DOCKETED	
Docket Number:	19-SPPE-01
Project Title:	Laurelwood Data Center (MECP I Santa Clara I, LLC)
TN #:	231928
Document Title:	PD comments
Description:	Sarvey comments on PD
Filer:	Robert Sarvey
Organization:	Robert Sarvey
Submitter Role:	Intervenor
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State of California
Backup Diesel Generator Commission

In the matter of:	Docket # 19-SPPE-01
Laurelwood Data Center	

Introduction

Thank you for the opportunity to comment on the proposed decision for the Laurelwood Data Center. Many in the environmental community were encouraged when the CEC stated in the Carlsbad decision that, "*we cannot and should not continue adding gas-fired plants ad infinitum.*"[1] Little did they know nor could they have imagined that now instead of natural gas fired generation the energy commission would be endorsing diesel fired generation. That is amazing considering natural gas fired backup generation is a more reliable than diesel[2] and less polluting.

The LDC is one of seven data centers being processed by the CEC. As the table below shows the seven data centers comprise 650 MW of peak demand in the SVP service area. This eclipses SVP's peak demand for 2018 of 526.1 MW in 2018.[3] The seven data centers not including the newly announced Memorex Data Center will consume up to 4,568,006 MWh of electricity which is more than the entire consumption

[1] Carlsbad Final Decision Page 6.1-19

[2] A comparison of Fuel Choice for Backup generators -NREL https://www.google.com/search?client=firefox-b-1-d&ei=mqEsXtuvMbLF0PEPi8OFMA&q=alternatives+to+diesle+back+up+genration&oq=alternatives+to+diesle+back+up+genration&gs_l=psy-ab.12...44554.70065..75169...1.2..0.193.8815.9j63.....0....1..gws-wiz.....0i71j33i10i160j33i160j33i299j33i10j33i10i299.oEfa2jjhZnY&ved=0ahUKEwjb5JGnyJ_nAhWyIjQIHYthAQYQ4dUDCAo

[3] Attachment 2 Silicon Valley Power 2018 Fact Sheet

of SVP service system which in 2018 which was 3,566,293,836 kWh.[4] The seven data centers not including the newly announced Memorex Data Center will emit up to 860,799 MTCO2e/yr which is almost 50% of current GHG emissions in Santa Clara. Can you say cumulative impact?

DATA Center Applications Before the Commission				
Facility	Docket #	Total MW	Total MWh Annual	(MTCO2e/yr)
McLaren Data Center	17-SPPE-01	99 MW[5]	665,760 MWh[6]	154,958[7]
Laurelwood Data Center	19 SPPE-01	99 MW[8]	867,240 MWh[9]	171,770[10]
Walsh Data Center	19-SPPE-02	80 MW[11]	700,800 MWh[12]	109,164[13]
Sequoia Data Center	19-SPPE-03	95.5 MW[14]	846,340 MWh[15]	84,023[16]
San Jose Data Center	19-SPPE-04	99 MW[17]	803,730 MWh[18]	254,122[19]
2305 Mission College Data Center	19-SPPE-05	78.1 MW[20]	684,156 MWh[21]	86,762[22]
Memorex Data Center		99 MW[23]	Not Posted Yet	
Totals		650 MW	4,568,006	860,799

[4] Attachment 2 Silicon Valley Power 2018 Fact Sheet

[5] https://ww2.energy.ca.gov/sitingcases/mclaren/
[6] McLaren Final Decision TN 225170 Page 128 of 361
[7] Mclaren Final Decision TN 225170 Page 129 of 361
[8] https://ww2.energy.ca.gov/sitingcases/laurelwood/
[9] Laurelwood Proposed Decision TN 231721 Page 210 of 368
[10] Laurelwood Proposed Decision TN 231721 Page 211 of 368
[11] https://efiling.energy.ca.gov/GetDocument.aspx?tn=229419-1&DocumentContentId=60822
[12] Walsh Data Center Application TN 228877-2 Page 111 of 203
[13] Walsh Data Center Application TN 228877-2 Page 112 of 203
[14] https://ww2.energy.ca.gov/sitingcases/walsh/ Page 10 of 222
[15] Sequoia Data Center Application TN 229419-1 Page 106 of 222
[16] Sequoia Data Center Application TN 229419-1 Page 131 of 122
[17] https://ww2.energy.ca.gov/sitingcases/sj2/
[18] San Jose Data Center Application TN 230741 Page 175 of 285
[19] San Jose Data Center Application TN 230741 Page 176 of 285
[20] https://ww2.energy.ca.gov/sitingcases/missioncollege/
[21] Mission College Data Center Application TN 230848 Page 121 of 222
[22] Mission Co0llege Data Center Application TN 230848 Page 122 of 222
[23] https://ww2.energy.ca.gov/sitingcases/all_projects_cms.html

The record demonstrates the projects generating capacity is 100 MW or more.

The application, the proposed decision and the environmental analysis all state that the maximum output of the LDC is 99 MW. According to the proposed decision, *"The buildings will create a combined electrical load of 99 MW. This load was calculated on base load of tenant-installed information technology (IT) equipment and cooling and ancillary electrical and telecommunications equipment operating to support IT equipment at peak summertime ambient conditions."*[24] The record demonstrates that even utilizing Staff's illegal capacity calculation method the building load would be 100 MW or more not 99 MW.[25] That is calculated by the maximum IT load of 80 MW times the PUE of 1.25 which equals 100 MW as stated by applicant witness Muell.[26] When you add the recharging of the batteries during an extended outage the load of the project is over 100 MW and does not qualify for the small power plant exemption even under Staff's calculation methods.

The PD utilizes an illegal underground regulation to determine in LDC's Generating Capacity

According to the PD Section 2003 does not apply when determining the generating capacity of the Laurelwood Data Center.[27] The PD states, ***"The uncontested evidence shows that the Backup Generators constitute a thermal power plant with a generating capacity in excess of 50 MW and none are or use***

[24] PD page 9 of 368

[25] 11-1-2019 RT Page 128

MR. SARVEY: Yeah, a couple of quick questions. How much IT do you expect to have loaded into this project?
MR. MUELL: A maximum of 80 megawatts.
MR. SARVEY: 80 megawatts. And previously staff's witness said that your maximum PUE was 125; is that correct? 1.25, I'm sorry. Is that your maximum?
MR. MUELL: Correct.

[26]

[27] PD Page

turbine generators. This makes Section 2003 inapplicable[28] The commission is demonstrating severe amnesia or dementia with this statement. The commission has applied section 2003 to the calculation of generating capacity for power plants that utilize IC engines many times before. In the Humboldt Generating Station Proceeding (06-AFC-07) the Commission determined that, *"The HBRP would consist of 10 dual-fuel Wärtsilä 18V50DF 16.3 MW reciprocating engine-generator sets and associated equipment with a combined nominal generating capacity of 163 MW."* [29] In the Eastshore Energy Center Proceeding (06-AFC-06) the commission used Section 2003 to determine that, "*The proposed facility would be a nominal 115.5 megawatt (MW) simple cycle power plant consisting of 14 Wartsila 8.4 MW 20V34SG natural gas-fired reciprocating engine generators and associated equipment."*[30] In the Quail Brush Proceeding (11-AFC-03) the Commission utilized Section 2003 when determining that the projects 11 internal combustion engines totaled 100 MW of capacity.[31]

The PD then alludes to the McLaren Data Center and Staff's ad-hoc determination there claiming the data center load should be the generating capacity, The PD states that, *"In support of this contention, Staff cites to the recent decision in the McLaren Backup Generating Facility SPPE proceedings, in which the CEC concurred with Staff. In McLaren, a similar argument about using section 2003 to calculate generating capacity was raised. The CEC there stated that the generating capacity of that project was equal to the maximum load of the servers, ancillary load, and cooling."* The PD then conveniently ignores its jurisdictional decision in the Santa Clara Data Center (Attachment1) where the commission clearly states, *"We also understand that each back up generator has a generating capacity of 2.87 MW which would make the total generating capacity 91.8 MW."*[32]

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[28] PD Page 15 of 368

[29] https://ww2.energy.ca.gov/2008publications/CEC-800-2008-005/CEC-800-2008-005-CMF.PDF page 17 of 447

[30] https://ww2.energy.ca.gov/sitingcases/eastshore/documents/index.html

[31] https://ww2.energy.ca.gov/sitingcases/quailbrush/index.html

[32] Attachment 1 Page 1

The PD then conjectures that, *"In the absence of on-point statutory or regulatory authority, we may take any action supported by the record that we deem reasonable and necessary to carry out the provisions of the Warren-Alquist Act, including approving the IS/PMND's methodology.*" The PD is dead wrong. The APA specifically prohibits any state agency from making any use of a state agency rule which is a "regulation" as defined in Government Code section 11342.600,[33] that should have, but has not been adopted pursuant to the APA (unless expressly exempted by statute). Such a rule is called an "underground regulation". The CEC must provide the public an opportunity to comment on the proposed regulation as required by the APA. The CEC has failed to do so and the method of calculating generating capacity for a data center utilized in the PD is nothing more than an illegal underground regulation.

The commission recognizes that Section 2003 does not provide authorization or a methodology for determining generating capacity for non-grid generation. On August 14, 2019 the Commission initiated a new rulemaking proceeding Docket, 19- SIT-01. According to the OIR, *"The new rulemaking docket is opened to updating title 20 sections 2001 and 2003 relating to the methodology for determining generating capacity of power generating facilities. The rulemaking will amend regulatory language to clarify the methodology for calculating generating capacity for non-grid tied electrical generating facilities."*

On August 17, 2019 I filed a motion to dismiss the proceeding as the project has a generating capacity of 168 MW when applying Section 2003 to determine the projects generating capacity. Abruptly on August 29, 2019, twelve days after filing my motion to dismiss, the Commission canceled the order instituting rulemaking.

At this point it's clear the commission is utilizing some underground regulations to process this and other data center applications in violation of the APA. They certainly

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[33] CA Govt Code § 11342.600 (2017) "Regulation" means every rule, regulation, order, or standard of general application or the amendment, supplement, or revision of any rule, regulation, order, or standard adopted by any state agency to implement, interpret, or make specific the law enforced or administered by it, or to govern its procedure.

are not complying with the language or purpose of the Small Power Plant Exemption. Section 2003 does not provide a method where generating capacity can be determined by data center load. Accordingly, the project DOES NOT qualify for SPPE treatment, as the LDC's generating capacity calculated under Section 2003 is 168 MW.

The Initial Study and Mitigated Negative declaration must be recirculated before a decision can be rendered.

The IS/MND must be recirculated for two reasons. First the proposed decision adds three additional mitigation measures which were not included in the IS/MND that was circulated to the public for review on August 28, 2019.[34] Any needed or proposed mitigation measures must be incorporated into a proposed negative declaration and the project revised accordingly before the negative declaration is released for public review. *Sundstrom v. Mendocino* (1988) 202 Cal. App. 3d 296. The commission has failed to recirculate the IS/MND since including 3 additional mitigation measures for the public to review. Additionally, Guidelines, §15070(b)(1)[35] require that CEQA requires that modifications to a project must be agreed to by the project applicant before an MND is released for public review.

Secondly CEC Staff failed to file the IS/MND correctly and misinformed the State Clearinghouse and associated state agencies. The CEC Staff failed to inform the State

34 TN 225284 Laurelwood Data Center Initial Study and Proposed negative Declaration

35 § 15070. Decision to Prepare a Negative or Mitigated Negative Declaration. A public agency shall prepare or have prepared a proposed negative declaration or mitigated negative declaration for a project subject to CEQA when:
(b) The initial study identifies potentially significant effects, but:
(1) Revisions in the project plans or proposals made by or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur,

Clearinghouse that BAAQMD was a responsible agency.[36] More importantly when the Summary Form asked the Question, "*If applicable, please describe any of the project's areas of controversy known to the Lead Agency, including issues raised by agencies and the public."* CEC Staff answered "*none"* as if the public had not raised any issues.[37] My petition for intervention was on filed May 5, 2019 (TN 228057). I raised several issues in that petition and the State Clearinghouse and the State Agencies could not have known if there was any public controversy and what those issues were. Accordingly, the clearinghouse and the state agencies were misled and the IS/MND must be recirculated.

The Commission cannot ignore the purpose of Section 1934.

Section 1934 provides the purpose of allowing SPPEs applications it states: "*It is the policy of the State Energy Resources Conservation and Development Commission to promote the development of electric energy supply technologies that prudently conserve and economically use energy resources. A major purpose of these regulations is to encourage the use of those technologies by expediting the procedures necessary for the approval and development of alternate sources of electric generation."* The PD claims that the purpose stated in Section 1934 is irrelevant. The PD states, "Section 1934 states one of many policies that the CEC may consider when making a decision on an SPPE, but it is neither exclusive nor dispositive." Once again, the PD runs afoul of the administrative procedure act by interpreting a regulation that is unclear and applying its interpretation without public review and comment.

NO2 Impacts

36 Attachment 3 Page 2 Question 2 Please provide a list of the responsible or trustee agencies for the project?
Answer: If the Small Power Plant Exemption is issued by the California Energy Commission this document could be used by the City of Santa Clara for local permitting. (BAAQMD is not mentioned)
37 Attachment 3 Page 2 Question 1 "If applicable, please describe any of the project's areas of controversy known to the Lead Agency, including issues raised by agencies and the public." CEC Staff Response "None"

According to the PD , *"Staff concluded that the 1-hour NO_2 standard would not be exceeded at the nearby apartment complex, or the nearest residential neighborhoods to the north, or the other sensitive receptors."*[38] Were happy that may be the case but the Federal and State NO2 standards are not to be exceeded anywhere not just at the CEC Staff's selected points. Further such an analysis ignores the surrounding companies like the Intel corporation with its 7000 employees located across the street from the LDC.[39] Workers not just residents are impacted by violations of the NO_2 standard. The analysis is incomplete and does not demonstrate that the projects NO_2 emissions will not create a significant impact.

The PD also states, "*The 24-hour modeling showed that the PM10 SIL and the 24-hour PM2.5 National Air Quality Standard would not be exceeded at the nearby apartment complex, or the nearest residential neighborhoods to the north, or the other sensitive receptors. Thus, Staff's modeling results conclude that the Project's emergency operation would not expose sensitive receptors to significant criteria pollutant concentrations."*[40] Once again there are workers surrounding the facility that might be impacted by the projects diesel particulate matter concentrations.

<u>PSPS outages are reasonably foreseeable and must be analyzed.</u>

According to the PD, "We recognize that outages caused by PSPS may be foreseeable."129 Kevin Kolnowski, Electric Utility Chief Operating Officer at SVP, confirmed that SVP had not been affected to date by PSPS. Mr. Kolnowski testified that SVP could potentially be impacted by PSPS in the future, as "dictated by the California Independent System Operator." Then inexplicably the PD states, "We therefore find that further analysis of PSPS outages is speculative and not required by CEQA."[41]

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[38] PD Page 25 of 368
[39] 11-1-2019 RT Page 65 of 156
[40] PD Page 25,26 of 368
[41] PD Page 30 of 368

Cumulative Impact Analysis HRA

According to the PD, "*The IS/PMND follows the 2017 BAAQMD Guidelines for evaluating the local community risk and hazard impact related to the Project.*[185] *Section 5.2 of those Guidelines provides that if the "single source impacts" for PM2.5 and TAC risk and hazard are less than the CEQA threshold, no further particulate matter or TAC analysis [is] recommended." the health risk analysis in the IS/PMND was conducted in accordance with appropriate guidance. It relied on AERMOD modeling,*[188] *which is capable of accounting for existing air quality including emissions from existing projects. In this case, the IS/PMND found that the project-level impact would be less than the threshold level of 10 in 1 million, so the contribution from the Project would not be substantial and would not be singularly or cumulatively considerable. Under the 2017 BAAQMD Guidelines,*[192] *no further quantification of emissions or impacts from past, present, and probable future projects is necessary."*[42]

That would be true if only the diesel generators which will be permitted by BAAQMD were included in the project. This project includes sources which will be regulated by BAAQMD and sources that will not be regulated by BAAQMD such as the truck traffic and emissions from the data center itself. BAAQMD 2017 CEQA guidelines state, **"*Some proposed projects would include both permitted and non-permitted TAC sources. For instance, a manufacturing facility may include some permitted stationary sources and also attract a high volume of diesel trucks and/or include a rail yard. All sources should be accounted for in the analysis.*"** The HRA presented in the IS/MND only analyzes the TAC emissions from the emergency diesel generators and ignores other emission sources such as truck traffic and other emission from the actual data center. The analysis presented in the IS/MND is therefore defective and does not follow BAAQMD CEQA guidelines because it does not include TAC emissions generated by the project which are not permitted by BAAQMD.

