ACCR - Origin 2022 AGM webinar

2022 ACCR resolution, Say on Climate and director re-election

Gemma Yeates, Investor Engagement Lead gemma.yeates@accr.org.au

Harriet Kater, Climate Lead Australia harriet.kater@accr.org.au

Alex Hillman, Carbon Analyst alex.hillman@accr.org.au

Dimitri Lafleur, Chief Scientist dimitri.lafleur@accr.org.au



Agenda

- Introduction Harriet Kater, Climate Lead Australia
- The latest science for a 1.5 degree pathway Dimitri Lafleur, Chief Scientist
- Overview of the ORG CTAP analysis and voting recommendations Alex Hillman, Carbon Analyst
- Q&A (20mins)



Contact details

Have a question? Please reach out.

Gemma Yeates - Sydney

Email: gemma.yeates@accr.org.au

Martin Norman - Norway

Email: martin.norman@accr.org.au



Origin Energy: Reflections on the last 12 months (or so)

- August 2021: ORG commits to 'Say on Climate' & ACCR resolution seeking 1.5C aligned Capex
- October 2021: 44% shareholders support capex resolution at AGM
- February 2022: Origin announces early closure of Eraring power station, possibly Aug 2025
- August 2022: ACCR files shareholder resolution seeking 1.5C sensitivity in financial statements
- August 2022: Origin published CTAP excludes exploration activities
- **Friday 16 Sept**: Notice of meeting, commits to climate sensitivity for operating assets
- Monday 19 Sept: Announcement re exit from Beetaloo, Canning and Cooper exploration
- Last week: ACCR rapidly rewrites our CTAP analysis
- TODAY: ACCR withdraws accounts and audit resolution Alex to provide more detail



Science update

1.5°C scenarios and implications for oil and gas

Dimitri Lafleur - Chief Scientist dimitri.lafleur@accr.org.au



New oil and gas developments are incompatible with 1.5°C

Future projections that are consistent with the Paris Agreement (and 1.5°C) show:

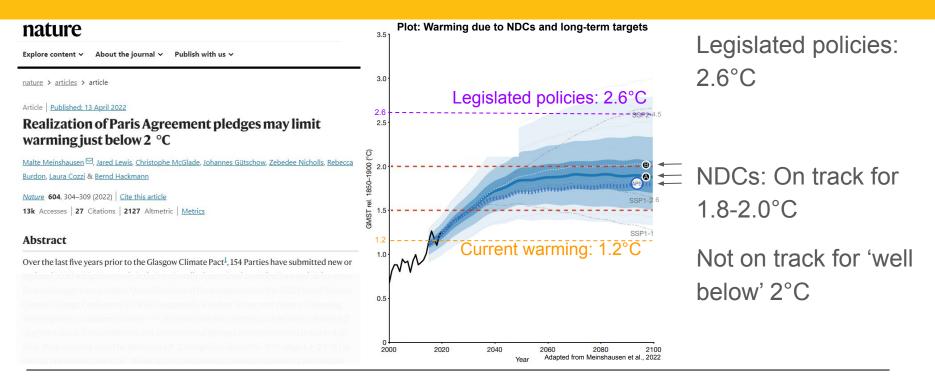
- new oil and gas exploration is incompatible with 1.5°C and also not needed to meet future demand
- emission from the energy system have to decline 40-45% by 2030
- unabated oil and gas use need to decline before 2030 (possibly -28%, -18%)

A call to Origin to disclose their 1.5°C scenario with:

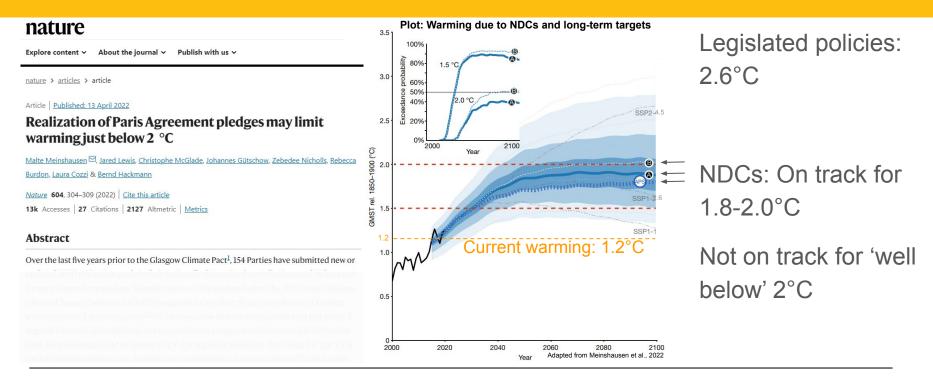
- temperature metrics through to 2100
- societal and technological assumptions



