



SENATE STANDING COMMITTEE ON ENVIRONMENT AND COMMUNICATIONS MIDDLE ARM SUSTAINABLE DEVELOPMENT PRECINCT

Australian Energy Producers | 31 October 2023

Australian Energy Producers welcomes this opportunity to provide its views to the Senate Standing Committee on Environment and Communications (Committee) to help inform its consultations on the Middle Arm Sustainable Development Precinct (Precinct).

Australian Energy Producers is the peak national body representing companies actively engaging in oil and gas exploration and production in Australia. The industry supports around 80,000 jobs directly and indirectly in Australia and hundreds of thousands more in electricity generation, manufacturing, transport, and other industries that rely on the sector's outputs.

It is important that in conducting this Inquiry, the Committee is led by the evidence and the considerable body of regulatory and technical work that underpins this nation-building Precinct. Australian Energy Producers encourages the Committee to visit Darwin as part of the Inquiry and inspect first-hand the impressive sustainable development precinct that has operated successfully for decades and co-existed with the environment and community with no adverse impacts, and to hear from the Precinct's new tenants on the innovation and economic contribution that the Precinct will unlock.

This Inquiry should focus on the engineering, environmental, social, and economic merits of the Precinct to assure the public interest and to ensure the national interest. Australian Energy Producers considers the \$1.5B of Commonwealth funding is vitally important to support marine infrastructure, including modular offloading facility, common user wharf and widening of shipping channels, and to "[fast track](#)" the precinct; as well as for the Northern Territory Government's (NTG's) development of the Precinct's strategic Program consisting of a master Development Plan and an Environmental Impact Assessment (EIA).

To ensure the Precinct is afforded an objective and evidence-based assessment in the Inquiry, Australian Energy Producers recommends consideration of the following points:

- **The agreed joint NTG and Commonwealth Strategic Environment Assessment is supported as an efficient, fit for purpose and appropriate assessment approach to ensure the Precinct meets its regulatory requirements at both the NT and Federal level.**
- **The Precinct is well positioned to service low emission advanced manufacturing and processing, renewable hydrogen (H₂) production, Carbon Capture Utilisation and Storage (CCUS), and critical minerals processing.**
- **Mitigation solutions like CCUS will be essential technologies for many hard to abate industrial sectors, and for carbon removal outcomes (negative emissions) which are critical for achieving net zero emissions.**
- **The Safeguard Mechanism already provides Australia's principal emissions reductions regulatory framework for all facilities within the Precinct emitting over 100,000tCO₂-e per year with the aim of reaching net zero emissions baselines in 2050.**
- **Natural gas remains vital as a feedstock and to generate high process heat for industrial production, as well as helping firm the electricity grid as more intermittent and non-synchronous energy enters the market, ensuring adequate gas supply at competitive prices is essential to ensuring viable industry, electricity**

reliability and at least cost to consumers.

- Australian Energy Producers supports the NTG's adoption of a circular-economy approach to planning the Precinct over a 50-year period; this accommodates life-cycle design, construction and operational phases as well as provides for the sustainable development outcomes for all protected matters to the benefit of future generations.
- Planned hydraulic fracturing activities in the NT have already been subjected to numerous extensive reviews and studies and are subject to some of the world's strongest regulations including water regulations and monitoring requirements. Concerns regarding health were thoroughly considered and addressed in the Pepper Inquiry and strict controls are in place to safeguard air and water quality.
- Future water supply to the Precinct is being considered as part of the [Darwin Regional Water Supply Infrastructure](#) (p.v) upgrades.
- CCUS provides a foundation for a relatively mature and internationally competitive pathway for low-carbon H₂ production and cleaner synthetic liquid fuels.
- Australia's comprehensive regulatory frameworks for CO₂ storage ensure any local environmental risks are identified and mitigated effectively. The transport of CO₂ across international boundaries for permanent storage will play an important role in reducing industrial emissions at scale both in Australia and the region, including for strategic trading partners such as Japan, Korea and Singapore that have limited geological CO₂ storage potential and are seeking to partner with Australia for CO₂ storage solutions.
- In addition to supplying gas to countries switching out of higher emitting energy sources, the urgency to address climate change intensifies a priority to domestically process and value add Australia's primary resources; this will help avoid carbon and environmental leakage to countries that have less stringent climate and environmental regulatory standards, regimes, controls, and engineering competencies.
- Avoiding administrative delays and adhering to the expected Approvals timeline for a decision by the end of the first half of 2024 remains critically important for investor confidence.

