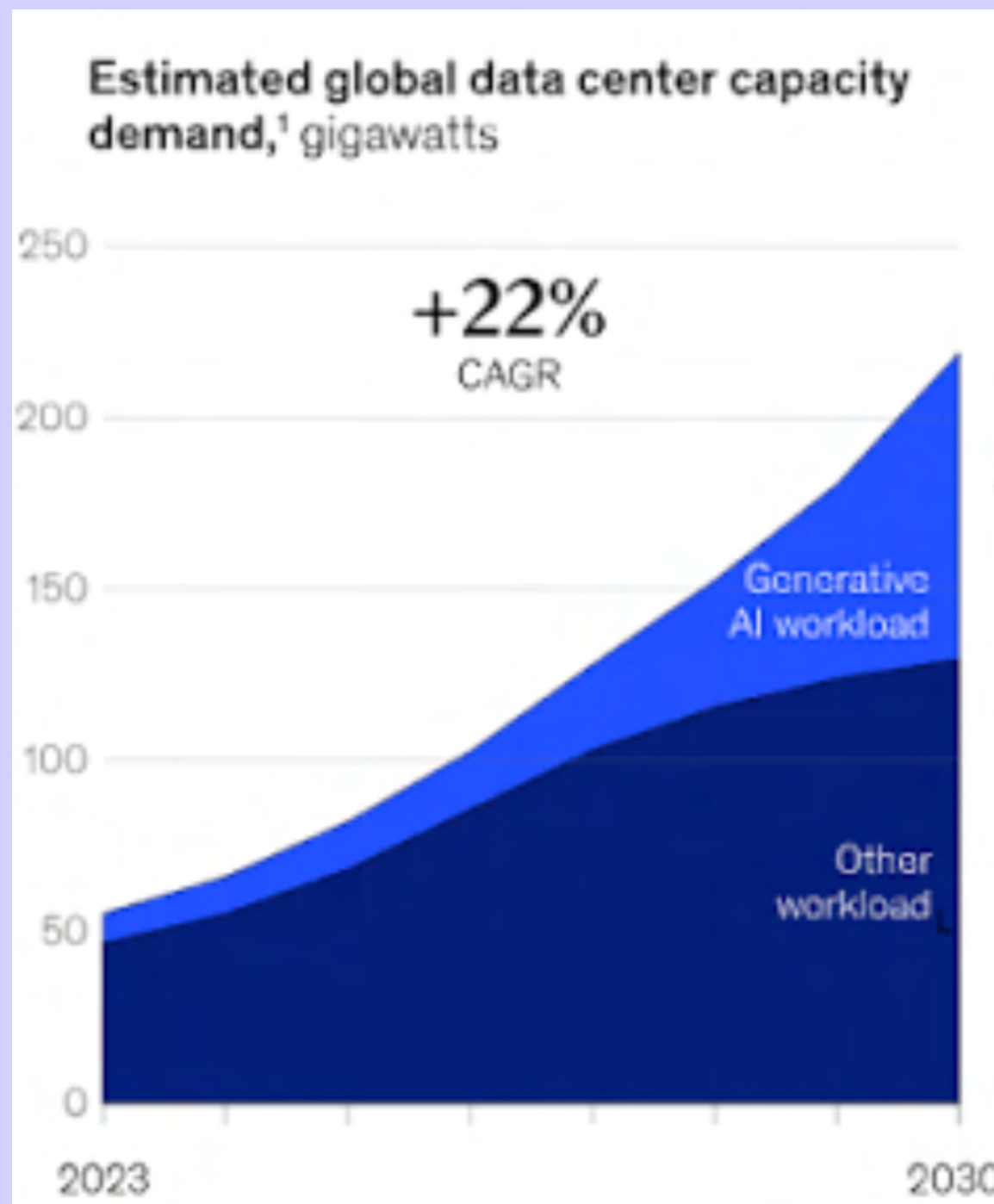


Aldata centres

what the hyper-scale data centre push means for the NT

AI & the Hyper scale data centre rush



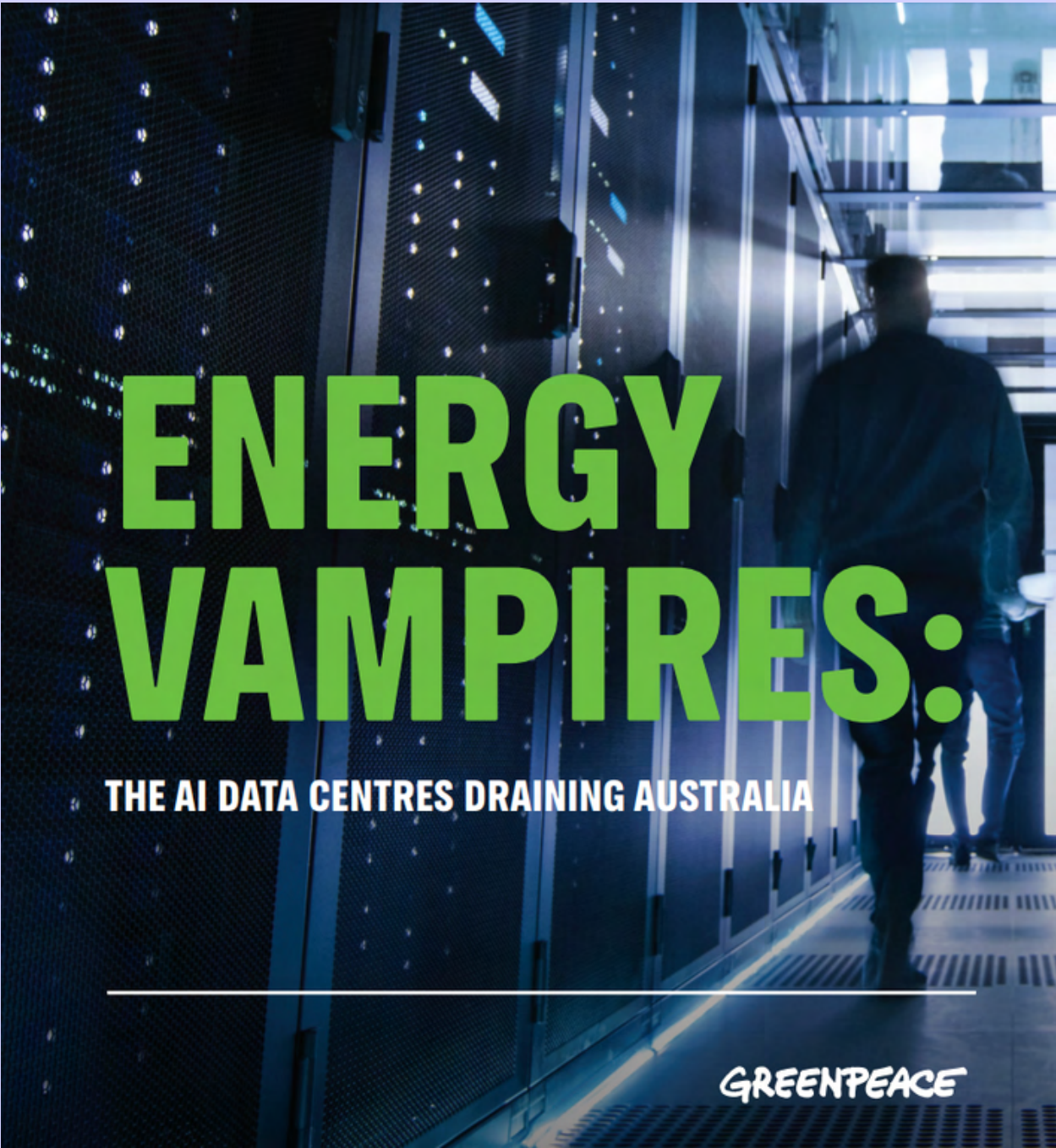
data centres are suddenly on everyone's radar, with hyperscale data centre construction connected to growth and widespread adoption of AI.

what's a hyperscaler?

“The current buildout consists mostly of hyperscale data centers, also known as hyperscalers. The name refers to their immense power capacity and size, often consuming over 100 megawatts of power capacity... Data centers being developed for AI can use as much electricity as 900,000 households (approximately 1 gigawatt) and consume the same amount of water as a city of 50,000 people.”

