Submission to the Darwin Pipeline Duplication Project

February 2022

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Doctors for the Environment Australia

Doctors for the Environment Australia (DEA) is an independent, non-government organisation of medical doctors in all Australian states and territories. Our voluntary members work across all specialties in community, hospital, and private practices. We work to prevent and address the diseases - local, national, and global - caused by damage to our natural environment. We are a public health voice in the sphere of environmental health with a primary focus on the health harms from pollution and climate change.

Doctors for the Environment welcomes the opportunity to make a submission to the Northern Territory Environmental Protection Authority (NTEPA) for Santos' proposed Darwin Pipeline Duplication Project in the Northern Territory.

Introduction

Santos' proposal is to develop the Barossa field, 300km north-northwest of Darwin. Methane gas would be extracted from the Barossa field and transported by pipeline to the Darwin LNG (liquified natural gas) facility for processing into LNG for export. This 300km pipeline, which includes a 100km segment in NT waters and lands, will be the third gas pipeline in Darwin Harbour.

This project further promotes growth of the gas and petrochemical industry, entrenching the industry in the Northern Territory, and paving the way for the development of the petrochemical precinct in Middle Arm. It also further prolongs the Northern Territory's dependence on fossil fuels.

This project will generate significant greenhouse gas emissions, have significant negative environmental impacts on Darwin Harbour, and the Middle Arm LNG processing plant and the ensuing development of the petrochemical precinct will have the potential to cause health issues from industrial air pollutants.

Doctors for the Environment Australia recommends that the project is called in for the following reasons:

1. Fossil fuels are the primary cause of anthropogenic climate change.
2. Climate change is a public health emergency requiring immediate and sustained action.
3. Natural gas processing and petrochemical precincts have known public health risks.
4. The project seriously threatens regional biodiversity, which has known negative human health impacts.
5. This project is in direct contravention to the NT government's reported goals to transition to a low-carbon economy.

Fossil fuel use is the primary cause of anthropogenic climate change

The evidence is clear that the main cause of climate change is the burning of fossil fuels, such as gas, oil, and coal. The Barossa project will produce significant global greenhouse gas (GHG) emissions at a time when significant reduction in emissions is imperative for the adequate mitigation of global warming and climate change.[1] The project could produce the most carbon intensive LNG in Australia, being potentially among the most polluting LNG projects in the world.[2]

[1] https://www.unep.org/news-and-stories/press-release/cut-global-emissions-76-percent-every-year-next-decade-meet-15degc
[2] https://www.jubileeaustralia.org/storage/app/media/uploaded-files/jbic-submission-on-santos-barossa-project-2021.pdf

In addition to GHG emissions from burning methane, and fugitive methane emissions which are increasing world-wide and are usually underestimated,[3] the Barossa gas field has very high levels of CO_2 (16-20%), which would be vented into the atmosphere. Life cycle emissions could be in the vicinity of 15 million tonnes per annum.[4] Carbon capture and storage has been proposed to capture these emissions but an economic process at scale has defied development.[5] Moreover, the referral document contains no figures or estimates for GHG emissions associated with the pipeline and broader Barossa project and does not make any reference to the emissions from combustion of produced LNG. This is unacceptable and must be part of any assessment of the project.[6]

Climate change is a public health emergency

There is global scientific consensus that climate change is an emergency and has many known serious health risks. Climate change will cause, for instance, higher mortality and morbidity from heat stress, increasingly severe weather events, the increased transmission of vector-borne diseases, food production and livelihood (<already edited), and a higher incidence of mental ill health.[7] The health of Australians is already negatively impacted by climate change – impacts that will become more severe and create a greater health burden over the coming years. One cannot overemphasise the enormity of health, economic, security and environmental costs of an inadequate response to climate change.[8]

Natural gas processing poses health risks

The extraction and processing of natural gas is known to have adverse public health consequences. For instance, in 2016-17, the LNG plants Woodside proposed to use for the Burrup Hub project were among the highest industrial point source polluters of harmful air pollutants in Western Australia. Those LNG facilities released 8,000 tonnes of nitrogen dioxide, 97 tonnes of sulphur dioxide and 16,000 tonnes of volatile organic compounds, in addition to other heavy metals, into the atmosphere.[9] These pollutants are similar to those from burning other fossil fuels and can contribute to a range of health issues, including exacerbation of asthma, respiratory and cardiac disease, lung cancer and stroke.[10]

Natural gas operations may have long-term health effects that are not immediately expressed.[11]

Biodiversity loss ultimately affects human health

Biodiversity helps to regulate climate, filters air and water, enables soil formation and mitigates the impact of natural disasters. It also provides timber, fish, crops, pollination, ecotourism, medicines, and physical and mental health benefits (UN 2019)[12]

The Darwin Pipeline Duplication Project will establish a third significant pipeline in Darwin Harbour, which will have many impacts on marine ecosystems that are already under pressure from existing gas developments. The number of resident dolphins in Darwin Harbour, for instance, has almost halved since construction of the Inpex gas plant and shipping channel in 2011.[13] The dredging operation requires 750,000m^3 of the seafloor in Darwin Harbour to be removed and dumped off Lee Point in an operation which will further damage delicate marine plants and creatures and interfere with feeding and breeding grounds.

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[3] https://phys.org/news/2020-07-global-methane-emissions-soar-high.html

[4] https://ieefa.org/wp-content/uploads/2021/03/Should-Santos-Proposed-Barossa-Gas-Backfill-for-the-Darwin-LNG-Facility-Proceed-to-Development_March-2021.pdf

[5] https://www.ciel.org/reports/carbon-capture-is-not-a-climate-solution/

[6] https://ieefa.org/wp-content/uploads/2021/10/How-To-Save-the-Barossa-Project-From-Itself_October-2021_3.pdf

[7] https://www.ama.com.au/media/climate-change-health-emergency

[8] https://www.dea.org.au/wp-content/uploads/2021/06/202102_Gas-Fired-Recovery-Plan-Submission.pdf

[9] https://www.cleanstate.org.au/burrup-hub-health-risks

[10] https://www.dea.org.au/wp-content/uploads/2017/07/DEA-Health-Toll-of-Coal-Fact-Sheet_final.pdf

[11] (https://www.tandfonline.com/doi/abs/10.1080/10807039.2011.605662)

[12] https://www.aihw.gov.au/reports/australias-health/natural-environment-and-health

[13] https://www.abc.net.au/news/2018-11-30/darwin-harbour-dolphin-population-decline-worries-scientist/10157960

This project contravenes the NT government's commitment to net zero emissions

The NT government has acknowledged that climate change is an issue of critical significance. This proposal is in direct contravention to the government's stated goals of working towards net zero emissions.[14,15]

Conclusion

DEA therefore opposes the development of this pipeline and the Darwin LNG plant. DEA suggests that the NTEPA call in a referral under s53(1) of the Environment Protection Act of the broader Barossa Project as a whole. If, however, the NTEPA does not call in the proposal, DEA urges that the Project be assessed at the highest level, in the form of a public Inquiry. There are significant environmental and, subsequently, health-related risks with this project, which cannot be otherwise eliminated. Climate change requires urgent action and fossil fuel expansion will be detrimental over the long-term to the health of all Northern Territorians.

[14] https://depws.nt.gov.au/environment-information/northern-territory-offsets-framework/greenhouse-gas-emissions-offsets-policy
[15] https://depws.nt.gov.au/__data/assets/pdf_file/0005/904775/northern-territory-climate-change-response-towards-2050.pdf