

**DOCKETED**

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State of California  
State Energy Resources Conservation and Development Commission

In the matter of:

Sequoia Data Center

Docket 19-SPPE-03

Intervenor Sarvey's Reply Testimony

**The SDC GHG emissions are not consistent with the Santa Clara Climate Action Plan.**

CEC Staff clearly underestimated the SDC's GHG emissions in the IS/MND and reported that the SDC emissions would total just 88,646 MTCO<sub>2</sub>e/yr. CEC staff in its response to comments revised its GHG emissions estimate to 170,865 MTCO<sub>2</sub>e/yr.<sup>1</sup> The CEC Staff in its response to comments on the IS/MND continues to insist that the SDC project is consistent with the Santa Clara Climate Action Plan without analysis of the projects individual and cumulative GHG emissions compared to the plans targeted reductions as required by CEQA. CEC Staff correctly states that the Sequoia Data Centers, *"updated GHG emissions of 170,865 MTCO<sub>2</sub>e/yr, would be about 9.6 percent of the City's 2016 GHG emissions inventory of 1,769,000 MTCO<sub>2</sub>e shown on page 5.8-5 of the IS/PMND."*<sup>2</sup> The CEC Staff then fails to analyze the projects individual and cumulative emissions<sup>3</sup> compared to the Santa Clara Action Plans goals and progress.

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<sup>1</sup> That estimate is also woefully inaccurate as the CEC fails to utilize the CO emission factor from SVP's non residential power mix as explained in TN 232270 Page 6 of 32 "According to the IS/MND, "As of December 31, 2017, the SVP power mix was composed of approximately 38 percent eligible renewable resources, 34 percent large hydroelectric, and 28 percent nonrenewable sources (SVP 2017)." While that may be true for the overall power mix the Santa Clara's non-residential power mix has a much higher GHG intensity that may be higher than the 2018 California power mix as demonstrated in the table below. SVP's non-residential power mix is 32% renewable, 11% hydroelectric and 34% natural gas and 23% sources of unspecified power as shown in the table below.

<sup>2</sup> TN The updated GHG emissions of 170,865 MTCO<sub>2</sub>e/yr, would be about 9.6 percent of the City's 2016 GHG emissions inventory of 1,769,000 MTCO<sub>2</sub>e shown on page 5.8-5 of the IS/PMND.

<sup>3</sup> CEC Staff has approved two projects and is reviewing six more GHG impacts are shown later

From 2008 to 2016 the Santa Clara Climate Action Plan progress report shows the City of Santa Clara reduced GHG emissions by 85,122 MTCO<sub>2</sub>e/yr<sup>4</sup> as illustrated in Table 3 below from the Climate Action Progress Report. The SDC emissions are almost twice the GHG reductions that the Santa Clara Climate Action plan has achieved in eight years.

**Table 3. Changes in MTCO<sub>2</sub>e between 2008 and 2016**

Community Sectors	2008	2016
Commercial & Industrial	1,110,100	1,080,261
Transportation	554,300	505,989
Residential	153,200	132,912
Solid Waste	27,500	25,724
Water & Wastewater	9,200	24,292
Total Emissions	1,854,300	1,769,178

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But that is just the tip of the iceberg. CEC Staff ignores the fact that the cumulative GHG emission contribution from just six of the eight data center projects being permitted by the CEC is 947,641 MTCO<sub>2</sub>e/yr which is approximately 69% of the City of Santa Clara’s 2016 GHG emissions inventory without considering the Memorex Data Center and the Sycamore Data Center.

<sup>4</sup> TN 232273 Climate Action Plan 2018 Progress Report Pages 10 of 29, and 8 of 29

<sup>5</sup> TN 232273 Santa Clara Climate Action Progress Report Page 18 of 30

DATA CENTER APPLICATIONS BEFORE THE COMMISSION

Facility	Docket #	Total MW	Annaul MWh	(MTCO <sub>2e</sub> /yr)
McLaren Data Center	17-SPPE-01	99 MW <sup>6</sup>	665,760 MWh <sup>7</sup>	154,958 <sup>8</sup>
Laurelwood Data Center	19 SPPE-01	99 MW <sup>9</sup>	867,240 MWh <sup>10</sup>	171,770 <sup>11</sup>
Walsh Data Center	19-SPPE-02	80 MW <sup>12</sup>	700,800 MWh <sup>13</sup>	109,164 <sup>14</sup>
Sequoia Data Center	19-SPPE-03	95.5 MW <sup>15</sup>	846,340 MWh <sup>16</sup>	170,865 <sup>17</sup>
San Jose Data Center	19-SPPE-04	99 MW <sup>18</sup>	803,730 MWh <sup>19</sup>	254,122 <sup>20</sup>
2305 Mission College Data	19-SPPE-05	78.1 MW <sup>21</sup>	684,156 MWh <sup>22</sup>	86,762 <sup>23</sup>
Memorex Data Center		99 MW <sup>24</sup>	N/A	N/A
Totals		650 MW	4,568,006	947,641 <sup>25</sup>

The project is not consistent with the Diesel free by '33 initiative.

