

The supply-side half of the climate crisis

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1 Introduction

The world's governments have been too slow to respond to climate change: it is now *physically impossible* for demand-side measures (the Paris Agreement NDCs) to suffice in preventing climate chaos.

This document is a brief introduction to key climate science reports that highlight the need for urgent supply-side measures to address the climate crisis. Notably, these measures include an immediate ban on any new fossil fuel projects in Australia.

2 The Production Gap report

The Production Gap Report — first launched in 2019 — tracks the discrepancy between governments' planned fossil fuel production and global production levels consistent with limiting warming to 1.5°C or 2°C,

The Production Gap: 2021 Report

<https://productiongap.org/2021report/>

Key findings of the 2021 report include,

- “*the world's governments plan to produce more than twice the amount of fossil fuels in 2030 than would be consistent with limiting warming to 1.5°C*”
- “*Global fossil fuel production must start declining immediately and steeply to be consistent with limiting long-term warming to 1.5°C*”

— these quotes are from page 4.

This report is often cited in expert witness testimony to courts and planning authorities by climate scientists trying to stop approvals for new fossil fuel projects.

Prof. Penny Sackett, former Chief Scientist of Australia, recently used graphs from the Production Gap Report in a slide presentation to the NSW Independent Planning Commission during the online Public Hearing for yet another coal mine extension,

Narrabri Underground Stage 3 Project: Greenhouse Gas and Climate Implications

<https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2021/12/narrabri-underground-mine-stage-3-extension-project-ssd-10269/public-hearing-presentations/220218-penny-sackett.pdf>

3 Australia's fossil fuel production must start declining immediately

The Production Gap Report is clear on the fact that *global* fossil fuel production must start declining immediately. Does production from every country have to decrease? Perhaps one country's slow increase could be cancelled by another's faster decrease?

The question of distribution of responsibility for reducing fossil fuel production is answered by the following report (March 2022),

Phaseout Pathways for Fossil Fuel Production Within Paris-compliant Carbon Budgets

https://www.research.manchester.ac.uk/portal/files/213256008/Tyndall_Production_Phaseout_Report_final_text_3_.pdf

Based on a 50:50 (!) chance of not exceeding 1.5°C,

- *“The report makes absolutely clear that there is no capacity in the carbon budget for opening up new production facilities of any kind, whether coal mines, oil wells or gas terminals.”*
- *“A transition based on principles of equity requires wealthy, high-emitting nations to phase out all oil and gas production by 2034 while the poorest nations have until 2050 to end production.”*

— these quotes are from the Headline Finding, page 6.

Of course, Australia is one of the “wealthy, high-emitting nations” referred to in the second quote (Australia is a Group 1 country in Fig 3, p41).

4 Project level detail — carbon bombs

The fossil fuel over-supply problem can be further clarified by identifying the individual fossil fuel projects that are most problematic.

A report published in May 2022 identifies 425 carbon bombs world-wide, of which 23 are in Australia,

“Carbon Bombs” - Mapping key fossil fuel projects
<https://doi.org/10.1016/j.enpol.2022.112950>

This report is well referenced and briefly touches on many interesting aspects of the supply-side of the climate crisis.

From the abstract,

“Meeting the Paris targets requires reducing both fossil fuel demand and supply, and closing the ‘production gap’ between climate targets and energy policy. But there is no supply-side mitigation roadmap yet. We need criteria to decide where to focus efforts.”

From the conclusion,

“We have mapped the biggest fossil fuel projects worldwide, 425 carbon bombs, with a CO₂ emissions potential exceeding 1 Gigaton in each project. The potential emissions from these projects exceed the 1.5°C carbon budget by a factor of two.”

Australia’s 23 carbon bombs include 12 that are new projects, which could be “defused” by denying or cancelling the project approvals.

5 Bans on new fossil fuel projects are inevitable

Right now Australia’s politicians have a choice:

- (A) Listen to the climate scientists and immediately ban all new fossil fuel projects; or
- (B) Ignore the climate scientists (again) until it becomes politically impossible (again) to keep doing so.

