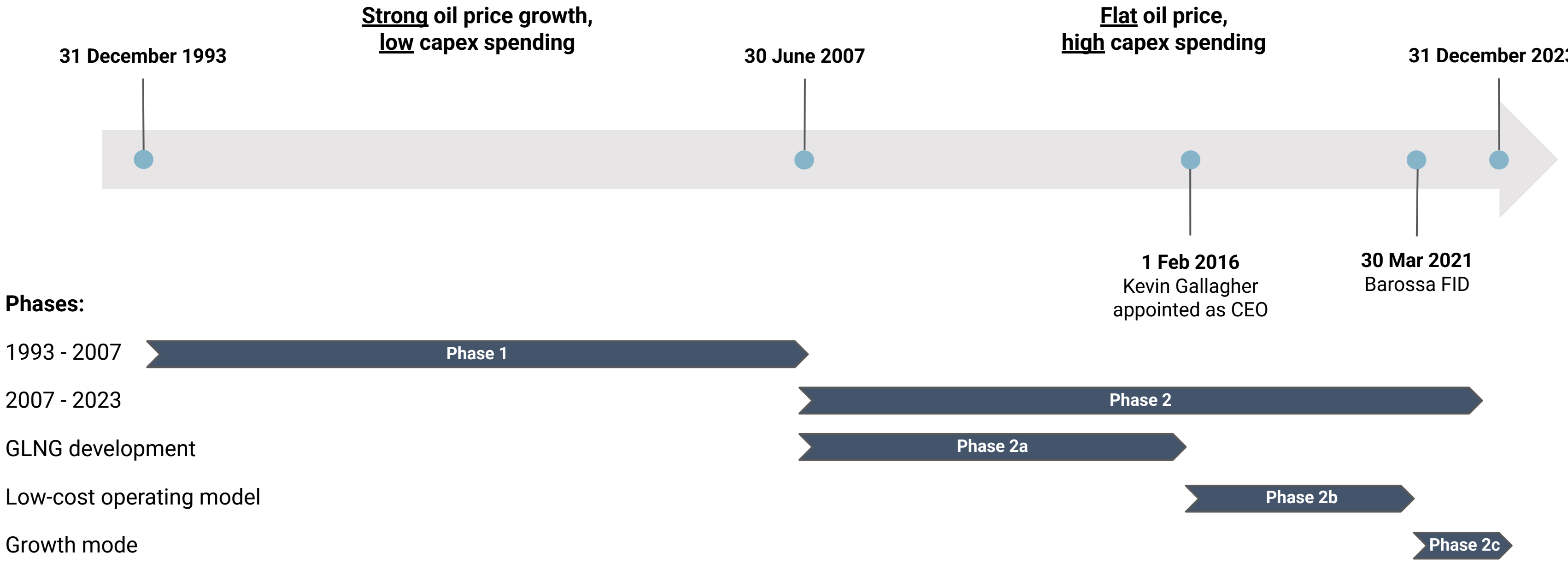
Shareholder returns



Timeline

Shareholder returns have varied significantly across Santos' phases of growth

ACCR has assessed Santos' Total Shareholder Return (TSR) performance for the phases defined in the chart below.



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Phase 1 (1993-2007) v. Phase 2 (2007-2023)

Santos performed strongly in the 15 years from 1993, but poorly since then

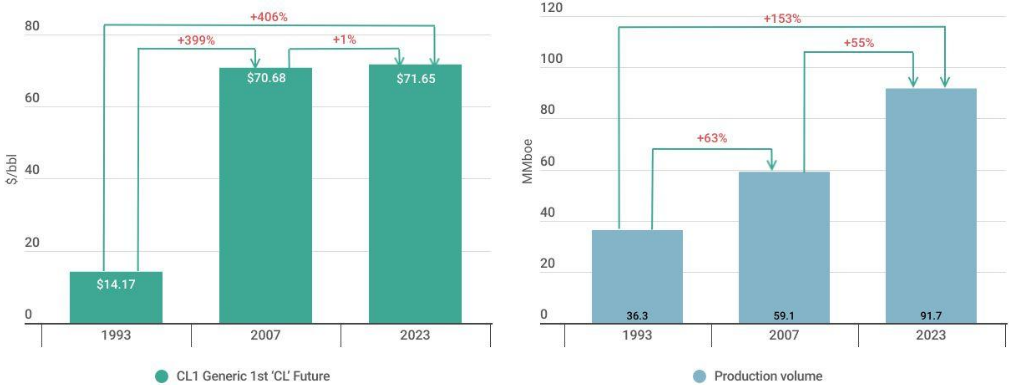
- **Phase 1 TSR of 21% p.a.**
- **Phase 2 TSR of 0% p.a.**

Santos shows a trend of not delivering strong shareholder returns in a flat oil price environment and underperforming during periods of high capex spend - suggesting production growth does not make a significant positive contribution to Santos shareholder returns.

With the IEA predicting oil demand and real prices will peak before 2030 in every scenario,[32] **the current capex-heavy production growth strategy does not appear to be optimal for maximising future shareholder returns.**

	Phase 1 1993-2007	**Phase 2** 2007-2023
WTI oil price growth (%)	399%	1%
Capex ($m average per year)[33]	402	1,756
Production growth (%)	63%	55%
TSR (USD, % p.a.)	**21%**	**0%**

Percentage growth of oil price (LHS) and Santos' production volume (RHS)



Source: Bloomberg Finance L.P.; Used with permission of Bloomberg Finance L.P. (LHS), Santos Annual Reports (RHS)

[32] IEA, World Energy Outlook 2023, p29.
[33] Bloomberg Finance L.P.; Used with permission of Bloomberg Finance L.P.

