

Submission on the referral of Project Ares and its draft Terms of Reference

Individual submission to the Northern Territory Environment Protection Authority

To NT EPA — ntepa@nt.gov.au (cc das.ntg@nt.gov.au)

Re Project Ares (Energy North Pty Ltd), Murrarji Station - proponent-initiated EIS referral

From Justin Tutty, Darwin · [REDACTED]

Date 17th August 2026

I write as a Territorian with a long interest in the Territory's energy and water future, and a working background in cloud computing - the industry proposing this facility.

I do not contest that Project Ares requires assessment by Environmental Impact Statement, as the proponent concedes it. My concern is *scope*. The draft Terms of Reference (ToR) that the proponent has written for its own assessment are generic: they engage six of the NT EPA's fourteen environmental factors and name almost none of the site-specific matters that make this project consequential. Several of those matters the proponent's own documents already *concede*.

What the ToR leaves out, the EIS is not obliged to answer: whereas the proponent must comply with the ToR in preparing the EIS (reg 129(3)), the ToR's catch-all for additional impacts “identified through the environmental impact assessment process” (§2.8) depends on the proponent identifying impacts against itself, and the later information powers (regs 83, 143) are discretionary backstops. Scope is set here, and a recurring pattern below is that the referral *promises* work the ToR does not *require*; each such promise should be written into the ToR, where it binds. I therefore ask the NT EPA to approve the draft ToR only with the changes set out below, as reg 104(3)(b) provides - “with any changes the NT EPA considers appropriate” - and I supply draft wording. I confine my comments to matters the NT EPA can act on.

Two points frame what follows.

First, the NT Act defines an impact of an action to include not only a direct consequence but “an indirect consequence of the action” where “the action is a substantial cause” of it, and to include cumulative impacts (EP Act s10) - the reach several of the gaps below turn on.

Second, the ToR is drafted assuming an accredited, bilateral assessment (§1.4); that cannot mean the NT EPA adopts the Commonwealth's significance findings as its own. The significance determination is one s 55(2) assigns to the NT EPA itself, informed by the environmental objectives it must consider (reg 77). A footprint-only, desktop-only very low conclusion reached for Commonwealth purposes is not an NT assessment. As at the date of this submission the Commonwealth referral (EPBC 2026/10560) remains undecided and awaiting further information from the proponent, so there is at present no Commonwealth controlled-action or significance finding for the NT to rely on, and the referral's characterisation of the Matters of National Environmental Significance is not settled federally.

The ToR already requires committed language (will) and the maximum extent of uncertain parameters (§2.2.1); I ask that the proponent be held to that wherever it defers a matter to “FEED.”

Hydrology - Lake Woods, and a karst aquifer the proponent concedes it has not assessed

The hydrological-processes factor (§2.8.3) requires aquifer connectivity, springs, groundwater-dependent ecosystems and surface-water catchments (the water balance sits at §2.2.5, Table 2-1) but names nothing. On this site the receptors that matter are ones the proponent's own documents concede.

The Lake Woods pathway

Lake Woods is a Directory of Important Wetlands in Australia site and NT Site of Conservation Significance. The referral report concedes the eastern works drain “ultimately into Lake Woods, approximately 80 km downstream”, and its ecology report concedes that “most records of migratory shorebirds relevant to the study area are based in, and around, Lake Woods”. Yet the referral assesses impacts only at the footprint and Table 5-13 concludes:

Consequently, the inherent likelihood that the Project will have a significant impact on threatened shorebirds is very low.

The same ecology report records migratory and waterbird species within 50 km, including the Great Egret at 228 NT Atlas records, the Glossy Ibis at 123, and the Little Curlew (Attachment A, Table 3-5). These species are not included in the referral report's own migratory assessment (Table 5-13). Contamination or disruption of Lake Woods via that downstream surface-water pathway is a reasonably foreseeable indirect and cumulative impact under EP Act s10, and it is unassessed.