*“In September 2018, the Air District launched Diesel Free by '33 to eliminate diesel emissions from our communities.<sup>26</sup> Mayor Lisa Gillmor of the City of Santa Clara signed Diesel Free by '33 to pledge the City's commitment to cut diesel use to zero by the end of 2033. To this end, the Air District recommends that the project applicant use*

<sup>6</sup> <https://ww2.energy.ca.gov/sitingcases/mclaren/>

<sup>7</sup> McLaren Final Decision TN 225170 Page 128 of 361

<sup>8</sup> McLaren Final Decision TN 225170 Page 129 of 361

<sup>9</sup> <https://ww2.energy.ca.gov/sitingcases/laurelwood/>

<sup>10</sup> Laurelwood Proposed Decision TN 231721 Page 210 of 368

<sup>11</sup> Laurelwood Proposed Decision TN 231721 Page 211 of 368

<sup>12</sup> <https://efiling.energy.ca.gov/GetDocument.aspx?tn=229419-1&DocumentContentId=60822>

<sup>13</sup> Walsh Data Center Application TN 228877-2 Page 111 of 203

<sup>14</sup> Walsh Data Center Application TN 228877-2 Page 112 of 203

<sup>15</sup> <https://ww2.energy.ca.gov/sitingcases/walsh/> Page 10 of 222

<sup>16</sup> Sequoia Data Center Application TN 229419-1 Page 106 of 222

<sup>17</sup> Sequoia Data Center Application TN 229419-1 Page 131 of 122

<sup>18</sup> <https://ww2.energy.ca.gov/sitingcases/sj2/>

<sup>19</sup> San Jose Data Center Application TN 230741 Page 175 of 285

<sup>20</sup> San Jose Data Center Application TN 230741 Page 176 of 285

<sup>21</sup> <https://ww2.energy.ca.gov/sitingcases/missioncollege/>

<sup>22</sup> Mission College Data Center Application TN 230848 Page 121 of 222

<sup>23</sup> Mission CoIllege Data Center Application TN 230848 Page 122 of 222

<sup>24</sup> [https://ww2.energy.ca.gov/sitingcases/all\\_projects\\_cms.html](https://ww2.energy.ca.gov/sitingcases/all_projects_cms.html)

<sup>25</sup> Revised from opening testimony to include CEC Staff new GHG emissions estimate for the SDC

<sup>26</sup> TN 232242 Bay Area Air Quality Management District Comments - Comment Letter for Sequoia Data Center MND Page 5 of 6

*the cleanest available technologies such as solar battery power, fuel cells, or Tier 4 generators.”*<sup>27</sup> According to the BAAQMD diesel emissions, *“impacts ... fall most heavily on communities and populations already most significantly impacted by air pollution, environmental hazards, and economic inequality. By taking on this commitment, signers are prioritizing the health of their communities and the health of our planet.”* This clearly defines the project area where the Energy Commission seems willing to site more than 650 MW of diesel engines. The project is not consistent with the Diesel Free by 2033 initiative being coordinated by the Bay Area Air Quality Management District.

CEC Staff never provides any analysis or proof that the project will comply with AB-32 or other state and regional GHG emissions reduction plans.

BAAQMD in its comments on the Sequoia Data Center IS/MND states,

*“The MND states that the Project’s GHG emissions would not be cumulatively considerable because the Project “would conform with all applicable plans, policies, and regulations adopted for the purpose of GHG reductions.” But the MND does not evaluate the project’s consistency with State policies and plans requiring reductions in emissions of GHGs beyond 2020, including the SB 32 requirements to achieve GHG emissions reductions equivalent to 40 percent below 1990 levels by 2030, and direction in Executive Orders B-55-18 and S-3-05 to respectively achieve carbon neutrality by 2045 and to achieve GHG emissions reductions equivalent to 80 percent below 1990 levels by 2050. See *Cleveland Nat’l Forest Foundation v. San Diego Ass’n of Governments* (2017) 3 Cal.5th 497, 516 (**CEQA analysis should “compare the [project’s] projected greenhouse gas emissions ... from 2020 through 2050 with the Executive Order’s goal of reducing emissions to 80 percent below 1990 levels by 2050.”**). To address the Project’s impacts on GHG emissions beyond 2020, Air District staff recommends that CEC augment its greenhouse gas discussion to include an analysis of whether the project will be consistent with these State policies and plans.”*<sup>28</sup>