Australian Energy Producers maintains that new gas supply is critical to improving Australia's energy security by remedying projected structural gas shortages across the east coast while supporting the delivery of affordable and reliable low emissions energy for Australians and globally. It also remains a critical element to Australia's and the world's strategies to decarbonise economic activities.

Australian Energy Producers thanks the Committee for the opportunity to contribute to the Inquiry.

Yours faithfully

Samantha McCulloch
Chief Executive

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OVERVIEW

The Precinct is a critical element of the Northern Territory's (NT's) future economic prosperity, and the NT Government's (NTG) goal of growing productivity and facilitating a \$40 billion economy by 2030.

According to the NT Government, the Precinct will unlock approximately [20,000 new](#), high-skilled local jobs across a diverse base of industries. Using the [Australian Bureau of Statistics](#) data, this approximates to about 14.5 per cent of the NT's currently employed labour force. Creating enduring and high paid jobs will necessarily bestow durable benefits to the living standards of NT's regional and remote communities.

Australia's [manufacturing](#) sector is declining as a proportion of Gross Domestic Product (GDP) from about [20 per cent in 1980](#) to about [6 per cent today](#). The NT's abundance of natural gas, derivatives, mineral deposits, and renewable energy coupled with its nearby offshore gas fields provides a significant opportunity to help reverse this declining trend by developing a value-adding manufacturing hub at the Precinct. This will also contribute significantly to Australia's economic growth while enhancing the NT's economic and fiscal sustainability.

The Precinct is situated near international export markets (55 per cent of the global population rests within a 5,000km radius) and is adjacent to deep water, the Marine Supply Base, East Arm Port, and the future ship lift facility, which will continue to service INPEX's Ichthys LNG, Shell's Prelude Floating LNG (FLNG) and Santos' Darwin LNG projects. This complements the NT's existing regional infrastructure (roads, rail, gas distribution network) connecting to southern states and is supported by an experienced local labour market in manufacturing construction and operations.

The Precinct is located on suitable lands that are strategically adjacent to local supply chains including reliable and economic sources of natural gas and renewable energies (clear drivers of manufacturing) and minerals (Manganese, Bauxite, Vanadium, Titanium, Iron, Molybdenum). Its core challenge remains the provision of sufficient marine infrastructure and serviced land to support advanced manufacturing and minerals refining as well as establishing common public infrastructure to leverage the existing infrastructures (much of which is private) of rail, roads, loading wharves, off-loading facilities. This is essential to attract private sector interest and to assist final investment decision (FID) making. The NTG consider it impractical to pipe product from the Precinct to the Darwin port given the need for lengthy undersea pipelines as well as the existing busy shipping channels.

Planning for the Precinct has already been the subject of considerable public scrutiny and technical evaluation, and it continues to demonstrate that it can satisfy the most rigorous and comprehensive of regulatory standards across all levels of government.

The business case underpinning the Precinct includes high value-adding from both operations as well as capital expenditures and employment in its construction of enabling infrastructure. For example, according to the [NTG's submission to Infrastructure Australia](#) the first 1,600 jobs in the Precinct are expected to create some \$450M per year in value-add plus \$306M associated with supply chain effects and \$211M from consumption flow on effects totalling \$967M (modelling date is by 2026). By 2036, annualised value-add is estimated at \$920M from direct employment, \$654M per annum from supply chains, and \$428M per annum from consumption flow-on effects totalling over \$2B ([p16-17](#)).

If the Precinct's peak gas processing is assumed to be about 3,76PJ per year, then the NTG's cited estimated value of \$44.6M per PJ for gas consumed for manufacturing represents a potential \$17B economic contribution to the Australian economy (see [NTG's submission, p18](#)). Additional to this is the non-economic contributions the Precinct could make including improved fuel security through import substitution, enhanced economic diversification, positive social and environmental impacts delivered by a highly skilled workforce and increased

opportunities for Territorians including First Nations people.

The Precinct has and will continue to have to meet stringent environmental and other regulatory requirements.

The Precinct's environmental assessment processes have and continue to be deeply informed and shaped by over [200 existing](#) relevant and detailed studies and reports on environmental deliverables, supported by extensive public consultations. Similar to the NTG's view, Australian Energy Producers is confident that all environmental issues will be addressed through engineering solutions and/or sensible and practical risk management plans.

The development of the Precinct delivers on national and NT policy objectives.

