

NOTICE OF DECISION AND STATEMENT OF REASONS

Section 55 of the *Environment Protection Act 2019* (EP Act)

Regulations 57(2)(b) and 63 of the *Environment Protection Regulations 2020* (EP Regulations)

Name of proposed action	Tiwi H2 Project (Green Hydrogen Production and Export)
Proponent	Provaris Energy Ltd
NT EPA reference	EPA2022/017
Description of proposed action	<p>Provaris Energy Ltd propose to construct and operate a green hydrogen production and export facilities on Melville Island (NT Portion 1644). The project is located on 2,862 ha Aboriginal land (some of which is covered by existing leases). The total area comprises:</p> <ul style="list-style-type: none"> • A 2,640 ha solar precinct to be established in an area currently used for forestry. • A 150 ha transmission line corridor comprising a 30 km long and 50 m wide easement, on undeveloped land with native vegetation, running adjacent to Putjimirra Road from the solar precinct to Port Melville. • A 40 ha hydrogen production precinct to be established on undeveloped land with native vegetation. • A high-pressure pipeline (of unspecified dimensions and construction) suitable for transporting compressed hydrogen from the compression facility and loading to ships. • A 32 ha hydrogen export precinct within the existing Port Melville lease area, including 5 ha of native vegetation. • A 500-person construction camp will be located in the hydrogen export precinct. <p>Hydrogen (H₂) will be produced through electrolysis of purified sea water using electricity generated at the solar precinct, and water generated by a desalination plant. Wastewater from the desalination plant will be discharged into the Apsley Strait. Hydrogen will be shipped from Port Melville via the existing shipping channel through the Apsley strait. Shipping movements will peak at 240 per year, equalling one ship movement every 36 hours (depending on seasonal hydrogen production and loading rates).</p> <p>Early works are proposed for 2024, the peak construction workforce is expected to be 500, with a long term operation workforce of 100 people, expected over the project's 30 year lifespan.</p>
Nature of proposed action	Energy (renewable)
Decision	<p>Standard environmental impact assessment is required in accordance with section 55 of the EP Act and regulation 57(2)(b) of the EP Regulations</p> <p>The method of environmental impact assessment to be by Environmental impact statement (EIS) in accordance with regulation 57(2)(b)(ii)</p>

Person authorised to make decision

Dr Paul Vogel AM – Chairperson, as delegate of the Northern Territory Environment Protection Authority (NT EPA)

Signature



Date of decision

12 October 2022

Matters considered under EP Regulation 56

The NT EPA has considered the following:

- the accepted referral (including the referral form, referral report and appendices)
 - submissions received in relation to the referral information during the public consultation period 3 August 2022 to 30 August 2022
 - government authority submissions received: 8
 - public submissions: 1
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Consultation

The referral indicates the proponent has engaged with stakeholders including government, Aboriginal traditional owner groups, land council and authorities and private corporations. Issues that were raised during early consultation included:

- water sources
- ground disturbance
- community involvement
- protection of waters and fishing
- protection of flora and fauna
- location of the solar precinct.

Submissions to the NT EPA identified potential impacts on threatened terrestrial flora and fauna, and sensitive or significant vegetation due to direct and indirect effects of native vegetation clearing, including the potential for erosion. Other issues raised included:

- source of construction water
- impacts to benthic species from brine discharge
- transport of material and workers including marine, aerial and road use
- safety
- economic and employment outcomes
- potential for contamination of Pirlangimpi's drinking water source
- generation of noise and dust
- waste management.

All submissions made during the consultation period are published on the NT EPA website in accordance with regulation 269 of Environment Protection Regulations 2020.

Statement of Reasons

Overview

The NT EPA considers that the proposed action has the potential to have a significant impact on environmental values associated with six environmental factors¹.

