Comments on Santos's Darwin Pipeline Duplication (DPD) Project Supplementary Environmental Report

June 27 2023

Thank you for taking my comments and recommendations into consideration. This is an extremely serious issue: Darwin Pipeline Duplication Project - SER

I admit I am disappointed the EPA decided to continue with this method of piecemeal assessment as if each component is only a minor project and cannot look or see far. It is simply not possible for us to have a low-carbon future built around gas. Nor is it feasible that this pipeline project can be constructed with "minimal environmental and social impact." There is no point constructing a pipeline in itself, the impacts of the reason the pipeline is requested to be built is fundamental. This is planned to be a highly greenhouse gas intensive project. The Barossa gas field in the Timor Sea, has the highest carbon dioxide content of any gas field in Australia. This pipeline is planned to facilitate the release of gases which have been kept safe from our already overwhelmed climate and so should not be allowed.

No more time for polluting our climate

I'm highly concerned about the climate impacts of new fossil fuel projects. The impacts on the climate from this project are unacceptable and it is inconceivable that in 2023 it is being considered for approval. I won't take you back to basics, but please consider the likes of the IEA.

The International Energy Agency (IEA) is a Paris-based autonomous intergovernmental organisation¹ established in the framework of the Organization for Economic Co-operation and Development (OECD) in 1974 in the wake of the 1973 oil crisis.

Today the IEA acts as a policy adviser to support energy security and advance the clean energy transition worldwide.

The IEA produced a roadmap² for the global energy sector to reach net zero by 2050 and to prevent global temperatures from rising above 1.5 °C. All IEA member countries have signed the Paris Agreement, and two thirds of IEA member governments have made commitments to emission neutrality in 2050¹.

This includes the Northern Territory Government, who, in 2020³, *"committed to reduce net greenhouse gas emissions in the Territory, with the goal of achieving net zero emissions by 2050."* I know I am not alone considering this a minimum action: 2050 is too late, (even Santos reports they are planning on net zero by 2040).

¹ https://en.wikipedia.org/wiki/International_Energy_Agency

² iea.li/nzeroadmap

³ Northern Territory Climate Change Response: Towards 2050

Recently, researchers⁴ say Australia's current policy ambition is "not in line with 1.5C" and the government's climate schedule needs to be brought forward by a decade to keep heating to 1.5 degrees celsius. This effort is required to reduce the impacts of heatwaves, sea level rise, temperature extremes and give ecosystems a better chance of avoiding collapse.

But let's get back to considering the conservative IEA's pathway. They encourage a goal of net zero by 2050, so let's try that on for size. The IEA roadmap says:

The energy sector is the source of around three-quarters of greenhouse gas emissions today and holds the key to averting the worst effects of climate change, perhaps the greatest challenge humankind has faced. Reducing global carbon dioxide (CO_2) emissions to net zero by 2050 is consistent with efforts to limit the long-term increase in average global temperatures to 1.5 °C. There is no need for investment in new fossil fuel supply in our net zero Pathway.

There are no new oil and gas fields approved for development in our pathway.

The unwavering policy focus on climate change in the net zero pathway results in a sharp decline in fossil fuel demand, meaning that the focus for oil and gas producers switches entirely to output and emissions reductions – from the operation of existing assets.⁵

So the way to achieve the shared goal of a safe climate is that we cannot have any new only oil and gas fields opened, or pipelines that enable them. We cannot get a safe climate and grant permission for Santos to do the activities laid out in this proposal.

Recommendation 1: Read the IAE's roadmap: Net Zero by 2050. Recommendation 2: Direct Santos that we cannot have any gas extracted from Barossa so no pipeline is needed, and **Recommendation 3:** Reject this application as it would contribute to the destruction of our vital safe climate.

Barossa is off the chart dirty

With a staggering 16% to 20% carbon dioxide, the Barossa reservoir would concern any Earthling woke on climate risks. That's because it's a carbon-dioxide emissions factory, with an LNG by-product. Instead of minimising waste, if Barossa happens, there is going to be more waste than product.

Barossa's carbon emissions would be about twice the current Australian LNG industry average according to an analysis conducted by the Institute for Energy Economics and Financial Analysis.⁶ That's DIRTY!