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Phase 2a (June 2007-February 2016)

Poor project execution impacts TSR

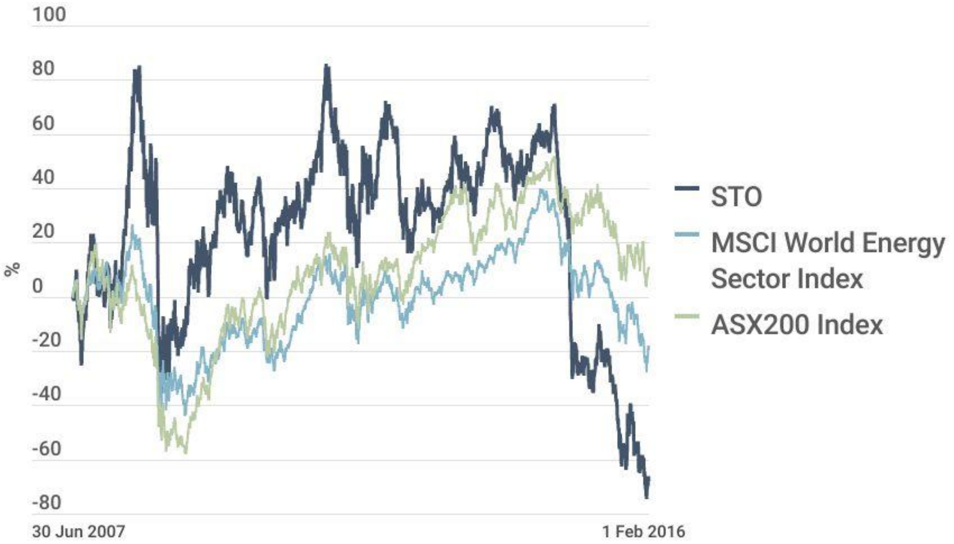
In Phase 2a Santos's TSR underperformed both the ASX200 and the MSCI World Energy Sector Index.

Despite an initially strong performance, overall TSR suffered due to poor execution of the $6.3 billion Gladstone LNG project which:

- was 1 year late and $1.5 billion over budget
- eroded $1.5 billion of shareholder value.[34]

30 Jun 2007 - 1 Feb 2016	Price Change	TSR
Santos	**-77%**	**-68%**
MSCI World Energy Sector Index	-38%	-19%
ASX200 Index	-33%	11%

Total Shareholder Return (30 Jun 2007 - 1 Feb 2016)[2]



Source: Bloomberg Finance L.P.; Used with permission of Bloomberg Finance L.P.

[34] ACCR, Australia's LNG growth wave: did it wash for shareholders, Nov 2022, p7.

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Phase 2b (2016-2021)

Santos moves to a low-cost operating model, outperforming the MSCI World Energy Sector Index

On 1 Feb 2016, Kevin Gallagher was appointed CEO of Santos and transformed it into a low-cost operating business.

Average annual capex was reduced by ~70% relative to Phase 2a.[36]

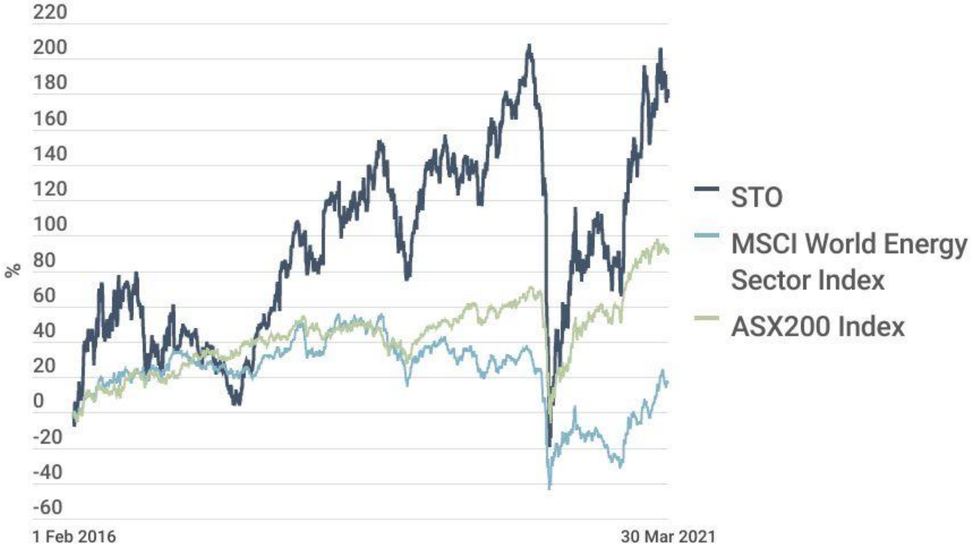
Santos' TSR was 178% - outperforming the ASX200 and the MSCI World Energy Sector Index.

This creation of significant shareholder value is attributable to:

- the low-cost operating model
- an increasing oil price.

1 Feb 2016 - 30 Mar 2021	Price Change	TSR
Santos	**151%**	**178%**
MSCI World Energy Sector Index	-8%	16%
ASX200 Index	43%	89%

Total Shareholder Return (1 Feb 2016 - 30 Mar 2021)[2]



Source: Bloomberg Finance L.P.; Used with permission of Bloomberg Finance L.P.

[36] Phase 2a capex was 2.3bn pa; Phase 2b capex was $0.7bn pa. Bloomberg Finance L.P.; Used with permission of Bloomberg Finance L.P.

