

Ichthys Carbon Capture and Storage Project¹ (CO₂ export pipeline)

Comments to NTEPA by Grusha Leeman, Darwin, Feb 10 2026

Thank-you for taking my views into consideration. Darwin Harbour and its environs are precious to me.

I note the question is whether the proposed action requires environmental impact assessment, and if so the required method of assessment. As INPEX are proposing

1. the construction, commissioning, operation and decommissioning of a 12 km carbon dioxide export pipeline to tie in stations on Middle Arm, and
2. hot commissioning and operation of the Ichthys LNG facility CO₂ compression and export system and
3. upgraded acid gas removal units, (or cessation of operation of the acid gas incinerators).

As these are industrialisation activities in sensitive environs, I request they be subject to maximum scrutiny and therefore full environmental impact assessment.

I assume it is recognised that as this proposal is a subset of the full plan, that the whole project be fully assessed before any works commence, for if it fails permission to dump carbon, or lay yet another pipeline through our once vibrantly living Darwin Harbour, there is no point constructing a terrestrial pipeline.

Greenwashing is not a justification for more industrialisation

I hope the NTEPA is not duped by often repeated mistruths like: *"INPEX ... is **actively working to decarbonise its operations** and deliver a stable supply of diverse and **clean energy** sources. Carbon capture and storage (CCS) is a **safe and proven emissions reduction technology** that can be applied to liquefied natural gas (LNG) production to capture naturally occurring carbon dioxide (CO₂) from the hydrocarbon reservoir stream."*

If the goal is to decarbonise then it is not helpful to pursue this planned project. CCS is carbon dumping which remains experimental and is not a proven safe and successful emissions reduction technology. It simply is not. By design, carbon dumping projects can only ever capture a small fraction of the climate emissions produced by opening new gas fields. The combined scope 1, 2 and 3 emissions are nearly an order of magnitude more than the planned storage, making this project insignificant. That's not including all the emissions for all the years when there is no CCS. That's also assuming both that they can successfully inject the promised gas and it stays there forever. These are both untested claims. This technology is not proven to be safe. Instead the deafening seismic blasting alone is known to be unsafe for marine life, pipelines do burst and a 300Mt dump could become a carbon bomb after an earthquake. The evidence elsewhere² is that as CCS is unsuccessful in its goals, it is unproven. There is nothing to stop the carbon from migrating to seepage points. Carbon has never been dumped in these pristine waters so it is not proven. The sea should never be used as a dump.

The only proven and safe way to limit carbon dioxide is to desist with releasing it.

This proposal along with its suite of accompanying projects amounts to permission to increase the carbonisation of our one and only safe climate. They hope to dump more even carbon on our over-burden polluted climate. Perversely, this proposal seeks permission for even more industrialisation of our over-burden Darwin Harbour coastal environment so that there might be some decarbonisation, when in truth it seeks to gain acceptance of dramatic increases in greenhouse gases in an era when world authorities know we must actually decarbonise. Pretending that attempting to dump a small component of the emissions from expanding filthy fuel gas projects is actually helping our dire climate situation is simply unacceptable. Naming the product a natural gas does not make it clean.

¹ <https://ntepa.nt.gov.au/consultation/ichthys-carbon-capture-and-storage-project>

² <https://reneweconomy.com.au/expensive-failure-flagship-gorgon-ccs-collects-less-co2-in-worst-year/>

Carbon capture and “storage” cannot save the climate

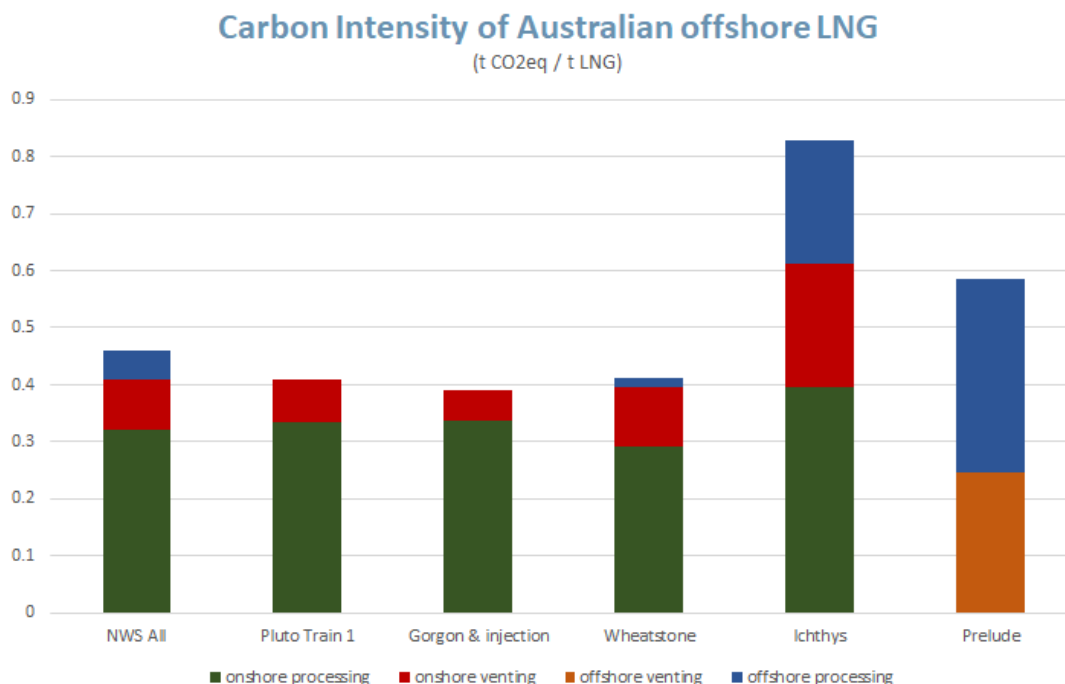
Whether or not the current government has the sense to pursue the net zero goal, the rest of Australia expects us to do our bit. Also, besides it being a Project goal, there remains a listing to “Minimise greenhouse gas emissions so as to contribute to the NT Government’s goal of achieving net zero greenhouse gas emissions by 2050.” in the NTEPA objectives³. Consequently, full environmental assessment is necessary to consider whether indeed this proposal contributes to expanding our already globally atrocious climate pollution, or if it does a bit to improve it.