The karst, and what has not been analysed

The aquifer is, in the referral's own words, “karstic and cavernous”. The ecology report (§2.8) concedes “terrestrial and sub-terranean GDE's have not been analysed”, and set aside its *own* SREBA dataset's flags of potential groundwater-dependent vegetation (riparian woodland on ephemeral streams; Melaleuca in springs and channels) as “mapping inaccuracies” on aerial-imagery review alone. “Field verification of vegetation types” is deferred until “a project footprint is selected”.

The proponent's answer, that groundwater sits deep (greater than 80 m in the ecology report; 50 – 105 mbgl in the referral report) and vegetation cannot reach it, bears only on *surface* vegetation dependent on the deep aquifer. The SREBA flags concern surface-expressed water (ephemeral streams, springs, channels) which a deep regional water table does not preclude, and the depth point says nothing at all about stygofauna living in the aquifer water itself, at any depth, which is precisely what “have not been analysed” leaves open.

The scale, on the plan's own arithmetic

The Montejinni Limestone is the Wiso Basin's aquifer, so the borefield sits in the plan's Wiso water management zone. The plan's own tables set that zone's estimated sustainable yield at 23,846 ML/yr. The combined allocation for every consumptive use other than stock and domestic, public supply, the Aboriginal water reserve and petroleum – ie. agriculture, aquaculture, cultural, industry and mining together - is 13,178 ML/yr. The referral's 4 GL/yr upper bound is one-sixth of the zone's entire sustainable yield and roughly thirty per cent of that shared consumptive pool, for one project. And that's without counting Project Sol, planned for the same station and borefield. Headroom cannot be imported from neighbouring zones: under the plan a trade must be “within the same water management zone”.

Recommendations

Assess the downstream surface-water pathway to Lake Woods (named) on NT grounds. Include flow attenuation and transmission losses along the ephemeral pathway, so the connectivity question is answered rather than assumed either way. Expressly include the migratory and waterbird species whose records concentrate there but which are absent from the referral report's migratory assessment, Table 5-13 (notably the Glossy Ibis and the Great Egret). Disallow the EIS from relying on the referral-stage "very low" conclusion in place of that assessment.

Characterise the karstic Montejinni Limestone, assess subterranean habitat across the affected aquifer, and field-sample stygofauna within the modelled drawdown and contamination-pathway zones of the borefield wherever it is finally sited. Any absence or negligible-risk conclusion must be supported by that sampling. Field-check the SREBA flags dismissed as "mapping inaccuracies".

Assess contaminant transport from gas-generation fuels and chemicals into the transmissive aquifer, and the fate and disposal pathways of all operational discharges - cooling blowdown, treated effluent, contaminated stormwater - in the same setting.

Assess cumulative groundwater drawdown on the shared aquifer and against the Georgina Wiso Water Allocation Plan from all reasonably foreseeable co-extractors, as an environmental impact under EP Act s10 distinct from Water Act allocation. Cumulative drawdown is among the matters the referral's §6 promises "will be assessed formally in the EIS"; the change sought writes that promise into terms, where it binds (reg 129(3)).

On volume, the referral has adopted "a conservative upper bound of approximately 4 GL/yr", expressly "reflecting pre-FEED uncertainty in cooling configuration", and has lodged its draft GWEL application at 4.0 GL/yr for a 25-year term; the ToR should fix that stated bound as the maximum-case assessment envelope (§2.2.1) so that a later departure then falls to be tested against the significant-variation regime (EP Act ss 12, 51).

Apply the precautionary principle (EP Act s19) where connectivity and recharge remain uncertain. The threatened damage, contamination of a karst aquifer or loss of stygofaunal communities within it, is *serious and effectively irreversible* if realised, which is the threshold s 19(1) sets.