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Phase 2c (2021-2023)

Santos goes into "growth mode", doubling capex but lagging the MSCI World Energy Sector Index

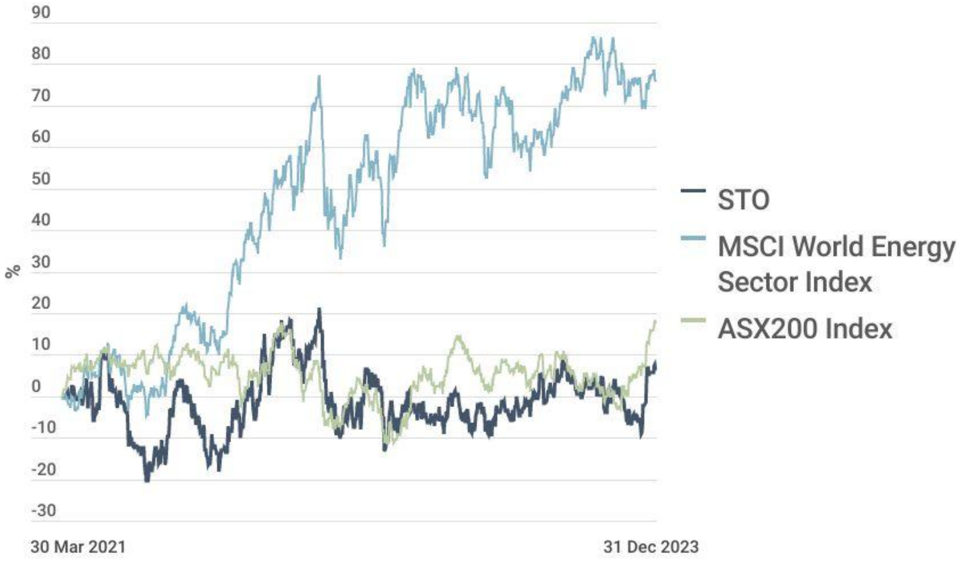
In March 2021, Santos kicked off a growth wave with the FID on the Barossa project.

Average annual capex more than doubled relative to the 2016-2020 period.[37]

Santos' TSR was 7% - lagging the MSCI World Energy Sector and the ASX200.

30 Mar 2021 - 31 Dec 2023	Price Change	TSR
Santos	**-4%**	**7%**
MSCI World Energy Sector Index	56%	76%
ASX200 Index	1%	18%

Total Shareholder Return (30 Mar 2021 - 31 Dec 2023)[1]



Source: Bloomberg Finance L.P.; Used with permission of Bloomberg Finance L.P.

[37] $1.7bn v $0.7bn. Bloomberg Finance L.P.; Used with permission of Bloomberg Finance L.P.

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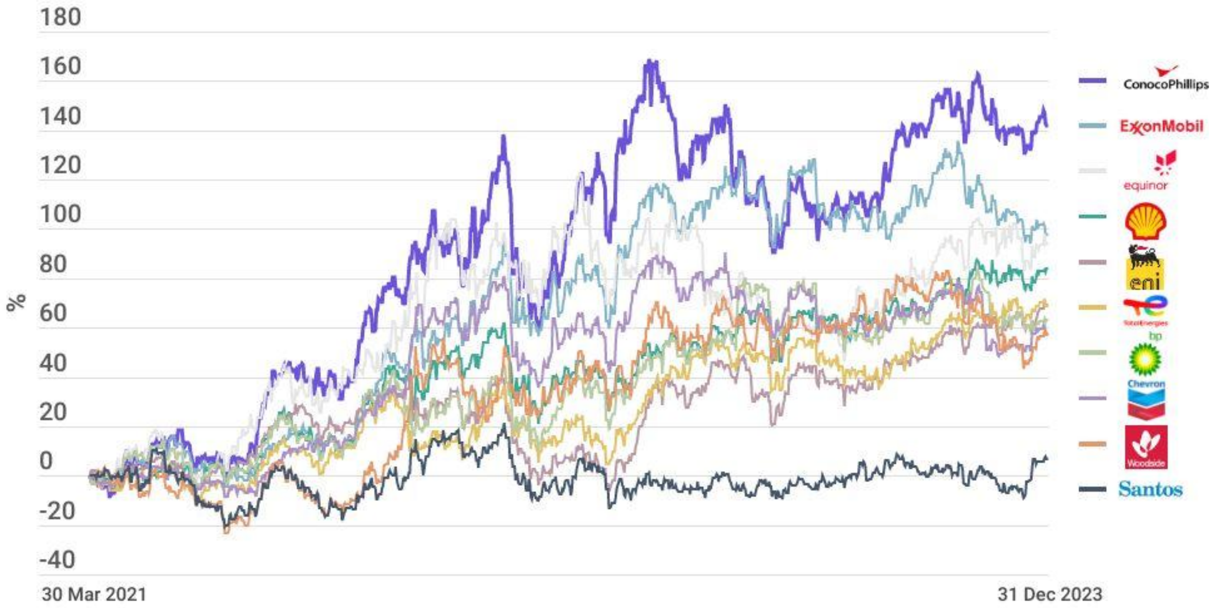
Phase 2c

Santos' TSR was by far the lowest amongst its peers

TSR: Santos v peers (30 Mar 2021 - 31 Dec 2023)[1]



Source: Bloomberg Finance L.P.; Used with permission of Bloomberg Finance L.P.

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Remuneration under "growth mode"

In April 2021, the Santos board implemented a A$6 million incentive for the CEO to:

- remain employed until Dec 2025
- meet milestones relating to:
    - Major growth projects
        - Barossa
        - Dorado and/or Pikka[38]
        - backfill resources.
    - various emission reduction projects.[39]

- Proxy advisor ISS reportedly criticised incentives "to deliver on future projects that have yet to deliver earnings and value for shareholders", meaning Gallagher "could still get his bonus if the board subjectively determines performance hurdles have been achieved, even if they don't generate shareholder value".[40]
- The Australian Shareholder Association noted the absence of "a hurdle set to ensure shareholders had a good outcome".[41]
- ISS recommended a vote against the remuneration report because "it is based on achieving strategic objectives which are typically regarded as being part of the 'day job' for a CEO".[42]
- At Santos' 2022 AGM, it received a "first strike" on remuneration.[43]

Santos' remuneration structure should be better aligned with shareholder interests.
(See Appendix D for ACCR's recommendations on this realignment)

[38] Pikka was added to the Growth Projects Incentive in 2022.
[39] Santos, 2022 Annual Report, p56.
[40] AFR, $6m golden handcuffs take Santos CEO off Woodside field, Apr 2021.
[41] CapitalIQ, Santos 2021 AGM transcript, p20.
[42] The Australian, Proxy adviser ISS slams Santos over CEO Kevin Gallagher's pay, Apr 2022.
[43] Santos, Results of 2022 AGM.