INPEX states “The Project would result in an overall reduction in greenhouse gas emissions in the Northern Territory resulting from the sequestration of CO₂ from Ichthys LNG facility operations, which is currently vented to atmosphere.” That is assuming it works, little is vented and there are no ruptures. But surely there can be modelling for how many emissions are saved, I could not find figures to demonstrate the justification for this project. I note also that the above quote is qualified in that it only counts this jurisdiction and it does not count potential sequestration from other sources. I read somewhere that venting might reach as much as 3Mtpa, and I see no addition of climate consequences of requiring a gas plant to liquify the CO₂.

There can be no justification for not counting the benefits of a project besides if it were likely minimal. Are the total scope 1 and 2 emissions really less than what can be dumped?

Anyways, although we all know the Scope 3 emissions are ginormous, and only count in this narrow assessment if they are exported, the climate will still be torched. But what if the NTG needs that gas to power the grid? Then the scope 3’s are domestic and would quickly outpollute the savings from any gases hidden under the carpet of the sea. Please insist on a full assessment so it all is accounted for.

And further there are plenty of us who are not duped by this carbon dumping as a way to decarbonise. If we really want to save the only livable climate in the universe we will desist from all fossil fuel activities. This project is an excuse to dig up every last molecule of filthy gas currently kept safe deep underground.



Source: Boiling Cold⁴ from project environmental approval submissions showing that INPEX was by far the filthiest project in Australia in 2021. It had considerable offshore emissions which are expected to increase.

³ [NT EPA Environmental factors and objectives](#)

⁴ <https://www.boilingcold.com.au/ichthys-lng-emissions-to-soar-as-inpex-chases-more-gas/>

INPEX mines filthy gas

Besides methane being a highly potent greenhouse gas, the carbon dioxide from the INPEX gas fields makes it one of Australia's most carbon intensive projects. That means filthy. The next fields that INPEX plans to drill will be worse⁵:
"When production from Plover peaks in the 2030s, emissions will be more than 30% higher than current rates."

It is interesting to ponder the efficacy of Australia's posturing towards net zero's impacts on INPEX's activities compared to what happened when Japan joined⁶ the club: *"Inpex's aversion to CCS for Ichthys was before Japan's Government committed to net-zero emissions by 2050 in 2020."* If CCS was too expensive to consider before there was pressure, do the financial burdens pressure the push for even more filthy bottom of the barrel fields?

So please resist being duped by repeated claims of "clean" energy and actual plans to decarbonise the planet.

Perhaps I missed it, but a methane monitoring device to determine seepage from tanks and pipelines would be useful to highlight areas that need attention.

Death by a thousand cuts

This proposal is a portion of a greater plan that is piecemealed both geographically and jurisdiction-wise so that the big picture of both broad and cumulative impacts are difficult to conceive and possibly aspects slip through the gaps. I anticipate that as usual the relevant government agencies contribute by spending minimal time expertly rubber stamping their portion of this proposal ensuring a minimum of green tape is needed. Please take a moment to consider the cumulation of all the industry and the whole of the projects proposed and how together their impacts may well create damages that are missed when focusing too narrowly. And what alternatives there may be. This is another reason why full environmental assessment is critical.

Air quality not the only threat

Unlike much of the planet, the NT is internationally known as a place of pristine air quality, yet proposals like this one undoubtedly threaten this status. I am concerned about the swagger that the CCS will be able to take all the noxious gas being accumulated so that the acid gas incinerators would no longer be required. My understanding is that WA's CCS experiment injection rates have been dismal. I cannot imagine that if INPEX were to similarly experience limitations, that the outflow of product would be reduced. Instead we can expect they would simply vent the noxious volatile organic compounds like BTEX and H₂S to Darwin's atmosphere. Indeed Inpex has a history of underreporting benzene emissions. It is unconscionable that taking the acid gas incinerators offline can be permitted, as we have already had a lungful of their unlimited carcinogenic pollutants.

