

IPC submission: Rejection of Narrabri CSG could put Australia on-track to becoming a world leader on climate action

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Abstract

Unless a worldwide emergency response to the climate crisis can be mobilised, our planet will soon be set on an irreversible path to climate chaos and mass extinctions. There is no carbon budget left for *new* fossil fuel projects. The IPC must reject the Narrabri CSG proposal, and it should do so in a way that will lead to the best possible outcome for Australians.

1 My background and expertise

I have held research positions in Mathematics and Physics at five different Australian universities. My research fields were numerical general relativity and nonlinear optics. My last position was in Potsdam, Germany, at the Max Planck Institute for Gravitational Physics. I retired early to freely pursue my interests in the foundations of quantum mechanics.

In October 2019, prompted by media coverage of Extinction Rebellion [1, 2] and Greta Thunberg [3], I decided to put aside a few days to learn what is being done about climate change and to update myself on the climate science. My research is still on hold while I figure out how to deal with what I learnt.

In May 2020 I created House of Representatives e-petition EN1526 [4, 5], requesting that the House,

“seek advice from the Office of the Prosecutor of the International Criminal Court on whether expanding fossil fuel production could be an act of genocide or a crime against humanity”.

There is nowadays enough science known about the carbon budget and the harms caused by climate change to assert that *at this point in time*, any policy, project, or decision to expand fossil fuel production is immoral. International ecocide law that could criminalise such actions is coming soon [6, 7, 8, 9, 10, 11, 12, 13], but it may come 10 years too late to avert a future ruled by climate chaos. We urgently need to find other ways to avoid such a future.

This submission is based on content taken from the website [5], to which all signatories of e-petition EN1526 were directed. I therefore claim that the views expressed in this personal submission are consistent with, and representative of, the views held by the 2955 signatories [4] to EN1526.

2 Introduction

The NSW DPIE assessment report [14] on the Narrabri Gas Project has been written in denial of the climate crisis. It does not acknowledge the extreme dangers of climate change (Section 3), nor the urgency imposed by the carbon budget (Section 4). The DPIE assessment report reflects only government climate policy, and does *not* consider any of the recent climate science that is relevant to this project proposal (Section 5). In particular, the report ignores the fact that the remaining 1.5°C carbon budget no longer permits any further expansion of fossil fuel production. In other words, climate science says there can

be no new fossil fuel projects.

The IPC's decision should be based on up-to-date climate science, not climate policy. The development application for the Narrabri Gas Project should therefore be rejected. The IPC commissioners should also be aware that because of recent developments in climate science, the approval of a project such as this could now constitute an international crime against peace (Section 6).

Rejection of the Narrabri Gas Project on the basis of climate science would be a wake-up call for Australian politics. It could set a precedent for the rejection of new fossil fuel projects throughout Australia, and thereby put Australia on-track for becoming a one of the first mover countries (Section 7) that are banning new fossil fuel production. As a first mover, Australia could make a huge difference to how the world responds to the climate crisis. When considered from this global perspective, there is no doubt that rejection of the Narrabri Gas Project would also in the best interest of Australians.

3 The extreme dangers of climate change

The 2019-20 fires gave Australians a taste of what climate change can do at 1°C of global warming [16, 17, 18, 19, 20, 21]. Future warming of 1.5°C is already locked in by the physics [15].

There is no sense in which 2°C warming can be described as “safe”. For example, it is not possible to rule out a scenario in which just 2°C of anthropogenic warming triggers tipping points for further warming [22, 23] that leads to a runaway hot-house Earth [24, 25] and the eventual asphyxiation of most life on the planet: 70% of Earth's oxygen is produced by photosynthesis of marine phytoplankton, a process that would stop if global warming were to ever reach 5–6°C [26].

Of course, there are many catastrophic scenarios that do not end with near total extinction [27, 28]. For example, chaotic weather could simply make growing food too difficult for modern civilization to exist.

Existential climate risk is dangerously underestimated by governments [29, 30, 31]. In particular, given that we are still on track for in excess of 3°C warming, and that we are running out of time to curb emissions, existential climate risk now warrants a planetary emergency response such as that proposed by the Club of Rome [32].

It is imperative that every effort be made to limit global warming to 1.5°C, not only as a *precaution* against unexpected catastrophic changes in the climate that tipping points might cause, but also because the harms that scientists *know* the world is going to suffer at 1.5°C would be *far worse* at higher global warming temperatures [15].

4 The production gap: cutting fossil fuel supply is even more urgent than cutting GHG emissions

Referring to the two existential threats of nuclear war and climate change, the 2020 Doomsday Clock Announcement [33, 34] states that:

“The international security situation is dire, not just because these threats exist, but because world leaders have allowed the international political infrastructure for managing them to erode.”