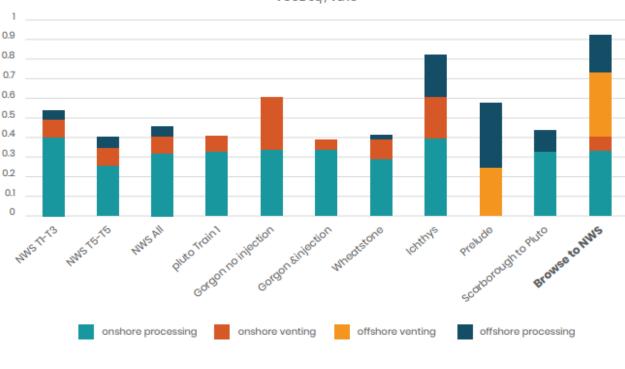
Net Zero by 2050 - A Roadmap for the Global Energy Sector

https://www.theguardian.com/environment/2023/jun/19/australia-needs-to-reduce-emissions-to-net-zero-by-2038-to-do-fair-share-to -contain-global-heating-analysis-shows?fbclid=lwAR1u-Wx56WSc0UYIP5hYnC9YTleaXZxDPIqrPqil7ItluiTbhMU4OqBX3-o

⁶ https://www.abc.net.au/news/rural/2021-06-24/santos-barossa-gas-carbon-emssions-twiggy-forrest/100224254

The carbon intensity of LNG from Barossa is literally off the chart produced by the Conservation Council of WA⁷ for its campaign against the Browse project. They thought the Burrup Hub was Australia's most polluting fossil fuel project when actually Santos' proposed Barossa project could be -one-of-the-dirtiest-gas-projects-in-the-universe!

For each tonne of Barossa LNG , about 1.36 tonnes of carbon dioxide would be sent into the atmosphere⁸.



t CO2 eq / t LNG

Carbon Intensity of Australian LNG projects Source: Conservation Council of WA

If the Barossa LNG is released it would be an incredible three times⁹ more carbon-intensive than LNG from Pluto, Wheatstone, or Gorgon (if its CO2 injection works).

In response to our valid concerns, Santos's absurdly minimised¹⁰ their anticipated appallingly high greenhouse gases:

GHG emissions represent only a small fraction (~0.02%) of Australia's annual GHG emissions. Therefore, the construction and operation of the DPD Project will not represent a significant contribution to global GHG emissions. The Barossa Development (including DLNG and end-use customers) greenhouse gas emissions represent 0.042% of 2021 global energy GHG emissions. Therefore, the Barossa Development is not a significant contributor to global GHG emissions.

The life cycle greenhouse gas emissions of the Barossa project are said by Santos to be a whopping 296 million tonnes of greenhouse gases. For context, the NT's total annual emissions for 2018 were less than 18 mt co2-e. Barossa is a carbon bomb. Everything is tiny on an international stage.

⁷ Burrup Hub: Australia's most polluting fossil fuel project

⁸ <u>https://www.boilingcold.com.au/santos-dirty-big-2b-barossa-bet/</u> 9 Control dirty him (2D Down and hat)

⁹ Santos' dirty big \$2B Barossa bet

¹⁰ Page 108 <u>https://ntepa.nt.gov.au/__data/assets/pdf_file/0019/1231930/darwin-pipeline-duplication-project-ser.pdf</u>

We are meant to be on a plan to zero. We need to be on a quick descent to zero world wide so pretending this pollution is exported and so not our responsibility is alarmingly flawed. A hole in the hull in another section of the boat sinks it just the same.

Pretending adherence to our current lax laws means it is acceptable for the climate is erroneous. It is an outrageous scam that the Safeguard mechanism fails to halt new fossil fuel projects if they are processed at existing facilities. The use of the eyesore Inpex plant for Barossa's gas requires assessment as it is likely to tip us off the climate cliff of no return. We are not adhering to our international climate responsibilities.

*"It needs to be called for what it is. It is an atrocious project, an atrocious project."*¹¹

Recommendation 4: If we are going to have energy sources, they must be the cleanest we can fathom. Leave the dirty sources safe in the ground.

Carbon "storage" is a downright dangerous pipedream

Carbon capture and storage (CCS) is simply a licence to pollute and is an excuse to ramp up emissions. Santos is pushing to duplicate this pipeline and is spinning the line it has plans to produce clean energy so it has a licence to keep its polluting projects going, not because it wants to cut emissions. Don't be duped. CCS is a temporary dump, at best.

Yet to be proven, the most advanced Aussie project is Gorgon. The Gorgon experiment has fallen millions of tonnes short of its emissions capture promises. If Chevron is required to make good on its failed promises using carbon credits, this will cost the company nearly \$100 million¹².

CCS is incapable of tackling the pollution needed to diminish our climate crisis. When attached to fossil fuel developments, especially like those of the really dirty Barossa field, carbon storage is not a climate solution, as digging up and burning fossil fuels only adds to the problem. Global temperatures do not stop increasing until emissions reach or go below net zero¹³. To achieve that we must stop digging up and burning fossil fuels and cannot deliver zero emissions. The only solution is to stop mining and burning fossil fuels.