Australian Energy Producers strongly supports the Precinct as aligning to and complementary with achieving the goals and objectives of the NTG and its [Infrastructure Plan and Pipeline](#) (2022), the Energy and Climate Change Ministerial Council's [Strategic Energy Plan](#) (SEP) (including its [National Energy Transformation Partnership](#) and [First Nations Clean Energy Strategy](#)), the emissions reduction objective in the [national energy objectives](#), as well as the Commonwealth's [Northern Australia Infrastructure Fund](#) (NAIF) and [legislated](#) emissions reduction targets as outlined in its [Nationally Determined Contribution](#) (NDC) under the Paris Agreement (among others).

The NTG is targeting a 50 per cent share of renewable energies (450MW) by 2030 through its [Northern Territory Road Map to Renewables](#), and when coupled with gas fired generation, will position it as one of the lowest emissions profiles of all States and Territories. The NTG's [Gas strategy \(Five Point Plan\)](#) also sets out a vision for an expansion to the Darwin LNG hub, growing NT's service and supply industries, establishing gas-based processing and manufacturing, growing the NT's research, innovation and training capacities, and contributing to Australia's energy security.

The Precinct also strongly aligns to the NTG and Commonwealth's [energy and emissions reduction agreement](#) to deliver affordable and reliable power, unlocking gas supplies to help prevent shortfalls in the market, and investing in key emissions reduction projects. It will also help the SEP's goal of ensuring electricity and gas sectors efficiently deliver their share of emission reduction targets while ensuring reliable supply (p.6).

TOR 1: ROLE OF GOVERNMENTS

The roles of the Australian Government and the NTG must be to ensure that the development of the Precinct is safe and sustainable, and its benefits flow to the NT economy and to the Australian community more broadly. Given the Precinct is being proposed, constructed, and operated within the Local Government Authority (LGA) of Litchfield Municipality, there are critically important roles for all three levels of governments and their stakeholder communities in this development.

The relevant public services also serve to strengthen the quality of government and regulatory decision making. The Precinct is being considered on a whole of NTG level led by the Department of Infrastructure, Planning and Logistics ([DIPL](#)), also known as the Proponent, in regard to the Precinct's feasibility and concept design phases and future development and conservation under the NT Planning Scheme ([NTPS](#)). DIPL is supported by the independent advice from the NT Environment Protection Authority (NT EPA).

The Commonwealth Departments of Climate Change, Energy, the Environment and Water ([DCCEEW](#)) and Infrastructure Australia ([IA](#)) are leads in regard to the *EPBC Act* and IA's [Assessment Framework](#) respectively. The National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) is also engaged in regard to [Offshore Petroleum Environmental Approvals](#).

Governments have an important role in providing the community with confidence in the regulatory arrangements that are in place to ensure the development of this Precinct delivers on its economic, social, and

environmental obligations.

The misinformation campaigns that have targeted NT's Beetaloo Basin development should be called out by the Commonwealth Government and the NTG, and the community provided with the facts to give them confidence that these claims are unfounded and that the Beetaloo Basin development will continue to have to meet the most stringent environmental regulations.

There has been significant public inquiry into and assessment(s) of the NT's national interest in its natural gas sector in recent years that remain relevant to informing this Inquiry. Both NT and Australian parliaments continue to hold interest in the governance arrangements underpinning the Precinct's development, and there is a significant amount of contemporary data and information available in which informed decisions can be based on in regard to onshore unconventional gas and advanced manufacturing developments. For example, the [Strategic Regional Environmental and Baseline Assessment](#) (SREBA) includes detailed studies, data, maps and reports providing important reference points.

In 2014 the NTG conducted an inquiry on hydraulic fracturing ([Hawke Inquiry](#)), which was followed up in 2018 with another independent inquiry ([Pepper Inquiry](#)). The [Pepper Report](#) made 135 recommendations to manage the development of any onshore shale gas industry in the NT to acceptable levels. The NTG [accepted](#) and has [implemented](#) all 135 recommendations, and lifted its 2016 moratorium on unconventional shale gas developments as a consequence.

Similar parliamentary inquiries have been conducted over the years in [Victoria](#), [Western Australia](#), and [South Australia](#). Highlights of the WA Inquiry findings include:

- There are sufficient safeguards and water resource protections in place to protect public drinking water sources (Finding 13).
- The risk of chemical spills and other fluids can be effectively managed (Finding 30).
- The risk of fugitive emissions is very low and can be managed (Finding 32).
- The risk of water contamination from fugitive methane emissions is highly unlikely (Finding 31).
- Many of the concerns expressed by the public can be addressed through regulation and monitoring (Finding 34).

The Beetaloo Basin was also the subject of a recent Federal [Senate inquiry](#) (Beetaloo Inquiry) on oil and gas exploration and production which signalled that the development of the resources and associated production approaches were in the public interest and all risks and opportunities manageable.