CO₂ pipelines require extremely high pressures which require energy-gobbling compressors in order to liquify the carbon dioxide. This industrial process emits even more pollution, worsening air quality in the vicinity of family homes.

We are yet to see our local fossil fuel industry chip in for the resourcing of the necessary pediatric cancer centre and other hospital and palliative care units as well as extension of the cemetery as a local consequence of their activities.

Air quality sensors for all the pollutants fully reported would be a valuable service as well.

Dangerous noxious gases

⁵ <https://www.boilingcold.com.au/ichthys-lng-emissions-to-soar-as-inpex-chases-more-gas/>

⁶ <https://www.boilingcold.com.au/japan-net-zero-by-2050/>

But in addition, have these geological formations been studied for CO₂ along with VOC behavior? CCS has been studied elsewhere for solely carbon dioxide dumping, as other gases may not be stable or safe to dump. Volatile organic compounds (VOCs) and H₂S have different solubility, reactivity, and mobility to CO₂, which could lead to unpredictable behavior when tossed undersea and may increase the risk of chemical reactions. Planning to dump VOCs like benzene and corrosive, highly toxic gases such as hydrogen sulfide alongside CO₂ via pipelines under the seabed has significant safety and environmental concerns. They may degrade the integrity of infrastructure, and pose a higher risk when leakage occurs, threatening marine life and human health. Clearly this is an unsafe plan and I hope the assessment is not a rubber stamp approval.

Rupturing pipelines

Because CO₂ is corrosive and will eat through the steel pipelines if contaminated with even small amounts of water, CO₂ pipelines have to be manufactured to a higher standard and the purity of the gas carefully monitored. When highly pressurised CO₂ pipelines rupture, they can open up like a zipper and hurl shards of metal and release huge amounts of heavy gas. Impurities like water or other gases in the CO₂ or the pipeline itself can cause such a reaction, leading to a potentially violent pipeline rupture.

Thing is there is a deferral of plans for swift emergency response to handle any incidents.

Currently rupturing of carbon dioxide pipelines may be rare, but they have happened⁷ and sent dozens to hospital. Add in a bunch of flammable noxious gases like H₂S and that safety record would become extremely hazardous⁸. It's not possible to be comfortable without details of conscientious emergency response capacity and merely mentions of diversions and vents being closed. Where are the evacuation plans and rapid response emergency services?

There are birds out there

I know the birds fly around, but they also come down, and some have a tradition of using the Middle Arm peninsula as a place to rest and feed and such. Migratory birds are being decimated by human industrialisation and how dare we contribute even further to that pressure. Please remember that extinction is forever and this project does impact many species that live there.

I see there is a note to keep lights to the minimum required for personnel safety. Yet any day it's possible to see the lights of INPEX as if it were Tokyo. Please set light levels that are cognizant that other creatures live nearby and are very disturbed by 24/7 sunshine.

Soils are slippery

I would like there to be greater care taken when bulldozing my country. The erosion from rain is fully avoidable in Darwin as there are many months with fuck all rain, and it's pretty predictable. Yet INPEX has the audacity to plan to do "Clearing to be undertaken preferentially in dry season conditions to avoid erosion risk associated with monsoon rains in the wet season." I mean if its only a preference that means it may not happen that way. Please ensure full respect is taken and qualifying terms like "preferentially" be removed.

When we studied environmental management at NTU they went on and on about the horrors of acid sulfate soils and again I do not see the respect required to manage such features of my country properly. Was there consideration of avoidance of soil disturbance? I am not convinced it is advisable to dig it up and dump it elsewhere. Even small clearings can be detrimental. This is well known:⁹ *"mismanagement of coastal acid sulfate soils have and will continue to cause environmental, social and economic damage."*

⁷ <https://climateinvestigations.org/co2-pipelines-and-carbon-capture-the-satartia-mississippi-accident-investigation/>

⁸ [Study of the consequences of CO₂ released from high-pressure pipelines - University of Wollongong](#)

⁹ <https://territorystories.nt.gov.au/10070/673022/0/0>

Slack decommissioning

Once again as is frequent with the fossil fuel industry we see a lazy attitude to fixing up messes that are out of sight. I do not think it is acceptable to plan to leave infrastructure after a project has been finalised just because it may be difficult. There are plenty of ways that all the stuff they leave will be degrading and polluting to the coastal and marine environs and should not be tolerated. Please ensure a full environmental assessment that incorporates full dismantling, recycling and otherwise dealing with all the infrastructure and pollutants and then has a full rehabilitation of all the areas. Make sure this is done in conjunction with local scientists and traditional owners so that it's all best as can be.