How are we doing limiting global warming?

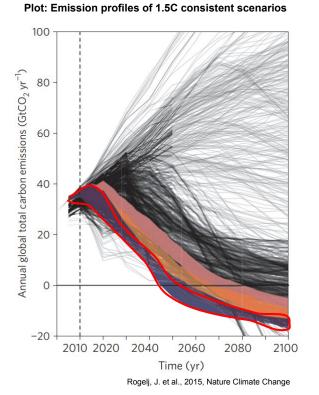


How are we doing limiting global warming?





1.5°C consistent scenarios



- Cumulative remaining GHG emissions budget
 - 500Gt CO2 (50%), 400Gt CO2 (67%)
 - Limits the temperature overshoot this century

• Limiting global warming to 1.5°C in 2100

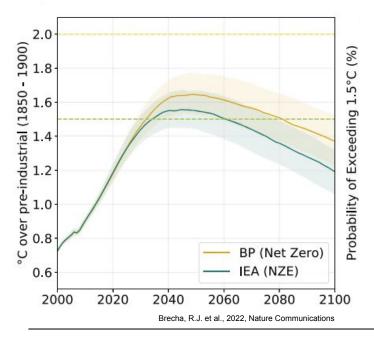
• Projections that capture societal choices

1.5°C consistent scenarios

- IEA
- IPCC
- DNV
- Bank of England
- PRI
- Institutional/company scenarios



Plot: Warming due to IEA NZE scenario



• 1.5°C consistent scenario

• Peaks at 1.56°C in 2045

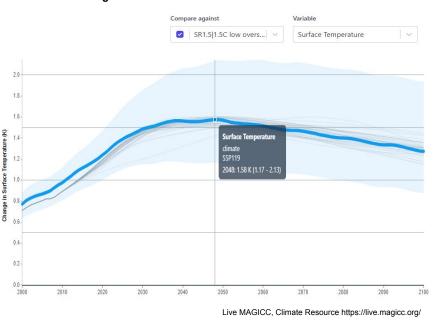
• Assumptions:

- Population (IMF)
- Economic growth (45% (2030), 100% (2050) vs. 2020)
- Low usage of CCS, BECCS, DAC, bioenergy
- Reliant on energy efficiency, hydrogen and solar and wind

• Outcomes:

- Energy GHG emissions decline by 43% (2019-2030)
- Unabated coal, oil and gas use decline by 58, 28 and 17% by 2030
- Very rapid renewables growth and hydrogen production ramp up
- No need for new mines, extension of mines or new oil and gas





Plot: Warming due to IPCC 1.5C scenarios

- Range of 1.5°C consistent scenarios
 - Based on outputs of Integrated Assessment models (IAMs)
- Assumptions:
 - Similar types as IEA

In general:

- Models have shortcomings but provide a good guardrail
- Beware of the median



Scenario filtering

- Scenario filtering: removing scenarios based on assumption thresholds
 - BECCS
 - \circ Afforestation
 - methane emission reduction
 - energy efficiency,
- Warszawski et al, 2021
- Climate Analytics, 2022



Scenario filtering

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 - BECCS
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Companies need to disclose temperature metrics and assumptions behind their 1.5°C scenarios through to 2100.

