

DOCKETED	
Docket Number:	19-SPPE-01
Project Title:	Laurelwood Data Center (MECP I Santa Clara I, LLC)
TN #:	230258
Document Title:	Applicant's Rebuttal Testimony
Description:	N/A
Filer:	Deric Wittenborn
Organization:	Ellison Schneider Harris & Donlan LLP
Submitter Role:	Applicant
Submission Date:	10/17/2019 1:13:32 PM
Docketed Date:	10/17/2019

**STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION**

In the Matter of:)	
)	
Application for Small Power Plant)	Docket No. 19-SPPE-01
Exemption for the:)	
)	
<u>Laurelwood Data Center</u>)	

**REBUTTAL TESTIMONY OF
MECP1 SANTA CLARA 1, LLC**

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October 17, 2019

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ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION**

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REBUTTAL TESTIMONY OF MECPI SANTA CLARA 1, LLC

INTRODUCTION AND SUMMARY OF QUALIFICATIONS

- Q. Please state your name and business affiliation.
- A. My name is Jerry Salamy. I am the Principal Program Manager with Jacobs Engineering, Inc.
- Q. Please describe your professional experience and qualifications in connection to your rebuttal testimony herein.
- A. My qualifications are set forth in Appendix A to the Applicant’s Opening Testimony filed on October 8, 2019 (TN #: 230042).
- Q. What is the purpose of your rebuttal testimony?
- A. The purpose of this testimony is to respond to the *Testimony of Robert Sarvey on the Initial Study/MND for the Laurelwood Data Center* (“*Testimony*”; TN #: 229959) submitted by Intervenor Robert Sarvey (“Intervenor”).

SMALL POWER PLANT EXCEPTION

- Q: Did you review the portions of the *Testimony* addressing whether the Laurelwood Data Center (“LDC”) qualifies for the small power plant exception?
- A: Yes.
- Q: And what were your conclusions?
- A: The Intervenor does not provide any technical analysis or information to support his assertion that the LDC does not qualify for the small power plant exemption (“SPPE”). Appendix A of the *Initial Study* clearly demonstrates that the LDC qualifies for the SPPE.

BAAQMD POLICY ON BACKUP GENERATORS

Q. Did you review the portions of the *Testimony* discussing the Bay Area Air Quality Management District (“BAAQMD”) policy titled, *Calculating Potential to Emit for Emergency Backup Power Generators*?

A. Yes, I did.

Q. And what were your findings?

A. The BAAQMD policy is to be used to determine the applicability of BAAQMD permitting regulations. The Intervenor mischaracterizes the BAAQMD policy.

On Page 2 of the *Testimony*, in the first paragraph, the Intervenor states that the *Initial Study* “ignores the BAAQMD policy titled ‘Calculating Potential to Emit for Emergency Backup Power Generators’, which requires inclusion of emissions from 100 hours per year of emergency operation in determining the potential to emit”, and thereby erred in not including the 100 hours of emergency operation of the backup generators in its air quality impact assessment. This is incorrect.

The BAAQMD policy, which is not codified in regulation, states that the 100 hours of emergency operation is to be used only for the determination of the applicability of the District’s permitting regulations:

“This assumption of 100 hours per year of emergency operation will be **used to determine the applicability of District permitting regulations**, such as New Source Review and Title V Major Facility Review. It will **not be used to determine the amount of emissions offsets required** for a project that triggers New Source Review. Emissions offsets represent ongoing emission reductions that continue every year, year after year, in perpetuity. As such, offsets are intended to counterbalance emissions that will occur every year, year after year, on a regular and predictable basis, to ensure Reasonable Further Progress towards attainment of the applicable ambient air quality standards. Accordingly, the PTE that a facility needs to offset is only its potential for such regular and predictable emissions – not any emissions that will only occur infrequently when emergency conditions arise.” (BAAQMD Policy, p. 1; emphasis in original.)

Furthermore, the BAAQMD’s policy states that a project’s air quality mitigation requirements should be based on the regular, predictable emissions, which is consistent with the analysis conducted in the *Initial Study*’s air quality impact assessment.

