

Julie Tumblety

RE: Public Comment Opposing Approval or Requesting Full Evidentiary Review — Yucca Growth Infrastructure, LLC (YGI) Microgrid Air Quality Construction Permit Application 10883

To the New Mexico Environment Department:

I submit these comments in strong opposition to approving the air quality permit for the Yucca Growth Infrastructure (YGI) microgrid serving the Project Jupiter AI data center in Doña Ana County unless substantial additional analysis, disclosure, and enforceable safeguards are required. Project Jupiter was initially presented as a massive AI data center powered by gas turbines and diesel generators. The developer now proposes a "new" energy model centered on Bloom Energy fuel cells and describes this as a cleaner, lower-emissions alternative. While the technology has changed, the fundamental environmental concerns remain unresolved.

First, the proposed fuel-cell system should not be treated as inherently clean simply because it reduces combustion-related NOx emissions. Bloom fuel cells still rely primarily on natural gas, meaning the project remains dependent on fossil fuel extraction, processing, and pipeline delivery. This shifts pollution upstream rather than eliminating it. Methane leakage throughout the natural gas supply chain must be accounted for. Because methane is a potent greenhouse gas, even relatively small leakage rates can erase much of the claimed climate advantage of gas-based fuel cells.

The permit review must therefore evaluate full lifecycle emissions, not just onsite stack emissions. A narrow focus on local NOx reductions risks obscuring the project's total climate impact.

Second, the applicant's claims regarding "closed-loop" cooling and minimal water use require much closer scrutiny.

Project Jupiter states that the data center will use a closed-loop, non-evaporative cooling system requiring only a one-time fill of non-potable water, with rare top-offs. This framing is misleading because "closed-loop" does not mean "water-free."

Any industrial cooling system operating in southern New Mexico's extreme heat will experience: thermal inefficiencies, fluid degradation, maintenance losses, leaks, and replacement requirements over time.

The public deserves transparent, enforceable estimates for:

Initial fill volume

Annual makeup water requirements

Water losses during maintenance and equipment replacement

Water needs associated with the fuel-cell microgrid itself

Worst-case water demand during heat waves or prolonged peak AI workloads

The region is already experiencing long-term aridification, drought, and increasing water stress.

Even non-potable water has ecological and economic value in the desert Southwest. Using "non-potable" as reassurance avoids the more important question: Where exactly will this water come from, and what competing uses may be displaced?

Third, this permit appears to evaluate the microgrid in isolation rather than considering cumulative impacts.

Project Jupiter is not a typical industrial facility. It is among the largest AI infrastructure developments proposed in New Mexico and part of a broader wave of hyperscale AI buildout across the Southwest. These facilities create extraordinary energy demand, often requiring dedicated power generation that effectively functions as a private utility for a single corporate use. This raises a critical policy question: should New Mexico authorize large fossil-fuel-dependent power systems primarily to support speculative AI expansion while the state simultaneously faces

climate instability, drought, and resource scarcity?

The issue is not merely whether this project meets minimum technical permit requirements. It is whether the state is enabling an infrastructure model built on perpetual growth despite finite ecological limits.

Project Jupiter exemplifies a broader pattern in which technological expansion is framed as progress while externalizing environmental costs onto land, water, air, and future generations. The burden falls disproportionately on rural and environmentally stressed communities.

Before any permit approval, NMED should require:

A full lifecycle greenhouse gas analysis including upstream methane leakage

Independent verification of all water-use claims, including long-term makeup water requirements

Disclosure of cumulative regional air and climate impacts

Binding reporting requirements for actual energy and water consumption

Independent third-party review of emissions and cooling assumptions

Consideration of environmental justice impacts on surrounding communities

At minimum, the public deserves transparency that matches the scale of this project.

Replacing turbines with fuel cells does not resolve the central concern: this remains an enormous AI facility requiring extraordinary energy and resource inputs in one of the most water-constrained regions of the country.

New Mexico should not accept optimistic corporate modeling as a substitute for rigorous environmental review.

I urge NMED to deny the permit as currently proposed or require a far more comprehensive review before proceeding.

Sincerely,

J. Tumblety