In 2030:

Coal use

Oil Use

Gas use

IEA NZE

(on 2019)

-58%

-28%

-17%

Climate

Analytics

(on 2020)

-80%

-27%

-29%



Warszawski

filtering

-68%

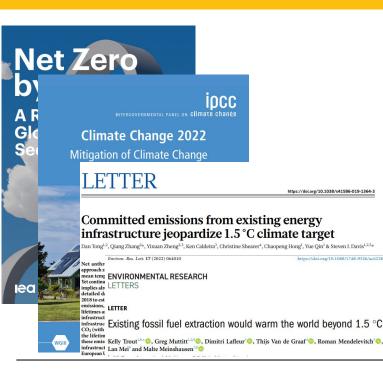
-28%

-9% (-18%

wo CCS)

(on 2020)

New oil and gas is inconsistent with the Paris Agreement



- New oil and gas exploration and development incompatible with the Paris Agreement
- IEA: no need for approval of new oil and gas projects
- Trout et al: committed oil and gas emissions consume 85% of remaining 1.5°C carbon budget
- IPCC WG3 and Tong et al: emissions from existing fossil fuel burning instructure larger than 1.5°C carbon budget



New oil and gas developments are incompatible with 1.5°C

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- emission from the energy system have to decline 40-45% by 2030
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ACCR analysis

H2 2022 Say on Climate

Director vote

Accounts and audit resolution

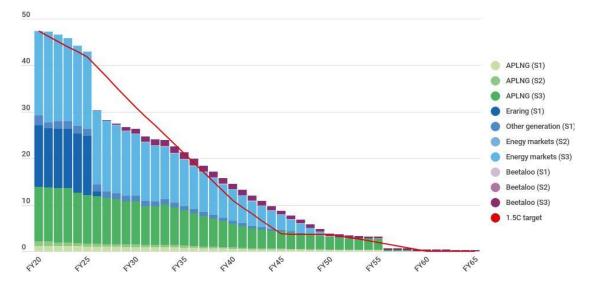
Alex Hillman - Carbon Analyst alex.hillman@accr.org.au



Origin 2022 Climate Report

- In 2021, 44% of shareholders supported a resolution to align capex with 1.5°C
- Origin's updated plan is now aligned with a 1.5°C carbon budget and capex
- Delaying the closure of Eraring even slightly would result in the budget being exceeded
- Despite the recent Beetaloo divestment Origin's facilitative role in new gas basins remains concerning

Origin emissions and 1.5C target profiles (MtCO2-e pa; ACCR analysis)



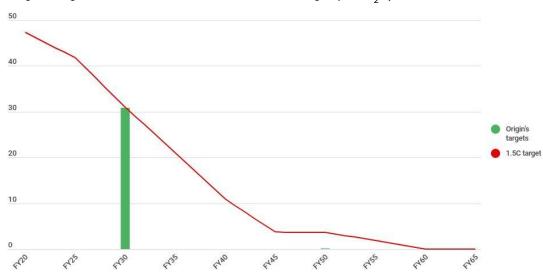


Origin Energy: CA100+ Indicators

Disclosure Indicator	Origin 2022 commitment / disclosure	ACCR assessment
1. Net-zero GHG emissions by 2050 or sooner	Net zero 2050	These targets cover scope 1, 2 and 3 emissions and are aligned with ACCR's view of a 1.5C carbon budget, despite risks to their delivery
2. Long-term (2036-2050) GHG reduction target(s)		
3. Medium-term (2026-2035) GHG reduction target(s)	40% reduction 20 MtCO ₂ -e pa reduction	
4. Short-term (up to 2025) GHG reduction target(s)	8 MtCO ₂ -e of cumulative scope 1 emissions	Only 2% pa of reduction when considered across all 3 scope
5. Decarbonisation strategy	Shut Eraring Power Station Grow renewables and use customer base to diversify revenue	Decarbonisation strategy partly relies on selling exploration assets to operators with aggressive development targets
6. Capital allocation alignment	Align investment with emissions targets Shift allocation to 'cleaner' energy	No formal commitment to align capex to 1.5°C but capital will be deployed consistently with strategy, targets and ambition
7. Climate policy engagement	Published 2022 industry association review	Review claimed to assess policy and advocacy, but missed key examples of misalignment
Climate policy engagement Alignment assessment	Organisation score 61% Relationship score 58%	Detailed InfluenceMap scoring indicates mixed engagement on climate policy
8. Climate governance	10% remuneration for S1 targets and 18% for Energy markets strategy	Indicator requirements are met however the Long Term Incentive should be linked to the 2030 target, to better incentivise Scope 2 and 3 emissions reductions
9. Just transition	Principles stated	Top level principles require detail and ongoing review
10. TCFD disclosure	Discloses consistent with TCFD pillars	Discloses consistent with TCFD pillars
Accounting and audit	Financial statements explain where climate is relevant. A 1.5°C scenario is considered.	Current improvements and the commitment to quantify 1.5C outcomes in the FY23 report are welcome