Water	<ul style="list-style-type: none"> • Inland water environmental quality – The proposal has the potential to significantly impact the availability and quality of the future drinking water supply for the Pirlangimpi community and water quality due to seven water crossings (Blue Water Creek, three first-order unnamed seasonal drainage lines and three wetlands) that will be intersected by the transmission line corridor. <p>Construction activities (including excavation, cutting and filling, drainage works, construction of access roads, hardstand areas, fencing, stockpiling, creation of gravel pits and installation of transmission towers) have the potential to cause erosion and sedimentation, which has the potential to run-off onto neighbouring sensitive receptors.</p>
Sea	<ul style="list-style-type: none"> • Marine environmental quality – The proposal has the potential to significantly impact marine water quality and the receiving environment through wastewater discharges, including for example brine and biocides, to the Apsley Strait.
Land	<ul style="list-style-type: none"> • Terrestrial ecosystems – Proposal activities including vegetation clearing have the potential to have a significant impact on threatened flora and fauna and sensitive or significant vegetation communities from clearing; erosion and sedimentation; weed spread facilitated by construction activities; and explosion, fire and unplanned incidents.
Air	<ul style="list-style-type: none"> • Atmospheric processes – The potential to generate greenhouse gas emissions (GHG), particularly during construction from the proposal is poorly understood, and the extent of any impact from greenhouse gas emissions and the ability to meet the NT EPA's environmental objective for atmospheric processes is uncertain.
People	<ul style="list-style-type: none"> • Community and economy – The proposal has the potential to significantly impact the regional community, including the Aboriginal community, due to the size of the construction workforce and potential noise impacts from operation of the hydrogen production and export precincts on the Pirlangimpi community. • Human health – The proposal has the potential to impact human health both through impacts to the future drinking water supply for the Pirlangimpi community, and from any leaks of hazardous materials, including nitrogen and compressed hydrogen, in the hydrogen production precinct (which is located one kilometre east of the Pirlangimpi community), pipeline and the export precinct.

The NT EPA considered other environmental factors during its consideration of the referral; however, the impact on those factors was not considered to be significant.

Justification

A standard assessment by EIS is required because:

Regulation 59 (a) the significance of the potential impact of the proposal as described above.

¹ [NT EPA Environmental factors and objectives](#)

- Regulation 59 (b) the need to improve the NT EPA’s level of confidence in predicting potential significant impacts of the proposal taking into account the extent and currency of existing knowledge, particularly in relation to the:
- location and nature, type, intensity and magnitude of the proposal
 - certainty that the quality and availability of drinking water would be protected
 - significance of impacts on the Tiwi Island community
 - storage of hazardous materials
 - operational noise generation
 - estimates of scope 1 and scope 2 GHG emissions
 - certainty that the quality of sensitive or significant vegetation, and threatened species and their habitat would be protected from erosion and sedimentation and weeds
 - significance of impacts of proposed native vegetation clearing on flora and fauna
- Regulation 59 (c) the need to develop measures to avoid, mitigate or manage potential significant impacts, and increase the NT EPA’s confidence in the effectiveness of the proposed measures, with respect to:
- the location of the proposal and alternatives considered in avoiding and mitigating potential significant impacts
 - potential impacts on drinking water
 - potential impacts native flora and fauna
 - potential impacts on human health
- Regulation 59 (d) the extent of engagement that has occurred with the Tiwi Island community
- Regulation 59 (e) uncertainty about the capacity of the Tiwi Island community, and individuals likely to be affected, to access and understand information about the proposal and its potential significant impacts, particularly in relation to information gaps in the referral
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Conclusion

The NT EPA considers that the proposed action has potential for significant impacts on six environmental factors, and that environmental impact assessment is required. The method of assessment will be EIS.

In making its decision under EP Regulation 57, the NT EPA has considered:

- the objects of the Act in section 3 of the EP Act
 - the purpose of the environmental impact assessment process in section 42 of the EP Act
 - the matters under regulation 56 of the EP Regulations
 - the matters relevant to a consideration of the method of environmental impact assessment in regulation 59 of the EP Regulations.
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