Ecology - an unsurveyed corridor, and a decoy lake

The corridor the baseline never surveyed

The attached ecological baseline is, by its own title, a *Desktop Ecological Assessment* that "did not include any field surveys", scoped to four candidate infrastructure blocks chosen for site selection. Within those blocks it identifies suitable habitat for three threatened species - the Greater Bilby (Vulnerable), the Northern Blue-tongued Skink (Critically Endangered) and the Yellow-spotted Monitor (Vulnerable, TPWC Act). The referral report's own preliminary assessment "identified nine threatened fauna species with a moderate to high likelihood of occurrence", eight of them EPBC-listed.

The additional six are tied, in the referral report's own words, to the access-road and gas-pipeline corridor: four wetland birds - Sharp-tailed Sandpiper, Curlew Sandpiper, Australian Painted Snipe and Common Greenshank - "where access road and pipeline corridor intersect black soil plains which may

provide temporary wetland habitat”; the Plains Death Adder where the same corridor intersects black-soil plains; and the Grey Falcon “where access road and pipeline corridor intersect Bucket Creek only”.

That corridor is not even fixed: the referral offers two route options. Option A is a ~40 km upgrading of the existing Murranji access road across “black soil plains and flood-prone terrain” to the Stuart Highway. Option B is ~60 km of new road to the Buchanan Highway. The preferred route is among the matters expressly left to be confirmed.

The referral's own avoidance mapping concedes that its higher bilby survey effort excludes the Option B track - so if Option B is advanced, the alignment lacks even the targeted effort the rest of the envelope received.

For each of the six additional listed species, the referral promises a field survey - “will confirm”, “will determine” - and concedes it is “yet to field-verify this information specifically within the Preliminary Disturbance Envelope”. The draft ToR requires none of it by name, and its general field-verification term defines no survey area reaching the corridor. The corridor is neither fixed nor field-surveyed for any of the six. The site as referred carries two Critically Endangered species - the Curlew Sandpiper on this corridor, and the Northern Blue-tongued Skink within the clearing blocks themselves. The change sought writes the referral's own survey commitments into terms.

Recommendations

Amend the terrestrial-ecosystems factor to define the survey study area to expressly include the full access-road and gas-pipeline corridor, sequenced to drive avoidance rather than record it.

While the route choice remains open, comprehensive habitat-suitability mapping of both options to inform route selection. Then, targeted field survey of the selected alignment - not desktop likelihood-of-occurrence.

The NT EPA's own *Guidance for assessment of impacts on terrestrial biodiversity* requires that field surveys “verify the findings from the desktop review.” This must be completed before the draft EIS's significance assessment for the corridor-tied species which the referral report itself has identified: Curlew Sandpiper (Critically Endangered), Australian Painted Snipe and Common Greenshank (Endangered), Sharp-tailed Sandpiper, Grey Falcon and Plains Death Adder (Vulnerable).

A species-by-species significant-impact assessment is required against the relevant Conservation Advices and Recovery Plans, and avoidance prioritised over offsets.

The Commonwealth's Recovery Plan for the Australian Painted Snipe (2022) states the survey logic in terms: “Areas that may be important habitat over time might not have birds in any given year. This pattern of habitat use means that recent survey data and historical records need to be considered.” A desktop null result cannot settle significance for such a species. Only designed field survey can.

The array as a decoy lake

The ToR already requires assessment of the solar “lake effect” - glint, glare, and panels “mistaken for a water body” (§2.8.2). What it does not do is point that requirement at this site's risk.

A 2024 report for the California Energy Commission (Diehl, Robertson and Kosciuch) demonstrated the mechanism: photovoltaic panels polarise reflected light in a way that mimics a natural water body, and birds use polarised light to locate water. It recorded flying birds descending on arid-zone solar facilities, and found water-associated bird carcasses at arid facilities whose

matched reference areas had none. The report found these results “consistent with a lake effect hypothesis”, and likely, on its evidence, most impactful where open water is scarce, as in its arid study region. It did not confirm the effect conclusively, and held it “premature to extend the lake effect hypothesis to other landscape types, or to refute it, until comparable studies are conducted there”.