[42] PD Page 34, 35

What CEQA requirements are we using for evaluating this application?

According to the PD, "As discussed above in relation to air quality, the 2019 PTE Policy does not require that our CEQA determination be based on emissions associated with the 100 hours-per-year." The PD utilizes "our CEQA" and BAAQMD's 2017 CEQA guidelines and whichever guideline is more favorable to the PD's position. The PD further goes on to state, *"Further, and as also described above, 100 hours-per-year is unfounded and speculative. The reasonably foreseeable run time in the event of an interruption of the electrical supply is 7.5 hours, based on historic outages.* [43] The PD claims to be governed by BAAQMD's CEQA guidelines but fails to follow BAAQMD's 100 hour PTE policy. The PD also ignores exhibit 305 where the EPA recommends 500 hours of operation per year to analyze backup diesel generators. BAAQMD recommends considering 100 hours of operation EPA recommends considering 500 hours of operation annually for each generator and here the PD recommends 7.5 hours.

The LDC cannot be consistent with Santa Clara CAP because its emissions occur after 2020 therefore the 171,770 $MTCO_2e/yr$ of GHG emissions is significant.

The PD states, *"Intervenor Sarvey argues that, in order to tier off of the 2013 CAP, the City of Santa Clara must be fully implementing the Plan and that plan itself be on track to meet its target.165 Intervenor Sarvey offers no basis for this opinion.* ***As such, we continue to rely on the 2013 CAP – along with other applicable plans - as a basis for assessing the significance of non-***

[43] PD Page 35 of 368

stationary source GHG emissions." The PD deliberately ignores my testimony[44] and BAAQMD's comments[45] that the LDC is not eligible to use the CAP to evaluate full-build emissions to determine its significance under CEQA, because the CAP is based on 2020 GHG reduction goals and this project will not be completed before 2020.

Exhibit 301 is BAAQMD's comments on the McLaren Data Center. In the McLaren Data Center comments BAAQMD states that the McLaren Data Center cannot be compatible with the 2013 CAP because the emissions from McLaren occur after the time frame used to evaluate the 2013-2020 CAP. The LDC is exactly in the same position as it will not be completed before 2020. As stated by BAAQMD allegedly the agency whose CEQA requirements Staff is using to evaluate this project:

> The analysis in the Mitigated Negative Declaration (MND) estimates that the Project will increase GHG emissions by 117,896 metric tonnes carbon dioxide equivalent (MTC02e) per year. The MND concludes that this GHG impact will be less than significant because the project "would not conflict with the Santa Clara CAP (Climate Action Plan) or other plans, policies or regulations adopted for the purpose of reducing the emissions of GHG" (p. 81). The Air District and the State of California have established a long-term GHG reduction goal of 40% below 1990 levels by 2030. The MND itself notes on page 72 that the project is not eligible to use the CAP to evaluate full-build emissions to determine its significance under CEQA, because the CAP is based on 2020 GHG reduction goals and this project will not be completed before 2023. Therefore, the MND does not appear to provide the substantial evidence needed to justify a less than significant determination.[46]

Obviously if the CAP evaluates emission reduction for the 2013-2020 period the CAP will not be applicable to emissions generated after 2020 which is the case with the LDC emissions.

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[44] Exhibit 300 Page 15 of 26 "The project is not eligible to use the CAP to evaluate full-build emissions to determine its significance under CEQA, because the CAP is based on 2020 GHG reduction goals and this project will not be completed before 2020. Therefore, the initial study does not provide the substantial evidence needed to justify a less than significant determination."

[45] Exhibit 301 Attachment 4 and 5

[46] Exhibit 301 Page 2

Public Participation and Environmental Justice

The Energy Commission failed to engage the general public, much less the confirmed environmental justice community that will be impacted by this proposal. The Commission failed to hold the traditional Informational Hearing and Site Visit.[47] An informational hearing is sponsored by the Energy Commission to inform the public about the project and to invite public participation in the review process. No document handling memo was sent out to the librarians informing the public where the proceedings documents could be accessed. The notice of the application was published once in the Chinese journal but no project materials were provided to the public in Chinese, Spanish or other appropriate foreign languages. In fact because of the lack of outreach the Staff didn't know what languages that were predominately used by the EJ community. Staff sent notice to property owners within 1000 feet of the project but the EJ population is likely renters so they received no notice. No hearings were held in Santa Clara. No workshop on the initial study was conducted in Santa Clara. All of the customary procedures for Energy Commission proceedings were not conducted and the EJ population was disenfranchised by the CEC.

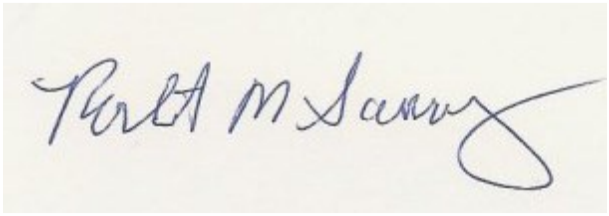
Conclusion

The IS/MND must be recirculated to include the additional mitigation measures imposed by the PD. It also must be recirculated because staff failed to file the IS/MND properly. The commission needs to either require an AFC level analysis or complete its modification of Section 2003 contemplated in the recent OIR Docket, 19- SIT-01. There are countless errors in the PD detailed above which require revisions. As usual the commission failed to conduct

[47] Title 20 § 1709.7. Informational Hearing, Site Visit, and Schedule
(a) Within 45 days after the acceptance of a notice of intent or application for certification, the presiding member shall hold one or more informational hearings and site visits as close as practicable to the proposed sites. Notice of the first informational hearing shall comply with section 1209, shall include information on how to participate in the proceeding, and shall be provided to all persons identified by the applicant under section (a)(1)(E) of the information requirements in Appendix B.

any of its environmental justice responsibilities. I have included my opening and rebuttal testimony as attachment 4 and 5 because the PD fails to consider it.

Respectively Submitted,



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Robert Sarvey

Attachment 1 Letter from Melissa Jones to Mr. Cantrell

STATE OF CALIFORNIA - THE RESOURCES AGE ARNOLD SCHWARZENEGGER, Governor

CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov

April 21, 2008

Mr. W. Tate Cantrell, Jr.
Vice President, Data Center Technologies
DuPont Fabros Technology, Inc.
1212 New York Avenue, NW
Suite 900
Washington, DC 20005

RE: Diesel Backup Generators (Xeres Permit S-1 through S-32)

Dear Mr. Cantrell:

The California Energy Commission has received information regarding 32 low-use diesel backup generators that we understand Xeres Ventures, LLC, plans to install to support a data center at 535 Reed Street in Santa Clara, California. We also understand each backup generator has a rated capacity of 2.87 megawatts, which would make the total generating capacity at the site be 91.8 megawatts. We also understand Xeres is seeking a permit from the Bay Area Air Quality Management District, as well as a use permit from the City of Santa Clara.

The purpose of this letter is to inform you that the Energy Commission has permitting jurisdiction over the 32 diesel generators. As a general matter, the Energy Commission has jurisdiction over any site for a thermal power plant with a generating capacity of 50 megawatts or more. (Pub. Resources Code §§ 25110, 25120, 25500.) Here, the 32 generators, each to use diesel as a source of thermal energy to generate electricity, constitute a thermal power plant with more than 50 megawatts in generating capacity.

The aggregation of all 32 generators is based on their common location for a computer server campus and their common purpose to provide power conditioning and backup power to the data center that is also planned for the site. The issue of whether to aggregate the backup generators and view them as a thermal power plant under the Energy Commission's jurisdiction is one we have dealt with on more than one occasion. In all these cases, including a few in which the power plants were to be located a mile or more apart and two others which also involved diesel backup generators for a data center, the Energy Commission's Chief Counsel concluded the Commission has jurisdiction based on aggregating the proposed power plants, including backup diesel generators.

The factors supporting aggregation include such matters as the separate generating units: (a) being served by common structures, for example, a common control room or a common gas line, (b) if lacking a common control room, nevertheless being triggered to operate by the same event , for example, grid failure, (c) being under common ownership or subject to a common permit to operate, (d) being proposed as part of a foreseeable plan of development and, thus, constituting a "project" under the California Environmental Quality Act for purposes of environmental review by the permitting agency, and (e) being installed to serve a common industrial or commercial host.

Here, the generators will be located on one site proposed for the development of a data center. The generators are considered by the Air District to be components of a single project. The generators have the common purpose of serving as power conditioning and backup generators for a computer server campus being developed by a single project proponent. Their operation is likely to be triggered by the same event, for example, lightning storms or grid failure. Moreover, the potential for the generators to operate simultaneously should be analyzed in a comprehensive environmental document in accordance with the California Environmental Quality Act. Such analysis would identify the project's emissions, assess their impacts, identify feasible mitigation, and assess the potential health risks from this concentration of diesel engines.

For all these reasons, we believe the Energy Commission has permitting authority over the 32 generators, regardless of whether the power will be sold to the grid or used exclusively on-site. Thus, to receive a valid permit for the 32 diesel generators, Xeres must file with the Energy Commission either an application for a small power plant exemption (for a thermal power plant of 50 to 100 megawatts) or an application for certification. We believe an application for certification would be most appropriate, given the potential for adverse impacts from the use of diesel fuel in as many as 32 generators operating at one time.

In either case, the Energy Commission, as a matter of statute, serves as lead agency under the California Environmental Quality Act. As lead agency, it is responsible for preparing the appropriate environmental document for public review and consideration in deciding whether to approve the application. In the case of a small power plant exemption, the project is exempted from the Commission's jurisdiction and permitted at the local level. In the case of an application for certification, the project is permitted by the Energy Commission. During the certification process, the Commission and its staff work with the Air District, which is required under the Commission's regulations to issue a determination of compliance with the District's rules. The conditions of the District's determination, provided within the timeline of the Commission's proceeding, are incorporated into and become enforceable through the Commission's final decision.

If Xeres wishes to claim otherwise about the Commission's jurisdiction, or seek a formal opinion from the Energy Commission, you may file a request for a jurisdictional determination under the Commission's regulations, specifically, section 1230 et seq. in Title 20 of the California Code of Regulations.

In any event, the staff of the Energy Commission is interested in working with you, DuPont Fabros Technology, Inc., and Xeres in a productive manner. Please do not hesitate to contact Arlene Ichien at (916) 654-3959 or by e-mail at aichien@energy.state.ca.us if you have any questions whatsoever.

Sincerely,

ARLENE L. ICHIEN
Assistant Chief Counsel

MELISSA JONES
Executive Director

cc: Michael J Tollstrup, Air Resources Board
Tamiko Endow, Bay Area Air Quality Management District
Gerardo Rios, US Environmental Protection Agency
Terrance O'Brien, California Energy Commission

Attachment 2 Silicon Valley Power 2018 Fact Sheet

https://www.siliconvalleypower.com/svp-and-community/about-svp/utility-fact-sheet

Utility Fact Sheet

Electric Utility
City of Santa Clara
FACT SHEET - JAN - DEC 2018

City Hall
1500 Warburton Avenue
Santa Clara, CA 95050

Phone:
(408) 261-5292

Form of Government:	Council-City Manager
No. of Employees (2018-19):	193
Operating Budget (2018-19):	$ 450,092,360

Fast Facts:

Electric Meters	55,383
Peak Demand	526.2 MW
Service Area	18.41 square miles
System Load Factor	80.1%
Transmission Lines	55.5 miles

Distribution Lines:

Underground	352.0 miles
Overhead	186.6 miles
Street Lights	7,076

2018 Calendar Year Retail Transactions:

Sales Revenues (note 1)	$ 414,019,366
kWh Sales	3,566,293,836

Purchased Power & Generation for Retail:

	kWh	
City-owned Generating Facilities	943,529,625	25.5%
Western Area Power Administration	231,119,803	6.3%
Northern California Power Agency	686,315,083	18.6%
Other Joint Power Agencies & City Purchases	1,833,347,659	49.6%
Total	3,694,312,170	100.0%

Average Monthly Customer Count & Total kWh Sales:

		kWh	
Residential	47,007	226,010,342	6.3%
Commercial	6,168	92,413,001	2.6%
Industrial	1,647	3,229,606,952	90.6%
Municipal	193	18,263,541	0.5%
Unmetered	379	N/A	N/A
Total	55,394	3,566,293,836	100.0%

Attachment 3- Form F Summary for Document Transmittal

Print Form

Form F

Sample Summary for Electronic Document Submittal

15 copies of this document may be included when a Lead Agency is submitting electronic copies of environmental impact reports, negative declarations, mitigated negative declarations, or notices of preparation to the SCH. The SCH will still accept other summaries, such as an EIR summary prepared pursuant to CEQA Guidelines Section 15123, attached to the electronic copies of the document.

SCH # _____

Lead Agency: California Energy Commission

Project Title: Laurelwood Data Center

Project Location: City of Santa Clara (*City*) Santa Clara (*County*)

Please provide a Project Decription (Proposed Actions, location, and/or consequences).

MECP1 Santa Clara 1, LLC (Applicant) is seeking an exemption from the California Energy Commission's jurisdiction (Small Power Plant Exemption, or SPPE) and proceed with local approval rather than requiring a certificate by the California Energy Commission. Section 25519(c) of the Public Resources Code designates the California Energy Commission as the California Environmental Quality Act (CEQA) lead agency, as provided in section 21165 of the Public Resources Code, for all projects that seek an exemption from the California Energy Commission's power plant certification process.

The applicant proposes to construct and operate the Laurelwood Data Center (LDC or project) at 2201 Laurelwood Road, in Santa Clara, California. The LDC would include two multi-storied data center buildings, and 56 3.0 megawatt (MW) standby backup diesel-fired generators capable of providing electrical power during utility outages or certain onsite electrical equipment interruption or failure. The maximum electrical load of the LDC would be 99 MW, inclusive of tenant-installed information technology (IT) equipment in the LDC and cooling and ancillary electrical and telecommunications equipment operating to support IT equipment. The LDC would also include an onsite 60 kilovolt substation with an electrical supply line that would connect to a Silicon Valley Power distribution line located 0.1 miles west of the LDC. To make way for the project, demolition of asphalt/foundations and underground utilities would be necessary, prior to construction.

Please identify the project's significant or potentially significant effects and briefly describe any proposed mitigation measures that would reduce or avoid that effect.

See Attached

If applicable, please describe any of the project's areas of controversy known to the Lead Agency, including issues raised by agencies and the public.

None

Please provide a list of the responsible or trustee agencies for the project.

If the Small Power Plant Exemption is issued by the California Energy Commission this document could be used by the City of Santa Clara for local permitting.

Attachment 4 Robert Sarvey's Testimony

State of California

State Energy Resources Conservation and Development Commission

In the matter of:	
Laurelwood Data Center	Docket 19-SPPE-01

TESTIMONY OF ROBERT SARVEY ON THE INITIAL STUDY / MND FOR THE LAURELWOOD DATA CENTER

Now in conjunction with these wildfire events we have the PG&E's Public Safety Power Shutoff (PSPS) events. On October 9, 2019 six days before rebuttal testimony is due over 500,000 people in PG&E's service area were without power and PG&E has indicated they may be without power for many days. The initial study acknowledges that wildfire impacts from the PSPS events can occur as the initial study states , *"Wildfire policies could impact SVP's ability to supply power to customers if curtailments on the Pacific Gas and Electric (PG&E) system interrupt SVP's electricity supplies."*[48] The initial study also recognizes that, "*The types of major regional events that are normally excluded from AAQS violation as extreme events could also cause the project to operate the standby engine generators in emergency mode due these events causing regional or local electrical outages."*[49]

Under PG&E's Public Safety Power Shutoff program the LDC could experience an extended outage of multiple days according to PG&E's PSPS website.[50] An extended outage requiring operation of the back-up diesel generators is a reasonably foreseeable event. Six

49

50 https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfires/public-safety-power-shutoff-faq.page

days ago, on October 9, 2019 a public safety shutoff impacted 38,250 customers in Santa Clara County alone.[51]

THE PROJECT DOES NOT QUAILFY FOR A SMALL POWER PLANT EXCEPTION

The initial study argues that even though the project's generators have a maximum capacity of 165 MW, we should use the 99 MW building load to determine the generating capacity of the LDC, to determine if the project is eligible for treatment under the small power plant provisions of Title 20. Section 1934 of Title 20 provides the purpose of allowing a small power plant exemption. Section 1934 states, ***"It is the policy of the State Energy Resources Conservation and Development Commission to promote the development of electric energy supply technologies that prudently conserve and economically use energy resources. A major purpose of these regulations is to encourage the use of those technologies by expediting the procedures necessary for the approval and development of alternate sources of electric generation."*** The major question is whether the LDC's back up diesel generators are a development of an electrical supply technology or alternate source of electric generation that prudently conserves and economically uses energy. The back-up diesel generators are certainly not a new development or innovative, or an alternative source of electrical energy. Diesel generators have been in use for decades and are certainly not a new development or an alternative source of electrical generation. Do the diesel generators prudently conserve and economically use energy? The answer is an unequivocal no. This project proposes to burn approximately 5,500 to 14,280 barrels of diesel fuel a year, which is the most polluting fossil fuel available and it doesn't produce any energy. This would be the definition of an inefficient and wasteful use of energy. Even while not producing any energy and assuming the project will only be tested for 21 hours a year the project will emit 24.7 tpy of NOx while the project area is in nonattainment for ozone and particulate matter.