The following report from the US National Intelligence Council (published October 2021) suggests that option (B) will be viable for no more than one or two election cycles before climate change impacts become undeniable by even the most ill-informed voter,

Climate change and international responses increasing challenges to US national security through 2040

<https://www.dni.gov/index.php/newsroom/reports-publications/reports-publications-2021/item/2253-national-intelligence-estimate-on-climate-change>

From the first paragraph,

“Global temperatures most likely will surpass the Paris Agreement goal of 1.5°C by around 2030, and the physical effects are projected to continue intensifying.”

Of course, this 2030 estimation is based on the assumption that no country will do anything remarkable — like Australia becoming the world leader on climate action.

6 An opportunity to try to save the Great Barrier Reef

The Paris Agreement was an agreement to destroy the Great Barrier Reef. It is now understood that warming of 2°C would be ecologically catastrophic,

The human imperative of stabilizing global climate change at 1.5°C

(September 2019)

<https://climateanalytics.org/media/eaaw6974.full.pdf>

Even 1.5°C warming would be devastating for the Reef. From page 5,

“there are multiple lines of evidence indicating that 70 to 90% of warm-water tropical corals present today are at risk of being eliminated even if warming is restrained to 1.5°C”

To save any significant fraction of the Reef requires that warming be kept below 1.5°C. No other country will fight for the Reef, and no other country is fighting for such a low warming target. Therefore,

- Australia needs to become the world leader on climate action;
- Australia will then be in a position to demand that other countries help save the Great Barrier Reef by aiming for below 1.5°C;
- Warming of under 1.5°C requires closing the production gap. The first step: no new fossil fuel projects world-wide;
- Since 1.5°C might otherwise be surpassed as soon as 2030, Australia’s climate reputation needs to change from worst-in-the-world to best-in-the-world virtually overnight;
- The only way that all of the above might happen is if Australia immediately bans approvals for new fossil fuel projects. No other country with fossil fuel resources has done that yet.

7 Domestic considerations — telling the Truth

To date, the Australian Government has always chosen option (B) of Section 5. But ignoring climate scientists for as long as possible entails trying to keep the Australian public ignorant about the climate crisis. This is particularly true of the supply-side of the crisis: it is *impossible* for Governments to talk about the supply-side of the climate crisis while at the same time increasing fossil fuel exports and production.

The extent to which the Australian Government has been suppressing any discussion of the supply-side of the climate crisis becomes evident on searching for the “Production Gap Report” in documents and webpages of government organisations and departments:

- CSIRO

<https://www.google.com.au/search?q=%22Production+Gap+Report%22+site:.csiro.au&filter=0>

- Bureau of Meteorology

<https://www.google.com.au/search?q=%22Production+Gap+Report%22+site:.bom.gov.au&filter=0>

- Australian Academy of Science

<https://www.google.com.au/search?q=%22Production+Gap+Report%22+site:.science.org.au&filter=0>

- All websites ending in .gov.au

<https://www.google.com.au/search?q=%22Production+Gap+Report%22+site:.gov.au&filter=0>

At the time of writing, the first 3 of the above searches return **no results**. The 4th search returns over

100 results, but only from **public submissions** (e.g., hosted on the IPC webpages) that object to the continued expansion of fossil fuel production.

By banning new fossil fuel projects, the Australian Government would become free to start telling the Truth about the climate crisis. A government funded public education campaign could then gain widespread political support for rapid climate action of all types (and simultaneously prevent climate science deniers from being voted into power later). Moreover, if saving the Great Barrier Reef were used as a rallying issue then banning new fossil fuel projects might be readily accepted (e.g., recall the interest in ABC's December 2020 live coverage of Great Barrier Reef's coral spawning).

8 International considerations — the groundwork has been laid

There is a rapidly growing international call for a supply-side Fossil Fuel Non-Proliferation Treaty (<https://fossilfueltreaty.org>) to complement the demand-side Paris Agreement NDCs.