That disclaimer cuts both ways by its own terms. It bars dismissal as firmly as extrapolation, and what it prescribes is exactly what this submission seeks, a comparable local assessment. This is the situation whose comparability the study says must be locally tested: an arid landscape, in which scarce open water concentrates the region's migratory-shorebird records (Lake Woods - 60 to 80 km away on the proponent's own accounts) with a polarised surface (of 3,000 MWp across approximately 6,000-7,000 ha) proposed in the same landscape, and the local risk unstudied.

A demonstrated mechanism and an unresolved local risk is the case for the precautionary principle, not for dismissal. The ecology report's conclusion that the study area “does not support important habitat for migratory species” does not answer it, because an ecological trap operates by making unimportant ground lethally attractive.

Recommendations

Require the §2.8.2 "lake effect" assessment to address the 3,000 MWp array specifically as a potential ecological trap for the migratory and waterbird populations the proponent's documents concede concentrate at Lake Woods: not as a generic glint-and-glare check.

This assessment should begin with whether the array footprint intersects the flight paths and local movement corridors of those populations, and must not treat the ecology report's desktop "does not support important habitat" finding as disposing of the question.

Apply the precautionary principle (EP Act s19) given the developing evidence base: recurring mortality of migratory species drawn from a nationally important wetland would be serious damage within s 19(1).

Whole-of-action: Project Sol and the gas pipeline

The referral treats co-located Project Sol and the off-site gas pipeline as separate. But under EP Act s10 an impact of Ares includes an indirect consequence Ares is a substantial cause of. Project Sol, to the extent it shares the Ares borefield, groundwater allocation and construction camp, and the gas pipeline, to the extent its capacity is built to serve Ares's ~1,038 MW generation, produce foreseeable impacts of which Ares is a substantial cause. These are impacts of *this* action, not separable third-party context.

The referral maintains Ares and Sol are “separate and independent projects”, while proposing both on the same station, from the same proponent, sharing borefield, groundwater allocation and camp. Two further points close the gap. First, s 10(1)(b) requires only that Ares be *a* substantial cause of the consequence, not the sole cause. Concurrent causation through shared, Ares-built works suffices. Second, the Regulations anticipate exactly this structure: a referral that “relates to part of a larger action proposed by the proponent” where whole-action information is required was a ground for declining to accept the referral (reg 47(c)). This is the Regulations' own recognition of proponent project-splitting.

The referral records that “Energy North is also developing Project Sol”. The referral having been accepted, the ToR is where that whole-action information is now secured: its terms “may include any terms the NT EPA considers appropriate” (reg 98(2)).

Recommendation. Amend §2.4 to require the EIS to assess, as indirect impacts of Project Ares under EP Act s 10(1)(b) - not merely as cumulative context capable of being screened out or deferred:

(a) Project Sol, to the extent it shares the Ares borefield, groundwater allocation and construction camp; and

(b) the gas-supply pipeline, to the extent its capacity is built to serve Ares's generation.

These are to be assessed on best-available information under each relevant factor and expressly not deferred, screened out, or reduced to "context" for want of third-party design detail. Cumulative assessment (reg 79(f); see s 10(2)) applies in addition to, not in substitution for, this own-impact assessment.

Factors the ToR leaves out

The NT EPA's guidance (*Environmental factors and objectives*, v4.0, 17 March 2025) identifies fourteen environmental factors. The draft ToR's information requirements (§2.8) address six.

The referral report did consider the others. Its Table 5-2 excludes them with justifications that are footprint-bound:

- Landforms because there are “no distinct natural landforms, escarpments, or sensitive geomorphic features within the Project Area”;
- Inland water environmental quality because there are “no mapped permanent waterways within the Project Area”;
- Aquatic ecosystems for the “absence of permanent water bodies or waterways within the Project Area”.

Each answers the surface of the footprint. None engages the karst beneath it (a distinctive physical landform); the groundwater whose quality the Inland water factor exists to protect; the stygofauna within it; or the wetland eighty kilometres downstream.