Santos' 2023 yield

Santos does not seem to be following the market trend to increase capital returns to shareholders

Santos' 2023 dividend and share buyback yield was 7.4% - below the 11% yield its Australian and international peers averaged.

In recent years, the oil and gas industry is:

- increasing dividends and share buybacks
- reducing cash spending on oil and gas capital expenditure.

Santos' 2023 yield incorporates the increased year end dividend. The higher dividends of $852m, however, coincided with an increase in net debt of $814m, which indicates the dividend increase has been assisted by increased gearing levels.

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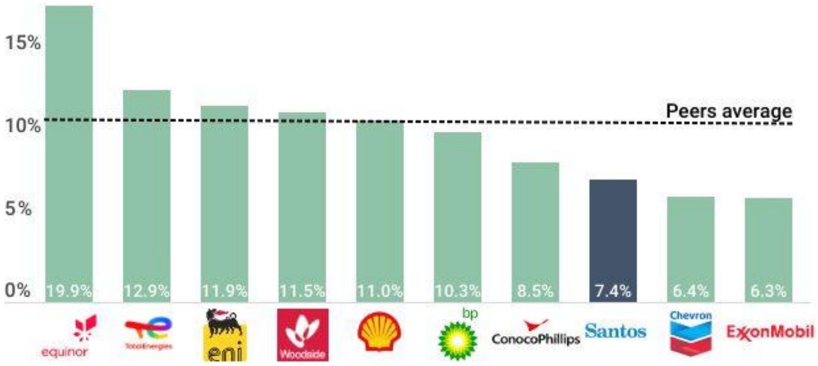
[44] The dividend and share buyback yield is the sum of 2023 dividend yield (Bloomberg 12 month dividend yield as of 21 February 2024 for peers and Santos' 2023 declared dividend of US$0.262 divided by the Santos' share price of US$4.8) and share count yield from 31 December 2022 to 31 December 2023. Santos announced the total declared dividends for FY23 and released the FY23 full year results on 21 February 2024.

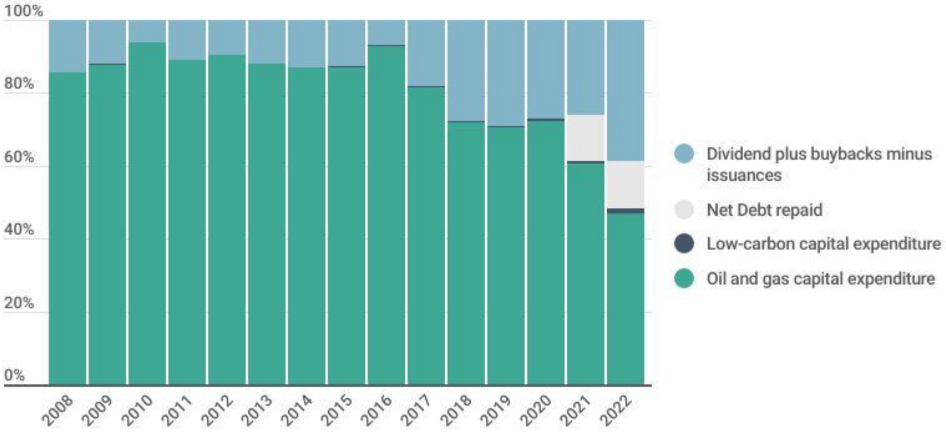
Returning capital to shareholders: Santos v. peers

2023 dividend and share buyback yield[44]



Source: Bloomberg Finance L.P.; Used with permission of Bloomberg Finance L.P.

O&G companies distributions trend



Source: IEA, [World Energy Investment 2023](), p11.

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Medium-term Brent oil price assumption

Santos' oil price assumption is higher than the market and peers

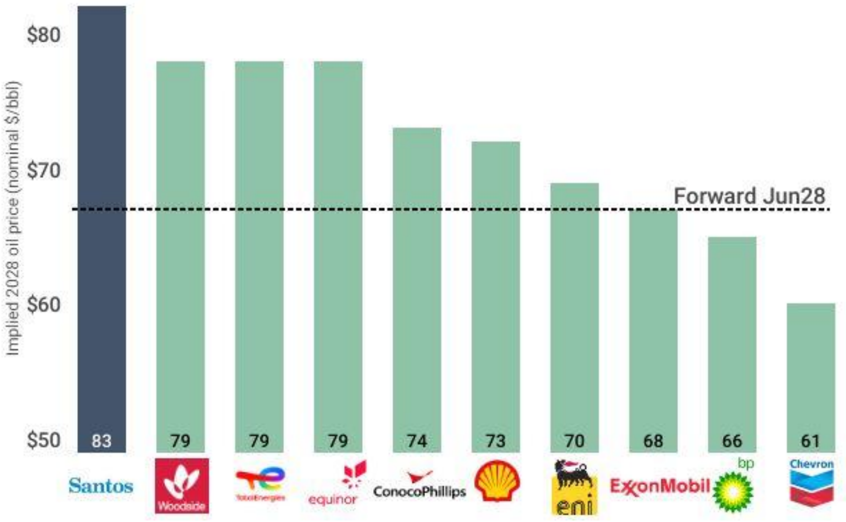
Santos' implied 2028 Brent oil price of $83/bbl[45] is:

- the highest amongst a group of peers
- ~22% higher than the June 2028 forward Brent price.[46]

At the 2023 Investor Briefing Day, Santos increased its oil price assumption from $65[47] (2022 real) to $75/bbl[48] (2023 real).