CEC Staff responds that they have already analyzed the consistency of the SDC’s GHG emissions with the aforementioned policies in the IS/MND on pages 5.8-2

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<sup>27</sup> TN 232242 Bay Area Air Quality Management District Comments - Comment Letter for Sequoia Data Center MND Page 5 of 6

<sup>28</sup> TN 232242 Bay Area Air Quality Management District Comments - Comment Letter for Sequoia Data Center MND Page 4 of 6

and 5.8-3. Page 5.8-2 and 5.8-3 merely mention the state and regional plans and offer no analysis of the project's consistency with the plans but by innuendo declare the SDC consistent. BAAQMD is entirely correct the IS/MND provides no proof and staff's response to BAAQMD does not demonstrate that the SDC is compatible with the state and regional GHG reduction plans and therefore staff cannot state that the projects GHG emissions are not significant. Staff's responses to BAAQMD's comments do nothing but recite the goals of the State and Regional GHG plans without any discussion or analysis on how the SDC's GHG emissions are consistent with the GHG reduction plans. BAAQMD recommends that the CEC Staff, "***compare the [project's] projected greenhouse gas emissions ... from 2020 through 2050 with the Executive Order's goal of reducing emissions to 80 percent below 1990 levels by 2050.***" CEC Staff and applicant have failed to analyze the projects consistency with state and regional GHG plans and have not met the burden of proof that the project individually and cumulatively is consistent with state and regional goals for reductions of GHG emissions.

#### Emergency operations have not been analyzed

The CEC Staff in the Laurelwood Data Center case modeled the air quality impacts of the project in emergency operation mode. CEC Staff in this proceeding failed to model the air quality impacts from emergency operation of the SDC instead only modeling impacts from one generator at a time. This is an incomplete analysis and does not examine the projects potential adverse impacts to the environment as required by CEQA. CEC Staff claims that, "*Staff's approach in this analysis is consistent with the approaches used by California's local air districts on emergency-use-only equipment. On page 5.3-27, the Sequoia IS/PMND states, "The air quality impacts of emergency generator operation during emergencies are not quantified below because impacts of emergency operations are typically not evaluated during facility permitting and air districts do not normally conduct an air quality impact assessment of such impacts."*<sup>29</sup>

CEC Staff completely mischaracterizes the treatment of emergency operations by other air districts. The record contains only one air districts response to CEC's query

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<sup>29</sup> Staff response to comments on the IS/MND Page 12 of 18

on emergency operations.<sup>30</sup> CEC Staff asked the SJVAPCD about their emergency generator policy and the SJVAPCD told CEC Staff that,

“With that said, your scenario is not the simple 1 to 5 units generating 1 or 2 MW, **but 30 -50 units that would likely operate at the same time.**

This has its own challenges that were not reviewed as a part of the development of our policy. Modeling for routine operations is manageable by limiting the timing of allowed operations and number of units that can be operated at any one time. Emergency scenarios are another matter. **I would say that doing modeling for emergency equipment for a large project (such as the >50 MW that triggers CEC permitting) is significantly different from those proposals considered by the District as it developed its policies, and requires more specific evaluation before requiring project proponents to conduct modeling, or exempting them from modeling.”<sup>31</sup>**

The Washington State Department of Ecology routinely analyzes emergency operation of its data centers for potential violations of state and federal air quality standards and health risks. In April of 2019 the Washington State Department of Ecology performed a health risk assessment on a Cyrus One Data Center in Quincy Washington included as exhibit one. Most of the analysis centered on violations of the NO<sub>2</sub> standard which is at issue here. Data centers in Washington State with large numbers of diesel backup generators are evaluated for emergency operations. As the Washington State Department of Ecology states on its website, *“We issue air quality permits to data centers to limit the air pollution that comes from diesel-powered backup generators. We also keep track of the combined impacts from the diesel exhaust that may occur from these generators.”*<sup>32</sup>

BAAQMD in evaluating the Santa Clara Data Center performed an analysis of the Santa Clara Data Centers routine and emergency operations. As the IS/MND performed for the Santa Clara Data Center by the CEC Staff states, *“BAAQMD evaluated discretionary emissions based on a total of 700 hours per year for all engines combined for purposes of maintenance testing and 8,000 hours per year for all engines*

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<sup>30</sup> TN 231420

<sup>31</sup> TN 231420 Email - AQIA Practices for Emergency Operations Page 2 of 3

<sup>32</sup> <https://ecology.wa.gov/Air-Climate/Air-quality/Data-Centers>

*combined for emergency usage.*<sup>33</sup> BAAQMD also evaluated the Santa Clara Data Centers air quality impacts in emergency operation in its ATC for the Santa Clara Data Center. The ATC states,

“The modeling results that were attached to the Initial Study estimated ambient N02 concentrations based on NOx emissions from emergency operation of all 32 engine-generators from an assumed scenario with loads ranging between 1100 to 1700 kW. An estimated overall NOx control of 65% was also assumed to allow for warm up and cool down modes during which the SCR system is not operational. The modeling was performed using conservative screening-level approach with the SCREEN3 dispersion model which includes the simplification that all emissions are released through single stack. **This model predicted worst case 1-hour N02 concentration of 1276 ug/m3 which would exceed the state 1- hour N02 standard of 338 ug/m3.**<sup>34</sup>”

Appendix G of the State CEQA Guidelines requires the Energy Commission to do an analysis of the air quality impacts of the emergency operations of the SDC to determine if the proposed project would violate any air quality standards.

