

July 2, 2026

New Mexico Environment Department
Air Quality Bureau
525 Camino de los Márquez, Suite 1
Santa Fe, New Mexico 87505

Re: Comment in Support of Air Quality Permit Application No. 10883 — Yucca Growth Infrastructure, LLC (“YGI Microgrid”); Public-Health Benefits of Fuel-Cell Technology in the Paso del Norte Border Airshed

Agency Interest No. 41351 · PRN20260001 · Doña Ana County, New Mexico

Air Quality Bureau,

Dr. Christopher Ollson, of Ollson Environmental Health Management (OEHM) was retained by Yucca Growth Infrastructure, LLC to review the Air Quality Permit Application No. 10883 (“Application”), for the YGI Microgrid (“Project”). Dr. Ollson holds a doctoral in Environmental Health Sciences and specializes in facility emissions of air pollutants and their potential to impact public health. He has been working across North America for more than 25 years on similar projects. In addition to his consulting practice he teaches a graduate course in Environmental Health and Risk Assessment at the Dalla Lana School of Public Health at the University of Toronto.

OEHM submits this comment letter in support of the above-referenced application and asks that the Department record our written interest pursuant to 20.2.72.206 NMAC. This project sits in the Paso del Norte border airshed — a region that already carries one of the heaviest air-pollution burdens in the country. OEHM has reviewed the Application to determine the potential air quality impacts on the health of local residents and the airshed.

Each data center must determine their appropriate source of electrical generation. Often this is through the use of natural gas turbines and back-up diesel generators that may have significant emissions of Criteria Air Pollutants (CAPs) that are governed by the U.S. Environmental Protection Agency (US EPA) National Ambient Air Quality Standards (NAAQS), including for carbon monoxide (CO), nitrogen dioxide (NO₂), ground-level ozone (O₃), fine particulate matter (PM_{2.5}, PM₁₀) and sulfur dioxide (SO₂), which could lead to an increase health burden in a community.

It is OEHM’s understanding that the Project is proposing to use an alternative power generation — Bloom Energy’s Energy Server fuel cells. This replaces the need for natural gas turbines and diesel generator back-ups to produce power for the Project. A review of the Application and the supporting information, including the validation of the fuel cell technologies air emissions, reveals that this technology results in significantly reduced emissions of the CAPs versus that of the traditional natural gas turbines. OEHM believes that the use of fuel cell technology is a responsible choice for the Project that would ensure the protection of public health given that they avoid almost entirely the combustion of the CAPs that could result in respiratory and cardiovascular impacts in the community.

I. The border airshed already carries a heavy public-health burden.

OEHM understands that the Project is proposed to be located in Southern Doña Ana County that lies within the Paso del Norte air basin, which spans El Paso, Sunland Park, and Ciudad Juárez. It is a pollution-burdened urban airshed, shaped by cross-border emissions, heavy traffic idling at international crossings, windblown dust, and industry on both sides of the river. Sunland Park and

El Paso County have historically failed to meet the national health-based NAAQs standards for ozone and particulate matter, and Doña Ana County still contains a PM₁₀ nonattainment area. The communities nearest this airshed are also, in significant part, lower-income and predominantly Hispanic — the kind of community that has too often borne a disproportionate share of the region's pollution.^{1 2}

II. The pollutants that burden this airshed are precisely the ones avoided by fuel cell technology.

The air pollutants of greatest concern for health here — NO₂, PM_{2.5}, ground-level O₃, and SO₂ — are the classic products of combustion. The U.S. Environmental Protection Agency (US EPA) links excessive exposure to these pollutants to premature death, heart attacks and strokes, asthma attacks, and aggravated lung disease, with children, older adults, pregnant women, and people with existing heart or lung conditions most at risk. This is why the US EPA developed the NAAQs standards to protect public health. The relationship runs both ways: exposure to lower concentrations of contaminants can result in improved health outcomes — studies of children have associated exposure to lower particulate-matter and nitrogen-dioxide levels with measurably better lung-function development.³⁴ The solid-oxide fuel cell proposed for the Project generates electricity electrochemically, without burning fuel. Because there is no flame and no combustion zone, the formation of these pollutants is largely avoided at the source. This is shown in Table 1.

Table 1. Advantages of the use of Fuel-Cell Technology over that of Natural Gas Turbines for Air Emissions.

Pollutant	Documented health effects (per U.S. EPA)	Fuel-cell advantage
Nitrogen dioxide (NO₂)	Aggravates asthma and other respiratory disease and is linked to emergency-department visits and hospital admissions; lower NO ₂ is associated with better lung-function development in children.	No combustion flame means little thermal NO _x forms — about 92% less NO _x than the gas turbines originally planned for this site.
Fine particles (PM_{2.5})	Premature death, heart attacks and strokes, and asthma attacks; especially harmful to children, older adults, pregnant women, and people with heart or lung disease.	Non-combustion operation emits near-zero particulate matter, and the design avoids the diesel backup generators that are a common source of data-center PM.
Ground-level ozone (O₃) (formed from NO_x + VOC)	Triggers asthma attacks and shortness of breath, aggravates lung disease, can cause permanent lung damage, and is linked to hospitalizations and premature death.	Sharply lower NO _x — an ozone precursor — reduces the project's contribution to this airshed's long-standing ozone problem.
Sulfur oxides (SO_x)	Cause respiratory effects and contribute to the formation of fine-particle pollution.	Near-zero SO _x because no fuel is combusted; sulfur is removed upstream rather than burned.