The back-up diesel generators for the LDC are not an innovative technology for producing electricity nor do they prudently conserve and economically use energy. The project does not qualify for SPPE treatment because it clearly does not conform to the purpose of

[51] https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfires/public-safety-event.page?WT.mc_id=Vanity_pspsupdates Viewed October 9, 2019

Section 1934 which governs the application of the small -power plant exemption. As such the applicant is required to file an Application for Certification.

Air Quality

Increase in NOx emissions from operation of the project is cumulatively considerable and a significant impact.

The initial study concludes that, "***Table 5.3-6*** *shows that the project would not be expected to result in a cumulatively considerable net increase of non-attainment criteria pollutants during the operational lifetime of the project, including routine testing and maintenance of the standby engine generators. Therefore, project operations would not result in a cumulatively considerable net increase of any criteria pollutant, and this impact would be less than significant."* [52] In making this determination the initial study determines that the project will emit only 24.7 tons of NOx per year and considers only 21 hours of testing and maintenance in determining the potential to emit. In determining the potential to emit the initial study analysis ignores[53] 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. Including the 100 hours of emergency operation as required by the BAAQMD regulation leads to an additional 69 tons per year of unmitigated NOx emissions as computed by the applicant.[54] The unmitigated NOx emissions from emergency operation would be considered a cumulative significant impact because it leaves

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[52] TN-229584 Initial Study Page 49 of 291

[53] TN-229584 Initial Study Page 60 of 291 "Emissions that could occur in the event of an outage that triggers emergency operations would not occur on a regular or predictable basis (BAAQMD 2019b) and are not included in the determination of whether the project would result in a cumulatively considerable net increase of non-attainment criteria air pollutants." The whole purpose of the BAAQMD policy is to include emergency emission in the potential to emit to determine applicability of BAAQMD regulations.

[54] TN 229186 Page 4 of 8
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 100tons per year of NOx and be subject to PSD and Title V.

66.7 tons per year of unmitigated NOx emissions which exceeds BAAQMD 10 tpy threshold for significance.

Cumulative Impacts

The initial study fails to conduct a cumulative impact analysis for air quality impacts. CEQA requires that the lead agency must analyze cumulative impacts whenever a proposed project's individual impacts have the potential to combine with related impacts from other projects to compound environmental harm. The Guidelines define cumulative impacts as two or more individual effects which, when considered together, are considerable or compound or increase other environmental impacts. If the proposed project will not make any contribution to the cumulative impact, the lead agency need not address it. **However, if even a tiny portion of the cumulative impact is caused by the proposed project, an EIR** must analyze it. The ultimate goal of this analysis is to determine whether the proposed project's incremental contribution is cumulatively considerable and thus significant. A project's incremental impact may be individually limited but cumulatively considerable when viewed together with the environmental impacts from past, present, and probable future projects. A proposed project's incremental effects may be cumulatively considerable even when its individual effects are limited. **In other words, CEQA does not excuse an EIR from evaluating cumulative impacts simply because the project-specific analysis determined its impacts would be less than significant**. Similarly, a less than significant impact conclusion at the project-level does not guarantee the project's contribution to a significant cumulative impact will be less than cumulatively considerable.

In Section 5.3-1 of BAAQMD's 2017 CEQA document the agency lays out its requirements for a cumulative impact analysis. The document states, "*A Lead Agency shall examine TAC and/or PM2.5sources that are located within 1,000 feet of a proposed project site. Sources of TACs include, but are not limited to, land uses such as* ***freeways and high volume roadways****, truck distribution centers, ports, rail yards, refineries, chrome plating facilities, dry cleaners using perchloroethylene, and gasoline dispensing facilities. Land uses that contain permitted sources, such as a landfill or manufacturing plant, may also contain non-permitted TAC and/or PM2.5sources, particularly if they host a high volume of diesel truck activity. A Lead*

*Agency should determine what the combined risk levels are from all nearby TAC sources in the vicinity of sensitive receptors**. Lead agencies should use their judgment to decide if there are significant sources outside 1,000 feet that should be included"**.*[55] Additional requirements apply to an area that is included in BAAQMD's Community at Risk Program (CARE). **The facility is located in an area included in the BAAQMD's CARE program.** According to BAAQMD, "*While overall air pollution continues to decrease in the Bay Area, some communities still experience higher pollution levels than others. These communities are generally near pollution sources (such as freeways, busy distribution centers, and large industrial facilities) and negative impacts on public health in these areas are greater. The CARE Program aims to reduce these health impacts linked to local air quality.*

The goals of the CARE Program are to:

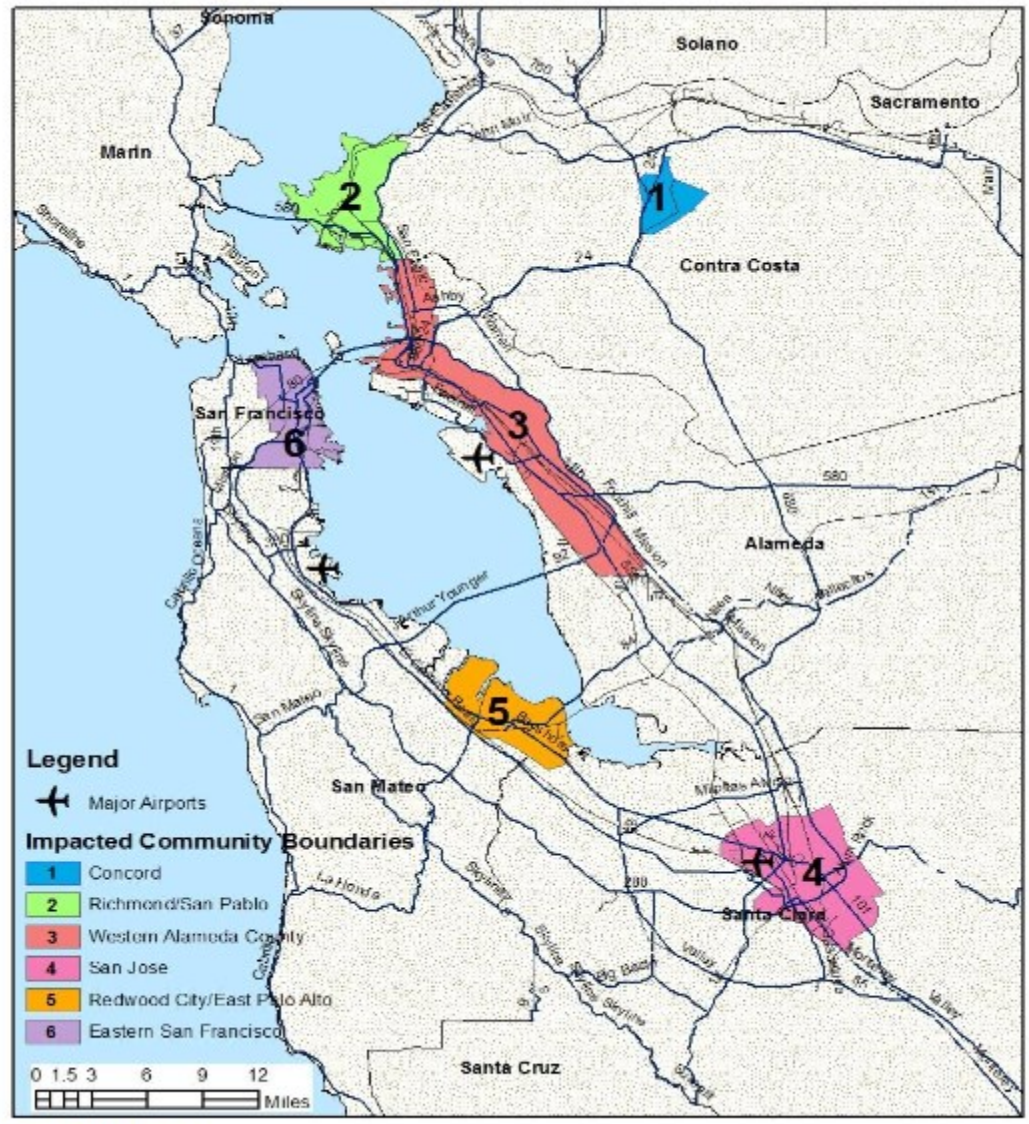
- *Identify areas where air pollution contributes most to health impacts and where populations are most vulnerable to air pollution.*
- *Apply sound scientific methods and strategies to reduce health impacts in these areas.*
- ***Engage community groups and other agencies to develop additional actions to reduce local health impacts."***[56]

As the guidance document states, "*in all areas, but especially within impacted communities identified under BAAQMD's CARE program, the Lead Agency is encouraged to develop and adopt a Community Risk Reduction Plan. To determine whether an impacted community is located in a jurisdiction, the Lead Agency should refer to Figure 5-1."*

[55] http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

[56] http://www.baaqmd.gov/?sc_itemid=AD652ACE-4CD0-4283-8992-BDF6FB0AAB65

Impacted Communities **Figure 5-1**



Source: BAAQMD 2009

The Laurelwood data center project is surrounded by Intel Corporation's Mission campus. The approximate 50-acre campus houses several corporate organizations: engineering (design, research and development), software engineering, sales and marketing, legal, supply network, and human resources, **and has more than 7,000 employees**. The Intel campus also houses data centers with many diesel generators. BAAQMD has estimated the cancer risk for

the facility of 205 in a million.[57] BAAQMD has provided me with the 2019 emissions data presented in Appendix 1.[58] On the other side of the LDC is highway 101 with its large amount on NOx, PM and TAC emissions, that the initial study fails to quantify or examine. Montague expressway, another busy major roadway, sits on the other side of the LDC.

A new data center has been approved by the City of Santa Clara at 2305 Mission College Blvd. The 2305 Mission College Boulevard data center would employ 120 625-kW diesel-fueled engine generators located within a generator yard west of the data center building. The 120 emergency backup generators would each be tested once per month at full load for up to one hour. No more than 45 generators would be tested at any one time.[59] The generators would provide 75 MW of backup power generation capacity. Diesel fuel for the generators will be stored in 24,10,000-gallon above ground tanks, with one tank located beneath each block of five generators.[60] The existing improvements on the site would be demolished to allow for construction of the project. Demolition and construction activities would last approximately 15 months. The map below depicts its location.

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[57] www.baaqmd.gov/~/media/files/planning-and-research/ceqa/santaclara-6ft.kmz?la=en

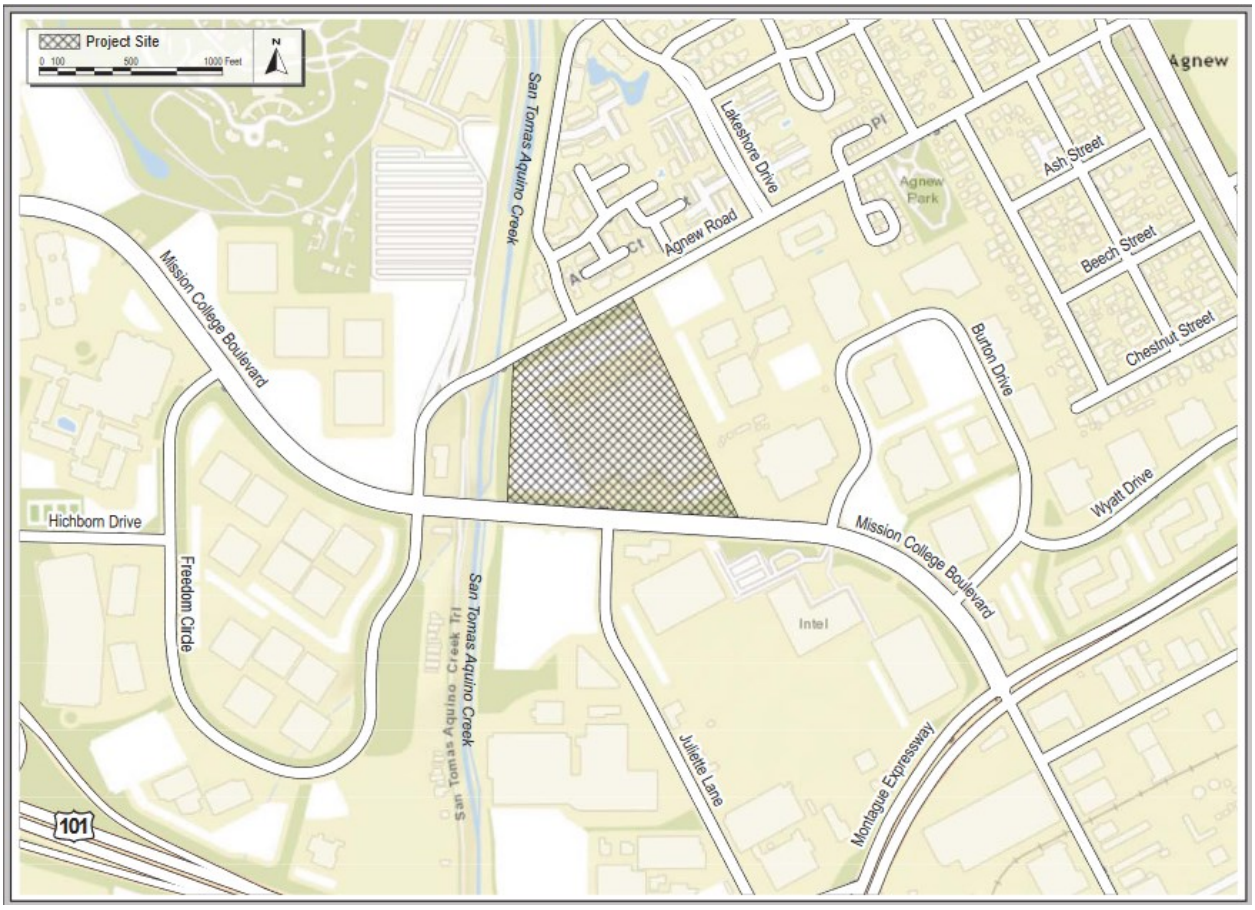
Source **632**

Santa_Clara_May_2012_schema:FID	962
Santa_Clara_May_2012_schema:PlantNo	632
Santa_Clara_May_2012_schema:Name	Intel Corporation
Santa_Clara_May_2012_schema:Address	2150 MISSION COLLEGE BLVD
Santa_Clara_May_2012_schema:City	Santa Clara
Santa_Clara_May_2012_schema:UTM_East	591780.560374
Santa_Clara_May_2012_schema:UTM_North	4137722.21689
Santa_Clara_May_2012_schema:Cancer	205.00
Santa_Clara_May_2012_schema:Hazard	0.200
Santa_Clara_May_2012_schema:PM25	3.260

[58] Email from **AREANA FLORES ENVIRONMENTAL PLANNER** Bay Area Air Quality Management District375 Beale St. Suite 600 | San Francisco, CA 94105415-749-4616 | aflores@baaqmd.gov on September 16 , 2019

[59] Initial Study for the2305 Mission College Boulevard Data Center Project March 2018 http://santaclaraca.gov/home/showdocument?id=56607 Page 13 of 126

[60] Initial Study for the2305 Mission College Boulevard Data Center Project March 2018 http://santaclaraca.gov/home/showdocument?id=56607 Page 11 of 126



According to the initial study, "*Electricity for the LDC would be supplied via a new San Tomas Junction (STJ) substation constructed on the project site, connecting through SVP's 60 kV Northwest Loop.*"[61] The northwest loop provides electrical supply to 10 data centers. An outage on that loop could impact as many as 10 data centers and an unknown number of diesel generators. The initial study recognizes that,

> "Wildfire policies could impact SVP's ability to supply power to customers if curtailments on the Pacific Gas and Electric (PG&E) system interrupt SVP's electricity

[61] TN 229584 MND/Initial Study Page 20 of 291

supplies. A Public Safety Power Shutoff (PSPS) could indirectly limit electricity supplies to SVP. A PSPS essentially de-energizes power lines in order to prevent the lines from causing wildfires. The PSPSs are generally limited to high fire risk zones and only implemented under special conditions. While the SVP service territory is not in a high risk zone, a line deenergization in one of PG&E's high risk zones to reduce the risk of lines causing a wildfire could reduce the electricity supplied to SVP through PG&E lines. Electricity supplies to SVP through PG&E could also be reduced if transmission lines were de-energized to avoid damage from a wildfire. **The potential impact of safety shutoffs on the PG&E system are not currently known or well defined by SVP or PG&E.**[62]

The initial study also recognizes that, "*The types of major regional events that are normally excluded from AAQS violation as extreme events could also cause the project to operate the standby engine generators in emergency mode due these events causing regional or local electrical outages. The peak demand of the SVP service territory exceeded 526 MW in 2018 (SVP 2019a), and growth in demand, including new data centers being added to SVP's system, would increase the need to rely on generation that is not local, which could increase the potential for future outages if transmission is shutoff forcing load to be dropped."*[63]

Despite these CEQA and BAAQMD requirements and the potential wildfire impacts, the initial study fails to conduct a cumulative impact analysis, even though this project is located in an area recognized by BAAQMD as a Community at Risk.