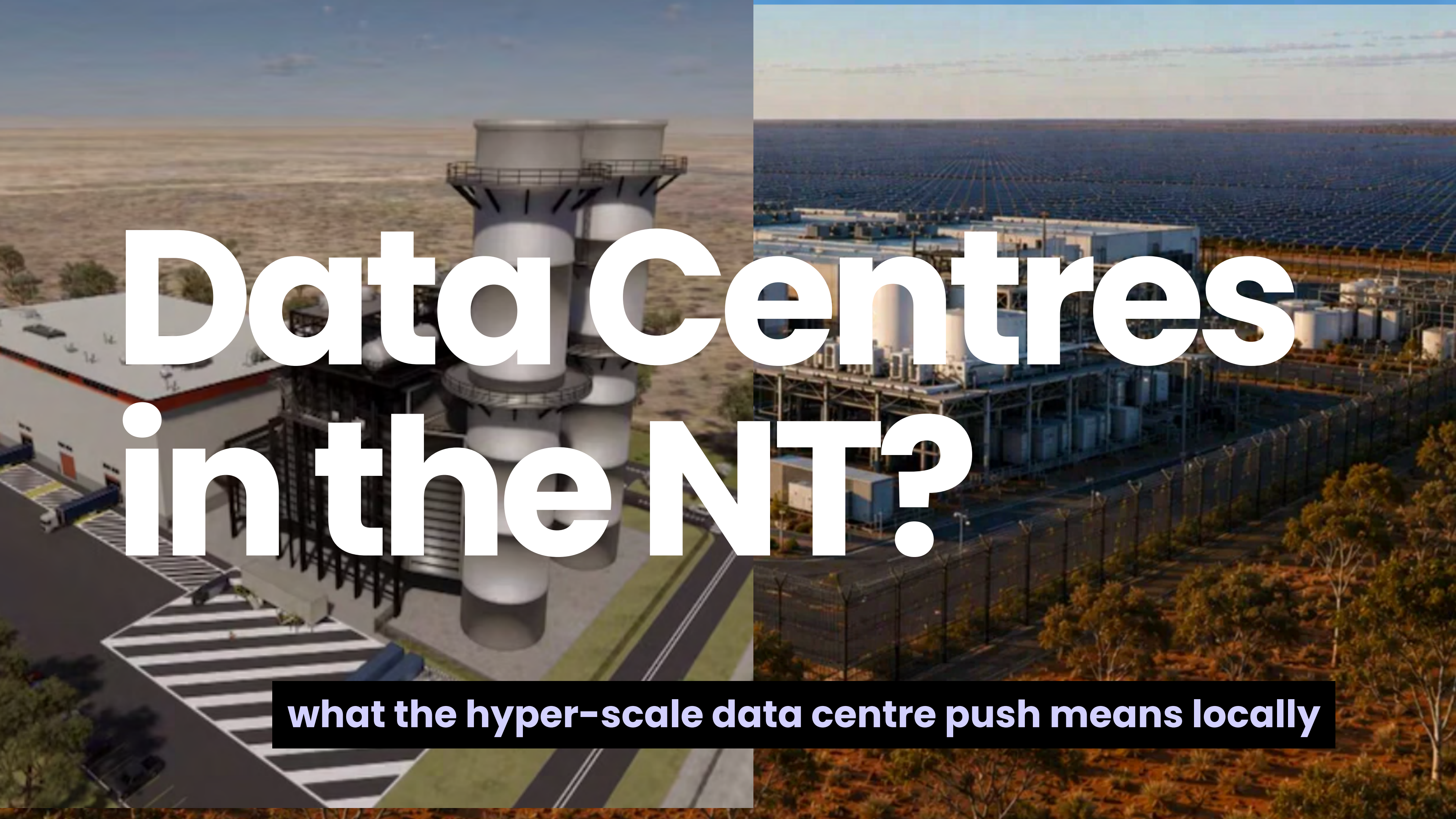
boom in data centre construction worldwide, big impacts

Hyperscale data centers deplete scarce natural resources, pollute local communities and increase the use of fossil fuels, raise energy costs for everyday ratepayers, pull tax dollars away from community needs, and fail to deliver on overpromised economic developments.



Green energy transition at risk from unrestricted data centre development





Data Centres in the NT?

what the hyper-scale data centre push means locally

NT: Data Centre Capital of the globe??

- NT government pushing to attract data centres
say they have had 12 responses to their EOI process
- Suncable have also been in advanced talks with data centre companies, pivoting to data centre first focus for it's massive solar projects at Muckatty and Powell Creek
- 2 public proposals so far + 10 EOIs not yet public

Project Ares – Energy North

Murranji Station – Jingili/Mudburra Country



THE COMPUTE

1 gigawatt (1,000 MW) of IT capacity at full build: a hyperscale AI data centre campus.

THE POWER

~3,000 MWp of solar, 16 GWh of batteries, and a ~1,038 MW gas-fired power station. Off-grid.

THE WATER

Up to ~4 GL a year pumped from the Cambrian Limestone Aquifer via a new borefield.

THE LAND

A ~186,000 ha project area, with up to ~19,150 ha of ground disturbance.

THE BUILD

Delivered in phases (Phase 1 ~500 MW), with ~\$11.9 billion cited for Phase 1 alone.

THE EXTRAS

A workforce village, a 2,000 m airstrip, a rail siding, a gas pipeline, and internal roads.

Energy North have self referred for EPBC (federal) and EIS (NT) approvals, and been given commonwealth major project status.

Project Ares – Energy North

Murranji Station – Jingili/Mudburra Country



Animals and habitat:

- 12 Nationally listed threatened species
- massive land clearing
- heat increase of 2 degrees for up to 10km radius
- lake effect of solar on water birds
- cumulative pressure on Jingili/Mudburra Country



NORTHERN  TERRITORY



Greater Bilby - a Vulnerable species recorded on Murranji Station, in the sandplain country the project would clear.