Health-effect descriptions are drawn from U.S. EPA; the fuel-cell comparisons are drawn from the project record and the manufacturer's published data⁵

¹The Paso del Norte air basin — El Paso County, Texas; Sunland Park and the rest of southern Doña Ana County, New Mexico; and Ciudad Juárez, Chihuahua — is one of the most pollution-burdened urban airsheds in the country; it was ranked among the worst in the United States in a 2023 American Lung Association report. See Univ. of Texas, "The Paso del Norte Air Basin" (2024); N.M. Env't Dep't, Air Quality Bureau, "Doña Ana County" (Paso del Norte airshed; historical particulate-matter and ozone problems).

²Sunland Park and El Paso County have historically failed to meet the national ambient air quality standards for ozone and PM₁₀; Doña Ana County contains a PM₁₀ nonattainment area (Anthony, designated 1991). Cross-border emissions and idling traffic at border crossings are significant contributors. See N.M. Env't Dep't, Air Quality Bureau, "Doña Ana County"; MacKinnon & Mukerjee, "The 1996 Paso del Norte Ozone Study," Science of the Total Environment (2001).

³U.S. EPA, "Air Pollution: Current and Future Challenges" (PM_{2.5} causes premature death and cardiovascular harm, including heart attacks and strokes, and is linked to asthma attacks; ozone increases asthma attacks, causes shortness of breath, aggravates lung disease, and is linked to premature death; short-term NO₂ exposure aggravates respiratory disease, particularly asthma); U.S. EPA, "Particle Pollution and Respiratory Effects"; U.S. EPA, 2024 Air Quality Trends Report.

⁴U.S. EPA, "Particle Pollution and Respiratory Effects," discussing Gauderman et al., Children's Health Study (2015) (improved childhood lung-function development associated with lower PM_{2.5}, PM₁₀, and nitrogen dioxide).

⁵Bloom Energy, "How Bloom Reduces Emissions" (Technical Note) (non-combustion operation emits near-zero NO_x, SO_x, and particulate matter; certified by the California Air Resources Board as a Distributed Generation technology after third-party source testing; NO_x and SO_x emission factors far below those of diesel generators).

III. The Project has selected a cleaner technology — greatly reducing potential air emissions.

This is not a hypothetical comparison. The Project replaced the originally planned natural-gas turbines and diesel generators with a fuel-cell microgrid. OEHM understands that this change reduces NOx emissions by approximately 92% and reduces water use to a negligible amount — the latter no small matter in an arid border region where water is itself a public-health resource. The design also removes that need for the back-up diesel generators that typically accompany data centers and can be a significant source of localized particulate and NOx pollution in host communities. In an airshed already struggling with ground-level O₃ and PM, replacing combustion with non-combustion generation, is a direct reduction in the pollutant load the surrounding community would otherwise be exposed to.⁶

V. Taking the community's health concerns seriously points toward selection of the fuel cell technology

OEHM understands the valid concerns that residents of this border region have about air quality; those concerns are well founded and were earned over decades. OEHM also understands that the use of the fuel cell technology does not claim that this facility would be emission-free — it is a large energy project with real, permitted emissions. But precisely because this community's airshed is already overburdened, the choice of energy generating technology matters more here than in other locations with better baseline air quality. Meeting the energy load need for the Project with fuel cells, rather than with gas turbines, diesel generators, or additional draws on combustion-heavy grid power means a fraction of the local NOx, particulate, and sulfur pollution that the alternative electrical generation technologies would impose on the same neighborhoods. The same logic applies here: the health-protective path for an overburdened airshed is to serve new load with the cleanest available technology, which is exactly what this Project has proposed.⁷

VI. Conclusion.

OEHM respectfully requests that the Department record our written interest in Air Quality Permit Application No. 10883 and issue the requested construction permit. For the community, the fuel-cell microgrid is the better public-health-protective option: it largely avoids the combustion pollutants most closely tied to respiratory and cardiovascular harm, by displacing the diesel generators and gas turbine alternatives that could burden the same neighborhoods. We also respectfully request an opportunity to comment on the agency's analysis of this permit or any draft permit issued. OEHM understands that the fuel cell technology is required to meet the health-based ambient standards on the record before it can operate. OEHM appreciates the opportunity to comment and are available to provide additional information at the Department's request.



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⁶Oracle, BorderPlex Digital Assets & Bloom Energy, "Oracle, BorderPlex, and Bloom Energy to Power Project Jupiter with Cleaner, Water-Efficient Fuel Cell Technology" (Apr. 27, 2026) (replacing previously planned gas turbines and diesel generators with a fuel-cell microgrid; approximately 92% reduction in NOx; negligible water use).