CONTRUCTION HEALTH RISK ASSESEMENT IS INADEQUATE

The construction HRA conducted in the initial study concludes that the health risk from construction would result in an excess cancer risk of 75.26 in a million, a significant impact. According to the initial study, ***"****Diesel particulate matter (DPM) was the only TAC modeled; its*

[62] TN 229584 MND/Initial Study Page 21 of 291
SEE also Page 49 of 291 "The types of major regional events that are normally excluded from AAQS violation as extreme events could also cause the project to operate the standby engine generators in emergency mode due these events causing regional or local electrical outages."
[63] TN 229584 MND/Initial Study Page 49 of 291

emissions result from exhaust of onsite diesel-fueled construction equipment and vehicles. Since DPM was assumed to be best represented by PM10 emitted as a result of onsite fuel combustion, ***fugitive dust emissions were excluded as they are not expected to include DPM****."*[64] The project site has had a release of the solvent trichloroethene to the soil and the groundwater.[65] Construction activities will resuspend this contaminated soil and impact local workers at Intel and other sensitive receptors near the project. The construction health risk assessment is clearly inadequate.

THE LDC AS PROPOSED HAS A SINGIFCIANT IMPACT ON ENERGY RESOURCES

The initial study states that the total quantities of diesel fuel used for all the generators operating at full load would be approximately 14,280 barrels per year (bbl/yr).[66] A significant impact under CEQA occurs when a project uses energy in a wasteful, inefficient manner. This project proposes to burn 14,280 barrels of diesel fuel, the most polluting fossil fuel available and it doesn't produce any energy. This would be the definition of inefficient and wasteful use of energy. Even while not producing any energy and assuming the project will only be tested for 21 hours a year the project will emit 24.7 tpy of NOx while the project area is in nonattainment for ozone and particulate matter.

According to the initial study the, "Project operation would not have a significant adverse effect on local or regional energy supplies and would not create a significant adverse impact on energy resources." The publicly available facts demonstrate that Silicon Valley Power will have to obtain additional resources to accommodate the load growth generated by the LDC and other data centers in the SVP service area. According to the 2019 electricity planning forms

[64] TN 229584 MND/Initial Study Page 66 of 291

[65] http://geotracker.waterboards.ca.gov/profile report.asp?global id=SL20230848m

[66] That could be reduced to 5997 barrels per year should the applicant actually accept and the intial study require a 21 hour limit on testing for each generator but there is no requirement in the initial study for the 21 hour limitation and the project has no BAAQMD permit to operate so the 21 hour operation scenario is speculative and not the worst case scenario,

submitted by SVP to the energy commission, peak load in the SVP service area was 758.8 MW in 2018 and 774 .8 MW in 2017.[67]

line	Historic LSE Peak Load:	Year 2017	Year 2018
19	Annual Peak Load / Actual Metered Deliveries	774.8	758.8
20	Date of Peak Load for Annual Peak Deliveries	9/1/17	7/25/18
21	Hour Ending for Annual Peak Deliveries	17	17
22	Interruptible Load called on during that hour (+)		
23	Self-Generation and DG Adjustments		
24	Adjustments for Major Outages		
25	Adjusted Annual Peak Load	**774.8**	**758.8**

68

The Silicon Valley Power Authority currently has ownership of 1100.4 MW of generation.[69] The product mix is included in Appendix 2.[70]

This leaves a surplus of approximately 342 MW in SVP's portfolio to serve additional customers. It should be noted that 223 MW of the portfolio are intermittent renewables, mostly wind. These products do not provide the baseload energy required by data centers.

Currently there are over 656 MW of data centers in construction or in review which is close to SVP's current demand. The CEC itself has approved the 99.4 MW McLaren Data Center, and is reviewing three data centers with a combined load of over 274 MW. The CEC data center applications total 373.17 MW which would require new resources or facilites for just the CEC approved data centers. In addition, the City of Santa Clara has approved another 73.5 MW with the 2175 Martin Avenue Data Center and 60 MW at the 2305 Mission College Data Center, which is located approximately 1,000- feet from the LDC. The 18 MW Core Site is currently under construction. Cyrus 1 has announced land acquisition for a 144 MW site and Digital Realty has announced a site purchase for 48 MW.

McLaren Data Center	17-SPPE-01	98.67 MW[71]	Under Construction

[67] Applicant and Staff indicate they believe peak load is 586 MW but that number does not include line loss, municipal use and other factors,

[68] https://ww2.energy.ca.gov/almanac/electricity_data/supply_forms_2019/

[69] The planning forms submitted to the CEC show only 854 MW of supply in 2018 https://emma.msrb.org/ER1173549-ER917302-ER1317844.pdf Page 21 of 196

[70] https://emma.msrb.org/ER1173549-ER917302-ER1317844.pdf Page 21 of 196

[71] https://ww2.energy.ca.gov/sitingcases/mclaren/

Laurelwood Data Center	19 SPPE-01	99 MW[72]	CEC Review
Walsh Data Center	19-SPPE-02	80 MW[73]	CEC Review
Sequoia Data Center	19-SPPE-03	95.5 MW[74]	CEC Review
2175 Martin Avenue Data Center	Santa Clara CEQA	13.5 MW[75]	Approved
2305 Mission College Blvd Data Center	Santa Clara CEQA	60 MW[76]	Approved
Cyrus 1 data center		144 MW[77]	Site Purchased
Digital Realty	Lafayette Street	48 MW[78]	Site Purchased
Core Site		18 MW[79]	Under Construction
Total[80]		656.67 MW	

The Laurelwood data center will require up to 99 MW of **baseload power** as the facility will operate around the clock. Intermittent renewables such as wind and solar will not provide the baseload power necessary to operate the LDC. The LDC power usage will lead to additional resource needs, which intermittent renewables will not provide.

The initial study claims the project has no energy impacts since it is consistent with the Santa Clara Climate Action Plan. In order to tier off the Climate Action Plan, the plan must be being fully implemented and on track to meet its target. The initial study does not discuss this.

Regardless, an examination of the Santa Clara Climate Action Plan demonstrates that the project is not consistent with the Plan. The GHG emission reduction strategy in the City of Santa Clara's Climate Action plan is focused on reducing overall electricity use"[81] The City has adopted a Performance metric for 2020 of 159,100 MWh of electricity savings for the entire city which would achieve an estimated reduction in GHG emissions of 27,600 MTCO2e. The Laurelwood data Center, "would consume up to the maximum electrical usage of 867,240 MWh

[72] https://ww2.energy.ca.gov/sitingcases/laurelwood/
[73] https://efiling.energy.ca.gov/GetDocument.aspx?tn=229419-1&DocumentContentId=60822
[74] https://ww2.energy.ca.gov/sitingcases/walsh/ Page 10 of 222
[75] http://santaclaraca.gov/home/showdocument?id=65138 Page 6of 290
[76] http://santaclaraca.gov/home/showdocument?id=56607 Page 11 of 126
[77] https://datacenterfrontier.com/cyrusone-preps-144-megawatt-santa-clara-campus-with-on-site-power/ "The company expects to deploy 96 megawatts of capacity on its first 15-acre property, which it acquired in August for $53.1 million. The adjacent 8-acre parcel will house a 48-megawatt data center." Property also houses a 25 MW co-gen which would reduce its footprint to 123 MW.
[78] https://datacenterfrontier.com/digital-realty-plans-for-next-phase-of-growth-in-silicon-valley-manassas/
[79] https://datacenterfrontier.com/coresite-buys-expansion-property-in-santa-clara/
[80] There are likely other data centers planned that have not made announcements.
[81] City of Santa Clara Climate Action Plan http://santaclaraca.gov/home/showdocument?id=10170 Page 53 of 116

per year," [82] which would be 600 % of the reduction target and clearly not be compliant with the City of Santa Clara GHG emission reduction strategy. According to the 2013 CAP the Santa Clara community needs to reduce emissions by an additional 309,600 MTCO2e by 2020 to achieve the emissions target (15% below 2008 baseline levels). Operation of the project would generate 255,583 metric tons of CO2e per year in indirect emissions alone. Inclusion of emissions from the LDC's maximum possible electricity use and other non-stationary sources brings this contribution to a maximum of 14 percent of the total City GHG emissions.[83]

The initial study also argues that the LDC would be consistent with the Santa Clara Climate Action Plan because Measure 2.3 of the CAP calls for completion of a feasibility study of energy efficient practices for new data center projects with an average rack power rating of 15 kilowatts or more to achieve a PUE of 1.2 or lower. According to the initial study, "*the project would have an average rack power rating range of 8 to 10 kilowatts (Jacobs 2019a, §3.8.3). This would be below the criteria in Measure 2.3, such that a feasibility study of energy efficient practices is not required. The project would be consistent with the CAP.*"[84] This does not demonstrate compliance with the cap it demonstrates that the projects rack power rating is not 15 kilowatts or more. BAAQMD recommends in its 2013 comments on the Santa Clara CAP that "***Data centers should require existing rather than just new data centers to complete a feasibility study to achieve a power use effectiveness rating of 1.2 or lower."***[85] BAAQMD's recommendation does not include limiting the 1.2 PUE analysis to just data centers with a rack rating of 15 kilowatts or more. LDC is proposing a PUE of 1.25 which is higher than BAAQMD's 1.2 PUE recommendation.

The data centers surrounding the LDC are achieving and proposing PUE's far lower than 1.25. The intel campus located next to the LDC contains data centers. One of the data

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[82] TN 227273 Laurelwood Application Page 103 of 172

[83] TN 227273 Laurelwood Application Page 104 of 172

[84] BAAQMD recommends in its 2013 comments on the Santa Clara CAP that "**Data centers to require existing rather than just new data centers to complete a feasibility study to achieve a power use effectiveness rating of 1.2 or lower. BAAQMD recommendation does not include limiting the 1.2 PUE to just data centers with a rack rating of 15 kilowatts or more**
http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA%20Letters/Santa%20Clara%20CAP%20letter_11_20_13.ashx?la=en

[85] Appendix 3 page 1

centers, "*uses close-coupled evaporative cooling that relies on recycled water, to help it to reach an annualized PUE of 1.06."*[86] "*Elsewhere in the old semiconductor fabrication plant are smaller data centers, including D2P4, which has 5MW of power capacity across 5,000 square feet (465 sq m). Thanks to free air cooling, it, too, has a PUE of 1.06 - "they have exactly the same PUE, but totally different techniques. The two facilities have the lowest PUE of any of Intel's data centers. "We've closed lots of small, inefficient data centers, and are trying to reduce our average PUE across our data centers to near 1.06."*[87]

The MND for the 2305 Mission College Boulevard Data Center states, "*with implementation of the proposed mechanical and electrical design of the building and the anticipated data center occupancy, the PUE of the data center would be1.09*."[88] "*Google senior director of data center operations Joe Kava reported that the company's trailing 12-month average PUE for 2011 was 1.14, an improvement from 1.16 in 2010. That includes a quarterly PUE of 1.12 for the fourth quarter of the year, when one facility recorded a PUE of 1.08 - the lowest ever for a Google data center."* [89] Google recently reported that, "*Our fleet-wide PUE has dropped significantly since we first started reporting our numbers in 2008. The TTM energy-weighted average PUE for all Google data centers is 1.11, making our data centers among the most efficient in the world.*"[90] The intel campus located next to the LDC contains data centers. One of the data centers, "*uses close-coupled evaporative cooling that relies on recycled water, to help it to reach an annualized PUE of 1.06."*[91] "*Elsewhere in the old semiconductor fabrication plant are smaller data centers, including D2P4, which has 5MW of power capacity across 5,000 square feet (465 sq m). Thanks to free air cooling, it, too, has a*

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86 **Inside Intel: From silicon fabrication plant, to energy-efficient data center**
https://www.datacenterdynamics.com/analysis/inside-intel-silicon-fabrication-energy-efficient-data-center/

87 **Inside Intel: From silicon fabrication plant, to energy-efficient data center**
https://www.datacenterdynamics.com/analysis/inside-intel-silicon-fabrication-energy-efficient-data-center/

88 http://santaclaraca.gov/home/showdocument?id=56607

89 https://www.datacenterknowledge.com/archives/2012/03/26/google-our-pue-is-lower-and-its-scrupulous

90 https://www.google.com/about/datacenters/efficiency/internal/index.html

91 **Inside Intel: From silicon fabrication plant, to energy-efficient data center**
https://www.datacenterdynamics.com/analysis/inside-intel-silicon-fabrication-energy-efficient-data-center/

PUE of 1.06 - "they have exactly the same PUE, but totally different techniques. The two facilities have the lowest PUE of any of Intel's data centers. "We've closed lots of small, inefficient data centers, and are trying to reduce our average PUE across our data centers to near 1.06."[92]

The PUE for the LDC is too high. The project, *"would consume up to the maximum electrical usage of 867,240 MWh per year,"* [93] Requiring the LDC to achieve a similar PUE of 1.6 to 1.9 as the adjacent data centers currently achieve would lead to a reduction in electrical needs of approximately 164,755 MWh to 137,758 MWh per year. Achieving a PUE of 1.2 as recommended by BAAQMD would result in a reduction of electrical usage of approximately 43,362 MWh.

The LDC's diesel generators will consume up to 14,280 barrels per year of diesel fuel and will produce no energy- a complete waste and a significant impact to energy resources. The LDC's proposed PUE is far above what other data centers are regularly achieving in the project area and will amount to a wasteful and inefficient use of energy- a significant impact under CEQA requiring an AFC level analysis for the project.

GHG Emissions Are Significant

The initial study states that, "*CEQA requires lead agencies to address the consistency of individual projects requiring discretionary approvals with reduction measures in the 2013 CAP and goals and policies in the Santa Clara General Plan designed to reduce GHG emissions. Compliance with appropriate measures in the City's CAP would ensure an individual project's consistency with an adopted GHG reduction plan.*" The project is not eligible to use the CAP to evaluate full-build emissions to determine its significance under CEQA, because the CAP is based on 2020 GHG reduction goals and this project will not be completed before 2023.

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[92] **Inside Intel: From silicon fabrication plant, to energy-efficient data center** https://www.datacenterdynamics.com/analysis/inside-intel-silicon-fabrication-energy-efficient-data-center/

[93] TN 227273 Laurelwood Application Page 103 of 172

Therefore, the initial study does not provide the substantial evidence needed to justify a less than significant determination.

If the Climate Action Plan is utilized to determine if the project has a significant impact to the environment, the conclusion will be that the project does have a significant GHG impact. BAAQMD commented on the Santa Clara Climate Action plan in 2013. BAAQMD commented that Santa Clara needed to expand Measure 2.3 to state that, *"**Data centers to require existing rather than just new data centers to complete a feasibility study to achieve a power use effectiveness rating of 1.2 or lower. Staff recommends that this measure also encourage and incentivize data centers to utilize alternatives to diesel powered back-up generators to reduce GHG emissions and other pollutants from the testing and use of these generators."**[94]* The LDC fails to achieve a 1.2 PUE and also includes the use of 56 back-up diesel generators.