- There was no material change in the Brent forward price and it's unclear why this material change was made.
- The change makes its projects appear more attractive, including potentially making some uneconomic projects appear viable.

Medium-term 2028 implied oil price assumption[49]



Source: Company disclosures to December 2023 and Bloomberg (Generic 1st 'CO' Future, June 2028 future contracts as of 31 December 2023)

[45] Santos' disclosed $75 (RT23) escalated at 2% p.a. inflation.
[46] Bloomberg, Generic 1st 'CO' Future, June 2028 future contracts as of 31 December 2023.
[47] Santos, 2022 Investor Briefing Day Presentation, p10.
[48] Santos, 2023 Investor Briefing Day Presentation, p72.
[49] Current as of 31 December 2023, with other companies based on ACCR, Woodside's growth portfolio: what's in it for shareholders?, Aug 2023, p23.

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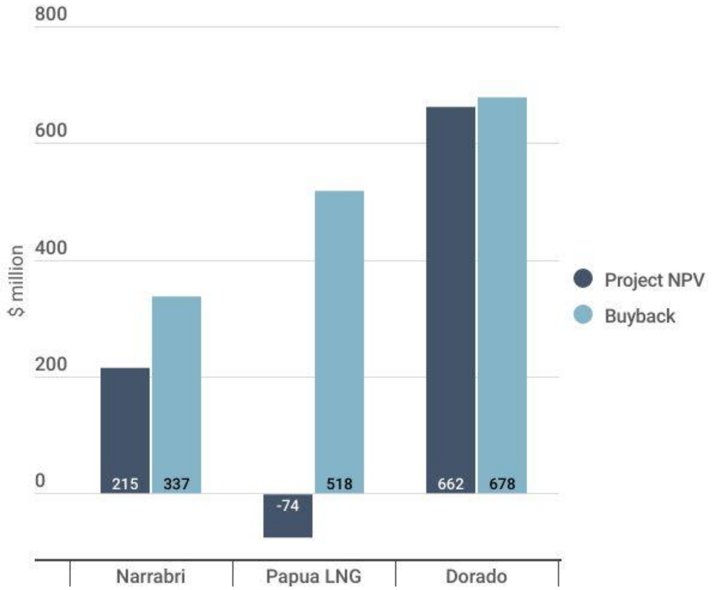
A capital return strategy

An alternative strategy: Share buybacks

Share buybacks appear to offer higher value than delivering the unsanctioned projects, with lower risk and fewer emissions

- We estimate redirecting capex from the portfolio of unsanctioned projects to share buybacks would generate $730 million more value than project delivery (4% of market capitalisation).
- We assume Santos shares trade at a 20% discount to underlying value, which is consistent with the 12 month consensus target price as of 31 December 2023.[50]
- At an individual project level, share buybacks offer the most upside for Papua LNG, but all three projects appear to offer less value than a buyback.
- If these projects suffer from delays or typical levels of cost overrun, buybacks will become even more attractive.

Value of delivering projects relative to share buybacks



Source: Rystad data and ACCR estimates

[50] Bloomberg. The 12 month consensus target price was 17% above Santos' share price as of 31 December 2023.

Additional value from ceasing fossil fuel expansion

As well as the direct opportunity to return capex to shareholders, we estimate an additional $1.7bn of valuation upside from a capital return strategy, which comes from:

1. **Avoided exploration costs ($1bn):** Ceasing new developments avoids exploration costs. We have included nominal annual costs associated with exploration in fields that did not make a discovery (the avg from 2000 to 2023) using Rystad Energy data. This has been capitalised using a P/E ratio of 10 and a 30% corporate tax rate. Including all exploration would roughly double the estimated benefits of ceasing exploration.

2. **Reduce the WACC ($0.5bn):** Ceasing expansion results in less volatile free cash flow and avoids entire risk categories, such as greenfields project execution risk. We have modelled this by assuming a gearing increase from Santos' current 20% target, to 25%, which will reduce the WACC for Australian and US projects by 0.3%, or 0.6% for PNG projects. We have applied this lower discount rate to all operating and sanctioned projects using Rystad Energy's Upstream Economic Model.

3. **Lower staff costs ($0.2bn):** Ceasing these activities allows for a much leaner and simpler organisation, with fewer staff and associated overheads. We have estimated a 5% reduction in staff and contractor headcount, $200,000 annual salary (including overheads), a one year redundancy payout, a P/E ratio of 10 and a 30% corporate tax rate. A 5% reduction may be conservative since Australian oil and gas companies have previously made greater reductions[51] without reducing workload.

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[51] SMH, Jobs go as Woodside chases cost savings while LNG prices boom, Mar 2022.