Q. Did you also review the Intervenor’s testimony related to the continuous rating for the Laurelwood Data Center’s (“LDC”) backup generators?

A. Yes, I did.

Q. And what were your findings?

A. In Footnote 3, the Intervenor states the following:

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<https://efiling.energy.ca.gov/GetDocument.aspx?tn=229116&DocumentContentId=60521>

“Please note that the applicant used an operating scenario which it cannot use as the diesel generators cannot be operated above their 2.75 MW continuous rating. Using the operating scenario that the applicant has proposed 44 generators operating at 80% load will lead the project to emit over 100 tons per year of NOx and be subject to PSD and Title V.”

Q. Is this statement accurate?

A. No. The above statement incorrectly assumes that the “2.75 MW continuous rating” for each standby generator is a physical limitation. Rather, the definition of “continuous rating” of an engine generator is the electrical output that is available for an unlimited number of hours.

Although the LDC standby generators have a continuous rating of 2.75 MW, they can generate up to 3 MW for a limited number of hours, consistent with the intended use of the LDC standby generators. Therefore, the Intervenor’s contention that the emission estimates are flawed is incorrect.

CUMULATIVE IMPACTS ANALYSIS

Q. Did you review the Intervenor’s critique of the air quality analysis as it relates to the potential for cumulative impacts?

A. Yes. In the first sentence of the first paragraph of page 3 of the *Testimony*, the Intervenor states that the *Initial Study* failed to conduct a cumulative air quality impact assessment.

Q. Is the Intervenor correct?

A. No. As presented in the *Initial Study*, Tables 5.3-6 to 5.3-9, the LDC’s air emissions would not exceed the BAAQMD significance thresholds and would not cause or contribute to a new or existing violation of an ambient air quality standard, based on the expected operating profile for the standby generators.¹ Therefore, LDC’s emissions would not be

¹ Initial Study, Table 5.3-7 assumes all 56 standby generators operate for 4 hours each day, which is a conservative assumption used in the air dispersion modeling but does not represent the proposed LDC operating profile.

considered cumulatively considerable and a cumulative air quality impact assessment would not be warranted.

The *Initial Study*'s conclusion that a cumulative air quality impact assessment is not required is consistent with applicable BAAQMD CEQA guidance, as presented below:²

“In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project’s individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region’s existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary. The analysis to assess project-level air quality impacts should be as comprehensive and rigorous as possible.”

Q. Did you review the Intervenor’s presentation of third-party information related to a certain Intel facility?

A. Yes. The Intervenor summarizes information from the BAAQMD relating to the Intel Corporation’s Mission Campus located adjacent to LDC. However, based on the information presented, it is difficult to determine if the reported Intel excess cancer risk represents the exposure at the point of maximum impact (PMI) or the maximum exposure at a residential or worker location (MEIR or MEIW, respectively), or some other value.

Further, no supporting materials to verify the calculations or information are provided. Moreover, information relating to a nearby facility has no relevance to the LDC’s demonstrated compliance with applicable LORS.

HEALTH RISK ASSESSMENT ANALYSIS

Q. Did you review the Intervenor’s critique of the Health Risk Assessments conducted for the Laurelwood Data Center?

A. Yes. On page 8, third paragraph the Intervenor states that the construction health risk assessment is inadequate as the *Initial Study* concluded that the construction excess cancer risk is above the BAAQMD’s significance threshold, and that the construction health risk assessment did not include fugitive dust, which could resuspend contaminated soil and impact local workers.

Q. Are the Intervenor’s statements on the Health Risk Assessment correct?

² BAAQMD CEQA Guidance: http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en.

- A. No. The Intervenor’s statements are not correct. First, the *Initial Study* concluded the project will not exceed applicable BAAQMD thresholds, as follows:³

“The results of the HRA for construction activities are presented in **Table 5.3 - 8** and show that the excess cancer risks and chronic HIs at the MEIR, MEIW, and MESR are less than the BAAQMD’s significance thresholds of 10 in 1 million and 1, respectively.”

These conclusions were based on Staff’s refined health risk analysis, which identified an excess cancer risk of 3.56 in a million at the PMI, well below the BAAQMD’s thresholds.