The initial study concludes that the projects emissions from the diesel generators is not significant because the potential to emit from the generators would not exceed the BAAQMD significance level of 10,000 MTCO2e/yr. Despite BAAQMD's proposed prohibition of back up diesel generators to lower criteria air pollutant and GHG emissions at data centers, LDC still proposes their use with 56 of these extremely polluting devices. Recently BAAQMD has implemented a new policy regarding multiple back up diesel generators, which requires that 100 hours of emergency operation per year be assumed in calculating the potential to emit. The initial study estimates that the back-up diesel generators will emit 2,583 MTCO2e/yr while operating for 21 hours a year per engine for testing and maintenance. The applicant estimates that the back-up diesel generators will emit 6,142 MTCO2e/yr. Neither estimate includes the GHG emissions that will result from 100 hours of emergency operation as required by the new BAAQMD Policy entitled, "Calculating Potential to Emit for Emergency Backup Power Generators."[95] GHG emissions from 100 hours of emergency operation will be approximately 12,300 MTCO2e/yr and would be a significant impact under BAAQMD's regulatory scheme.[96]

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[94] http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA%20Letters/Santa%20Clara%20CAP%20letter_11_20_13.ashx?la=en Letter is included as Appendix 3

[95] http://www.baaqmd.gov/~/media/files/engineering/policy_and_procedures/banking-and-offsets/calculating-pte-for-emergency-generators-06032019-pdf.pdf?la=en

[96] A rough estimate would be 100/21 x 2,583 MTCO2e/yr = 12,300 tpy MTCO2e/yr

According to the 2013 City of Santa Clara CAP the Santa Clara community needs to reduce emissions by an additional 309,600 MTCO2e by 2020 to achieve the emissions target (15% below 2008 baseline levels). Operation of the project would generate 255,583 metric tons of CO2e per year. Inclusion of emissions from the LDC's maximum possible electricity use and other non-stationary sources brings this contribution to a maximum of 14 percent of the total City GHG emissions.[97] The LDC is clearly not consistent with the Santa Clara CAP. Instead of reducing GHG emissions by 15%, it increases current GHG emissions in Santa Clara by 14%.

The initial study concludes that, *" With implementation of the efficiency measures to be implemented with the project, in combination with the green power mix used by SVP, GHG emissions related to the project would not conflict with the Santa Clara CAP or other plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs."* Clearly as explained above, the projects GHG emissions are not consistent with the Santa Clara CAP. No proof that the Santa Clara CAP is fully implemented and achieving its GHG reductions is included in the initial study. The Santa Clara Cap only covers the period up until 2020 and is not applicable to the project. As illustrated in the table below the power mix of SVP for non-residential projects is almost identical to the State of California Power Mix.[98] Inclusion of emissions from the LDC's maximum possible electricity use and other non-stationary sources brings this contribution to a maximum of 14 percent of the total City GHG emissions. This is a significant impact.

[97] TN 227273 Laurelwood Application Page 104 of 172 Initial study estimates GHG emissions to be less at 171,770 **MTCO2e/yr Initial Study Page 163 of 291 Discrepancy is not explained.**

[98] http://www.siliconvalleypower.com/svp-and-community/about-svp/power-content-label

2018 Power Content Label

SILICON VALLEY POWER				
ENERGY RESOURCES	SILICON VALLEY POWER RESIDENTIAL MIX	SILICON VALLEY POWER NON-RESIDENTIAL MIX	SANTA CLARA GREEN POWER (100% VOLUNTARY)	2018 CA POWER MIX**
Eligible Renewable	**45%**	**31%**	**2%**	**31%**
Biomass & Biowaste	0%	2%	0%	2%
Geothermal	0%	5%	0%	5%
Eligible Hydroelectric	0%	13%	0%	2%
Solar	26%	0%	2%	11%
Wind	19%	11%	0%	11%
Coal	**0%**	**0%**	**0%**	**3%**
Large Hydroelectric	**55%**	**11%**	**0%**	**11%**
Natural Gas	**0%**	**34%**	**0%**	**35%**
Nuclear	**0%**	**0%**	**0%**	**9%**
Other	**0%**	**0%**	**98%**	**<1%**
Unspecified sources of power*	**0%**	**24%**	**0%**	**11%**
TOTAL	**100%**	**100%**	**100%**	**100%**

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.
** Percentages are estimated annual by the California Energy Commission based on the electricity generated in California and net imports as reported to the Quarterly Fuel and Energy Report database and the Power Source Disclosure program.

[99]

Conclusion

Section 1934 of Title 20 states the purpose of the Small Power Plant Exemption. ***"It is the policy of the State Energy Resources Conservation and Development Commission to promote the development of electric energy supply technologies that prudently conserve and economically use energy resources. A major purpose of these regulations is to encourage the use of those technologies by expediting the procedures necessary for the***

[99] http://www.siliconvalleypower.com/svp-and-community/about-svp/power-content-label

approval and development of alternate sources of electric generation." The Laurelwood Data Center is not an innovative technology for producing electricity, nor does the project prudently conserve and economically use energy. Therefore, the small power plant exemption is not available to the LDC. In addition, the Laurelwood Data Center is not eligible for a small power plant exemption because it consists of 165 megawatts of back-up diesel generators, which is over the 100 MW limit for the Small Power Plant Exemption. The initial study fails to examine the cumulative impacts of the project and fails to consider that the project is located in the Community At Risk Program area for the BAAQMD, which entails additional requirements. Because the construction health risk assessment doesn't include fugitive dust, which contains contamination from previous activities at the site, the HRAs for the construction of the project is inadequate. The initial study also fails to utilize BAAQMD's new policy for calculating the potential to emit for the emergency back-up generators, which lead to false conclusions about the significance of the projects operational emission. The applicant needs to file an AFC for this project as the LDC does not qualify for the SPPE process and the LDC has significant energy and environmental impacts.

Appendix 1-Intel Campus Emissions 2019 [100]

BAY AREA AIR QUALITY MANAGEMENT DISTRICT Printed: SEP 16, 2019

DETAIL POLLUTANTS - ABATED

MOST RECENT P/O APPROVED (2019)

Intel Corporation (P# 632)

PLANT TOTAL:

lbs/day Pollutant

7.50E-06 Arsenic (all) (1030)

8.62E-03 Benzene (41)

4.40E-06 Beryllium (all) pollutant (1040)

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[100] Email from **AREANA FLORES ENVIRONMENTAL PLANNER** Bay Area Air Quality Management District375 Beale St. Suite 600 | San Francisco, CA 94105415-749-4616 | aflores@baaqmd.gov on September 16 , 2019

1.88E-05 Cadmium (1070)

2.89E+02 Carbon Dioxide, non-biogenic CO2 (6960)

1.36E+00 Carbon Monoxide (CO) pollutant (4990)

3.88E-07 Chromium (hexavalent) (1095)

8.11E-02 Diesel Engine Exhaust Particulate Matter (1350)

7.13E-04 Formaldehyde (124)

1.59E-05 Lead (all) pollutant (1140)

2.50E-05 Manganese (1160)

5.30E-06 Mercury (all) pollutant (1190)

1.15E-02 Methane (CH4) (6970)

3.04E-04 Nickel pollutant (1180)

5.82E+00 Nitrogen Oxides (part not spec elsewhere) (2990)

2.31E-03 Nitrous Oxide (N2O) (2030)

4.09E-01 Organics (other, including CH4) (990)

3.96E-05 PAH's (non-speciated) (1840)

2.81E-03 Sulfur Dioxide (SO2) (3990)

CITY OF SANTA CLARA
ELECTRIC UTILITY DEPARTMENT
POWER SUPPLY RESOURCES
(For the Fiscal Year Ended June 30, 2018)

Source	Capacity Available (MW)	Recorded Energy (GWh)	Percent of Total Energy
City-Owned Generating Facilities[1]			
Cogeneration	7.0	43.49	1.2%
Stony Creek Hydro System	11.6	9.81	0.3
Gianera Generating Station	49.5	5.87	0.2
Grizzly Project	17.7	29.78	0.8
Donald Von Raesfeld Power Plant	147.8	768.52	20.6
Jenny Strand Solar Park	0.1	0.20	0.0
Purchased Power:[2]			
Western Area Power Administration (Western)[3]	136.0	277.17	7.4
Manzana Wind	50.0	136.16	3.6
G2 (Landfill)	1.6	12.59	0.3
Ameresco (Landfill)	0.8	2.81	0.1
Ameresco FWD (Landfill)	4.2	30.85	0.8
Ameresco VASCO (Landfill)	4.3	32.77	0.9
TriDam-Beardsley	11.5	68.76	1.8
TriDam-Donnells	72.0	225.13	6.0
TriDam-Tulloch	25.9	139.24	3.7
TriDam-Sandbar	16.2	98.23	2.6
Rosamond (Recurrent Solar)	20.0	59.36	1.6
Graphics Packaging	27.7	57.24	1.5
Friant 1	25.0	110.32	3.0
Quinten Luallen (Friant 2)	7.3	50.46	1.3
Santa Clara Tioga Canopy	0.4	0.46	0.0
Joint Power Agencies[2]			
NCPA			
Geothermal Project	55.7	347.04	9.3
Combustion Turbine Project	31.0	6.34	0.2
Hydroelectric Project	93.6	177.97	4.8
Lodi Energy Center Project	77.9	276.41	7.4
Seattle City Light[4]	32.6	(21.1)	(0.6)
M-S-R PPA			
San Juan[5]	51.0	196.89[5]	5.3
Big Horn I Wind Energy	105.0	269.76	7.2
Big Horn II Wind Energy	17.0	42.78	1.1
Market Purchases	--	278.40	7.5
Total[6]	1,100.4	3,733.4	100.0%

[101] https://emma.msrb.org/ER1173549-ER917302-ER1317844.pdf Page 21 of 196

Appendix 3 BAAQMD Comment Letter on Santa Clara CAP

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

November 20, 2013

Payal Bhagat
Assistant Planner II
City of Santa Clara
1500 Warburton Avenue
Santa Clara, CA 95050

Subject: City of Santa Clara Climate Action Plan

Dear Ms. Bhagat,

Bay Area Air Quality Management District (Air District) staff has reviewed the City of Santa Clara's (City) Climate Action Plan (Plan). The Plan defines the City's strategy to address climate change and contains measures to avoid, reduce, and sequester greenhouse gas (GHG) emissions. Air District staff commends the City's initiative in addressing GHG emissions and supports the City's efforts in developing a Climate Action Plan. Air District staff has the following specific comments on the City's Plan.

We commend the City for including local actions, that when coupled with state actions, will help Santa Clara achieve its 2020 goal of reducing GHG emissions by 15 percent below 2008 emission levels. In fact, the City anticipates that it will surpass its goal and achieve a 24 percent reduction in GHG emissions by 2020. However, in order to meet the State's and Air District's climate stabilization goal of an 80 percent reduction below 1990 levels by 2050 (Executive Order S-3-05, Resolution), California will to need to explore all feasible avenues to achieve significant emission reductions. In this spirit, we have identified additional feasible measures that have proven effective at reducing GHG emissions in other jurisdictions and are not included in the Plan. Air District staff recommends that the Plan strengthen its GHG reduction approach in the following ways.

1) Expand Measure 1.1, Coal-free by 2020, to include increasing the City's renewable energy power mix beyond the requirements of the Renewable Portfolio Standard. We strongly commend switching from coal to natural gas; however, we encourage the City to commit to increasing the City's power mix from renewable resources to fifty percent or higher. In addition, we recommend that the City include more information on how the emission reductions were calculated for this measure to better understand the change in the City's power mix from 2008 to 2020.

2) Expand Measure 2.3, Data centers, to require existing, rather than just new, data centers to complete a feasibility study to achieve a power usage effectiveness rating of 1.2 or lower. Staff recommends that this measure also encourage and incentivize data centers to utilize alternatives to diesel powered back-up generators to reduce GHG emissions and other air pollutants from the testing and use of diesel generators.

3) Extend Measure 5.2, Alternative construction fuels, to prohibit the use of diesel generators and use on-site grid power at construction sites when feasible. Due to the high amount of future construction the City anticipates, prohibiting the use of diesel generators provides a significant opportunity to reduce GHG emissions as well as other air pollutants.

4) Expand Measure 7.2, Urban cooling for parking lots, to require the installation of cool roofs in new developments and to incentivize cool roofs for existing developments.

Staff supports the Plan's strong implementation program for annual reporting and monitoring. To further track the implementation of required measures in new projects, staff recommends that the City consider preparing a compliance checklist for new developments.

We commend the City for addressing the critical issue of climate change through local action. We believe that the City's Climate Action Plan will likely achieve its GHG reduction target and that the City will be in a good position to use the CAP as a tierable document under CEQA.

Air District staff is available to assist the City in addressing these comments. If you have any questions, please contact Sigalle Michael, Senior Planner, at (415) 749-4683 or smichael@baaqmd.gov.

Sincerely,

Jean Roggenkamp
Deputy Air Pollution Control Officer

cc: BAAQMD Director Cindy Chavez
BAAQMD Chair Ash Kalra
BAAQMD Director Liz Kniss
BAAQMD Director Jan Pepper

RESUME OF ROBERT SARVEY

Academic Background

BA Business Administration California State University Hayward, 1975

MBA California State University Hayward, 1985

Experience

San Joaquin Valley Air Pollution Control District Citizens Advisory Board Industry Representative: Analyzed proposed air quality regulations and made recommendations to the Governing Board for approval.

GWF Peaker Plant 01-AFC-16: Participated as an Intervenor in the project and helped negotiate and implement a 1.3 million dollar community benefits program. Successfully negotiated for the use of local emission reduction credits with GWF to offset local air quality impacts.

Tesla Power Project 01- AFC-04: Participated as an Intervenor and provided air quality testimony on local land use and air quality impacts. Participated in the development of the air quality mitigation for the project. Provided testimony and briefing which resulted in denial of the PG&E's construction extension request.

Modesto Irrigation District 03-SPEE-01: Participated as an Intervenor and helped negotiate a $300,000 air quality mitigation agreement between MID and the City of Ripon.

Los Esteros: 03-AFC-2 Participated as an Intervenor and also participated in air quality permitting with the BAAQMD. Responsible for lowering the projects permit limit for PM-10 emissions by 20%.

SFERP 4-AFC-01: Participated as an Intervenor and also participated in the FDOC evaluation. My comments to the BAAQM D resulted in the projects PM -10 emission rate to be reduced

from 3.0 pounds per hour to 2.5 pounds per hour by the District. Provided testimony on the air quality impacts of the project.

Long Beach Project: Provided the air quality analysis which was the basis for a settlement agreement reducing the projects NOx emissions from 3.5ppm to 2.5ppm.

ATC Explosive Testing at Site 300: Filed challenge to Authority to Construct for a permit to increase explosive testing at Site 300 a DOE facility above Tracy. The permit was to allow the DOE to increase outdoor explosions at the site from 100 pounds per charge to 300 pounds per charge and also grant an increased annual limit on explosions from 1,000 pounds of explosive to 8,000 pounds of explosives per year. Succeeded in getting the ATC revoked.

CPUC Proceeding C. 07-03-006: Negotiated a settlement with PG&E to voluntarily revoke Resolution SU-58 which was the first pipeline safety waiver of GO112-E granted in the State of California. Provided risk assessment information that was critical in the adoption of the Settlement Agreement with PG&E which, amongst other issues, resulted in PG&E agreeing to withdraw its waiver application and agreeing to replace the 36-inch pipeline under the sports park parcel after construction.

East shore Energy Center: 06-AFC-06: Intervened and provided air quality testimony and evidence of cancellation of Eastshore's power purchase agreement with PG&E.

Colusa Generating Station: 06-AFC-9: Participated as air quality consultant for Emerald Farms. Filed challenge to the PSD Permit.

CPUC proceeding 08-07-018: Tesla Generating Station CPCN participated in proceeding which was dismissed due to motion by IEP. Reviewed all filings, filed protest, signed confidentiality agreement and reviewed all confidential testimony.

GWF Tracy Combined Cycle 08-AFC-07: Participated in negotiation of the Air Quality Mitigation Agreement with the San Joaquin Valley Air Pollution Control District and GWF.