The Beetaloo Inquiry's [final report](#) called for an inquiry into the Precinct (Recommendation 2.92) and that the existing water trigger in the [Environment Protection and Biodiversity Conservation Act 1999](#) (EPBC Act) be expanded to include all forms of unconventional gas. Australian Energy Producers considers sensible the Australian Government's decision to twice ([reportedly](#)) reject previous Greens attempts in the Senate to establish an Inquiry on the basis that the Precinct is in early stages of planning.

Australian Energy Producers views socially, environmentally, and economically responsible resource development and value-added processing, such as the Precinct, in both the NT's and broader national interest. It will attract potentially billions of dollars of private capital. This will significantly contribute to the balance sheets of the NTG and Commonwealth Government with royalty and tax revenues for reinvestment in and spending on much needed social and environmental infrastructures and services.

Government decision-making needs to strike a good balance between economics and sustainability outcomes. This includes setting appropriate environmental outcomes and affording the private sector incentives to

mobilise and deploy solutions and best practices. The core interests of this Committee should be the applied science (engineering), social, environmental, energy, and economic merits of the Precinct.

TOR 2: FUTURE INDUSTRIES AND SUPPLY CHAINS

Australian Energy Producers is confident that the Precinct will achieve world-class status as a globally competitive and sustainable hub providing critical economic growth opportunities for the NT and serve Australia's national interest. It also commends the NTG for adopting a circular-economy approach to planning for the Precinct's development over a 50-year period (and presumably beyond). This timeframe not only accommodates life-cycle design, construction and operational phases but also provides for the sustainable development of the area to deliver positive outcomes for all protected matters to the benefit of future generations.

The development of the Precinct continues to be held to and satisfies the highest of public scrutiny, technical standards, and approval frameworks. The location of the Middle Arm Peninsula is already home to a globally significant LNG export hub, with operational facilities such as the Santos-led Darwin LNG and INPEX-led Ichthys LNG onshore processing. As part of a '[Do Not Deal](#)' agreement with the NTG – which sets aside preferred sites at the Precinct for up to 12 months while proponents continue to develop their proposals – Tamboran has been awarded a 170-hectare site to develop the new NTLNG project for LNG export, announcing plans for an initial-stage 6.6 Mtpa facility.

Both Santos and INPEX have publicly [committed](#) to achieving net zero emissions in scopes 1 and 2 by 2040 and 2050 respectively. Santos is also voluntarily stewarding emissions reductions in its supply chains with the aim of reducing at least 1.5MtCO₂ of scope 3 emissions by 2030. Both companies continue to demonstrate corporate best practices in their emissions management and are fine examples of how the Precinct will support environmentally responsible industries.

The Safeguard Mechanism reforms also legislates all new gas fields, including the Beetaloo Basin, will be allocated net zero allowable emissions baselines from first production. This effectively means all associated emissions will need to be either avoided through solutions like CCUS, and/or fully offset through the acquisition and acquittal of Australian Carbon Credit Units (ACCUs) and/or with Safeguard Mechanism Credits (SMCs).

Tamboran Resources, a major Beetaloo Basin explorer, has for many years now maintained a net zero emissions strategy for its operational share of scope 1 and 2 emissions in the Beetaloo Basin, noting commercial production is expected to commence in 2025. Tamboran Resources leadership will further inform and strengthen other operators' emissions management plans given the Beetaloo Basin's naturally low CO₂ concentration reservoirs of between 3 to 4 per cent of reservoir gas. Tamboran Resources is also actively participating in the [Global Methane Guiding Principles](#) initiative which promotes new technologies, such as methane (CH₄) detection, in the design of facilities to eliminate CH₄ leakage.

The Precinct will continue to play a major facilitative role for reducing scope 3 emissions both in Australia and for our regional trading partners, who increasingly rely on Australian LNG to decarbonise their own economies (and especially as energy systems substitute out of high emitting coal). Tamboran Resources' NTLNG developments at the Precinct for example will be critical in helping achieve these emissions reduction outcomes for both domestic and LNG customer requirements given the scale and pace of the cleaner energy transition required globally, and specifically in the Indo-Pacific.

The [NTG also intends](#) for the Precinct to host some of the world's largest CCUS facilities and capturing 90 per cent of emissions while potentially storing CO₂ sourced from other countries. This is already strongly supported by INPEX and Santos investments in [CCUS evaluation, studies](#) and FIDs in projects located in the Precinct. INPEX for example aims to ultimately inject about 2.5MtCO₂ per year by 2030, and has already [obtained](#) the permits

(G-7-AP) for offshore geological CO₂ storage in the Bonaparte basin (indicative assessments for 6.48GtCO₂ storage capacity). Santos has also secured [\\$100M in Federal funding](#) to help support its establishment of a CCUS hub at the Precinct and to ultimately capture and store [10MtCO₂ a year](#).