One aspect of this erosion is that fossil fuel companies have gained far too much influence over governments' fossil fuel production plans. As a result, plans for new projects, such as the Narrabri Gas Project, are still being made despite the fact that climate scientists are telling us that there is no carbon budget left for new fossil fuel projects.

In November 2019 the United Nations Environment Program (UNEP) published the Production Gap report [35]. The production gap of a country is defined as *the discrepancy between a country's planned*

fossil fuel production and global production levels consistent with limiting global warming to 1.5°C or 2°C.

The UNEP Production Gap report [35] warns that the world’s governments are planning to produce more than *twice* as much fossil fuel (oil, gas, and coal) as can be burned within the 1.5°C carbon budget. If planned production to 2030 were to go ahead, then it would result in CO₂ emission levels that are 2.2 times the level consistent with limiting global warming to 1.5°C.

Another report [36], published in December 2019 by a collaboration of 15 NGOs, focuses on planned production to just 53 months beyond the day I am writing this (1 Aug 2020). The report finds that planned production for gas and oil over the five years 2020–2024, is incompatible with limiting warming to 1.5°C.

Australia gets mention as a major culprit in both of the reports cited above. The erosion of Australia’s political infrastructure for managing climate change happened by allowing the fossil fuel industry:

- to foster financial dependence of the major parties on political donations [37];
- to infiltrate the major political parties through revolving doors [38];
- to exercise intimidating advertising power [39].

Consequently, Australia’s fossil fuel production policy is now effectively dictated by the Minerals Council of Australia, which is internationally recognised as one of the world’s top 10 climate policy opponents [40].

The problem of planned over-production of fossil fuel is both dire and urgent because investments in production infrastructure lock in fossil fuel usage for decades to come. This problem is particularly grim in Australia because our Federal government has no desire to address it [41]. Profits for the fossil fuel industry now trump ethics, climate change science, the well-being of Australians, and Australia’s potential to become a renewable energy superpower [42].

How bad is the current situation? Climate change is an existential threat and it is now known (since Nov/Dec 2019) that we have only a few years to rein in the expansion plans of the fossil fuel industry. If current expansion plans are not cancelled, the world’s efforts to reduce CO₂ emissions over the next few decades will likely fail. This time last year, *before* publication of the Production Gap report, a record 404,538 Australians petitioned the Federal government to declare a Climate Emergency [43]. If there was any doubt then, there is no doubt now: *we have a climate crisis that requires an emergency response.*

5 The DPIE assessment ignores the most relevant climate science

The DPIE assessment report [14] ignores the climate crisis and any need for emergency action. Given the Federal and NSW Governments’ stance on climate change, one could hardly expect otherwise. Instead, the report simply states what the current government policy is,

“The NSW Government has committed to an aspirational long-term objective of achieving net zero greenhouse gas emissions by 2050. This objective is consistent with the IPCC’s projected requirements to maintain average global warming to 1.5°C, as committed to by the Australian government in the Paris Agreement.” (paragraph 536, page 107, [14])

and in summarising, the report states that the Narrabri Gas Project,

“can be seen as being consistent with NSW’s and Australia’s commitments to a low carbon future.” (Summary, page 104 [14])

The DPIE has used Australian government climate policy to recommend this project, with no regard for the relevant climate science.

The DPIE appears to have bought into the fantasy that the Paris Agreement [44] is working and therefore there is no climate crisis. The evidence to the contrary is that the world is still heading for 3–4°C of

warming [15]. The problem lies with politics not science: (a) the Paris Agreement is too weak¹; (b) countries' nationally determined contributions (NDCs) [45] are insufficient; and (c) countries have been failing to meet their NDCs. Australia has an especially poor record for (b) and (c) [46, 47, 48], so assessing the Narrabri Gas Project on the basis of Australian government policy is certainly no basis for recommendation.

The Production Gap report [35] shows that if the Paris Agreement ambition to limit global warming to 1.5°C is to still have any chance of success, then plans that have already been made for expanding fossil fuel production will now have to be cancelled. *At this point in time, approving a new fossil fuel project is inconsistent with the Paris Agreement.* The DPIE assessment report recommends that NSW not only take a step in the wrong direction, but one that risks opening the door for the approval of similar CSG projects throughout Australia.

Claims made in the DPIE report include:

1. that project-related Scope 1 to 3 emissions would be “low relative to Australian emissions, at approximately 0.9% of the nation’s total emissions” (Summary, page 104);
2. that “greenhouse gas emissions associated with gas use in NSW are likely to continue, whether the Narrabri gas project is approved or not” (page xvi);
3. that “using gas to generate dispatchable energy is likely to help reduce total greenhouse gas emissions in NSW as coal use is phased out” (page xvi);
4. that project refusal “would be a decision against the future use of gas in NSW, which would make it harder to transition to a low emissions economy” (page xvii);
5. domestic coal seam gas produced electricity would produce up to 50% less carbon emissions compared to coal fired electricity production (Summary, page 104).