Staff modeled the impact from only one generator at a time. Even modeling 1 generator at a time the impacts were still within 1% of the Federal NO<sub>2</sub> standard and 2% of the States NO<sub>2</sub> standard. The results are illustrated in table 5.3-8 from the initial

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<sup>33</sup> 11 SPPE-01 Initial Study and Negative Declaration Recommendation Page 36 of 122  
<https://ww2.energy.ca.gov/2012publications/CEC-700-2012-001/CEC-700-2012-001.pdf>

<sup>34</sup> Exhibit 2 BAAQMD Santa Clara Data Center ATC Page 11 of 110

study below.

**TABLE 5.3-8 SEQUOIA MAXIMUM IMPACTS DURING READINESS TESTING AND MAINTENANCE-TESTING ONLY ( $\mu\text{g}/\text{m}^3$ )**

Pollutant	Averaging Time	Project Impact	Background	Total Impact	Limiting Standard	Percent of Standard
PM10	24-hour	0.76	<b>69.8</b>	<b>70.6</b>	<b>50</b>	<b>141%</b>
	Annual	0.05	<b>21.9</b>	<b>22.0</b>	<b>20</b>	<b>110%</b>
PM2.5	24-hour	0.58	31.0	31.6	35	90%
	Annual	0.05	10.6	10.7	12	89%
CO	1-hour	3,053	2,748	5,801	23,000	25%
	8-hour	1,967	2,061	4,028	10,000	40%
NO <sub>2</sub>	State 1-hour <sup>a</sup>	---	---	333	339	98%
	Federal 1-hour <sup>b</sup>	---	---	187	188	99%
	Annual	13.2	24.1	37.3	57	65%
SO <sub>2</sub>	State 1-hour	0.21	9.4	9.6	655	1%
	Federal 1-hour	0.19	6.1	6.3	196	3%
	24-hour	0.08	2.9	3.0	105	3%

**Notes:**

Concentrations in **bold** type are those that exceed the limiting ambient air quality standard.

Results are the worst-case impact of a single generator in use because only a single generator would operate at a given time for testing and maintenance.

The federal 24-hour PM<sub>2.5</sub> background of 31.0  $\mu\text{g}/\text{m}^3$  is based on 98th percentile averaged over 3 years of recent data (2015-2017) excluding 2018.

<sup>a</sup> For CAAQS 1-hour NO<sub>2</sub> impacts, this is the project impact and seasonal hour of day background for source "C1SWEG01" at a 75% load; staff reports the highest 1-hour NO<sub>2</sub> modeled result (on 5/12/2017).

Staff argues that outages on the SVP system are rare according to information provided by SVP. But power outages are not the only reasons data centers operate their emergency generators. Some data center operators perform a pull the plug test where they test all of their generator's operation in a simulated outage. For example, on May 17, 2017 the Vantage Data Center in Santa Clara performed a pull the plug test that was not reported by SVP.<sup>35</sup>

"UPS failures often time lead to extended run times for emergency generators. A "catastrophic" UPS failure caused a power outage at a Santa Clara data center operated by Quality Technology Services, triggering days of performance problems for the social network Friendster. Quality Tech said the outage occurred during planned maintenance when the facility was switched from utility power to backup diesel

<sup>35</sup> <https://blog.vantage-dc.com/index.php/2017/05/17/pulling-the-plug-why-we-chose-to-black-out-an-entire-campus-and-how-it-went/#.XnWBy3J7mM9>