Air quality is screened on a different basis again: a buffer of “at least 5 km” from “any sensitive human receptor (namely the Murranji Station homestead)” - a human-receptor answer that never reaches ecological receptors - and on gas generation claimed as being “medium-term (i.e. not throughout the entire life of the Project)” - an uncommitted transition assumption addressed below.

The omissions are not incidental, they are where this project's impacts live.

Air quality - a factor distinct from Atmospheric processes, and omitted

Under the NT EPA framework, *Air quality* “Protect air quality and minimise emissions and their impact so that environmental values are maintained” is a separate factor from *Atmospheric processes*, which is greenhouse-only. The ToR carries only the latter (§2.8.4); its sole mention of air quality anywhere is

dust containment inside a management-plan bullet. So the criteria and air-toxic emissions of a gigawatt-class gas plant - NO_x, CO, fine particulates, products of combustion - have no stated home in the ToR; only the §2.8 catch-all, which depends on the proponent identifying the impact against itself.

The plant is no occasional backup: the referral concedes “Natural gas generation is a technical requirement of the Project”; that gas is “the most technically and commercially viable firm power option”; that it considered battery storage, diesel and hydrogen, “none of which were assessed as technically or commercially viable” within the Project's timeline and location; and that redundancy “cannot be achieved by renewable energy and storage alone at the scale and duration required”. It is a plant sized and required to run whenever solar and storage cannot carry the full load, whose maximum credible operating profile the EIS must state and assess rather than assume.

Recommendations

Amend the ToR to include the Air quality factor with its own information requirements.

Require assessment of the gas plant's criteria and air-toxic emissions via ground-level-concentration modelling against the Ambient Air Quality and Air Toxics NEPMs, and nitrogen-deposition screening against sourced ecological thresholds for karst-associated and threatened-species habitat (receptors a health-based licensing assessment does not reach) computed on the realistic maximum operating profile, not nameplate.

Under §2.8.4, require the life-of-project greenhouse inventory to include a maximum-case "no-transition" scenario in which gas firing is never displaced, consistent with the ToR's maximum-case and committed-language requirements. Emissions must be reported gross and location-based, and any offsets or certificates the proponent may later rely on disclosed separately rather than netted against them.

Inland water environmental quality, Aquatic ecosystems, Landforms

Three further omitted factors bear directly on matters raised in the Hydrology section: *Inland water environmental quality* is the factor under which contaminant transport into the karstic and cavernous aquifer belongs; *Aquatic ecosystems* is the factor under which Lake Woods and stygofauna within the aquifer belong; and the karst itself is a *Landforms* matter (“Conserve the variety and integrity of distinctive physical landforms”). Their absence from the ToR is how a footprint-scoped assessment stays footprint-scoped.

Recommendation. Include the Inland water environmental quality, Aquatic ecosystems and Landforms factors in the ToR.

Assign each of the Hydrology matters above (contamination pathway; Lake Woods; stygofauna; karst characterisation) to its proper factor once, with the amended §2.8.3 cross-referring to those requirements rather than restating them, so each has a single operative home.

The project's own waste heat

Climate is addressed in the ToR only one-directionally - the Project's resilience to a changing climate (§2.7) - and the Atmospheric factor is greenhouse-only. The Project's own thermal footprint - data-centre waste-heat rejection plus ~1,038 MW of gas generation, and the altered surface-

thermal and albedo regime of the ~3,000 MWp array - is captured by no factor at all. As heat rejected by the Project's own plant it is a direct consequence within EP Act s 10(1)(a).

Recommendation. Amend §2.8.2 to require the EIS to characterise and assess, at maximum case, the Project's own waste-heat and surface-thermal footprint as an impact under EP Act s10 on heat-sensitive fauna and habitat.

The assessed project may not be the built project

Project Ares is presented, and will be assessed, as a solar-and-battery system with gas support, “designed to transition to renewable-powered operations”. The phased structure puts that framing at risk, and the proponent concedes it in its own words.