Climate targets

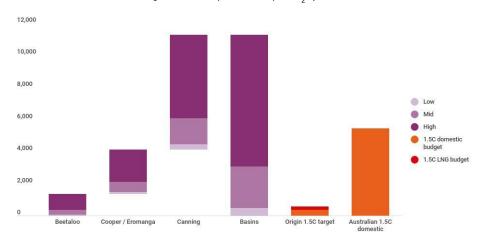
- Short term target to reduce emissions by 8 MtCO₂-e over 3 years is insufficient when assessed across all 3 scopes
- Medium term target to reduce emissions by 20 MtCO₂-e or 40% is aligned with our 1.5°C carbon budget
- Long term target of net zero by 2050 is aligned with our 1.5°C carbon budget



Origin's target and ACCR's modelled 1.5C carbon budget (MtCO₂-e)

Divestment is not decarbonisation

- Institutional investor portfolios will be subject to the physical climate impacts of developing these basins irrespective of who develops them
- Despite divesting Beetaloo, Origin is still supporting its developments with an offtake agreement
- We encourage investors, particularly universal owners, to challenge Origin's role unlocking the Beetaloo Basin

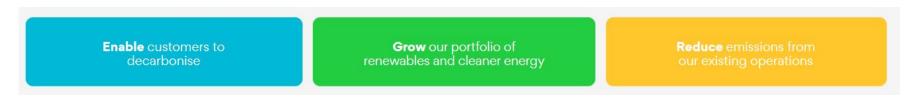


Potential emissions from Origin's undeveloped basins (MtCO₂-e)

In support of its 1.5°C commitment, Origin could instead 'wind down' its Canning and Cooper-Eromanga acreage by:

- Ceasing capital investment, beyond legal obligations
- Committing to not pursue production licenses
- Working with governments to ensure these resources are not developed

Decarbonisation strategy to 2030



Low carbon products and solutions

- PV, batteries, EV solutions and demand management
- Carbon credits

Octopus Energy (20% share)

- UK 100% renewable electricity retailer
- Kraken customer management system has been licensed globally

Evolve the portfolio

- Targeting 4GW of PV renewables and storage by 2030
- Targeting expansion of the Virtual Power Plant to 2GW

Future fuels

• Mid 2020's green hydrogen and ammonia ambitions

Exit coal

• Close Eraring 'as early as' 2025

Gas operations

- Focus on methane emissions at APLNG
- Renewable energy import to APLNG is not canvassed

Capital allocation

In 2021 44% of Origin shareholders supported an ACCR resolution to align capital allocation with 1.5°C pathways.

The CTAP says Origin's net zero ambition will now be 'considered' when allocating capital

The Beetaloo divestment statement supports the view that Origin is materially redirecting its capital:

The decision to divest our interest in the Beetaloo and exit other upstream exploration permits over time, will enable greater flexibility to allocate capital towards our strategic priorities to grow cleaner energy and customer solutions, and deliver reliable energy through the transition

Although there are no specific commitments, the indicative guidance appears to show that medium term capital allocation to fossil fuels is aligned with the IEA's Net Zero Emissions 1.5°C scenario.