- Q. Are the Intervenor’s statements on pages 8 and 9 of the *Testimony* relating to soils handling accurate?

- A. No. The resuspension of contaminated soils during demolition and construction is a possibility only if the work were to be conducted in a manner inconsistent with applicable LORS. However, as noted in the Hazards and Hazardous Materials section of the *Initial Study*⁴, the San Francisco Bay Regional Water Quality Control Board (“RWQCB”) has regulatory authority over the site, and has required a deed restriction to be placed on the parcel and the property owner to prepare a soil management plan to protect workers, the public, and the environment.

The *Initial Study* further notes that the RWQCB will “review the groundwater and soil removal plans before the start of construction to ensure that worker safety, public health, and the environment are protected.” Therefore, the *Initial Study*’s construction health risk assessment addresses the cancer risk associated with construction and demolition, including any exposure to workers, the public, or the environment due to the existing contamination on the project site.

ENERGY RESOURCES ASSESSMENT

- Q. Did you review the Intervenor’s statements related to Energy Resources for the Laurelwood Data Center?

- A. Yes. On page 9 of the *Testimony*, the Intervenor states that LDC’s operation of the standby generators represents an “inefficient and wasteful use of energy” and that the assumption that the standby generators will only operate for 21 hours per year is speculative and not the worst-case scenario.

- Q. Are these statements correct?

³ Transaction Number 229584, page 5.3-22.

⁴ Transaction Number 229584, page 5.9-8.

A. No. The Intervenor misrepresents the 21 hours proposed as the maximum testing and maintenance hours for each engine, with the expected annual testing and maintenance hours being significantly less (estimated at 12.3 hours per engine per year).⁵ The testing and maintenance of the engines, consistent with industry standards, is not “inefficient and wasteful use of energy; it is, instead, a method to ensure that the LDC can reliably operate under most conditions. Moreover, operation of the standby generators for testing and maintenance represents an operating cost without a direct financial benefit as the energy produced during testing and maintenance does not defer energy purchased from the utility.

Q. Does the Intervenor accurately represent the facts?

A. No. The estimated 14,280 barrels of annual diesel use misrepresents the facts. The *Initial Study* uses an overly conservative assumption that each of the 56 standby generators operate 50 hours per year at 100 percent load, which is the state’s maximum allowable emergency diesel engine testing and maintenance hours.

However, as a factual matter, the Applicant has proposed a 21-hour per generator per year limit on testing and maintenance. Even with this conservative assumption, the *Initial Study* concludes that LDC’s energy consumption would not be inefficient or wasteful.

This conclusion is further bolstered by the fact that LDC’s maximum proposed operating limit of 21 hours (for testing and maintenance purposes) per year results in an annual diesel consumption of less than 50 percent of the 14,280 barrels used in the *Initial Study* (approximately 42%). Therefore, the Intervenor’s contention that the *Initial Study’s* energy analysis does not consider the worst-case condition is not correct as LDC is proposing to limit standby generator operation to 21 hours per year (per engine) for testing and maintenance purposes.

SVP ENERGY RESOURCE PLANNING

Q. Have you reviewed the Intervenor’s testimony related to Silicon Valley Power (“SVP”) and its supply plans for its service territory starting on page 10?

A. Yes. The Intervenor incorrectly speculates that Silicon Valley Power’s (SVP) electricity supply is limited, with a substantial portion being intermittent renewables (mostly wind), and that LDC and other planned data centers (with baseload electric demand) will challenge SVP’s ability to serve its customers.

This speculation is incorrect. California utilities, in coordination with state agencies (California Independent System Operator, publicly owned utilities’ elected boards, California Public Utility Commission, the California Air Resources Board, and the California Energy Commission, among others), are obligated by state law to ensure that an

⁵ Transaction Number 229584, page 5.3-9. Footnote 3.

adequate, reliable, and environmentally sound supply of electricity is available for state residents and businesses.

As additional demand materializes, the integrated resource planning (“IRP”) and Resource Adequacy (“RA”) processes, among others, adapt to the changing demand, with additional energy resources identified and allocated sufficient to meet demand. Any new energy resources procured will need to comply with the State’s Renewable Portfolio Standard goals to ensure environmental impacts are minimized to the extent feasible.