The Precinct is well positioned in terms of servicing low emission advanced manufacturing and processing, renewable H₂ production, CCUS, and critical minerals processing. As a low-emissions manufacturing hub it will likely attract the following industrial activities:

- LNG.
- Ammonia and derivatives.
- Urea and derivatives.
- Ethylene and derivatives.
- Methanol and derivatives.
- Gas to liquids (GTL).
- Low-carbon H₂.
- CCUS including importing CO₂ for permanent geological storage.
- Minerals processing.
- Advanced manufacturing.
- Support service industries.

Australian Energy Producers maintains that new gas supply is critical for ensuring Australia's energy security.

The NTG [estimates](#) there could be over 200,000 Petajoules (PJ) of natural gas in the Beetaloo Basin. Even if all of this gas is not recoverable, a very conservative recovery rate of even 10 per cent production translates to more than 12 years' worth of domestic gas demand;¹ and this will help protect Australia's future energy security whilst supporting significant emissions reduction as the East Coast market switches to low CO₂ gas from the Beetaloo Basin and away from existing more emissions intensive energy sources.

As existing East Coast market gas supply declines in the Gippsland and Cooper Basins, Beetaloo Basin gas will be a key source in meeting the anticipated shortfall forecast by the Australian Competition and Consumer Commission (ACCC) and Australian Energy Market Operator (AEMO).

The concentrated sources of CO₂ from industrial processes will also favour the economic feasibility of CO₂ capture. This will assist the pace and scale of mitigation outcomes in the NT and Australia to help achieve their respective emissions reduction targets and policy ambitions.

The Precinct will serve as a 'development-ready' location for investment. A key success factor will be the quality of design and construction of integrating established and new networks of enabling and shared infrastructures. Australian Energy Producers considers the Precinct well placed to benefit from:

- Untapped proven gas reserves offshore and a world-class shale gas resource onshore.
- Highly prospective geological storage to sequester CO₂ emissions.
- Critical minerals resources including copper, lithium, vanadium, rare earths, tungsten, and cobalt.
- Access to renewable energy sources.

¹ 2021-22 gas consumption was 1,559PJ, see [Australian Energy Update 2023 – Table C 'AUS' tab](#)

- Established construction, logistics, and operations capability.
- Proximity to international markets.

TOR 3: ASSESSMENTS AND IMPACTS

The Precinct will be required to meet regulatory requirements at both the NTG and Commonwealth levels prior to development being able to proceed.

The Precinct is being primarily assessed for approval under the NT's [Environment Protection Act 2019](#) (*EP Act*). Other approvals as required will include the [Planning Act 1999](#) for the rezoning of land and subdivision with relevant approvals and/or licences as required under the [Waste Management and Pollution Control Act 1998](#) and/or the [Water Act 1992](#) for activities involving water extraction and/or wastewater discharges.

The Precinct is also subject to the Federal Minister's deliberations under the Commonwealth's *EPBC Act* due to 'Matters of National Environmental Significance' (MNES). To simplify this process, the NTG and Australian Government have entered an [agreement](#) to undertake a joint [Strategic Environmental Assessment](#) (SEA, p.3). And potentially NOPSEMA's Offshore Petroleum Environmental Approvals.

Key differences between NT and Commonwealth legislation is that the *EP Act* requires impact assessments of climate change (p.24) and the environment (now or in the future). The term 'environment' is defined as "all aspects of the surroundings of humans including physical, biological, economic, cultural and social aspects" (p.6). These matters are not listed as MNES under the *EPBC Act*; but the Federal Minister must still hold regard for the extent to which the Precinct's planning and development assists the cooperative implementation of Australia's international environmental commitments. This includes Australia's ability to deliver on its NDC pledges of delivering a 43 per cent reduction on 2005 emissions levels by 2030 and net zero emissions by 2050.

Once approved, it will continue to be overseen by world class regulators to ensure compliance with regulatory requirements in a highly transparent manner. This will help prevent both carbon and environmental leakages by retaining economic activity within Australia's appropriately regulated supply chains and avoiding industry shifting production to countries with less stringent climate and environmental regimes.