Pumping dangerous concentrations of carbon dioxide into crevices under the sea as in this project's associated projected plan, has no guarantee it will stay there. Any crack may see it seep out. But also there are risks of earthquakes that would render such deposits free to rise and pollute our planet's precious climate.

Santos' documents reveal that two-thirds of the carbon dioxide from the Barossa offshore gas field will be

¹<u>Twiggy hits the mark: Santos' new Barossa gas field is a 'carbon emissions factory with an LNG by-product'</u>

¹² https://www.boilingcold.com.au/times-up-on-gorgons-five-years-of-carbon-storage-failure/

¹³ https://www.climatecouncil.org.au/resources/what-does-net-zero-emissions-mean/

vented directly into the atmosphere before the gas is piped into Darwin. If that cuts the mustard for effective climate action then please resign.

Santos does not appear to have explained the predicted amounts of carbon dioxide captured. They have yet to detail the emissions created in the process, and net emissions reduction anticipated from a CCS project. Due to the high level of emissions involved in transporting and compressing carbon dioxide, there's a real probability we will see no net reduction in emissions. If this is the case, this project is absolutely unnecessary and poses unacceptable risk.

And as if that's not enough, the pipeline is ageing, likely corroding and wasn't constructed to transport carbon dioxide. Santos is still awaiting a Statement of Conformity to establish the possibility of using existing infrastructure for CCS. Surely we would want to be sure it is safe before we spend time considering this madness.

Recommendation 5: Disallow this pipeline duplication. It is far better and cheaper to avoid carbon emissions in the first place, rather than try to capture them after they've been released. Rather than wasting money on something that's expensive, ineffective, and likely downright dangerous, Australia should be investing in the things we know can cut emissions quickly and bring down power prices, like renewables backed by storage.

Smashing another pipeline through our Harbour and sea

Darwin was once, not long ago, the envy of the world, a happy city with a LIVING HARBOUR. Since then it has been smashed and dredged by fossil fools. We don't want a third pipeline. We want our dolphins and whales back. Sonar to identify seafloor debris and seabed profile with pulses at high frequencies are an anathema to our saltwater friends who depend on their senses. Already many whales and dolphins have lost part of their Territory. Not finding any dolphins, when recently they were frequently seen, is a serious cause for concern and suggests greater efforts are needed to properly assess the problem.

What is the point of monitoring if when they are gone they are omitted as not present? Sounds like grounds alone for rejecting the project. We were promised it would continue to be a living harbour!

The construction of this pipeline could mean another 550 vessel transits in Darwin Harbour. Already marine megafauna is threatened by the increased vessel activity and associated light and noise impacts, and possible collisions. We already have enough industrialisation of our once magnificently pristine harbour.

In shallower waters, the Project pipeline may require stabilisation due to exposure to waves, currents and tidal movement. Surely anchoring devices will suffice and trenching along with the associated blasting and dredging can be abandoned. These activities are severely detrimental to the environs under the sea and should never be condoned.

The project requires sea clearing ("dredging") a whopping 40m wide destruction of seabed to lay the pipe.

Dumping sludge in a six kilometre area back of Lee Point is a huge ruin of seagrass, corals and other vital seabed biodiversity.

The project's proximity to the near pristine Tiwi Islands and the Oceanic Shoals Marine Park is a huge concern as if this project is given the go ahead, it will have devastating impacts on biodiversity in the region, including on critical habitat for the threatened Flatback and Olive Ridley turtles¹⁴.

Recommendation 6: Adding yet another destructive development to the seafloor is unnecessary and detrimental to the environment so reject the plan. It's a duplication, if they must, use the pipeline that is there.

Gas is not even safe to use in our kitchens

Although Santos likes to inform us all that gas is safe it is not.

Beyond contributing to global warming, gas stoves emit unhealthy levels of nitrogen oxide¹⁵, which can trigger breathing problems for people with asthma or chronic obstructive pulmonary disease, even in low concentrations.

Recommendation 7: As the gases from Barossa are not safe, not in the kitchen, not in production and not in our atmosphere, insist all the wells are properly plugged and the gases left in situ.

As we do not seem to have a mechanism to deny outrageous proposals like this one from the outset, it is vital that the NT EPA considers the wider impacts, the impacts on the turtles, on our traditional custodians, and on our future generations.

Recommendation 8: Reject this plan.

¹⁴ Santos and partners investing \$4.7 billion to develop Barossa offshore gas field near Darwin - ABC News

¹⁵https://www.popularmechanics.com/science/health/a39036270/gas-stoves-leak-methane/?fbclid=lwAR3dL3l0rwk2H_kYhzRxill4caVKKvuPIYE3 <u>9e8iP_2DCx1hSd8j7iwdYok</u>