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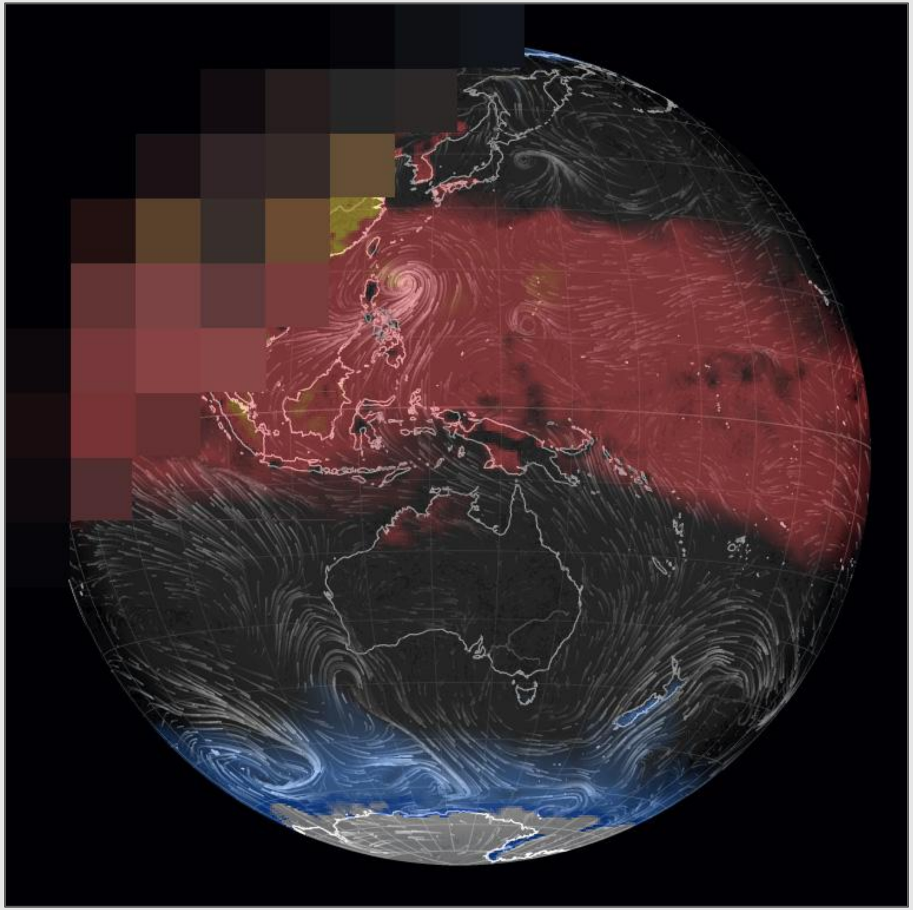
Climate alignment of Santos’ projects



ACCR's NZE alignment methodology

To test whether fossil fuel projects are Paris-aligned, ACCR has developed a global industry, least-cost evaluation of alignment with the IEA's NZE pathway. It assesses project alignment by examining individual unapproved projects in the context of all producing, approved and non-approved projects in the global oil and gas industry.

Our view is that the NZE pathway is the best available tool for assessment of Paris-alignment, because:

- it aims to limit global warming to 1.5°C in 2100 and provides enough certainty that warming stays well below 2°C throughout the 21st century.
- the temperature outcome in 2100 is determined by a climate model that takes into account all of the IEA's assumptions, including those relating to energy security, recent technology developments, recent geopolitical events, along with providing comprehensive sectoral and geographic data.[54]
- it is updated annually and takes into account the emissions output of recent years.
- the IPCC scenarios from the Sixth Assessment Report referred to by many oil and gas companies work with a 500GtCO_2 remaining carbon budget, which was current in 2020, as opposed to 210GtCO_2 which is current as of the start of 2024.[55]

For more details of our methodology see Appendix E

[54] The IEA bases its scenario temperature outcomes on outputs from MAGICC 7.5.3 (a reduced complexity climate model). See World Energy Outlook, 2023, p.158.

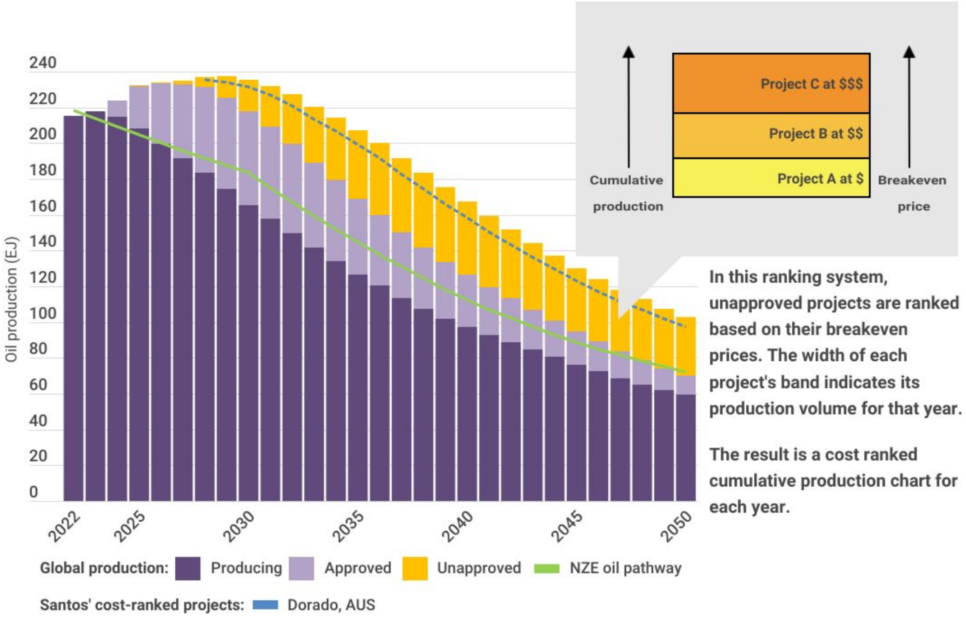
[55] For limiting global warming to 1.5°C with a 50% likelihood. Lamboll, R.D., Nicholls, Z.R.J., Smith, C.J. et al. Assessing the size and uncertainty of remaining carbon budgets. Nat. Clim. Chang. 13, 1360–1367 (2023). https://doi.org/10.1038/s41558-023-01848-5 , and subtracting 40GtCO_2 for the year 2023 based on Friedlingstein et al., Global Carbon budget 2023 (2023), https://doi.org/10.1038/s41558-023-01848-5

Dorado is significantly misaligned with the Paris Agreement

Our analysis shows that on a global industry, least-cost evaluation the Dorado oil project is:

- not consistent with the IEA's NZE pathway
- more expensive than 77% of all other unapproved oil projects
- still producing oil beyond 2050, creating long-term fossil fuel dependence and delaying the energy transition.

