



**BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT**

July 6, 2021

Lisa Worrall, Project Manager
Siting, Transmission and Environmental Protection Division
California Energy Commission
1516 Ninth Street, MS-15
Sacramento, CA 95814

RE: Great Oaks South Backup Generating Facility – Draft Environmental Impact Report

Dear Ms. Worrall,

Bay Area Air Quality Management District (Air District) staff has reviewed the Draft Environmental Impact Report (DEIR) for the Great Oaks South Backup Generating Facility (Project) in San Jose. The Project applicant proposes to construct three 182,350 square foot, two-story data center buildings and a backup energy generating facility with 36 3.25-MW diesel-fired generators and three 0.5-MW diesel-fired generators on an approximately 18-acre site at Great Oaks Boulevard and Via Del Oro. As the lead agency, the California Energy Commission (CEC) can grant the project applicant a Small Power Plant Exemption if it finds that the proposed project would not create a substantial adverse impact on the environment or energy resources.

The Air District commends the CEC for requiring the Project applicant to procure 100 percent carbon-free electricity for electricity accounts associated with the Project. Because the data center includes backup diesel generators, the Project will require Air District approval of an Authority to Construct and Permit to Operate for the backup diesel generators, and, as such, the Project will be required to comply with all applicable Air District regulations. Although the Air District's regulations do not currently prohibit the use of diesel generating equipment, a rulemaking effort is underway to address backup generators at data centers. Because diesel combustion produces greenhouse gases (GHGs) and toxic air contaminants, the Air District encourages the CEC to go beyond current regulatory requirements and require the project applicant to adopt the use of cleaner, non-diesel technologies.

Additionally, staff are providing the following recommendations about how the CEC could enhance its CEQA analysis and minimize emissions from the Project and future proposed data centers.

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Consistency with Long-Term State Climate Goals

The DEIR establishes the GHG significance thresholds through consideration of “GHG emission reduction strategies in the AB 32 Scoping Plan, regional GHG reduction goals, and EO B-55-18.” However, the DEIR consideration of Executive Order B-55-18 is limited to a brief discussion that dismisses achieving carbon neutrality as soon as possible and no later than 2045 to this Project based on the premise that “...staff is not aware of any regulations that have been adopted to meet the goal of the Executive Order that would apply to this project.” In addition, the DEIR does not evaluate, disclose, nor discuss the Project's consistency with State policies requiring long-term (i.e., 2045 and 2050) reductions in emissions of GHGs. See *Cleveland Nat'l Forest Foundation v. San Diego Ass'n of Governments* (2017) 3 Cal.5th 497, 516 (CEQA analysis should “compare the [project's] projected greenhouse gas emissions ... from 2020 through 2050 with the Executive Order's goal of reducing emissions to 80 percent below 1990 levels by 2050.”). Air District staff recommends that the GHG analysis be augmented to include an evaluation, disclosure, and discussion of whether the Project will be consistent with the State's policies beyond 2030. Regardless of whether upon further evaluation CEC deems that deployment of 39 diesel backup generators is consistent with the State's carbon neutrality target, the Air District recommends that CEC compel the project applicant to adopt alternative zero emitting technologies, procure renewable fuel, commit to otherwise mitigate GHG emissions, or a combination of the three.

Testing and Maintenance Analysis and Emergency Load Reduction Program

The DEIR estimates the annual emissions of the standby generators by assuming readiness testing and maintenance to occur for 20 hours per year per engine. In addition, the DEIR mentions the recently adopted California Public Utilities Commission (CPUC) Emergency Load Reduction Program (ELRP) and states that “data centers could voluntarily participate in ELRP.” It is unclear if this Project may participate in ELRP, and if so, how many hours of ELRP participation are assumed in the DEIR. The Air District recommends that CEC staff include potential hours of ELRP operation in emissions calculations unless there is a commitment from the Project that they will not participate in ELRP. It is also important to note that it is the Air District's position that voluntary participation in ELRP is not considered an emergency and the California Air Resources Board Airborne Toxic Control Measure for Stationary Compression Ignition Engines (§ 93115) and Air District rules and permit conditions still apply.

Non-Testing/Non-Maintenance Operations

The DEIR provides a discussion about electrical system reliability and emergency operations based on historical power outages, in addition to a discussion about the Air District's analysis of data center diesel engine operations. The DEIR uses electrical system reliability (i.e., four conditions outlined in Appendix B) and historical power outages as proxies for backup diesel generator use. Although backup generators indeed are likely to operate during power outages,

they may also operate in other circumstances. Rather than using proxies for backup generator usage and drawing conclusions from these proxies, the Air District encourages CEC to obtain records of backup generator usage and draw conclusions from actual backup generator usage, which would provide a more accurate, direct representation of historical backup generator use.