The ToR states the commitment conditionally: the transition is to occur “as rapidly as equipment procurement timelines, long-duration battery storage economics, and Tier III firm power requirements permit”. Its “specific milestones and targets will be confirmed during FEED and documented and implemented through the environmental management framework developed as part of the EIS process” (§1.2) - a framework that documents whatever FEED produces, committing nothing in advance.

The referral report goes further: the “energy configuration at Phase 1 COD will be confirmed during FEED and may vary depending on procurement conditions”. Nothing commits the solar and battery build-out to the ratio that makes the project a "transition." Because solar and storage matter to the emissions and air-quality case chiefly through how hard the gas runs, the facility could be approved on a renewable-primary design and built and operated gas-heavy - with emissions, air quality and the firming load all worse than assessed. Under-building the solar is the consequential case: the solar is the renewable energy; the battery only time-shifts it. This is the divergence the ToR's own requirements of committed language (will, not may) and maximum-case assessment (§2.2.1) exist to prevent.

The same pattern extends to fuel. The referral assessed three hydrogen configurations and found none viable within the Project's timeline, yet offers a plant “designed to be hydrogen-ready... as hydrogen supply infrastructure and technology matures.” This future conversion is relied on for comfort but committed to nowhere. If hydrogen conversion contributes anything to the assessed greenhouse trajectory, the ToR's committed-language rule requires it stated as a scheduled parameter. If not, the trajectory must be assessed without it, which is the maximum-case 'no-transition' scenario already sought.

Further, the same logic governs the phasing, which the referral report states inconsistently within its own pages.

In one place Phase 1 “delivers 500 megawatts (MW) of firm power alongside the full 1 GW IT campus”. In another, “Phase 1 delivers 500 MW of firm generation capacity to support the first 500 MW IT load”. There, a table records “Phase 1: 500 MW IT capacity across 45 ha”. Elsewhere the data centre campus is “designed as a single integrated build delivering the full 1 GW IT capacity”.

A single-build campus with phased commissioning may reconcile some of these statements - but the decisive parameter, the IT load the Phase 1 gas plant actually serves, is stated both ways, and it sets

the plant's operating profile in the years before any renewable build-out completes. The ToR's committed-language rule (§2.2.1) requires it stated once, in one form.

Recommendations

Require the EIS to assess the worst-case energy configuration for emissions and air quality. The statement should assess minimum solar and storage relative to the gas plant, not only the marketed renewable-primary design. The footprint maximum should be separately assessed at the 19,150 ha envelope.

The statement should describe the solar, battery and transition build-out relied on to reduce assessed impacts as scheduled, ratio-defined commitments in committed language (§2.2.1), in a form capable of adoption as conditions at the approval stage rather than left as FEED aspirations.

Require the EIS to state the operational gas share and run-hours corresponding to that assessed renewable build, so any exceedance is identifiable against the assessed envelope.

Resolve the phasing and assess the full build at the 19,150-hectare maximum.

The referral promises the 19,150 ha footprint "will be refined and reduced through design iterations". Require the EIS to state the actual clearing quantum, by vegetation type and conservation value, against the 19,150 ha assessed maximum; to demonstrate avoidance in the siting and extent of the array within the candidate blocks (habitat the baseline itself found suitable for the Critically Endangered Northern Blue-tongued Skink); and to express any reduction as a commitment rather than an expectation.

Adaptive management is not the answer to any of this: the NT EPA's *Guidance on Adaptive Management* states adaptive management "will not be considered by the NT EPA" where, among other limitations, "there is insufficient baseline data about environmental conditions" - the condition the FEED deferrals create.

The thirty-year rehabilitation liability

Project Ares leaves a thirty-year end-of-life liability stated in the proponent's own figures:

- a disturbance envelope of 19,150 ha - the draft Statement of Reasons puts it as "removal of up to 19,150 ha of vegetation across the site";
- solar of 3,000 MWp across approximately 6,000-7,000 ha;
- battery storage of 16 GWh across approximately 80 ha; and
- a gas power station of 1,038 MW at full build-out - its footprint to be confirmed

For scale: the disturbance envelope is roughly 190 square kilometres, larger than the City of Darwin and the City of Palmerston combined. The solar array alone, at 60 to 70 square kilometres, exceeds the whole of Palmerston.