Santos' unapproved oil projects relative to the global oil market



In this ranking system, unapproved projects are ranked based on their breakeven prices. The width of each project's band indicates its production volume for that year.

The result is a cost ranked cumulative production chart for each year.

Source: Rystad data, IEA, ACCR analysis

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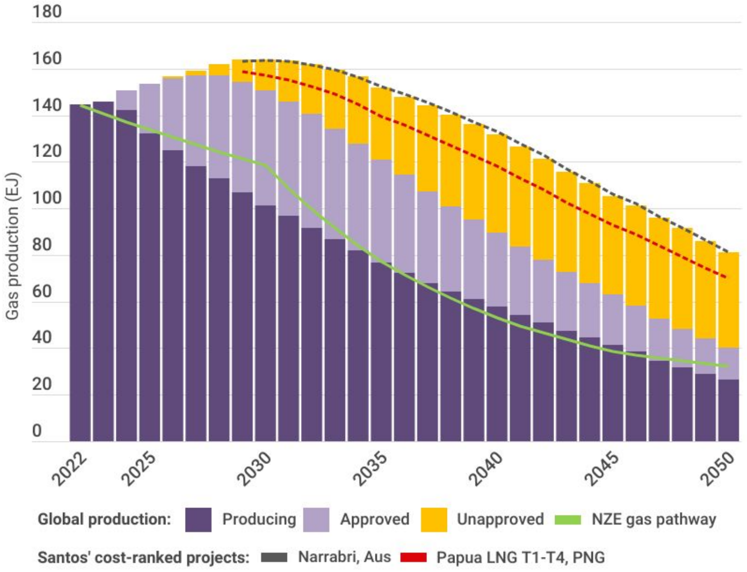
Narrabri and Papua LNG's significant misalignment with the Paris Agreement

We find that on a global industry, least-cost evaluation, Narrabri and Papua LNG are:

- not consistent with the IEA's NZE pathway
- more expensive than 98% and 58% respectively of all other unapproved gas projects
- still producing gas beyond 2050, creating long-term fossil fuel dependence and delaying the energy transition.

Narrabri and Papua LNG are not Paris-aligned, and sit on the 98th and 58th cost percentile of unapproved global gas projects respectively



Source: Rystad data, IEA, ACCR analysis

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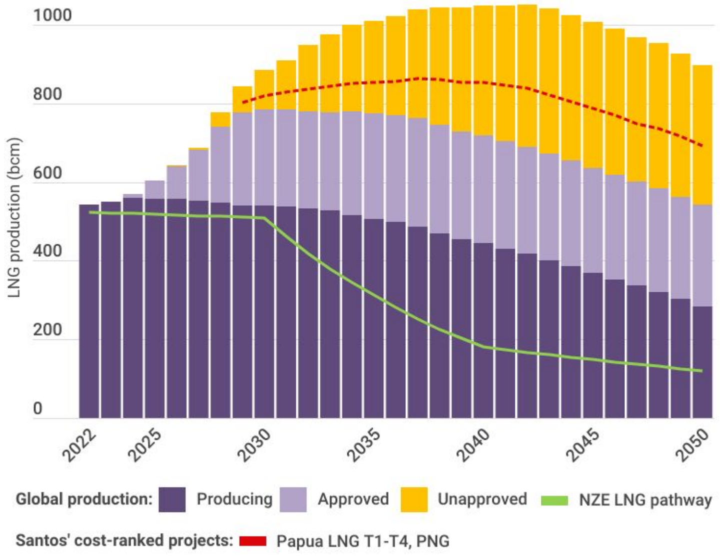
LNG supply glut means Papua LNG isn't needed under the NZE

- This chart shows what the IEA is calling an LNG supply 'glut'.[56]
- LNG demand under the NZE can be met by already operating projects, with even projects under construction not needed in this scenario.
- The IEA estimates that 70% of projects under construction will fail to recover their capital costs under the NZE scenario. This is 40% under their Announced Pledges Scenario (APS).[57]

Given the expected LNG glut, there is no room for already approved projects in the NZE scenario



Source: Rystad data, IEA, ACCR analysis

[56] IEA, Oil and gas in net zero transitions, Dec 2023, p47.
[57] IEA, Oil and gas in net zero transitions, Dec 2023, p47.

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Appendices

Appendix A: Methodology, data and assumptions

Currencies are in USD unless otherwise stated.

Calculations reflect Santos' current share of each asset, except for the TSR analysis, which uses historic/reported data.

NPVs use a 2024 base year, so do not represent NPV at FID.

Oil prices reflect the Brent forward curve (UCube Forward case; $54/bbl Real long term). Gas prices are based on Rystad Energy's relationship between gas and Brent prices.

Most production, cash flow and break even price data has been sourced from Rystad Energy's UCube on 11 January 2024. Rystad Energy has only delivered asset-level data and the model used to calculate the sensitivities. Rystad Energy is not responsible for any conclusions drawn from the data, and ACCR retains responsibility for any subsequent analysis including assumptions used or errors made.

Discount rates are project specific Weighted Average Cost of Capitals (WACCs). Inputs and assumptions are included in the Appendix B.

Emissions include scope 1 and 3 assume all production is combusted and there is no reservoir venting. Scope 2 emissions, and scope 3 emissions other than 'use of sold product' are not assessed.

The share buyback calculations assume that Santos shares trade at a 20% discount to the underlying value, based on the perspective of an active owner of Santos shares.

Appendix B: Weighted Average Cost of Capital (WACC)

Project WACCs are 10% adjusted for country risk and project specific risks.