In addition, the DEIR discussion of the Air District's analysis of data center diesel engine operations concludes that emergency operations "...remain infrequent, irregular, and unlikely and the resulting emissions are not easily predictable or quantifiable and cannot be modeled in an informative or meaningful way." The Air District remains concerned about the environmental impacts associated with using backup diesel generators in non-testing/non-maintenance operations. The Air District has previously submitted historical evidence that backup generators operate for non-testing/non-maintenance reasons, and this information should be incorporated into the emissions calculations for backup generator operations. Although the DEIR rightfully notes that emergency operations are less predictable than maintenance and testing, the evidence from historical operations should not be discounted and dismissed, but rather should be incorporated into the analysis to show various potential scenarios of backup power generation operations beyond routine testing and maintenance. Backup generators are operating more frequently than previously understood because of climate change induced crises¹ and grid operational challenges,² and as such, it is critical to consider the impacts of operating the emergency backup diesel generators. Air District staff recommends that the DEIR include GHG, criteria pollutant, and toxic air contaminant (TAC) impacts due to the non-testing/non-maintenance operations of backup power generators. Various scenarios should be considered for non-testing/non-maintenance operations, including non-zero hours of operation and concurrent generator operations.

Risk Assessment of Diesel Fuel Deliveries vs. Alternative Natural Gas Pipeline

The DEIR states that "deliveries of diesel fuel during the project's operation would be scheduled on an as-needed basis resulting in twenty fuel tanker truck trips annually" and that "diesel fuel has a long history of being routinely transported and used as a common motor fuel." However, there is no analysis or discussion of the risk associated with diesel fuel shortage and delivery challenges during natural disasters.

Meanwhile, in CEC staff's alternative analysis, natural gas internal combustion engines are dismissed in part due to the risk of unreliable fuel supply during a natural disaster. Specifically, that "...pipelines are susceptible to natural disasters (e.g., earthquakes) [and] can potentially cut off fuel supply to the project during a grid outage." The Air District encourages CEC staff to apply a consistent and objective rigor to Project and alternative analyses and to use historical evidence to quantify the risk of fuel reliability rather than anecdotal evidence to selectively dismiss

¹ More frequent wildfires and PSPS events, more frequent heat events

² CAISO, CPUC, and CEC; *FINAL – Root Cause Analysis Mid-August 2020 Extreme Heat Wave*; January 13, 2021; <http://www.aiso.com/Documents/Final-Root-Cause-Analysis-Mid-August-2020-Extreme-Heat-Wave.pdf>

alternatives. Specifically, if anecdotal evidence is the basis for the risk assessment of natural gas pipeline unreliability, Air District staff suggests application of the same basis to discuss diesel fuel shortages and unreliability during natural disasters. Alternatively, Air District staff recommends quantifying the risk of fuel reliability (i.e., the historical number of hours of pipeline down time compared with the number of diesel fuel shortage events that have occurred).

Recommendations for Achieving Additional Emissions Reductions

To the extent that further analysis concludes the Project's emissions would be cumulatively considerable or inconsistent with the State's climate goals, the Project may need to incorporate mitigation measures to reduce emissions. Even if the revised analysis does not conclude the Project's emissions will be cumulatively considerable, the Air District encourages the CEC to compel the applicant to incorporate additional emission reduction measures as a condition of approval of the Project. These recommended measures will help ensure the Project's emissions impacts are reduced by the maximum extent possible to achieve the most health protective air quality for Bay Area residents and to achieve climate change goals established by the State and the Air District.

The Project, as proposed, would use diesel fuel to power the 39 backup generators. To meet State and regional climate goals, the Air District encourages projects to go above and beyond permitting requirements. In September 2018, the Air District launched a Diesel Free by '33 campaign to eliminate diesel emissions from our communities. Mayor Sam Liccardo of the City of San Jose signed Diesel Free by '33 to pledge the City's commitment to cut diesel use to zero by the end of 2033. To this end, the Air District recommends that the CEC compel the Project applicant to use the cleanest available technologies such as solar battery power, fuel cells, other non-diesel alternatives, renewable fuels, or consideration of an alternative site.

Lastly, Air District staff strongly recommends that the CEC work with Pacific Gas & Electric, the City of San Jose, San Jose Clean Energy, the Air District, State agencies, and the Project proponents for this and similar proposed data center projects to explore alternative options to reduce GHG emissions. For example, the Air District awarded a Climate Protection Grant of \$300,000 to the City of Santa Clara to conduct a pilot project to demonstrate the viability of replacing data center backup diesel generators with electric energy storage systems, and the CEC has previously provided Electric Program Investment Charge (EPIC) awards for data center microgrids. We also encourage Project proponents and future data centers to seek available grant funding for zero-emitting alternatives to diesel backup generators.

We encourage the CEC to contact Air District staff with any questions and/or to request assistance during the environmental review process. If you have any questions or would like to discuss Air District recommendations further, please contact Josephine Fong, Environmental Planner, at (415) 749-8637 or jfong@baaqmd.gov, or Jakub Zielkiewicz, Advanced Projects Advisor, at (415) 749-8429 or jzielkiewicz@baaqmd.gov.

Sincerely,



Greg Nudd
Deputy Air Pollution Control Officer

cc: BAAQMD Director Margaret Abe-Koga
BAAQMD Chair Cindy Chavez
BAAQMD Director Rich Constantine
BAAQMD Director Rob Rennie
CARB Executive Officer Richard Corey