Re. (1):

- The inference here is that project emissions should be acceptable if they are small compared to something large. This nonsense could be said of *every* fossil fuel project on the planet. Global fossil fuel production and global GHG emissions are cumulative over many sources, all of which are small with respect to the total.

Re. (2):

- If claim (2) is correct (which is not obvious), it does not change the fact that Narrabri gas would be coming from a new project that had locked in gas usage for 25 years. Otherwise, the gas being used by NSW would be coming from other gas projects with earlier end-of-life dates, thus encouraging the earlier adoption of renewables.
- Unless approval of the Narrabri Gas Project was made conditional on those other gas projects being forced to shut down earlier than currently scheduled, then the net result would be a net increase in total gas produced, and a corresponding net increase in total Scope 1 to 3 emissions by an amount equal to that of the Narrabri Gas Project. The implied assertion that GHG emissions would somehow be the same whether the Narrabri gas project is approved or not, is both false and deceptive.

Re. (3):

- There is no time left to transition from coal to renewables via gas.
- The gas transition idea is being pushed by the fossil fuel industry. It is not a good idea [49].

Re. (4):

- Refusal would not make it harder to transition to a low emissions economy. If it were clear that gas was going to be in short supply in the future, and therefore that renewables were going to be

¹When ratifying the Paris Agreement in April 2016, the Marshall Islands, Micronesia, Niue, Solomon Islands, Tuvalu, and Vanuatu all declared that in light of the best scientific information available at that time, they considered the Paris Agreement to be “inadequate to prevent global temperature increase of 1.5 degrees Celsius above pre-industrial levels”.

needed, then they would be built. Necessity is the mother of invention.

Re. (5):

- Other submissions to the IPC have presented evidence that the GHG emissions for electricity generation may be similar using coal or Narrabri gas, rather than differing by a factor of 2, due to methane leakage and the high CO₂ content of Narrabri gas;
- Nevertheless, if claim (5) correct, this is still no argument for moving from coal to gas (to reduce to 50% of coal's emissions) rather than from coal to renewables (to reduce to 0% of coal's emissions). If the latter is possible (as is widely believed) then it is obviously the proper choice;
- The DPIE assessment report does not make any case that a transition from coal generation of electricity to renewables is not possible now, nor will be within a few years;
- The report does not explain how renewables could be expected to gradually take over from gas if 25 years of electricity generation by gas has been locked in by investment in infrastructure for the Narrabri Gas Project and for gas-fired power stations.

Although claims (1)–(5) have been addressed as though deserving of a response, to do so has required pretending there is no climate crisis—else such considerations would be recognised as pointless. The DPIE assessment report pretends there is no climate crisis. The report ignores the climate science that is most relevant for making a recommendation about this project. In particular, the report ignores the fact that the remaining carbon budget for the 1.5°C Paris Agreement goal does not permit the development of any new fossil fuel projects. Narrabri gas must stay in the ground.

6 Approval of the Narrabri Gas Project could be an international crime against peace

The DARA climate vulnerability report [50], commissioned by 20 governments, estimated that in 2012 the death rate due to anthropogenic global warming was already 400,000 deaths per year. In relation to future deaths, an order-of-magnitude estimate suggests that within the carbon budget for 2°C of global warming (but ignoring tipping points!), for each 1000-tonnes of carbon that is extracted from the ground and burned now, one future human will die as a result within the next few hundred years [51].

An estimate for the number of future deaths that the Narrabri Project would cause can be calculated using data from the DPIE report (Option 1, Table 16, p 105, [14]), which gives the Scope 1 to 3 GHG emissions for the 25 year operational life of the project as being equivalent to 120.6 Mt of CO₂. The atomic weight of CO₂ is 44 and that of carbon is 12. Therefore, according to the 1000-tonne rule [51], the estimated number of future persons who would die over the next few hundred years as a result of this projects's approval is $12/44 \times 121 \times 10^6/1000 = 33,000$.

The International Criminal Court (ICC) [52] has been reluctant to prosecute climate criminals, but at least one group of lawyers and activists in England believe this may change [53]. The group is aiming to have the three most recent prime ministers of England (David Cameron, Theresa May, and Boris Johnson) prosecuted for the Rome Statute [54] crimes of genocide and crimes against humanity.