CPUC Proceeding 09-09-021: Provided Testimony on behalf of CAlifornians for Renewable

Energy. Demonstrated PG&E failed to follow its environmental protocol in the LTPP. Provided testimony and evidence that PG&E's need had fallen since 2007 and that the Commission should limit PG&E's procurement to the 950-1000 MW Range.

CPUC Proceeding A. 09-04-001: Represented CAlifornians for Renewable Energy in the proceeding. Demonstrated PG&E had violated terms of Mariposa Settlement Agreement. PG&E was fined $25,000 for breach of settlement.

CPUC Proceeding A. 09-10-022: Provided Testimony on behalf of CAlifornians for Renewable Energy. Provided confidential evaluation of PPA value. Provided testimony and evidence that PG&E had violated the Mariposa Settlement. Provided testimony that demonstrated PG&E's demand had fallen sharply since the issuance of D. 07-12-052.

Oakley Generating Station 09-AFC-04: Participated as an intervenor. Provided testimony in Alternatives, Air Quality, Environmental Justice, and Water Quality. Negotiated settlement with CCGS to not use ERC's and instead exclusively use 2.5 million dollars to create real time emission reductions through BAAQMD real time emission reduction programs.

Pio Pico PSD Permit: Participated in the Pio Pico PSD permit. Comments resulted in a remand to the air district and a lowering of particulate matter emission limits by 10%

CPUC Proceeding A.11-12-003: Was credited by the decision for demonstrating that an additional 5 MW of firm capacity was not needed from the Thermal Energy Biomass Plant.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of McLaren Laurelwood Data Center

Docket Number 19-SPPE-01

Declaration of Robert Sarvey

I Robert Sarvey Declare as Follows:

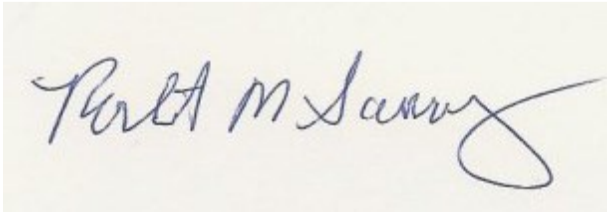
1. I prepared the attached testimony on the IS/MND for the Laurelwood Data Center.

2. A copy of my professional qualifications and experience is included with this Testimony and is incorporated by reference in this Declaration.

3. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed in Tracy, California on October 3, 2019.



Robert M. Sarvey

501 W. Grant Line Rd.

Tracy. CA. 95376

209 835-7162

Attachment 5 Robert Sarvey's Rebuttal Testimony

State of California
State Energy Resources Conservation and Development Commission

In the matter of:	
Laurelwood Data Center	Docket 19-SPPE-01

REBUTTAL TESTIMONY OF ROBERT SARVEY

The project does not qualify for the Small Power Plant Exemption

Section 1934 of Title 20 provides the purpose of the Small Power Plant Exemption. Section 1934 states, "*It is the policy of the State Energy Resources Conservation and Development Commission to promote the development of electric energy supply technologies*

that prudently conserve and economically use energy resources. A major purpose of these regulations is to encourage the use of those technologies by expediting the procedures necessary for the approval and development of alternate sources of electric generation." CEC Staff does not believe that its review of an SPPE application is governed by the purpose stated in Section 1934 of Title 20. CEC Staff claims that, "*regarding innovative or alternative technologies, Section 1934, cited by Mr. Sarvey, is a broad policy statement explaining the reasons for the CEC's enactment of the regulations governing SPPEs. It contains no specific requirements to govern staff's review of this SPPE petition*."[102]

CEC Staffs testimony is that the purpose of Section 1934 the Small Power Plant Exemption is not relevant to the review of the LDC. The purpose of section 1934 is meant to guide the energy commission's review of projects with a generating capacity under 100 MW. A regulation is a rule adopted by a state regulatory agency to implement, interpret, or make specific the law enforced or administered by it, or to govern its procedure. Staff's review procedures do not trump the intent of Section 1934 it's quite the opposite. The purpose of Staff's review is to comply with the purpose of Section 1934, not to define the regulation.

This is very similar to staff's interpretation of the project's generating capacity. In applying Section 2003 the commission staff normally uses a three-step process. First, they determine the gross rating of the project, in this case it would be 168 MW.[103] Then they determine the Coincidental Minimum Auxiliary load, which would be zero in this case. Then they determine the projects generating capacity which is the gross generating capacity minus the auxiliary load. In this case the generating capacity determined pursuant to Section 2003 is 168 MW. Section 2003 also provides that, *"the maximum gross rating cannot be limited by an operator's discretion to lower the output of the turbine generator(s) or by temporary design modifications that have no function other than to limit a turbine generator's output.*" This project is not under 100 MW and does not qualify for the Small Power Plant Exemption. Staff considers the data

[102] TN 230202 Page 2 of 17

[103] 56 Generators X 3MW = 168 MW

centers design load of 99 MW as the maximum load of the data center. This method does not comply with Section 2003. Nowhere in Section 2003 does it mention the load from a data center being the generating capacity.

To illustrate how inconsistent this method is, consider the three 100 MW data centers being reviewed by the commission. The first is the approved McLaren data center with 47 generators and a total generating capacity of 129.25 megawatts. The second is the Laurelwood data center with 56 generators and a gross generating capacity of 168 megawatts. The third is the Sequoia Data Center with 47 generators totaling 121.5 megawatts. Under Staff's method of calculating generating capacity, no matter how many megawatts of back up generation are utilized in the project, their generating capacity is still under 100 megawatts.

The commission recognizes that Section 2003 does not provide authorization or a methodology for determining generating capacity for non-grid generation. On August 14, 2009 the Commission initiated a new rulemaking proceeding Docket, 19- SIT-01. According to the OIR, *"The new rulemaking docket is opened to updating title 20 sections 2001 and 2003 relating to the methodology for determining generating capacity of power generating facilities. The rulemaking will amend regulatory language to clarify the methodology for calculating generating capacity for non-grid tied electrical generating facilities."*

On August 17, 2019 I filed a motion to dismiss the proceeding as the project has a generating capacity of 168 MW when applying Section 2003 to determine the projects generating capacity. Abruptly on August 29, 2019, twelve days after filing my motion to dismiss, the Commission canceled the order instituting rulemaking.

At this point it's clear the commission is utilizing some underground regulations to process this and other data center applications. They certainly are not complying with the language or purpose of the Small Power Plant Exemption. Section 2003 does not provide a method where generating capacity can be determined by data center load. Accordingly, the project DOES NOT qualify for SPPE treatment, as the LDC's generating capacity calculated under Section 2003 is 168 MW.

The project's potential to emit NOx emissions is over 100 tons per year

According to the initial study, "*staff does not expect the project would be subject to Title V or PSD.*"[104] In calculating the annual potential to emit for 100 hours of emergency operation as required by BAAQMD's policy, the applicant and staff assumed that 33 generators would operate for 100 hours to meet the 99 MW load of the data center for 100 hours. In doing so the applicant calculated that the emergency generators would emit 94 tons of NOx, assuming 100 hours of emergency operation of 33 engines at full load and 21 hours of testing and maintenance.[105] BAAQMD's policy requiring 100 hours of emergency operation states,

> "Such facilities should presume **that each** of their generators will experience 100 hours per year of emergency operation when calculating their PTE for purposes of determining the applicability of the permitting regulations in Reg. 2 - including the District's New Source Review regulations (Reg. 2, Rule 2) and Title V Major Facility Review regulations (Reg. 2, Rule 6)."[106]

The BAAQMD policy requires that 100 hours of emergency operation **for each** generator be included in the potential to emit.[107] The project has 56 generators, not 33. The BAAQMD policy would require 100 hours of emissions from each of the 56 generators be included in the potential to emit. One hundred hours of emergency operation from each generator would generate approximately 117 tons of NOx per year. Including the 24.4 tons per year for testing and maintenance emissions, the project

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[104] TN 230202 California Energy Commission Staff Reply to Opening Testimony Page 5 of 17

[105] TN 229116 Laurelwood Data Center Bay Area AQMD Policy Compliance Letter Page 4 of 8

[106] **Calculating Potential to Emit for Emergency Backup Power Generators Page 2 of 5** https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKEwjL8IOUsqzlAhXJGTQIHSgeDEgQFjAAegQIABAC&url=http%3A%2F%2Fwww.baaqmd.gov%2F~%2Fmedia%2Ffiles%2Fengineering%2Fpolicy_and_procedures%2Fbanking-and-offsets%2Fcalculating-pte-for-emergency-generators-06032019-pdf.pdf%3Fla%3Den&usg=AOvVaw0SWoc-Rde7FdGofg0rwW8b

[107] TN 229419 Sequoia Data Center SPPE application 19-SPPE-03 Page 61 of 222

would emit 141 tons per year of NOx emissions. The project would be subject to BAAQMD's New Source Review regulations (Reg. 2, Rule 2) and Title V requirements.

Emergency Operation

The initial study concludes that an outage occurring on the Northwest Loop is likely to last a maximum of 7 hours and their emergency operations analysis assumes that this is the longest duration an outage could occur.[108] The initial study acknowledges that wildfire impacts from the PSPS events can occur as the initial study states , "*Wildfire policies could impact SVP's ability to supply power to customers if curtailments on the Pacific Gas and Electric (PG&E) system interrupt SVP's electricity supplies."* The initial study also recognizes that, "*The types of major regional events that are normally excluded from AAQS violation as extreme events could also cause the project to operate the standby engine generators in emergency mode due these events causing regional or local electrical outages."*

Under PG&E's Public Safety Power Shutoff program the LDC could experience an extended outage of multiple days according to PG&E's PSPS website.[109] An extended outage requiring operation of the back-up diesel generators is a reasonably foreseeable event. On October 9, 2019 over 700,000 people in PG&E's service area were without power, some for over three days. The October 9, 2019 public safety shutoff impacted 38,250 customers in Santa Clara County alone.[110]

The initial studies' conclusions about air quality impacts from emergency operation are inadequate as they fail to analyze the new reality of possible multiple day shutoffs due to PG&E's PSPS shutoffs.

The project will result in a cumulatively considerable net increase of NOx emissions

[108] Initial Study does model 24 hours of emergency operation for PM2.5 but not NOx

[109] https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfires/public-safety-power-shutoff-faq.page also see Attachment 1 to this testimony

[110] https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfires/public-safety-event.page?WT.mc_id=Vanity_pspsupdates Viewed October 9, 2019

The initial study concludes that the LDC will not result a cumulatively considerable net increase of any criteria pollutant as it does, "*not exceed any of the BAAQMD operation emissions significance thresholds*"[111]. In arriving at that conclusion, the initial study does not consider the applicant's projected unmitigated 69 tons of NOx emissions[112] from emergency operation, required to be included in the potential to emit by the new BAAQMD policy. The new BAAQMD policy is not applicable for the purposes of determining emissions offsets or BAAQMD Regulation 2 Rule 5 toxics requirements, and does not apply for emergency fire pump engines. All other new source review and major facility rules apply.

> "When determining the Potential to Emit (PTE) for an emergency backup power generator, the District shall include emissions resulting from emergency operation of 100 hours **per year**, in addition to the permitted limit for reliability-related and testing operation. **Applicability** 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.

In applying the BAAQMD regulations for "New Source Review" Section 2-2-604 details how to calculate a cumulative increase under new source review. "*Cumulative Increase Calculation Procedures: The cumulative increase in emissions associated with an authority to construct and/or permit to operate for a source shall be calculated as: 604.1 New Source: The emissions increase associated with a new source is the source's potential to emit.*"

According to the applicant's calculations, when including emergency operation as required by BAAQMD's new rule, the potential to emit NOx for the emergency

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[111] TN 229584 Page 61 of 291

[112] TN 229116 Page 4 of 8 Actual NOx emissions from emergency operation are approximately 117 tons per year. See above the actual total is 117 tons per year of unmitigated NOx emissions.

generators is 94 tons per year of NOx.[113] According to the initial study the project owner will provide 28.4 tons per year of NOx offsets[114] leaving an unmitigated total of 65.6 tpy of NOx emissions. The BAAQMD annual significance threshold is 10 tpy of NOx so the unmitigated 65.6 tpy of NOx would be a significant impact.

The projects daily NOx emissions computed pursuant to BAAQMD's new back-up generator rule[115] would be approximately 515 pounds per day.[116] The project applicant is offering 28.4 tons per year of ERC's or approximately 155 pounds per day leaving approximately 360 pounds per day of unmitigated NOx emissions, which would be higher than the 54 pound per day significance level, and would be a significant impact.

Cumulative Air Quality Impacts

In CEC Staff's testimony CEC staff utilized BAAQMD CEQA significance levels for stationary source projects permitted by BAAQMD to determine that the project had no significant impacts. In their analysis they conclude that the project's backup diesel generators do not exceed any significance levels for a BAAQMD permitted stationary source, therefore no cumulative impact assessment need be conducted[117] because the project's back up generators do not violate any of the BAAQMD single source significance levels. In making the determination that the projects emissions and criteria pollutant impacts are below significance criteria from BAAQMD CEQA Guidelines, the CEC Staff is applying the significance levels for sources that are permitted by BAAQMD and have no other emission sources.[118] In this case, this project has two components,

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[113] **TN #:** 229116 Laurelwood Data Center Bay Area AQMD Policy Compliance Letter Page 4 of 8 Actual potential to emit for emergency generators is 141 tons per year of NOx.

[114] TN 229584 Page 61 of 291

[115] https://www.google.com/search?client=firefox-b-1-d&q=BAAQMD+Calculating+Potential+to+Emit+for+EmergencyBackup+Power+Generators

[116] 94 tons / 365 days

[117] TN 230202 Page7 of 17 The actual amount is approximately 780 pound per day

[118] BAAQMD 2017 CEQ Guidelines Section 5.2.3 Page 60 of 224

the diesel generators that are permitted by BAAQMD and the operations of the LDC that are not permitted by BAAQMD.

According to the BAAQMD CEQA guidelines, some projects have emissions that are permitted by BAAQMD, and some sources which are not permitted by BAAQMD, as is the case here.[119] In those instances, the BAAQMD CEQA guidelines recommend quantifying both the permitted sources and the non-permitted source emissions and compare them to the BAAQMD significance levels. The initial study fails to do so and therefore fails to comply with the BAAQMD CEQA Guidelines that it purportedly uses to evaluate the projects consistency with CEQA.

CEQA is the yardstick the Energy Commission Staff is supposed to use in evaluating this project, not the BAQMD CEQA Guidelines. Unlike the BAAQMD guidelines, CEQA requires that the lead agency must analyze cumulative impacts whenever a proposed project's individual impacts have the potential to combine with related impacts from other projects to compound environmental harm. The Guidelines define cumulative impacts as two or more individual effects which, when considered together, are considerable or compound or increase other environmental impacts. If the proposed project will not make any contribution to the cumulative impact, the lead agency need not address it. **However, if even a tiny portion of the cumulative impact is caused by the proposed project, an EIR must analyze it.** The ultimate goal of this analysis is to determine whether the proposed project's incremental contribution is cumulatively considerable and thus significant. A project's incremental impact may be individually limited, but cumulatively considerable when viewed together with the environmental impacts from past, present, and probable future projects. A proposed project's incremental effects may be cumulatively considerable even when its individual effects are limited. **In other words, CEQA does not excuse an EIR from evaluating cumulative impacts simply because the project-specific analysis determined its impacts would be less than significant**. **Similarly, a less than**

[119] BAAQMD 2017 CEQ Guidelines Section 5.2.4 Page 61 of 224

significant impact conclusion at the project-level does not guarantee the project's contribution to a significant cumulative impact will be less than cumulatively considerable.

Utilities and Service Systems

The initial study claims without analysis that, "*Construction and operation of the project would not require new or expanded electric power utilities. Therefore, potential impacts would be less than significant.*"[120] Currently there are over 656 megawatts of data centers in construction or in review, which is close to SVP's current demand. The CEC itself has approved the 99.4 MW McLaren Data Center, and is reviewing three data centers with a combined load of over 274 MW. The CEC data center applications total 373 MW. The City of Santa Clara has approved another 73.5 MW with the 2175 Martin Avenue Data Center[121], and 60 MW at the 2305 Mission College Data Center, [122] which is located approximately 1,000- feet from the LDC. The 18 MW Core Site is currently under construction.[123] Cyrus 1 has announced land acquisition for a 144 MW site[124] and Digital Realty has announced a site purchase for 48 MW. 125 The publicly available facts demonstrate that Silicon Valley Power will have to obtain additional resources to accommodate the load growth generated by the LDC and other data centers in the SVP service area. According to the 2019 electricity planning forms submitted by SVP to the energy commission, peak load in the SVP service area was 758.8 MW in 2018 and 774 .8 MW in 2017. [126] Silicon Valley Power Authority currently

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[120] TN 229584 Page 228 of 291

[121] http://santaclaraca.gov/home/showdocument?id=65138 Page 6of 290

[122] http://santaclaraca.gov/home/showdocument?id=56607 Page 11 of 126

[123] https://datacenterfrontier.com/coresite-buys-expansion-property-in-santa-clara/

[124] https://datacenterfrontier.com/cyrusone-preps-144-megawatt-santa-clara-campus-with-on-site-power/ "The company expects to deploy 96 megawatts of capacity on its first 15-acre property, which it acquired in August for $53.1 million. The adjacent 8-acre parcel will house a 48-megawatt data center." Property also houses a 25 MW co-gen which would reduce its footprint to 123 MW.