THE CITY OF SANTA CLARA’S CLIMATE ACTION PLAN

Q. Have you reviewed the Intervenor’s statements related to the LDC and the City of Santa Clara’s Climate Action Plan (“CAP”), starting on page 12?

A. Yes.

Q. Is the LDC consistent with the City of Santa Clara’s CAP?

A. Yes.

Q. Have you reviewed the Intervenor’s testimony on the CAP?

A. Yes. The Intervenor incorrectly argues that the LDC is not consistent with the City of Santa Clara’s CAP, Measure 2.3, due to the LDC’s proposed Power Usage Effectiveness (“PUE”) of 1.25. The PUE of 1.2 described in Measure 2.3 applies to data centers with larger average rack ratings than the LDC. A PUE is a measure of the total energy consumed by a data center divided by the energy used by the information technology equipment.

CAP Measure 2.3 states that the City should “*Encourage* new data centers with an average rack power rating of **15 kilowatts or more** to identify and implement cost-effective and energy-efficient practices”, which the City will achieve by requiring new data centers with an average rack power rating of 15 kilowatts or more to conduct a feasibility study to identify measures to achieve a PUE of 1.2 or lower.

Q. Is this CAP Measure applicable to the Laurelwood Data Center?

A. No. The LDC rack rating is less than 15 kilowatts described in CAP Measure 2.3. The LDC is expected to achieve a PUE of 1.25, with an average rack power rating of up to 10 kilowatts. This Measure is not applicable to the LDC.

Q. Have you reviewed the Intervenor’s statements related to comments made by the BAAQMD before the City of Santa Clara’s adopted the CAP?

- A. Yes. The Intervenor states that, when BAAQMD commented on the City of Santa Clara’s CAP, the BAAQMD comments stated that the City should require all data centers (new and existing) to complete a feasibility study to achieve a PUE of 1.2 or lower.

The City considered this BAAQMD comment and approved the CAP as written based on the evidence in the City record as a whole. Since LDC’s average rack power rating is less than 15 kilowatts, a feasibility study is not required and, to the extent it is applicable for a facility with a rack rating of less than 15 kilowatts, LDC is consistent with CAP Measure 2.3.

- Q. Are there other issues with how the Intervenor characterizes the BAAQMD comments on backup generation?

- A. Yes. On page 15, second paragraph, of the *Testimony*, the Intervenor mischaracterizes the BAAQMD’s comments on the City of Santa Clara’s CAP as a “prohibition of back up diesel generators.” This is a mischaracterization. There is no BAAQMD “prohibition” on backup generators. Instead, the BAAQMD’s comment states “Staff recommends this measure encourage and incentivize data centers to utilize alternative to diesel powered back-up generators...” (emphasis added.) The BAAQMD comment does not “prohibit” back generators, nor does it identify what “alternatives” should receive incentives. The City considered this BAAQMD comment and approved the CAP as written based on the evidence in the City record as a whole.

- Q. Have you reviewed the Intervenor’s arguments related to Intel’s data centers?

- A. Yes. Based on his reading of a news article, the Intervenor states that lower PUE’s have been achieved, including a PUE of 1.06, at an existing Intel facility. However, for the Intel facility cited, the information provided does not identify the specific circumstances under which the PUE was achieved, and whether the PUE reported is still accurate for the referenced Intel facility. The Intel data does not describe the differences between the Intel facility and LDC, and does not allow for a comparison of the two projects on equal basis.

It is not clear, for example, if the Intel facility information takes into consideration the rest of the “campus” where the data center is located. Were certain Intel data center loads assigned to other Intel campus facilities, reducing the PUE? For example, was security lighting and other energy loads benefiting more than this one component of the Intel campus considered in the reported information and attributed to the PUE calculations? It is also not clear if that facility is a data center or just a large off-site storage facility that serves only non-critical loads. Intel’s PUE, reported in this second-hand report, has no bearing on the analyses applicable to the LDC.

- Q. Does this conclude your rebuttal testimony?

- A. Yes.