All of this is to be removed and the land rehabilitated in an overall Project life exceeding 30 years. The ToR requires a rehabilitation and closure section (§2.3) but nowhere requires the EIS to cost that liability.

Recommendations:

Amend §2.3 to require the EIS to independently quantify the full closure and rehabilitation liability at maximum disturbance and at each construction-staging increment (applying the ToR's maximum-case treatment of uncertain parameters). This is an information requirement within the economic assessment the Regulations already contemplate (reg 79(e)), with independent review available on direction (reg 87).

Require assessment of the residual environmental risk of a foreseeable partial build that halts and leaves the disturbance existing at that point - up to the 19,150-hectare envelope - unfunded or incompletely rehabilitated across the liability period.

The EIA process must ensure acceptability “now or in the future” and that “restoration or rehabilitation is identified and provided for” (EP Act s 42(a), (e)), with the persisting disturbance an impact occurring over time within s 10(2).

The costed liability is to inform, without pre-empting, any condition imposing financial requirements - an environment protection bond - set at environmental approval (EP Act s 86), an engagement the proponent has already accepted, acknowledging “the NT EPA may require a financial assurance as a condition of approval”.

Further considerations

Battery fire as an environmental pathway

Section 2.8.1 already requires end-of-life panel and battery management and hazard/spill control.

Recommendations:

Require, under §2.8.1, that a BESS thermal-runaway and fire scenario be assessed specifically for its environmental pathways - firewater runoff and toxic combustion products reaching soil, groundwater and habitat - rather than deferred wholesale to the dangerous-goods regime.

Require the EIS also to state whether any PFAS-containing fire-suppression agents or heat-transfer and cooling fluids are proposed anywhere in the Project (the referral documents are silent on PFAS and the cooling configuration is deferred to FEED). If so, require consistency with the NT EPA's position statement applying the PFAS NEMP 3.0, in which “the precautionary principle guides the regulation of these so-called forever chemicals”, with the karstic aquifer as the receptor of concern.

Noise, light and fire

Three impact classes have no stated requirement anywhere in the draft ToR. Two of them the referral itself concedes.

On noise, the ToR is silent - the word does not appear. The referral concedes potential impacts to "habitat surrounding the Preliminary Disturbance Envelope from dust, noise, sedimentation and weed spread" and "degradation of retained vegetation through noise, dust and pests". This is a 1,038 MW gas plant and continuous data-hall cooling, running all night in otherwise silent country. The homestead is considered; ecological receptors are not.

Those receptors are not hypothetical. The referral confirms Greater Bilby presence "in the southern part of the Project Area to the west of the rail corridor" - a nocturnal, burrowing, Vulnerable-listed animal, and exactly the kind of receptor that continuous noise, vibration and night lighting reach beyond any fence line.

On fire, the ToR's entire content is a parenthetical - "ongoing maintenance (e.g. fire and vegetation management)". The referral concedes, twice, "Changes in bushfire risk (fire frequency and intensity) due to vegetation clearing for Project infrastructure". An altered fire regime around a 190 square kilometre excluded zone, in savanna fire country, is a first-order ecological driver, not a maintenance line.

On artificial light, both documents are silent. A campus of this scale operates lit, all night, in a dark landscape. The Commonwealth's National Light Pollution Guidelines for Wildlife (2023) address exactly this, and extend to migratory shorebirds.

Recommendations:

Require assessment of construction and operational noise and vibration against ecological receptors as well as the homestead, on the realistic maximum operating profile

Require assessment of fire-regime change and ignition risk across and around the Project area, and a landscape-scale fire management approach.

Require the "lake effect" assessment to address operational lighting as an attraction co-factor alongside polarised reflection, consistent with the National Light Pollution Guidelines for Wildlife - including any open water storages or evaporation ponds the cooling configuration may require, which would be actual water bodies beside simulated ones.