Climate Policy Engagement

APPEA and QRC have both had a sustained, negative influence on Australian climate policy

This puts Origin's 1.5°C aligned strategy at risk

If Origin cannot constrain their negative advocacy, it should exit both organisations

Origin should also be advocating positively and publicly for climate policies that support its 1.5°C aligned strategy

Industry Association	Example of advocacy against a 1.5°C scenario
Queensland Resources Council (QRC)	Used Russia's invasion of Ukraine to push for ongoing legal and assessment processes to be disregarded in order to approve New Hope's New Acland thermal coal mine in Queensland. ¹
Australian Petroleum Production and Exploration Association (APPEA)	We need new [gas] supply. We need confidence for investors to invest in exploration and expansion. ²



Climate Governance

Strategy

• 2022 strategy refresh considered climate change and clearly resulted in significant decisions

Remuneration

- Short term remuneration includes 10% for scope 1 emissions reductions and 18% for Origin's energy markets strategy - effectively a transition strategy
- 50% of the long term incentive equity grants for the CEO includes consideration of nonfinancial metrics, including some climate related metrics
- Remuneration would be stronger if it included the 2030 target, including all emission scopes



Just Transition

- Eraring presents a genuine test of Origin's commitment to a Just Transition
- Origin's commitments to 'open, inclusive and transparent engagement' and positive policy advocacy are welcome
- Questions remain about Origin's approach to:
 - Eraring's indirect employees
 - A regional structural adjustment policy, as recommended by the Hunter Jobs Alliance
- More detail is needed for a full assessment

Investors can:

• Monitor specific actions and commitments, especially relating to worker and subcontractor engagement and participation



Conclusions

- Origin's climate plan is significantly improved and is supportable
- Divestment is not however decarbonisation, and investor could rightly be concerned of the physical impacts associated with developing Origin's exploration acreage, irrespective of who the developer is
- Origin can take actions to reduce the chances of these basins being developed
- APPEA and QRC's advocacy presents a risk to Origin's strategy since it works against a 1.5C outcome. Origin should restrain, or exist these organisations as well as publicly advocating for positive policies.
- The Just Transition implementation at Eraring requires additional detail.



ACCR analysis

2022 Director vote

Naomi Hogan - Special Projects Lead, Australia naomi.hogan@accr.org.au



Director re-elections: Greg Lalicker at ORG

- Lalicker is CEO of private oil and gas company Hilcorp Energy, based in Houston
- July 2022 <u>research</u> by Clean Energy Task Force and Ceres found Hilcorp is the highest methane emitter of all oil and gas companies operating in the US
- This poor record on methane is extremely concerning since Origin is operator of upstream wells for APLNG and Lalicker is on Origin's Safety and Sustainability Committee
- ACCR encourages investors to take this into account and vote against the re-election of Greg Lalicker



Greg Lalicker

Independent Non-executive Director

Greg Lalicker joined the Board in March 2019. He is a member of the Safety and Sustainability Committee.

Greg is the Chief Executive Officer of Hilcorp Energy Company, based in Houston, USA, Hilcorp is the largest privately held independent oil and gas exploration and production company in the United States.

Greg joined Hilcorp's leadership team in 2006 as Executive Vice President where he was responsible for all exploration and production activities. He was appointed President in 2011 and Chief Executive Officer in 2018. Prior to working for Hilcorp, Greg was with BHP Petroleum based in Midland, Houston, London and Melbourne as well as McKinsey & Company where he worked in its Houston, Abu Dhabi and London offices.

Greg graduated as a petroleum engineer from the University of Tulsa. He also has a Master of Business Administration and a law degree.



ACCR analysis

Accounts and audit

Alex Hillman - Carbon Analyst alex.hillman@accr.org.au



Accounting and Audit

Climate risk, is financial risk. It belongs in the financial statements

ACCR resolution asks for a 1.5°C sensitivity scenario from its FY23 financial statements.

This is a sensitivity, not 'Paris aligned accounts'.

Origin made significant progress with 2022 financial statements:

- Qualitative discussion of climate impacts, including under IEA 1.5°C scenario
- Energy markets: Higher value, now that Eraring's value is already impaired. Assumptions not disclosed
- APLNG: Disclosed energy price assumption which would impair asset. Impairment not quantified.
- Exploration: Silent

Announced a "plan" to improve disclosure for FY23, with the exception of exploration assets

Exploration assets are now much less significant

As such, ACCR has withdrawn the resolution