As an indication of the rigour applied to the Precinct's planning and approvals processes, over [200 studies](#) have so far been completed to inform decision-makers. This includes on environmental deliverables such as:

- Air quality assessment.
- Water quality assessment.
- Marine ecology study.
- Human health impact assessment.
- Noise, traffic, and visual amenity studies.
- Flora and fauna conservation strategy.
- Social impact assessment.
- Archaeological study.
- Economic impact assessment.
- Jetty engineering design.
- Module off-loading facility design.
- Marine navigation and traffic study.

- Shipping channel dredging studies.
- Shared infrastructure designs such as roads, water and electricity supply, product corridors, drainage, wastewater treatment, land layouts, governance framework models.

The Precinct was referred to the NT EPA last year for strategic assessment on the nature and materiality of potential impacts, and to identify and understand the many options available to address those impacts in terms of avoidance, managing, and/or offsetting as well as enhancing and promoting positive impacts. NT EPA [supported](#) the approach and has released a [Terms of Reference](#) and is currently progressing its [draft Environmental Impact Statement](#) (EIS).

The SEA approach is considered fit for purpose, and it will assess the potential impacts on environmental values of relevant policies, plans and programs at a cumulative and regional scale; as well on a basis of sustainability-led, participatory, and transparency principles as distinct to project level assessments. The NTG and NT EPA have adopted an outcomes-based framework for measuring social, economic, environmental and governance impacts based on Infrastructure Australia's (IA) [sustainability principles](#) and [Australian Infrastructure Plan and Assessment Framework](#) (2021).² This framework includes the following sustainability principles:

- Increasing self-sufficiency in supply chains and manufacturing capacity to provide opportunity to grow local manufacturing.
- Circular economy principles, whereby the Precinct operates as an integrated system where wastes from one operation can become inputs for another.
- Maximising the use of shared infrastructure.
- Targeting low emissions proponents, including initiatives that support decarbonisation and contribute to achieving net zero emissions.
- Efficient water use, including reuse and recycle where possible.
- Supporting or driving the development of other regional conservation initiatives and ensuring the Precinct planning is well-aligned and integrated (e.g., Darwin Harbour Dredge Management Strategy).

The NT EPA's consideration of a strategic assessment approach initially identified twelve [environmental impact factors](#) (p.2) associated with the Precinct including broadly:

- Terrestrial ecosystems from land-based works and reclamation, including mangrove clearing.
- Marine water quality and ecosystems from industrial discharges, vessel traffic, dredging and dredge spoil disposal.
- Air quality impacts including greenhouse gas (GHG) emissions from industry.
- Health impacts from facilities near a residential area (3km from across the Elizabeth Rover to Palmerston).
- Impacts on Darwin Harbour amenity.
- The need for transparency in project-level decision making.

On GHG's, the NT EPA reported that "... While there is the potential for use of renewable power and CCUS, the degree to which GHG's could be avoided, sequestered or managed is unknown and there is the potential for high emission volumes ... Such GHG's have the potential to have a significant impact on the environment and the ability to meet the [NT EPA's environmental objective](#) [p.6] for atmospheric processes ..."

² Infrastructure Australia is governed under the Commonwealth's *Infrastructure Australia Act 2008* in guiding nationally significant infrastructure investment and reforms in the national interest.

CCUS is and will continue to be an essential emissions reduction technology for many critically important economic sectors. This includes upstream natural gas, many hard to abate industrial sectors, and carbon removal (negative emissions) – it also provides scalable engineering pathways to internationally competitive low-carbon H₂ production, chemical production, net-negative bioenergy production, and synthetic liquid fuels.

The NTG is also considering opportunities associated with importing CO₂ from international sources for domestic geological storage. This will be legally provided for if the [proposed Environment Protection \(Sea Dumping\) Amendment \(Using New Technologies to Fight Climate Change\) Bill 2023](#) ascends to give effect to Australia's international obligations under 2009 and 2013 amendments to the London Protocol. The Senate Environment and Communications Legislation Committee recommended the [Bill be passed](#), and the Bill is currently before [the Senate](#).

Australia's comprehensive regulatory frameworks for CO₂ storage ensure any local environmental risks are identified and will be mitigated effectively. The transboundary movement of CO₂ across international borders for permanent storage will play an important role in reducing industrial emissions at scale both in Australia and the region, including for strategic trading partners such as Japan, Korea and Singapore have limited geological CO₂ storage potential and are seeking to partner with Australia for storage solutions.

The value of CCUS as a credible and viable mitigation option is well documented in the Intergovernmental Panel on Climate Change's (IPCC) Fifth Assessment Report (WGIII – Mitigation, see [Table SPM.1; p15](#)); it found that without an option to deploy CCUS at scale, the economic cost of containing emissions to 450ppm – which is the atmospheric concentration point to halt temperature rises to below 2 degrees Celsius on pre-industrial times – would more than double while noting that some of the models assessed were not able to meet the carbon constraint without CCUS.