Community and economy, and culture

I raise the cultural matter as process only - the adequacy of the process, not the values, which are for Traditional Owners to speak to.

Recommendations:

Require the economic and social assessment to test net (not gross) local benefit and cumulative social load; and a Traditional-Owner-led cultural assessment, conducted with their representative bodies, adequately resourced and not truncated by the assessment timeline the NT EPA sets (reg 99(3)).

Require the EIS to report the status of the AAPA Authority Certificate application, a commitment recorded in the Statement of Reasons, across all phases (§2.8.6). Design should not be treated as settled ahead of it.

Over-arching recommendation

Throughout, hold the EIS to the ToR's own requirements of committed language and maximum-case assessment where uncertainty remains. Where its threshold is established, hold the EIS to the precautionary principle (EP Act s19).

Sources

Proponent's referral documents (Energy North Pty Ltd / EcOz, June 2026), as exhibited by the NT EPA: Draft Terms of Reference; Draft Statement of Reasons; Referral Report (incl. §5.2 threatened-species conclusion, §6 cumulative impacts, Table 5-13 Preliminary assessment – Migratory birds); Referral Form; Attachment A - Terrestrial Ecology Report ("Desktop Ecological Assessment", Murrarji Station), incl. Table 3-2 (threatened-species likelihood of occurrence), Table 3-5 (migratory species recorded within 50 km of the study area and PMST report), §2.8 (groundwater-dependent ecosystems), and Appendix B (Protected Matters Search Tool). The Commonwealth referral of the same action is EPBC 2026/10560 (Business Portal Application 03507). Section references to the draft ToR follow its body numbering; note the ToR's table of contents diverges from its body from §2.4 (the contents page numbers the environmental factors §2.7.x, the body §2.8.x).

Legislation. *Environment Protection Act 2019* (NT) - s6 (environment), s 10(1)(b) and s 10(2) (meaning of impact; cumulative), s11 (significant impact), s19 (precautionary principle), s 42 (purpose of the EIA process), s 43 (general duty of proponents), ss48–57 (environmental impact assessment, incl. s 51 significant variations and s 55(2)), s 86 (financial-requirement conditions); *Environment Protection Regulations 2020* (NT) - reg 43 (proponent initiated EIS referral), regs 51(2)(d) and 52 (publication and public comment), reg 56(c) (submissions must be considered), reg 104(3)(b) (approval of draft ToR with any changes the NT EPA considers appropriate), reg 129(3) (proponent must comply with the terms of reference), reg 79(f) (cumulative assessment), reg 47(c), regs 83 and 143. (EP Act ss 5, 6, 10 and 11 confirmed verbatim against the consolidation as in force 5 June 2026; other provisions confirmed against the same consolidations 8 August 2026.) Significant Impact Guidelines 1.1 cited only where the ToR itself invokes them.

Receptors and instruments. Lake Woods - Directory of Important Wetlands in Australia; NT Site of Conservation Significance. Georgina Wiso Water Allocation Plan 2023–2031 (NT) - Table 1 (estimated sustainable yield: Wiso zone 23,846 ML/yr), Table 2 (allocation to beneficial uses: other consumptive uses, Wiso, 13,178 ML/yr; petroleum 2,000 ML/yr), §4.3 (trading within the same water management zone) - and its Background Report (Montejinni Limestone as the Wiso Basin's Cambrian Limestone Aquifer unit). NT EPA, *Environmental factors and objectives*, General technical guidance, v4.0, approved 17 March 2025 (fourteen factors; Air quality objectives quoted verbatim); NT EPA, *Guidance for assessment of impacts on terrestrial biodiversity*; NT EPA, *Guidance on Adaptive Management* (December 2018, v1.0); NT EPA, Position Statement - *Application of the PFAS National Environmental Management Plan (NEMP 3.0) in the Northern Territory*; NT EPA, *Preparing an environmental impact statement*; DCCEE, *National Light Pollution Guidelines for Wildlife* (2023).

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