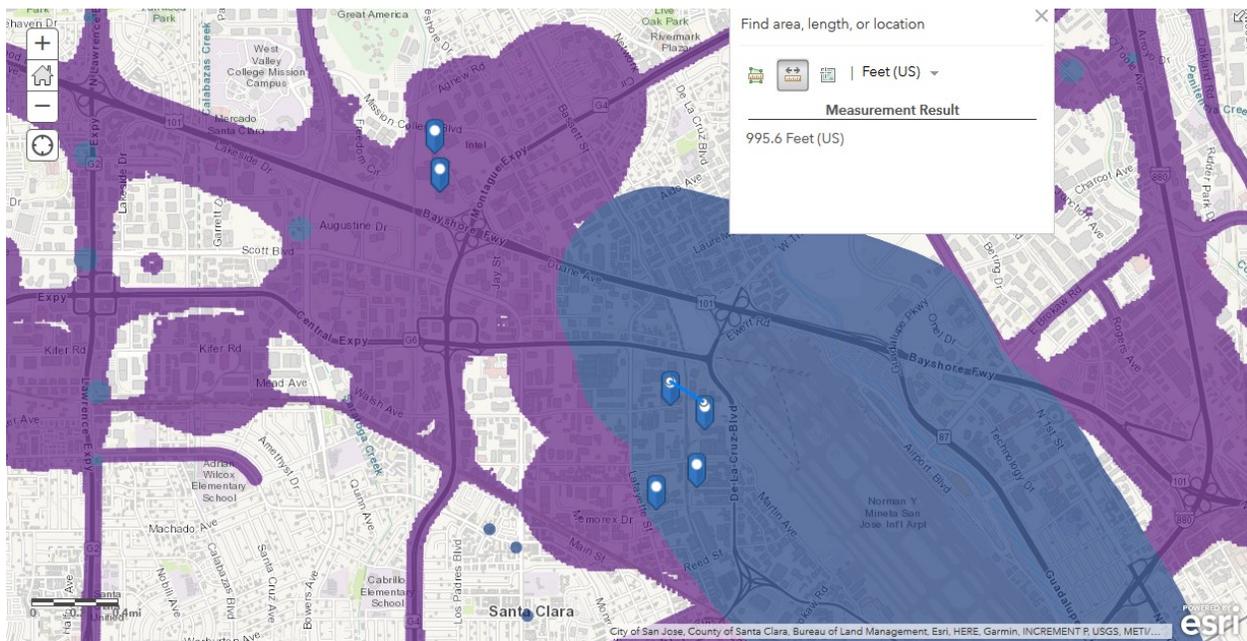
generators. The Santa Clara facility was back on generator power within two hours, but Friendster remained offline for more than 23 hours over three days.<sup>36</sup>

Uptime institutes, “Publicly Reported Outages for 2019” report states that power outages only account for only 25% of data center outages.<sup>37</sup> Relying on SVP’s knowledge of generator activity due to its own power losses is incomplete and misleading.

No cumulative impact analysis has been performed.

The Energy Commission is currently processing six data centers in addition to the McLaren Data Center and Laurelwood Data Center which were recently approved. One of the data centers the 651 Walsh Avenue Data Center currently under Energy Commission review is less than 1,000 feet from the SDC as depicted in the map below.

Santa Clara Data Centers Under Commission Review and Distance between SDC and Walsh Avenue DC



CEC Staff has determined that the population around the project is an environmental justice community.<sup>38</sup> Staff’s analysis states that in the project area,

<sup>36</sup> <https://www.datacenterknowledge.com/archives/2008/11/17/ups-failure-triggered-friendster-outage>

<sup>37</sup> <https://uptimeinstitute.com/publicly-reported-outages-2018-19>

<sup>38</sup> IS/MND Page 263 of 322

*“There are two census tracts where the pollution burden percentile is above 90 and there are 13 census tracts where individual pollution burden indicators are in the 90 or above percentile. **Table 5.21-5** presents the CalEnviroScreen percentiles for the indicators that make up the population characteristics in a six-mile radius of the project site. There is one census tract where the population characteristics burden percentile is above 90 and there are 11 census tracts where individual population characteristic indicators are in the 90 or above percentile.”*<sup>39</sup>

BAAQMD has determined that the project area shaded in blue in the map above requires further study. BAAQMD Planning Healthy Places handbook on page 12 describes the blue shaded project area in the map above. The handbook states,

**The Air District has identified a number of areas within the Bay Area where additional analysis (i.e. further study) is recommended to assess the local concentrations of TACs and fine PM, and therefore the health risks from air pollution.** These areas are characterized by “large and complex” industrial facilities such as oil refineries, large airports, and seaports, etc., and the Air District recommends using caution when considering sensitive land uses in these areas. More information on “large and complex” sources is below. **Conducting “further study” would entail air quality modeling to more precisely determine fine PM concentrations and/or to estimate increased health risks from air toxics to determine if there is an unacceptable level of health risk, and to identify measures that can be implemented to reduce the health risks to acceptable levels.**<sup>40</sup>

The applicant has not performed the air quality analysis asked for by the CEC Staff in data request 14. CEC Staff now declares that a cumulative air quality analysis is not necessary claiming that since the project does not exceed any BAAQMD thresholds of significance no cumulative assessment is required. BAAQMD states in its 2017 CEQA guidelines,