The treaty initiative was launched in conjunction with 101 Nobel laureates writing to the 40 world leaders at President Biden's virtual Leaders Summit on Climate in April 2021, urging them to stop the expansion of oil, gas and coal production,

**Nobel Laureates' Statement to Climate Summit World Leaders:
Keep Fossil Fuels in the Ground**
<https://fossilfueltreaty.org/nobel-letter>

Just 13 months after its launch, the fossil fuel treaty initiative has now been endorsed by:

- 2,900 scientists and academics;
- Over 1,250 organizations, including,
 - The Australian Greens
 - The Australian Democrats
 - The Australia Institute
 - Greenpeace Australia Pacific
 - Friends of the Earth Australia
 - 350.org Australia
 - Australian Religious Response to Climate Change (ARRCC)
 - Fridays for Future Australia
- 50 Cities and Subnational Governments, including,
 - The Australian Capital Territory
 - The City of Sydney
 - The Victorian City Councils of Darebin, Maribyrnong, Moreland, and Yarra
- Over 200 parliamentarians and other elected officials, including,
 - Adam Bandt, Member of Parliament
 - Andrew Barr, Chief Minister of the Australian Capital Territory Legislative Assembly
 - Andrew Braddock, Member of the Australian Capital Territory Legislative Assembly
 - Andrew Wilkie, Member of Parliament
 - Cassy O'Connor, Member of the Tasmanian House of Assembly
 - Chris Steel, Member of the Australian Capital Territory Legislative Assembly
 - Emma Davidson, Member of the Australian Capital Territory Legislative Assembly

- Dorinda Cox, Senator
- Janet Rice, Senator
- Jo Clay, Member of the Australian Capital Territory Legislative Assembly
- Johnathan Davis, Member of the Australian Capital Territory Legislative Assembly
- Jordon Steele-John, Senator
- Larissa Waters, Senator
- Lidia Thorpe, Senator
- Mehreen Faruqi, Senator
- Nick McKim, Senator
- Peter Wish-Wilson, Senator
- Rebecca Vassarotti, Member of the Australian Capital Territory Legislative Assembly
- Dr Rosalie Woodruff, Member of the Tasmanian House of Assembly
- Sarah Hanson-Young, Senator
- Shane Rattenbury, Member of the Australian Capital Territory Legislative Assembly
- Tara Cheyne, Member of the Australian Capital Territory Legislative Assembly
- Yvette Berry, Deputy Chief Minister of the Australian Capital Territory Legislative Assembly

Information on general endorsements: <https://fossilfuel treaty.org/endorsements>

Information on parliamentarian endorsements: <https://www.fossilfuel freefuture.org>

If Australia immediately bans new fossil fuel projects then it can also legitimately become the first *country* to endorse the Fossil Fuel Non-Proliferation Treaty initiative.

9 Australia’s fossil fuel Major Projects

Australia currently has 114 fossil fuel Major Projects in the approvals pipeline. The list of these projects is available for download as an .xlsx file from the following webpage of the Department of Industry, Science, Energy and Resources,

Resources and Energy Major Projects: 2021

<https://www.industry.gov.au/data-and-publications/resources-and-energy-major-projects-2021>

If the proponent company decides to proceed with their project, then it is normally the case that the project will be approved if it satisfies planning law requirements. In this regard, whether the government is Liberal or Labor makes no difference.

Public objections to new fossil fuel projects have little effect. The Narrabri Gas Project (NGP) — the centerpiece of Morrison’s gas-led Covid recovery — received around 30,000 submissions, of which around 98% were objections. Nevertheless, the NGP was approved by the NSW Independent Planning Commission (IPC). The IPC’s Statement of Reasons clearly demonstrates that, with a little creative writing, virtually any fossil fuel project can be approved under Australian law,

Narrabri Gas Project SSD-6456:

Statement of Reasons for Decision (30 September 2020)

<https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2020/03/narrabri-gas-project/determination/ssd-6456-statement-of-reasons.pdf>

Such projects will be stopped only by changing the law. An initial step might be something like Adam Bandt’s moratorium bill,

Moratorium on New Coal, Gas and Oil Bill 2022

https://www.aph.gov.au/Parliamentary_Business/Bills_Legislation/Bills_Search_Results/Result?bId=r6849

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