CCUS is a technically proven solution at scale with [over 25 years](#) of demonstrated integrity. The Australian Government was a pioneer in supporting CCUS through its \$500M [Low Emissions Technology Demonstration Fund](#) (2005), and with Victoria responsible for establishing Australia's first regulatory framework for CCUS approvals. Many Australian government policy strategies publicly [identify](#) CCUS as offering opportunities for new industries to develop together with ongoing employment (such as in the Latrobe Valley); with the most prospective of these opportunities being H₂ production with CCUS and natural gas processing with CCUS.

Australia continues to deepen its experiences to deploy CCUS solutions based on actual projects such as the [Otway International CCUS Test Centre](#) (which commenced in 2004) and commercial projects such as CarbonNet – Hydrogen Energy Supply Chain (HESC). The [latter](#) recently exported its first shipment of liquefied H₂ to Japan by converting brown coal and biomass to H₂. HESC [expect](#) that at a commercial production scale of 225,000 tonnes of liquid H₂ per year with CCUS, global CO₂ could reduce by 1.8MtCO₂-e per year.

The CarbonNet project has a potential to transport and store up to [6MtCO₂ per year](#) with further capacity to scale-up storage once more sites come online. CCUS provides relatively low-cost engineering pathways to internationally competitive low-carbon H₂ production and cleaner synthetic liquid fuels.

The environmental, social, and economic risks and impacts of hydraulic fracturing have also been well explored and can be managed effectively subject to robust regulatory systems. Future LNG plants will likely source their feedstocks from new gas fields such as the Barossa gasfield and the Beetaloo sub-basin with advanced processing plants converting natural gas into a diverse range of high value adding products. Beetaloo Basin gas will significantly boost advanced manufacturing, domestic supply security, and cleaner energy production in Australia by fuelling the Precinct's CCUS hub, as well as H₂ and hydrocarbon operations underpinned by CCUS. And in turn this will serve as a key enabler for the natural gas produced in the NT.

As noted, the Hawke Report [found](#) (p.3) that “consistent with other Australian and International reviews... the

environmental risks associated with hydraulic fracturing can be managed effectively subject to the creation of a robust regulatory system". Following the release of this report, the [Petroleum \(Environment\) Regulations 2016 \(NT\)](#) were promulgated to regulate activities. The [Pepper Inquiry's](#) overarching recommendation was similar in stating all challenges and risks associated with unconventional gas development can be managed. Concerns regarding health impacts were also thoroughly considered and addressed in the Pepper Inquiry with strict controls in place to safeguard air and water quality.

Australian Energy Producers notes that much public discussion relating to health appears to be [influenced](#) by a limited survey of studies applicable to the United States (Mississippi River and the Gulf of Mexico). Additionally, several sources used within this public discussion on health appear to reference studies that have been discredited by government state health departments due to poor methodology and an absence of credible findings. Australian Energy Producers notes the NTG's publicly expressed confidence that the Precinct's EIA will transparently and adequately address all matters and that any risks identified can and will be mitigated and managed appropriately.

Finally, the Darwin Harbour remains a pristine natural environment despite supporting heavy industry for many decades, thanks to environmentally responsible industries and robust environmental assessments, regulatory approvals, and compliance assurances.

TOR 4: IMPLICATIONS OF THE STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA)

The SEA process provides all stakeholders substantial opportunity to express views on the acceptability and management options of potential impacts – however it is important that the Committee's exploration of the Precinct is informed by evidence-based information rather than subjective views. SEA is a single touch approach to facilitating streamlined development approvals under both the *EP Act* and the *EPBC Act*. It includes the development and consideration of the following two key documents:

- A Program (policy or plan) setting out the scope of future sustainable developments, and measures to ensure appropriate outcomes are given effect across economic, environmental, social, and cultural and governance settings.
- An Environmental Impact Statement (EIS) including consideration of MNES.

The Program under the *EP Act* is based on three equally important parts including: a Development Plan (scope), a Sustainability Outcomes Framework (a best practice approach to embedding sustainability principles), and an Implementation and Assurance Plan (transparent, effective, and adaptive implementation).

The publicly available [Draft Program](#) provides for:

- Efficient and rigorous regulatory environments.
- Embedding sustainability principles into planning, assessment, and delivery.
- Consideration of cumulative and regional scale impacts to environmental, economic, social, and cultural values.
- Development of consistent Precinct-wide controls and management measures.
- Development and implementation of processes to guide future decision making.
- Early delivery of important conservation strategies including offsets.
- Certainty on development opportunities and environmental, social, and cultural obligations for future industries.
- Increased stakeholder confidence that environmental matters are considered on a whole of NTG basis.