**“While thresholds of significance give rise to a presumption of insignificance, thresholds are not conclusive, and do not excuse a public agency of the duty to consider evidence that a significant effect may occur under the fair argument standard. Meija, 130 Cal.**

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<sup>39</sup> IS/MND Page 263 of 322

<sup>40</sup> BAAQMD Planning Healthy Places Guidebook Page 12 [https://www.baaqmd.gov/~media/files/planning-and-research/planning-healthy-places/php\\_may20\\_2016-pdf.pdf?la=en](https://www.baaqmd.gov/~media/files/planning-and-research/planning-healthy-places/php_may20_2016-pdf.pdf?la=en)

**App. 4th at 342. “A public agency cannot apply a threshold of significance or regulatory standard ‘in a way that forecloses the consideration of any other substantial evidence showing there may be a significant effect.’” Id. This means that if a public agency is presented with factual information or other substantial evidence establishing a fair argument that a project may have a significant effect on the environment, the agency must prepare an EIR to study those impacts even if the project’s impacts fall below the applicable threshold of significance.”<sup>41</sup>**

The Governor’s Office of Planning and Research issued updates to the CEQA Guidelines in 2018. In the 2017 Thematic Responses to Comments on the CEQA Updates the Office of Planning and Research stated,

**“In particular, some object to the clarification that agencies must consider evidence that a project may have a significant impact, even when it complies with a threshold of significance. That clarification is important for several reasons. First, it is an accurate statement of the law. (See *Rominger v. County of Colusa* (2014) 229 Cal.App.4th 690, 717; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1108-1109; *Communities for a Better Environment v. Resources Agency* (2002) 103 Cal.App.4th 98, 112-113.) Second, clarification of what the law requires in the Guidelines will help agencies to comply and thereby avoid litigation and disruption to project implementation.**

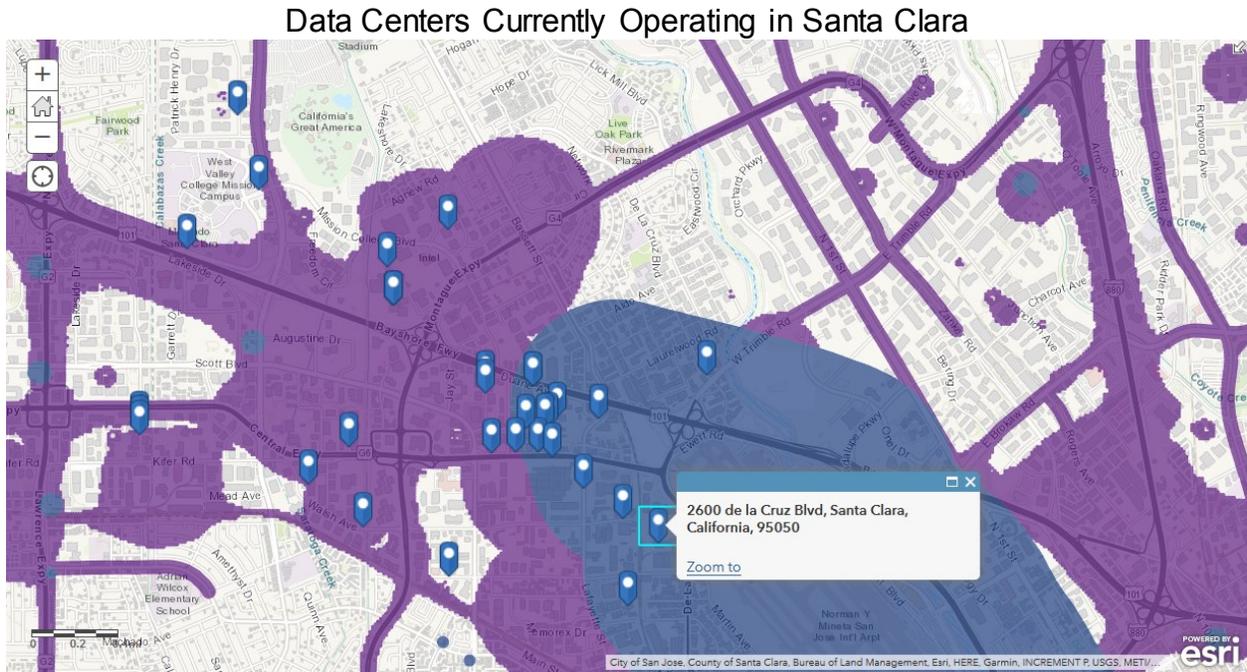
The environmental justice community in the project area is already overburdened as BAAQMD recognizes in its Communities at Risk Program (CARE) which designates the project area as in need of best practices and further study due to the concentration of large industrial sources. As the planning healthy places website states about the purple and blue shaded areas in the map below, *“The location of communities and places throughout the region that are estimated to have elevated levels of fine particulates and/or toxic air contaminants. These areas are shown via web-based, [interactive maps](#).”*<sup>42</sup>