[125] https://datacenterfrontier.com/digital-realty-plans-for-next-phase-of-growth-in-silicon-valley-manassas/

[126] https://ww2.energy.ca.gov/almanac/electricity_data/supply_forms_2019/

has ownership of 1100.4 MW of generation.[127] The large amount of data centers in review and approved will require new or expanded electric power facilites. Therefore, potential impacts from the LDC in conjunction with other data centers would be significant.

The LDC as proposed has a significant impact on energy resources.

In order to assure that energy implications are considered in project decisions, the California Environmental Quality Act requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy. This project wastes large amounts of energy in two ways. First, the project utilizes more generators than necessary to provide 99 MW of back up power. To illustrate this, consider the three data center projects under energy commission review. The first project the McLaren Data Center (17-SPPE-01) utilizes 47 generators with a generating capacity of 129.25 MW to provide 99 MW of backup power for the 99 MW McLaren Data Center. The commission is currently reviewing the Sequoia Data Center with 121.5 MW of generators to back up the 96.5 MW Sequoia project. The LDC is proposing to use 56 generators with a combined generating capacity of 168 MW to support 99 MW. Listed in the table below are the approximate GHG emissions and diesel consumption of all three projects when testing each of the projects' generators for 50 hours.

How many generators does it take to support 99 MW[128]					
GHG Emissions 50 Hours Testing					
Facility	# Generators	Size	Generating Capacity	GHG Emissions	Diesel Gallons
Laurelwood	56	3 MW	168 MW	6,142[129]	605,952
Sequoia	54	2.25 MW	121.5 MW	4,301[130]	423,324[131]
McLaren	47	2.75 MW	129.25 MW	5,044[132]	497,626

[127] The planning forms submitted to the CEC show only 854 MW of supply in 2018 https://emma.msrb.org/ER1173549-ER917302-ER1317844.pdf Page 21 of 196

[128] Sequoia Data Center is slightly less than 100 MW

[129] TN 227273 19-SPPE_01 Laurelwood 'SPPE Application Page 101 of 172

[130] TN 229419 19-SPPE-03 Sequoia Data Center SPPE Application Page 128 of 222

[131] Sequoia Data Center load is only 96.5 MW not 100

[132] TN 223911 McLaren Data Center Initial Study Page 106 of 329

Increasing the number of generators to provide 100 MW of backup power has significant GHG and criteria pollutant impacts, due to the fact that each generator must be tested. As shown in the table above the McLaren Data Centers 47 generators total 129.5 MW and tested for 50 hours emits 5,044 metric tons of CO2E per year. In comparison, the LDC, with its 56 generators, totaling 168 MW, testing for 50 hours will emit 6,142 metric tons of CO2E per year. The LDC will also consume approximately 108,326 more gallons of diesel fuel to provide the same back up capacity as the McLaren Data Center. The oversizing of the LDC generators leads to excess GHG emissions and diesel consumption which is an inefficient, wasteful and unnecessary consumption of energy, in violation of CEQA.

The second way the project wastes energy is by achieving a PUE of only 1.25. CEC Staff argues that, *"With this lower level of power density per rack, no additional study of PUE would be warranted by Measure 2.3 of the Climate Action Plan."* The climate action plan is not meeting its goals and clearly its mitigation measures cannot be relied upon to demonstrate compliance with CEQA. According to the City of Santa Clara's 2018 CAP progress report, "*The total emissions from 2016 is **1,769,178 MTCO2e.** The GHG emissions from 2008 were 1,854,300 MTCO2e. In conclusion a reduction of 85,122 MTCO2e has been realized. This represents a 4.5% reduction of GHG emissions from the baseline. The City needs to reduce GHG emissions by 10.5% to reach 2020 goals."*[133] The Santa Clara Climate Action Plan has proven that the measures contained in their plan will not achieve the desired 15% GHG emissions reductions to meet its 2020 goals. If the city only achieved a 4.5 % reduction in GHG emissions in eight years (2008-2016) then it is highly unlikely they will reduce another 10.5 % in GHG emission reduction to meet the 2020 GHG emission reduction target in three years.

[133] City of Santa Clara Climate Action Plan 2018 Report

santaclaraca.gov/home/showdocument?id=62433

In its comments on the Santa Clara Climate Action Plan, BAAQMD specifically stated, *"Expand Measure 2.3, Data Center, to require existing rather than just new data center to complete feasibility studies to achieve a power usage effectiveness rating of 1.2 or lower. Staff recommends that this measure also incentivize data center to utilize alternatives to diesel powered back up generators to reduce GHG emissions and 0ther air pollutants from the testing and use of diesel generators."*[134]

BAAQMD further commented on the Mitigated Negative Declaration for the McLaren Data Center Project, "*Finally, the Project could be required to meet a Power Usage Effectiveness (PUE) of 1.2 or less, which would be both consistent with Measure 2.3 of the City's Climate Action Plan for extremely large power rack rating data centers and consistent* ***with efficiencies achieved at other datacenters (e.g., Google).***"[135] The data centers surrounding the LDC are achieving and proposing PUE's far lower than 1.25. The intel campus located next to the LDC contains data centers. One of the data centers, "*uses close-coupled evaporative cooling that relies on recycled water, to help it to reach an annualized PUE of 1.06."*[136] "*Elsewhere in the old semiconductor fabrication plant are smaller data centers, including D2P4, which has 5MW of power capacity across 5,000 square feet (465 sq m). Thanks to free air cooling, it, too, has a PUE of 1.06 - "they have exactly the same PUE, but totally different techniques. The two facilities have the lowest PUE of any of Intel's data centers. "We've closed lots of small, inefficient data centers, and are trying to reduce our average PUE across our data centers to near 1.06."*[137]

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[134] Exhibit 402

[135] Exhibit 401

[136] **Inside Intel: From silicon fabrication plant, to energy-efficient data center** https://www.datacenterdynamics.com/analysis/inside-intel-silicon-fabrication-energy-efficient-data-center/

[137] **Inside Intel: From silicon fabrication plant, to energy-efficient data center** https://www.datacenterdynamics.com/analysis/inside-intel-silicon-fabrication-energy-efficient-data-center/

The MND for the 2305 Mission College Boulevard Data Center states, "*with implementation of the proposed mechanical and electrical design of the building and the anticipated data center occupancy, the PUE of the data center would be1.09*."[138]

GHG impacts from operation of the emergency generators are significant.

The initial study concludes that the project's emissions from the diesel generators are not significant because the potential to emit from the generators would not exceed the BAAQMD significance level of 10,000 MTCO2e/yr. The initial study estimates that the back-up diesel generators will emit 2,583 MTCO2e/yr while operating for 21 hours a year per engine for testing and maintenance.[139] CEC staff states that it is unsure whether the BAAQMD 2017 CEQA Guidelines require inclusion of GHG emissions from emergency operation in calculating the potential to emit for the GHG emissions of the backup generators. CEC Staff posits that even if the GHG emissions from emergency operation are included the project's backup generators still emit less than 10,000 MTCO2e/yr, the BAAQMD significance level. CEC Staff argues that the intervenor miscalculated the GHG emissions from emergency operation and testing and that GHG emissions from testing and emergency operation are only 9,833 MTCO2e/yr.[140]

In calculating the GHG emissions from 100 hours of emergency operation, CEC Staff assumed 100 hours of emergency use per year per engine for 33 engines, each operating at 100 percent load and also estimated 100 hours of emergency use per year per engine for 41 engines, each operating at 80 percent load. BAAQMD's policy requiring 100 hours of emergency operation states, "*Such facilities should presume* ***that each*** *of their generators will experience 100 hours per year of emergency operation when calculating their PTE for purposes of determining the applicability of the permitting regulations."* When properly calculating the GHG emissions from the standby generators under the BAAQMD policy, emergency emissions from all 56 emergency

[138] http://santaclaraca.gov/home/showdocument?id=56607 Page 71 of 126
[139] TN 229584 Page 160 of 291
[140] TN 230202 California Energy Commission Staff Reply to Opening Testimony Page 16 of 17

generators are to be included in the potential to emit. One hundred hours of emergency operation of each engine will lead to 12,180 MTCO2e/yr of GHG emissions from the backup generators. Including the GHG emissions from 21 hours of testing and maintenance of 2,583 MTCO2e/yr and the 12,180 MTCO2e/yr of GHG emissions from emergency operation provides a potential to emit for the 56 back up diesel generators of 14,763 MTCO2e/yr, which is over the 10,000 MTCO2e/yr BAAQMD significance level. The projects GHG emissions from the back up diesel engines are significant**.**

The indirect emissions from the LDC are significant.

The initial study states that, "*Compliance with appropriate measures in the City's CAP would ensure an individual project's consistency with an adopted GHG reduction plan.*" CEC Staff concludes that, "the project would conform with all applicable plans, policies, and regulations adopted for the purpose of GHG reductions; so, the maximum operation non-stationary source GHG emissions (171,770 MTCO2e/yr) are determined to have less than significant impacts."[141]

The initial study underestimates the LDC's indirect GHG emissions from electricity use. The initial study estimates the indirect GHG emissions from the project's electricity use as 170,170 MTCO2e/yr. In estimating the project's indirect GHG emissions, the initial study utilizes Silicon Valley Power's overall 2017 GHG emissions factor of 430 pounds of CO2e/MWh. As I pointed out in my comments on the initial study, SVP's overall GHG emission factor of 430 pounds of CO2e/MWh is not applicable to the project's GHG emissions. SVP has a residential mix which is 100% renewable but their non-residential power mix is almost identical to the 2018 California Power Mix as can be seen from the 2018 Power Content Label below.

[141] TN 229584 Initial Study/MND Page 164 of 291

2018 Power Content Label

SILICON VALLEY POWER				
ENERGY RESOURCES	SILICON VALLEY POWER RESIDENTIAL MIX	SILICON VALLEY POWER NON-RESIDENTIAL MIX	SANTA CLARA GREEN POWER (100% VOLUNTARY)	2018 CA POWER MIX**
Eligible Renewable	**45%**	**31%**	**2%**	**31%**
Biomass & Biowaste	0%	2%	0%	2%
Geothermal	0%	5%	0%	5%
Eligible Hydroelectric	0%	13%	0%	2%
Solar	26%	0%	2%	11%
Wind	19%	11%	0%	11%
Coal	**0%**	**0%**	**0%**	**3%**
Large Hydroelectric	**55%**	**11%**	**0%**	**11%**
Natural Gas	**0%**	**34%**	**0%**	**35%**
Nuclear	**0%**	**0%**	**0%**	**9%**
Other	**0%**	**0%**	**98%**	**<1%**
Unspecified sources of power*	**0%**	**24%**	**0%**	**11%**
TOTAL	**100%**	**100%**	**100%**	**100%**

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.
** Percentages are estimated annual by the California Energy Commission based on the electricity generated in California and net imports as reported to the Quarterly Fuel and Energy Report database and the Power Source Disclosure program.

CEC Staff's response to the SVP 2018 non-residential power mix chart that I provided stated, "*Thank you for the information.*"[142] The CEC Staff then admits in its testimony that, in fact, SVP's current non- residential power mix matches California power mix. As CEC reply testimony states, "*That SVP's mix matches California's mix today, in one snapshot in time, does not mean that SVP and California's power mix will remain in lockstep as renewables are added, demand and efficiency measures are*

[142] TN 230202 California Energy Commission Staff Reply to Opening Testimony Page 17 of 17

implemented, and demand changes across California and its electricity providers."[143] Despite admitting that the SVP's non-residential power mix that will be utilized by the LDC is the same as the 2018 California Power Mix, the CEC Staff fails to reevaluate the project's indirect GHG emissions from electricity use. Utilizing the 2018 California statewide average emissions factor of 1,004 pounds of CO2 per megawatt [144] the projects indirect GHG emissions from the use of energy are approximately 395,059 MTCO2e/yr. That is 233% of the amount of GHG emissions estimated by CEC Staff in the initial study. Additionally, 24% of SVP's non-residential power comes from unspecified sources of power as compared to the 11% unspecified sources of power in the 2018 California Power Mix. The SVP non-residential power mix may in fact have a higher GHG emission rate per megawatt than the 2018 California Power Mix.

The indirect GHG emissions from the LDC are significant.

BAAQMD CEQA guidelines for determining if project level GHG emissions are significant starts with a comparison of the project's GHG emissions to the applicable screening criteria. "*For land use development projects, the threshold is compliance with a qualified GHG Reduction Strategy; or annual emissions less than 1,100 metric tons per year (MT/yr) of deCO2e.*"[145] Obviously the project's operational emissions are over 1100 MTCO2e/yr, so in order for the project to be considered less than significant for GHG emissions, the project must be consistent with the Santa Clara Climate Action Plan. As the BAAQMD CEQA Guidelines state, "*If a project, including stationary sources, is located in a community with an adopted*

[143] TN 230202 California Energy Commission Staff Reply to Opening Testimony Page 17 of 17
[144] TN 229584 Initial Study/MND Page 162 of 291
[145] BAAQMD 2017 CEQA Guidelines Page 22 of 224
https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwjP7vKGjK7lAhUZITQIHVviC_QQFjAAegQIAxAC&url=http%3A%2F%2Fwww.baaqmd.gov%2F~%2Fmedia%2Ffiles%2Fplanning-and-research%2Fceqa%2Fceqa_guidelines_may2017-pdf.pdf%3Fla%3Den&usg=AOvVaw0_sdwVqNI0nvF1jd9t5JGr

qualified GHG Reduction Strategy, the project may be considered less than significant if it is consistent with the GHG Reduction Strategy." In this case the city of Santa Clara has an adopted, qualified GHG reduction strategy called the Santa Clara Climate Action Plan.

The project is not eligible to use the CAP to evaluate full-build emissions to determine its significance under CEQA, because the CAP is based on 2020 GHG reduction goals and this project will not be completed until 2021. Therefore, the IS/MND reliance on the Santa Clara CAP does not provide the substantial evidence needed to justify a less than significant determination.[146]

In addition, in order to utilize the CAP, the Santa Clara CAP would have to demonstrate that it is achieving its planned GHG reductions. Neither the applicant nor staff has made such a showing. According to the City of Santa Clara's 2018 CAP progress report, "*The total emissions from 2016 is **1,769,178 MTCO2e.** The GHG emissions from 2008 were 1,854,300 MTCO2e. In conclusion a reduction of 85,122 MTCO2e has been realized. This represents a 4.5% reduction of GHG emissions from the baseline. The City needs to reduce GHG emissions by 10.5% to reach 2020 goals."*[147] If the city only achieved a 4.5 % reduction in GHG emissions in eight years (2008-2016), then it is highly unlikely they will reduce another 10.5 % in GHG emission reduction to meet the 2020 GHG emission reduction target in three years. The Santa Clara Climate Action Plan has proven that the measures contained in their plan will not achieve the desired 15% GHG emissions reductions to meet its 2020 goals.

FINAL 2017 BAAQMD CLEAN AIR PLAN

The 2017 Bay Area Clean Air Plan defines an integrated, multipollutant control strategy to reduce emissions of particulate matter, TACs, ozone

[146] See Exhibit 405 BAAQMD Comments on the Mitigated Negative Declaration for the McLaren Data Center Project Page 1

[147] City of Santa Clara Climate Action Plan 2018 Report Page 12 of 29 santaclaraca.gov/home/showdocument?id=62433

precursors and greenhouse gases. The Bay Area Clean Air Plan states, *"It is especially important to rapidly reduce emissions of those GHGs with very high global warming potential, such as methane, black carbon, and F-gases, which we refer to as "super-GHGs" in this document. (The Air Resources Board refers to these compounds as short-lived climate pollutants or SLCPs.)"* [148] This project proposes to use 63,550 pounds of R-134a, a very potent super-GHG. According to CEC Staff, using the regulatory leakage rate of 10 percent per year would increase the maximum allowable GHG annual emissions to 4,122 MTCO2e. The Clean air plan uses a value of $62 per metric ton of CO2-equivalent to estimate the avoided social and economic costs related to the anticipated impacts of climate change.[149] The projects potential R-134a leakage would have a societal cost of $255,564 each year. The LDC also emits large amounts of black carbon through its diesel generators, another compound the 2017 Clean Air Plan proposes to eliminate. The project is not consistent with the BAAQMD Clean air Plan.