Projects	Narrabri	Papua LNG	Dorado
Country	Australia	Papua New Guinea	Australia
Base WACC	10%	10%	10%
Project specific risks[58]	3%	-	-
Country risk premium[59]	-	6.5%	-
Proportion of debt in the capital mix[60]	20%	20%	20%
Proportion of equity in the capital mix	80%	80%	80%
Adjusted WACC	**12.4%**	**15.2%**	**10.0%**

[58] This is ACCR's judgement based on 3% was assigned to Browse in the Woodside/BHP Independent Expert Report.
[59] Spread of 10 Year Papua New Guinea Government bond yield and 10 Year US Government bond yield.
[60] Mid-point of Santos' 15%-25% gearing target.

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Appendix C: Background of unsanctioned projects with FID date announced

Project	Location	Product type	FID[61]	RFSU[62]	Lifecycle Production (MMboe)	Santos' share	Project partners[2]
Narrabri	Australia	Gas	2025	2028	106	100%[63]	nil
Papua LNG	Papua New Guinea	Gas	2024	2028	125	17.7%	TotalEnergies[64] (31.1%); ExxonMobil (28.3%); Kumul Petroleum Holdings Limited (22.5%); Other partner(s) (0.4%)
Dorado	Australia	Crude Oil	2024	2028	144	80%[65]	Carnarvon Energy (10%) CPC (Taiwan) (10%)

[61] Santos announced target FID dates.
[62] Rystad
[63] [64] [65] Operator.

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Appendix D: Recommendations for remuneration

Santos' remuneration structure could better align with shareholder interests

CEO incentive component	ACCR recommendation	Reasoning
STI	Remove production and fossil fuel growth metrics	Fossil fuel production is not necessarily in investor interests and, in ACCR's view, the scorecard is overweight on fossil fuel production (25%) and expansion (7.5%) relative to financial indicators (5% on unit cost; 5% capex[66]).
LTI	Introduce absolute TSR metric	This incentivises management to deliver positive TSR for shareholders regardless of the performance of the market and peer group.
CEO Growth Incentive	Cancel incentive	Capital expenditure since this incentive was introduced appear to have eroded shareholder wealth.

[6] There is also 10% gearing component, but we view gearing as a board decision rather than a management target.

Appendix E: ACCR's NZE alignment methodology

At a high level, our methodology involves:

1. assuming all operating and under development projects operate until end of life
2. ranking all unapproved projects by breakeven price
3. assessing each unapproved project to see if it is 'required' to meet demand levels under the NZE scenario, after accounting for operating and under construction facilities.

By developing this least-cost model at the asset level, we can provide project context and broadly reconcile with the IEA's statements that:

- no new [oil] projects are approved for development in the NZE scenario and higher-cost projects are also closed [shut-in] from the 2030s
- in the NZE scenario, no new long-lead time gas projects are required
- in the NZE scenario, a glut of LNG and pipeline capacity forms in the mid-2020s
- in the NZE scenario, LNG projects currently under construction are not necessary.

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[1] IEA, The Oil and Gas Industry in Net Zero Transitions, 2023, Fig 1.11, p35
[2] IEA, The Oil and Gas Industry in Net Zero Transitions, 2023, Fig 1.13, p38
[3] IEA, The Oil and Gas Industry in Net Zero Transitions, 2023, Fig 1.18, p45

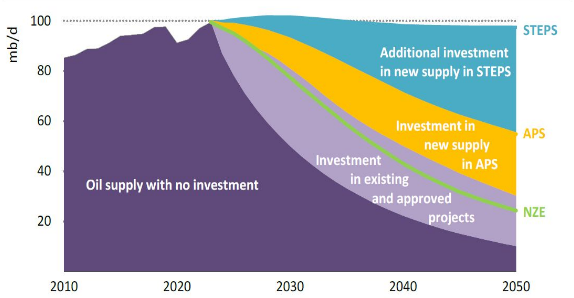
Appendix E: ACCR's NZE alignment methodology (continued)

ACCR's NZE analysis closely matches the IEA's fossil fuel supply charts

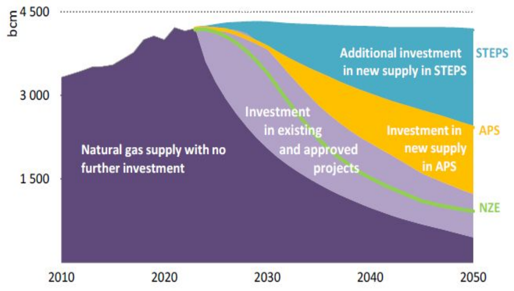
ACCR's NZE analysis broadly reconciles IEA's supply charts (pictured below), with the following differences:

- IEA show supply with no further investment, whilst ACCR allows for sustaining capex
- IEA displays existing and under-construction LNG capacity, whilst ACCR shows LNG production.

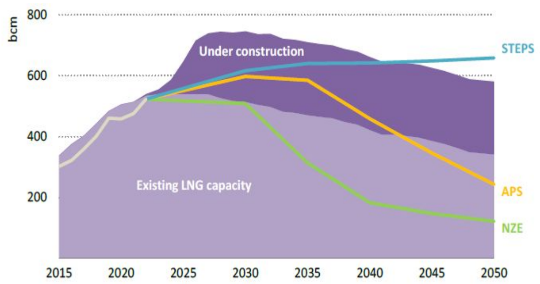
IEA: Oil supply by scenario, 2010-2050[1]



IEA: Natural supply by scenario, 2010-2050[2]



IEA: LNG liquefaction capacity and trade by scenario, 2015-2050[3]



[1] IEA, The Oil and Gas Industry in Net Zero Transitions, 2023, Fig 1.11, p35
[2] IEA, The Oil and Gas Industry in Net Zero Transitions, 2023, Fig 1.13, p38
[3] IEA, The Oil and Gas Industry in Net Zero Transitions, 2023, Fig 1.18, p45

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