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<sup>41</sup> BAAQMD 2017 CEQA Guidelines Page 165 of 224  
[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKEwiVgKTV55\\_oAhWlpp4KHa6QBhgQFjAAegQIBRAB&url=https%3A%2F%2Fwww.baaqmd.gov%2F~%2Fmedia%2Ffiles%2Fplanning-and-research%2Fceqa%2Fceqa\\_guidelines\\_may2017-pdf.pdf%3Ffla%3Den&usg=AOwaw2L1NtXPpSfbkxx5nWcghfv](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKEwiVgKTV55_oAhWlpp4KHa6QBhgQFjAAegQIBRAB&url=https%3A%2F%2Fwww.baaqmd.gov%2F~%2Fmedia%2Ffiles%2Fplanning-and-research%2Fceqa%2Fceqa_guidelines_may2017-pdf.pdf%3Ffla%3Den&usg=AOwaw2L1NtXPpSfbkxx5nWcghfv)

<sup>42</sup> <https://www.baaqmd.gov/plans-and-climate/planning-healthy-places>

The City of Santa Clara is currently host to 50 existing data centers<sup>43</sup> clustered in a three and a half square mile area. The publicly available locations of data centers are on the map below.



In addition to the existing data centers the California Energy Commission has approved or is reviewing six more data centers with an annual estimated total of 205 tons of NOx emissions from the testing of the backup generators. This does not include the Memorex and Sycamore Data Centers NOx emissions.

Estimated Annual NOx Emissions from CEC reviewed Data Centers<sup>44</sup>

CEC Data Centers	Address	NOx tpy
Mission Data Center	2305 Mission College Boulevard	33 <sup>1</sup>
Walsh Avenue Data Center	651 Walsh Avenue	34.9 <sup>1</sup>
Sequoia Data Center	2600 De La Cruz Blvd	35.9 <sup>1</sup>
McLaren Data Center	651, 725, and 825 Mathew Street	40 <sup>1</sup>
San Jose Data Center	1657 – Alviso-Milpitas Road in San Jose	36 <sup>1</sup>
Laurelwood Data Center	2201 Laurelwood Road	24.7 <sup>1</sup>
<b>Tons NOx per year</b>		<b>205.56</b>

<sup>43</sup> <https://www.svpfiber.com/fiber-connect/data-centers-in-santa-clara>

<sup>44</sup> This does not include the NOx emissions from the Memorex or Sycamore Data centers

The City of Santa Clara has also approved several other data centers in the middle of the data center cluster. In April of 2019 The City of Santa Clara approved the 1150 Walsh Avenue Data Center located a few blocks from the 651 Walsh Avenue Data Center now under CEQA review at the Energy Commission.<sup>45</sup> Construction of the project is scheduled to begin in March 2019 and be completed in 2021, a total of 25 months.<sup>46</sup> The 1150 Walsh Avenue Data Center has ten 3.25 MW diesel generators.<sup>47</sup> The projects generators are expected to generate 9 tons per year of NOx and .3 tons per year of diesel particulate.<sup>48</sup> Annual GHG emissions from the project are estimated to be 39,156 Metric tons of CO<sub>2e</sub>.<sup>49</sup> Annual GHG emissions from the emergency generators is estimated to be 589 Metric tons of CO<sub>2e</sub>.<sup>50</sup>

In August of 2019 the City of Santa Clara approved the 2175 Martin Avenue Data Center Project.<sup>51</sup> The project has six 2.75 MW emergency diesel generators. The emergency generators would have a total generation capacity of up to 13.75 MW.<sup>52</sup> The projects diesel generators are expected to generate 8 tons of NOx annually.<sup>53</sup> Based on the building energy and water consumption rates provided by the project applicant, the project would consume 105,003 megawatt-hours per year at buildout.<sup>54</sup> The projects GHG emissions from the emergency generators is 635 MT per year of CO<sub>2e</sub><sup>55</sup> The projects annual indirect GHG emissions from electricity use is 12,178 MT per year of CO<sub>2e</sub> annually.<sup>56</sup>

In May of 2018 the City of Santa Clara approved the Coresite 8 Data Center located at 3045 Stender Way.<sup>57</sup> The project will employ ten 3 MW generators for a

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<sup>45</sup> <https://www.santaclaraca.gov/Home/Components/BusinessDirectory/BusinessDirectory/295/3650>

<sup>46</sup> MND SV1 1150 Walsh Avenue Data Center Page 59 of 240

<https://www.santaclaraca.gov/home/showdocument?id=64292>

<sup>47</sup> <https://www.santaclaraca.gov/home/showdocument?id=64292> Page 38 of 240