As noted, the Sustainability Outcomes Framework adopts IA's [sustainability principles](#) and [Australian Infrastructure Plan and Assessment Framework](#) (2021).

The Precinct's draft EIS is being considered/progressed by the SEA teams in NTG and DCCEEW. The process as prescribed under the *EP Act* and its *Environment Protection Regulations 2020* is carried out by the NT EPA with recommendations to the Minister for Environment, Climate Change and Water Security on the granting of an environmental approval(s).

The Australian Energy Producers supports the EIA's public terms of reference which includes:

- Identifying and assessing the potential significant impacts and risks on the environment associated with the strategic proposal, in particular the potential cumulative impacts at a regional scale in consideration of existing and proposed development in the Darwin Region.
- Identifying and assessing the effectiveness of options available to avoid, mitigate or offset these impacts and risks to an acceptable level.
- Demonstrating how the principles of ecologically sustainable development (ESD) have been considered in planning for the strategic proposal and proposed future industries and activities.
- Demonstrating how the strategic proposal can be implemented in a manner that is acceptable in terms of its costs and benefits to the community.

The current Approvals timeline, for which the NT Chief Minister has publicly signalled a decision could be made as early as the end of the first half of 2024, is also critically important to adhere to for investor confidence. To delay it could create significant sovereign risk, perceived or otherwise, by domestic and foreign investors alike.

TOR 5: ENGAGEMENT AND ADVOCACY

The Precinct has been the subject of extensive public consultation processes and will continue to be throughout its development.

With respect to engagement with First Nations groups, the Precinct aligns strongly with the [First Nations Clean Energy Strategy](#). First Nations people, communities, and businesses can be supported to increase direct participation and ownership in low emissions energy intensive projects such as the Precinct offers.

The NT gas industry has a strong record of working with Traditional Owners (TOs) and ensuring that the economic benefits flow on to First Nations communities. In doing so, the industry seeks to create socio-economic opportunities for their communities, boost training and employment, and promote better regional outcomes.

The sector acknowledges and respects TO communities have a unique connection and knowledge of the local lands, waters, and environment in which it operates. The sector recognises that building strong relationships with TO communities and involving them in decisions that impact them is paramount and integral to the Australian oil and gas industry's continued success.

Santos for example is partnering with 21 Traditional Owner Groups (TOGs) and 3 Land Councils and associated Indigenous communities across Australia. It engages TOGs and Land Councils for the lifecycle of its operations on matters not just relating to Native Title, consent, and cultural heritage management, but also in relation to economic opportunities which includes employment, training, education, and enterprise opportunities. On an annual basis, Santos engages up to 180 cultural heritage officers nominated by their respective communities to undertake cultural heritage assessments under the Cultural Heritage Management Process.

As one example among many, Santos' [West Arnhem Land Fire Abatement](#) (WALFA) Indigenous partnership

project is recognised by the UN as one of the best examples in the world of Indigenous communities working with business in the carbon market. It was the world's first carbon project using fire management and one of Australia's biggest emissions offset programs, with more than 2MtCO₂-e abated.

INPEX also launched its [first](#) Reconciliation Action Plan (RAP) over a decade ago. It has since released six RAPs including three [Stretch RAPs](#) – the latest in January 2023. INPEX continues to deliver many positive outcomes. For example, in 2018 it signed the historic [Larrakia Ichthys LNG Foundation Trust](#) Agreement on behalf of Ichthys Joint Venture participants and the Larrakia people. The Agreement serves to provide some of the most significant and enduring benefits and opportunities outside of native title obligations (refer to web page for a listing of relevant [programs](#)).

The national RAP initiative is stewarded by [Reconciliation Australia](#), who recognised INPEX's considerable [contributions](#) in leveraging its reach and resources to support Aboriginal and Torres Strait Islander self-determination. It highlights for example the INPEX funded Savanna Fire Management program, describing it as providing "... tangible benefits to remote communities through sustainable employment, training and business opportunities, aiding efforts to steward land through cultural practices and in turn improving environmental outcomes."

In addition to the two organisations identified above, the majority of Australian oil and gas operators have established RAPs to promote reconciliation with First Nations peoples and to identify and implement activities that create positive economic, social, and cultural outcomes. This includes [Chevron](#), [Woodside](#), [BP](#), and [Jemena](#) to name a few.