Since 2016 the Office of the Prosecutor (OTP) [55] of the ICC has a case selection policy (Section 5.41 in [56]) that prioritises Rome Statute crimes that are committed by means of the destruction of the environment. If the OTP decides to take a stand on governments' failures to address climate change, then decisions to develop new fossil fuel projects is the ideal issue on which to focus. The UNEP Production Gap report (Nov 2019) [35] has made it straightforward to now argue that developing any *new* fossil fuel project is immoral, and governments could now be open to climate liability [57].

Australia's climate policy is ranked in the Climate Change Performance Index 2020 [47] as being the worst of the 57 countries that were assessed [46]. At COP25 three countries distinguished themselves as being especially obstructive: Australia, the USA, and Brazil [58, 59, 60, 61]. The philosopher and social critic, Prof Noam Chomsky, identifies these same countries as the world's top three climate criminals

[62]. The internationally recognised climate expert Dr Saleemul Huq, gave an interview during the 2019-20 fires entitled “Your PM is an arsonist...” [63], labelling Scott Morrison a climate criminal for his intention to further invest in fossil fuels. And Christiana Figueres, the former UN climate chief who oversaw the negotiation of the 2015 Paris Agreement, says that our Federal Government’s claim that we are “meeting and beating our emissions targets” is dishonest [64].

In short, Australia has an abysmal international reputation for climate action. So if the OTP were looking for a test case for prosecuting climate crime, then Australia’s rapidly expanding fossil fuel production gap would not go unnoticed: Australia currently has plans for 69 new major fossil fuel projects, comprising 52 coal mines and 17 gas projects [65].

The way the ICC operates is described in [66]. In relation to climate crime, the most relevant Articles of the Rome Statute are 5, 6, 7 and 30 [54]. How these Articles are interpreted and applied by the court is described in [67].

The ICC prosecutes individuals not states. The Office of the Prosecutor (OTP) follows policy to “focus on those who, having regard to the evidence gathered, bear the greatest responsibility for the crimes, and does not take into account any official position that may be held by the alleged perpetrators.” [56] Regarding *intent* to commit a crime against peace, the ICC commissioners should note that “intent and knowledge” are defined in Article 30 of the Rome Statute (and differ from common usage). If a person is aware that their intentional conduct will, in the ordinary course of events, bring about certain consequences, then that person is responsible and liable for punishment for those consequences.

7 Rejection of the Narrabri CSG project could help create a new global moral norm

The Production Gap report shows that if we are to limit global warming to 1.5°C then plans that have already been made for expanding fossil fuel production will have to be cancelled. This needs to happen soon, and there is no reason for delay. All countries should adopt:

- a ban on *new* fossil fuel projects;
- a ban on *extensions* to existing fossil fuel projects;
- a ban on *exploration* for fossil fuel.

Without such bans worldwide, the Paris Agreement will likely fail because investments in exploration and production infrastructure will lock in fossil fuel usage for decades to come. These bans will still not suffice. A significant number of operating projects will have to be wound down ahead of schedule, which will require creating just transitions for workers and communities.

The Production Gap report provides the scientific grounds on which to argue that expanding a country’s fossil fuel production is immoral. This opens the way for creating a new *global moral norm* [68, 69] that could, in its effect, prohibit any country from expanding their fossil fuel production. This can be done immediately, thus side-stepping the glacially slow international negotiations that have characterised 25 years of annual COP meetings.

A growing number of countries have introduced bans to limit the expansion of fossil fuel production. These first movers include Costa Rica (2014) [70], France (2017) [71], Belize (2018) [72], Denmark (2018) [73], Netherlands (2018) [74], NZ (2018) [75], Spain (2020) [76], and most recently, Ireland (2020) [77, 78].

In the Laureates Open Letter [80] it was recognised that because the 2019-20 fires made Australia ground zero for climate chaos [79], Australia now has a unique opportunity to become a world leader for climate action. Australia is known internationally for its iconic animals and Natural World Heritage sites [81] (Gondwana Rainforests [82], Great Barrier Reef [83], etc.). If Australia were a first mover, then the responsibility for caring for this natural heritage would give Australia considerable authority to pressure other countries into also adopting expansion bans on fossil fuel production.

The ICC should reject the Narrabri Gas Project, and it should do so in a way that will lead to the

best possible outcome for Australians. That can be done by making it clear that climate science *alone* is sufficient grounds for rejection (there may also be other reasons for rejection: ground water, health, social license, salt disposal, dark sky, etc.). A rejection based on climate science will have the best chance of setting Australia on-track to becoming one of the first mover countries. This could make a significant difference to what climate change impacts Australia is going to suffer in the future.

Our house is on fire [84]. It is time for the IPC to join with academics [85] and scientists [86] and rebel.

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