California SB 100

The initial study claims that as a reduction measure to comply with SB 100, "*This project could significantly reduce GHG emissions by purchasing all of its electricity from Santa Clara Green Power, which is available through SVP.*"[150] The LDC has a maximum electrical usage of 867,240 MWh per year.[151] Santa Clara Green power set a record for delivering clean energy of 423,808 Megawatt-hours in 2017.[152] The power usage of the LDC is twice the record amount of megawatts delivered by Santa Clara Green Energy. It's unlikely that Santa Clara Clean Energy has the resources to serve the LDC and the initial study provides no analysis that it can. Like all of the mitigation measures the applicant proposes and Staff identifies, there is no mitigation measure

[148] FINAL 2017 CLEAN AIR PLAN Page
[149] FINAL 2017 CLEAN AIR PLAN Page 15 of 268
[150] TN 229584 Initial Study/MND Page 167 of 291
[151] TN 229584 Initial Study/MND Page 162 f 291
[152] http://www.siliconvalleypower.com/solar-and-green-power/santa-clara-green-power/santa-clara-green-power-faq

requiring the project to use Santa Clara Green Power, as required of a CEQA mitigation measure.

The initial study goes on further to state that this, "project could further reduce its GHG impacts by installing solar panels over parking spaces and any roof area not being used for the adiabatic condenser cooling system or other equipment, consistent with a City of Santa Clara design review condition, **should one be issued**. [153] There is no condition of certification in the initial study that would require the use of solar panels and it is not clear from the initial study that a Santa Clara design review condition would require it. Like all of the applicant's proposed conditions without a condition of certification, they are not enforceable as required by a mitigation measure under CEQA.

Santa Clara General Plan

The Santa Clara General Plan relies on tiering off the Santa Clara Climate Action Plan to reduce GHG emission by 15% over 1990 levels to avoid a significant and unavoidable impact. As stated in the general plan, "*Through its General Plan policies the City is committed to the preparation, adoption, and implementation of a comprehensive greenhouse gas emissions reduction strategy (Climate Action Plan) to achieve its fair share of statewide emissions reductions for the 2020 timeframe consistent with AB 32" [154]* According to the City of Santa Clara's 2018 CAP progress report, "*The total emissions from 2016 is **1,769,178 MTCO2e.** The GHG emissions from 2008 were 1,854,300 MTCO2e. In conclusion a reduction of 85,122 MTCO2e has been realized. This represents a 4.5% reduction of GHG emissions from the baseline. The City needs to reduce GHG emissions by 10.5% to reach 2020 goals."[155]* The Santa Clara Climate Action Plan has proven that the measures contained in their plan will not achieve the desired 15% GHG emissions reductions to meet its 2020 goals.

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[153] TN 229584 Initial Study/MND Page 167 of 291

[154] 2010-2035 General Plan ES-8 Integrated Final EIR City of Santa Clara Page 34 of 593 santaclaraca.gov/home/showdocument?id=12900

[155] City of Santa Clara Climate Action Plan 2018 Report Page 12 of 29 santaclaraca.gov/home/showdocument?id=62433

Further the Santa Clara General Plan states that the City of Santa Clara's, *"Citywide 2035 GHG emissions are projected to exceed efficiency standards necessary to maintain a trajectory to meet long-term 2050 state climate change reduction goals. Achieving the substantial emissions reductions will require policy decisions at the federal and state level and new and substantially advanced technologies that cannot today be anticipated, and are outside the City's control, and therefore cannot be relied upon as feasible mitigation strategies. Given the uncertainties about the feasibility of achieving the substantial 2035 emissions reductions, the City's contribution to climate change for the 2035 timeframe is conservatively determined to be cumulatively considerable."*[156] Both the Climate Action Plan and the general plan do not meet the GHG reduction goals required by AB 32 and other state policies. Accordingly, the project's GHG emissions are cumulative, considerable and a significant impact requiring preparation of an AFC.

AB 32

AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020, a reduction of approximately 15 percent below emissions expected under a "business as usual" scenario. According to the City of Santa Clara's 2018 CAP progress report, "*The total emissions from 2016 is **1,769,178 MTCO2e.** The GHG emissions from 2008 were 1,854,300 MTCO2e. In conclusion a reduction of 85,122 MTCO2e has been realized. This represents a 4.5% reduction of GHG emissions from the baseline. The City needs to reduce GHG emissions by 10.5% to reach 2020 goals."*[157] The city is not on track to meet the climate reduction goals of AB 32, which requires California to reduce its GHG emissions to 1990 levels by 2020, a reduction of approximately 15 percent below emissions.

[156] 2010-2035 General Plan ES-8 Integrated Final EIR City of Santa Clara Page 35 of 593Asantaclaraca.gov/home/showdocument?id=12900

[157] City of Santa Clara Climate Action Plan 2018 Report

santaclaraca.gov/home/showdocument?id=62433

The initial study concludes that, *" With implementation of the efficiency measures to be implemented with the project, in combination with the green power mix used by SVP, GHG emissions related to the project would not conflict with the Santa Clara CAP or other plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs."* Clearly, as explained above, Santa Clara's Climate Action Plan is not going to meet its goal of a 15% reduction in GHG emissions by 2020. The Santa Clara Cap only covers the period up until 2020 and is not applicable to the project, which will not commence operation by 2021.[158] The Santa Clara General Plan relies on the measures in the failing Santa Clara Climate Action Plan to achieve its GHG reduction goals. The Santa Clara General plan makes clear that, "*projected 2035 GHG emissions would constitute a cumulatively considerable contribution to global climate change by exceeding the average carbon-efficiency standard necessary to maintain a trajectory to meet statewide 2050 goals as established by EO S-3-05. (Significant Impact)."*[159] As illustrated previously, the power mix of SVP for non-residential projects is almost identical to the State of California Power Mix, so the SVP green power mix does not provide significant mitigation for the projects GHG emissions.[160] The LDC's GHG emissions are significant under BAAQMD's CEQA requirements.

<u>The project will contribute to violations of the Federal Annual and 24 hour PM 2.5 standard when utilizing current air quality data.</u>

Wildfires have had a significant impact on air quality in the project area. Wildfires have led to exceedances of the particulate matter air quality standards in 2017 and 2018 according to the initial study.[161] In 2018 the Jackson Street Station in San Jose exceeded the federal 24 hour PM 2.5 standard and equaled the federal annual PM 2.5

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[158] The project has a 17 month construction period.

[159] 2010-2035 General Plan ES-8 Integrated Final EIR City of Santa Clara Page 34 of 593 santaclaraca.gov/home/showdocument?id=12900

[160] http://www.siliconvalleypower.com/svp-and-community/about-svp/power-content-label

[161] TN 229584 Laurelwood Data Center Initial Study and Proposed Mitigated Negative Declaration Page 49 of 281

standards largely due to impacts from November wildfires.[162] Above average 1- hour NO2 concentrations have also been recorded at the nearest monitoring station at Jackson Street in San Jose, largely due to wildfire activity.

CEC Staff analyzed the projects air quality impacts and used the annual background value of 10.6 µg/m3 from 2017 to decide whether or not the project violates any air quality standard. The CEC has the more recent annual background data from 2018, as evinced by the testimony in the initial study on page 5.3-4. Using the 2018 data as background demonstrates that the project's annual PM 2.5 impacts will contribute to an exceedance of the Federal annual PM2.5 standard of 12 µg/m3, as the annual background data for 2018 is already at the Federal PM2.5 annual limit of 12 µg/m3.

Attachment 1

SVP News List

Public Safety Power Shutoff Update

Post Date:10/11/2019 5:00 PM

We heard it all over the news for months now, and it finally happened… a Public Safety Power Shutoff (PSPS). Thankfully, due to our urban, flat location, we got through it without a hitch. While we didn't lose power in Santa Clara, some of our neighbors in surrounding cities did. We at the City of Santa Clara and our electric utility, Silicon Valley Power, can't thank you enough for your cooperation and understanding as we navigated our first ever PSPS event. Through community outreach both in-person and online via email, web and social media, we aimed to canvas as much ground as we could so that you stayed informed about any impacts that may come from a power shutoff.

Here are some key takeaways from this experience:

- **High wildfire threat elsewhere could affect us here** – Although Santa Clara residents may not live in a high wildfire threat area, power may be shut off due to transmission lines running through an area that's experiencing extreme wildfire danger conditions. Some areas did experience high wind speeds but not everywhere in the region. Even so, the South Bay was affected with power outages due to the interconnected nature of the power grid.
- **We are not immune to power shutdowns or any other electric emergency** - While we are unique that Silicon Valley Power operates and maintains our own local power grid, we still rely on the joint/interconnected transmission lines throughout the State of California to deliver our solar, wind, hydroelectric and geothermal to deliver the bulk of electricity to Santa Clara. Fortunately, these lines were not impacted by the recent PSPS.
- **Technology is not reliable** – As we saw when people from 40 counties and around the U.S. tried to access PG&E's website at the same time, it crashed. Make sure you are signed up to receive alerts from the City and Silicon Valley Power. If technology is completely down, we will take paper copies of information to City facilities such as libraries, the senior center and City Hall as soon as we receive it.
- **Have a personal safety plan in place** – Some areas affected by this event were without cell service and internet access was spotty. It is important to know how you will communicate with your loved ones. Get to know your neighbors so you can share resources, information and have another set of eyes watching over your belongings.
- **Plan for any medical needs** – What do you do if you depend on electricity for your medical needs? Have a backup plan in case of an unexpected emergency.
- **Build an emergency supply kit** – Californians affected by the power shutdown experienced long lines at the gas station and empty shelves at the grocery store where water once sat. Don't wait for the next emergency to stock up.

At this time, PG&E is still working on inspecting and repairing lines that were shut down throughout Santa Clara County and will continue to restore power to communities still left in the dark.

The wildfire season isn't over yet and another PSPS event could happen again in the coming months. Remember to have a personal safety plan in place and follow Silicon Valley Power on Twitter, twitter.com/SantaClaraPower. If and when Santa Clara is impacted by a PSPS, we will share information with you as soon as possible.

We hope that we never have to feel the effects of a Public Safety Power Shutoff in the City of Santa Clara, but if we do, our employees are ready to assist in serving the community. From all of us here at the City of Santa Clara, may you all have a safe weekend filled with light, hot water and working traffic signals.

http://www.siliconvalleypower.com/Home/Components/News/News/39541/6271?backlist=%2fsvp-and-community%2fnews-and-announcements

RESUME OF ROBERT SARVEY

Academic Background
BA Business Administration California State University Hayward, 1975
MBA Tax Law California State University Hayward, 1985

Experience

San Joaquin Valley Air Pollution Control District Citizens Advisory Board Industry Representative: Analyzed proposed air quality regulations and made recommendations to the Governing Board for approval.

GWF Peaker Plant 01-AFC-16: Participated as an Intervenor in the project and helped

negotiate and implement a 1.3 million dollar community benefits program. Successfully negotiated for the use of local emission reduction credits with GWF to offset local air quality impacts.

Tesla Power Project 01- AFC-04: Participated as an Intervenor and provided air quality testimony on local land use and air quality impacts. Participated in the development of the air quality mitigation for the project. Provided testimony and briefing which resulted in denial of the PG&E's construction extension request.

Modesto Irrigation District 03-SPEE-01: Participated as an Intervenor and helped negotiate a $300,000 air quality mitigation agreement between MID and the City of Ripon.

Los Esteros: 03-AFC-2 Participated as an Intervenor and also participated in air quality permitting with the BAAQMD. Responsible for lowering the projects permit limit for PM-10 emissions by 20%.

SFERP 4-AFC-01: Participated as an Intervenor and also participated in the FDOC evaluation. My comments to the BAAQMD resulted in the projects PM -10 emission rate to be reduced from 3.0 pounds per hour to 2.5 pounds per hour by the District. Provided testimony on the air quality impacts of the project.

Long Beach Project: Provided the air quality analysis which was the basis for a settlement agreement reducing the projects NOx emissions from 3.5ppm to 2.5ppm.

ATC Explosive Testing at Site 300: Filed challenge to Authority to Construct for a permit to increase explosive testing at Site 300 a DOE facility above Tracy. The permit was to allow the DOE to increase outdoor explosions at the site from 100 pounds per charge to 300 pounds per charge and also grant an increased annual limit on explosions from 1,000 pounds of explosive to 8,000 pounds of explosives per year. Contested the permit and succeeded in getting the ATC revoked.

CPUC Proceeding C. 07-03-006: Negotiated a settlement with PG&E to voluntarily revoke Resolution SU-58 which was the first pipeline safety waiver of GO112-E granted in the State of California. Provided risk assessment information that was critical in the adoption of the Settlement Agreement with PG&E which, amongst other issues, resulted in PG&E agreeing to withdraw its waiver application and agreeing to replace the 36-inch pipeline under the sports park parcel after construction.

East shore Energy Center: 06-AFC-06: Intervened and provided air quality testimony and evidence of cancellation of Eastshore's power purchase agreement with PG&E.

Colusa Generating Station: 06-AFC-9: Participated as air quality consultant for Emerald Farms. Filed challenge to the PSD Permit.

CPUC proceeding 08-07-018: Tesla Generating Station CPCN participated in proceeding which was dismissed due to motion by IEP. Reviewed all filings, filed protest, signed confidentiality agreement and reviewed all confidential testimony.

GWF Tracy Combined Cycle 08-AFC-07: Participated in negotiation of the Air Quality Mitigation Agreement with the San Joaquin Valley Air Pollution Control District and GWF.

CPUC Proceeding 09-09-021: Provided Testimony that demonstrated PG&E failed to follow its environmental protocol in the LTPP. Provided testimony and evidence that PG&E's need had fallen since 2007 and that the Commission should limit PG&E's procurement to the 950-1000 MW Range.

CPUC Proceeding A. 09-04-001: Demonstrated PG&E had violated terms of Mariposa Settlement Agreement. PG&E was fined $25,000 for breach of settlement.

CPUC Proceeding A. 09-10-022: Provided Testimony on behalf of CAlifornians for Renewable Energy. Provided confidential evaluation of PPA value. Provided testimony and evidence that PG&E had violated the Mariposa Settlement. Provided testimony that demonstrated PG&E's demand had fallen sharply since the issuance of D. 07-12-052.

Oakley Generating Station 09-AFC-04: Participated as an intervenor. Provided testimony in Alternatives, Air Quality, Environmental Justice, and Water Quality. Negotiated settlement with CCGS to not use ERC's and instead exclusively use 2.5 million dollars to create real time emission reductions through BAAQMD real time emission reduction programs.

Pio Pico PSD Permit: Participated in the Pio Pico PSD permit. Comments resulted in a remand to the air district and a lowering of particulate matter emission limits by 10%

CPUC Proceeding A.11-12-003: Was credited by the decision for demonstrating that an additional 5 MW of firm capacity was not needed from the Thermal Energy Biomass Plant. Decision led to the plants closure.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT

COMMISSION OF THE STATE OF CALIFORNIA
In the Matter of McLaren Laurelwood Data Center
Docket Number 19-SPPE-01

Declaration of Robert Sarvey

I Robert Sarvey Declare as Follows:

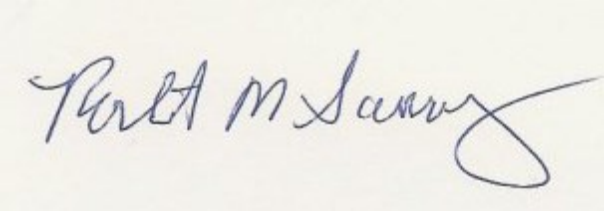
1. I prepared the attached rebuttal testimony on the IS/MND for the Laurelwood Data Center.

2. A copy of my professional qualifications and experience is included with this Testimony and is incorporated by reference in this Declaration.

3. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed in Tracy, California on October 22, 2019.



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