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Great Egret - Lake Woods, downstream, is the only known inland breeding site in the NT for this species.

© Mike Baird, CC BY 2.0



Grey Falcon - one of Australia's rarest raptors; the project's eastern corridor crosses its habitat along Bucket Creek.

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Project Ares – Energy North

Murranji Station – Jingili/Mudburra Country



- 4 gigaliters per year from the Montejinni Limestone southern part of the Cambrian Limestone Aquifer
- Aquifer under increasing pressure from fracking, irrigation and climate change



Project Ares – Energy North

Murranji Station – Jingili/Mudburra Country



The scale is hard to picture. So compare it.

A grid-connected data centre in a city hides its scale inside infrastructure that already exists. Ares has to build all of it – power station, gas, solar panels, batteries, borefield, pipeline – from scratch, in an empty landscape. So every part of it is enormous on its own.

>2×

the entire Top End grid

Ares needs ~1,000 MW. The whole Darwin–Katherine system that powers ~165,000 people has ~476 MW of generation and peaks around ~290 MW.

~3×

Channel Island Power Station

Its ~1,038 MW gas plant alone is roughly three times the Territory's main power station (~310 MW).

~1,600

Olympic pools of water / year

Up to ~4 GL a year from the aquifer. That's about four to five Olympic pools' worth every day.

≈ Gove

worth of gas, potentially

At the run-hours its plant sizing implies, the gas station could burn ~30–40 PJ of gas a year: comparable to the whole Gove alumina refinery.

Project Ares – Energy North

Murranji Station – Jingili/Mudburra Country



Table 1: Project Ares 1,038 MW gas generator: Gas consumption and emissions under different scenarios

Run time	Approximate gas use (PJ) ²	Scope 1 emissions (tCO ₂ -e)
100% of year	80	4,114,151
25% of year	20	1,028,538
5% of year	4	205,708
3% of year	2	123,425

***safe guard threshold hit at 3% use, can assume significantly more**

Beetaloo Energy “Beetaloo Digital” Weddel – Larrakia and Kungarakana Country



Alex Underwood signs a deal with Gerard Maley and Joshua Burgoyne. (ABC News: Olivana Lathouris)

- NT gov has granted “Beetaloo Digital” – an offshoot of Beetaloo Energy, an exclusive 12-month “not to deal” commitment for land at Weddel
- 2GW proposal would use six times Top End's annual electricity consumption, & be primarily fracked gas fired
- Very early stages, no approvals, no info public.

Beetaloo Energy “Beetaloo Digital” Weddel – Larrakia and Kungarakana Country



Bowen says gas-only NT data centres will not meet new rules, warns of federal action



Feds: “while gas has a “role to play in firming up datacentre power use, “if a datacentre is proposed to only use gas, it will not meet the national minimum standards and it will not be allowed to register and will not be able to proceed”.

Data Centres the new Middle Arm – market creation for fracked gas



Business Minister Robyn Cahill said Beetaloo Basin gas could drive data centre development across the Territory.

“What we really need to do is bring in the customer base to realise the full potential of the Beetaloo,”

Why current rules for data centres are inadequate:

“

The frenzied rollout of AI data centres in Australia is rushing through massive new projects, which will derail Australia's energy transition unless the government urgently intervenes.” - Ketan Joshi

if the National Standards for AI follow what Bowen is saying – Project Ares would likely go ahead despite massive impacts on climate, water & biodiversity. Massive new extractive industry like AI and its data centre infrastructure needs a cost benefit analysis at local national and global scale

Senate Inquiry into AI & Data Centres

- chance to raise awareness of concerns and issues as federal government drafts their legislated National AI standards
- previous inquiry hearings have been good opportunities to raise awareness & expose contradictions – Middle Arm example
- demonstrate that NT gov position is not representative of population
- **Submissions due 1st September (next Tuesday)**

Inquiry – suggested recommendations:

- The Committee must hold public hearings in the NT
- An immediate moratorium on data centre construction above 50MW until the government has enacted regulations that provide firm social and environmental safeguards.
- The right to free, prior and informed consent for Traditional Owners must be established as a central pillar of Australian data centre regulations.
- Fracked gas cannot be used to power data centres in any way
- No public funding for data centres or enabling infrastructure.

Inquiry – suggested recommendations cont:

- Rollout of the data centre industry in the Northern Territory must be informed by a strategic regional assessment to understand the cumulative risks for nationally significant animals, plants, habitats and places.
- Ensure new data centre builds have best practice water efficiency and do not harm precious water resources.
- Data centre proponents must be obligated to prepare comprehensive modelling before environmental assessments are open for public comment to allow for a clear understanding of water requirements, energy use and source, sound & heat impacts along with a comprehensive flora and fauna study.