

Meredith Lugo-Casasus

I urge the NMED to deny Air Quality Construction Permit Application 10883 for the Yucca Growth Infrastructure (YGI) Microgrid in southern Doña Ana County. Granting a permit to emit over 10 million metric tons of CO₂ annually violates NMED's mission to protect public health and prevent air quality deterioration, disproportionately harming BIPOC and low-income communities.

The application relies on an unproven, unregulatable, and inadequately tested design:

- * Unprecedented, Unproven Scale: YGI proposes using 2,275 Bloom Energy Solid Oxide Fuel Cells (SOFC). Though several projects have been announced with much fanfare, the largest operating Bloom installation is a 40 MW facility - 60 times smaller than what is proposed here. Scaling this technology to a mega-utility application remains entirely unproven.

- * Suspect Estimates & Inadequate Testing: The emissions data provided is based on testing of a single, 65 kW unit four times for four hours. Extrapolating data from a unit 37,876 times smaller than the proposed plant capacity - and adjusting it with an arbitrary 15% safety margin - fails to provide credible empirical evidence. The emissions data provided by the company cannot be trusted.

- * Enforcement Impossibility: The design routes 2,275 individual cells through separate stacks with no add-on pollution control mechanisms or integrated continuous monitoring for particulate matter, VOCs, or shifting CO₂ intensity. NMED cannot practically enforce compliance under 20.2.72.210 NMAC across thousands of individual, degrading units.

- * Severe Public Health & Environmental Impacts: The microgrid will emit 161.2 tons/year of CO and 124 tons/year of VOCs near existing EPA non-attainment zones. It will generate a thermal plume and a "heat island" effect, raising downwind temperatures by up to 3.6°F in a sweltering desert climate, threatening vulnerable populations.

Furthermore, concentrating 10M metric tons of climate-warming CO₂ into 275 acres - exceeding the combined emissions of Albuquerque, Santa Fe, and Las Cruces - creates localized health risks. Emerging 2025–2026 research links elevated CO₂ levels to permanent changes in human blood chemistry, oxidative stress, and cognitive decline. Because CO₂ sensitivity exists on a normal spectrum, even minor baseline increases can induce anxiety and panic attacks in sensitive individuals.

Viable alternatives exist. The June 2025 Lazard Levelized Cost of Energy Report confirms that renewables are the lowest-cost resources to deploy and tech leaders are already powering massive data centers using firm solar-wind-battery configurations.

YGI must not be allowed to greenwash a fossil-fueled plant that erases New Mexico's climate progress. NMED must reject this permit, or at the very least schedule a formal public hearing to investigate these severe community impacts.