<sup>48</sup> MND SV1 1150 Walsh Avenue Data Center Page 59 of 240

<sup>49</sup> <https://www.santaclaraca.gov/home/showdocument?id=64292> Page 82 of 240

<sup>50</sup> <sup>50</sup> <https://www.santaclaraca.gov/home/showdocument?id=64292> Page 82 of 240

<sup>51</sup> <https://www.santaclaraca.gov/Home/Components/BusinessDirectory/BusinessDirectory/339/3650>

<sup>52</sup> <https://www.santaclaraca.gov/home/showdocument?id=65174> Page 5 of 289

<sup>53</sup> <https://www.santaclaraca.gov/home/showdocument?id=65174> PAGE 73 OF 289

<sup>54</sup> <https://www.santaclaraca.gov/home/showdocument?id=65174> Page 106 of 289

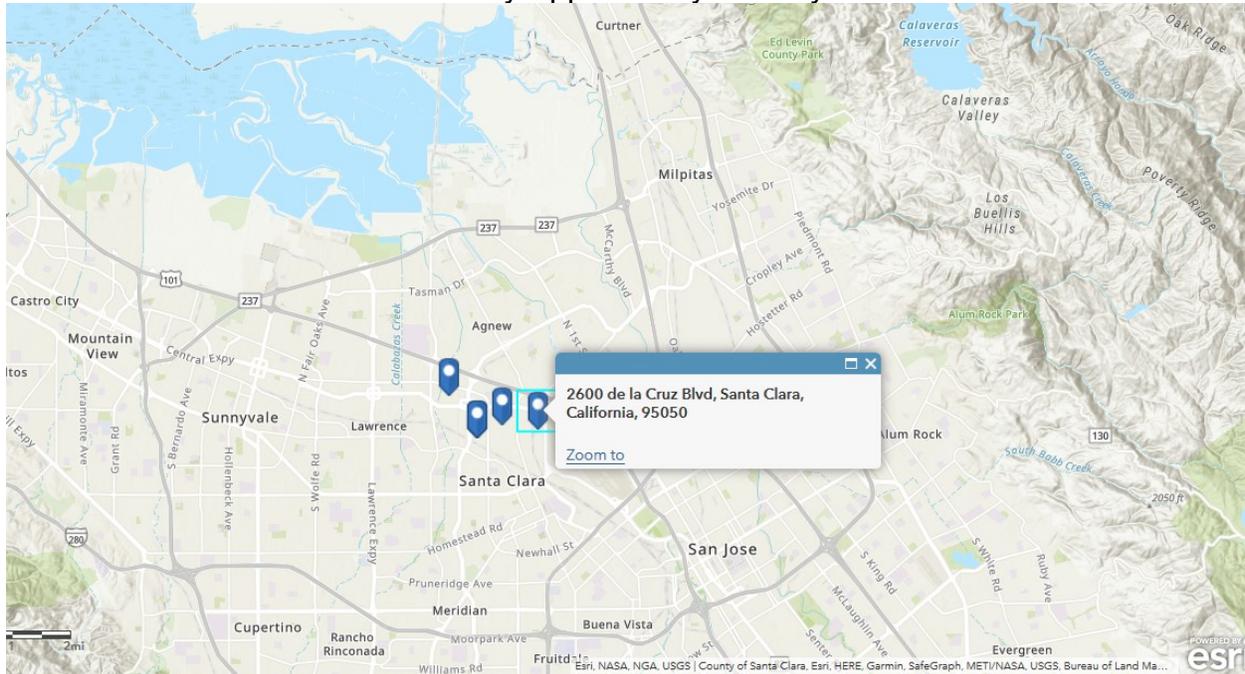
<sup>55</sup> <https://www.santaclaraca.gov/home/showdocument?id=65174> Page 109 of 289

<sup>56</sup> <https://www.santaclaraca.gov/home/showdocument?id=65174> Page 110 of 289

<sup>57</sup> <https://www.santaclaraca.gov/Home/Components/BusinessDirectory/BusinessDirectory/231/3650?npage=4>

generating capacity of 30 MW.<sup>58</sup> The project is estimated to emit 32,569 metric tons of CO<sub>2</sub>e per year. The emergency generators are estimated to emit 823 metric tons per year from generator testing.<sup>59</sup> Testing of the projects generators is estimated to produce 12.9 tons per year of NO<sub>x</sub> and .3 tons of diesel particulate matter.<sup>60</sup> The data centers are located on the map below.

Data Centers recently approved by the City of Santa Clara



As can be seen the project area is overburdened with pollution before the many new data centers spew their diesel particulate and NO<sub>x</sub> emissions. A fair argument has been made above that a cumulative impact assessment is required for this project due to the existing and future data centers. Accordingly the Energy Commission must require preparation of a complete Environmental Impact Report to be compliant with CEQA.

<sup>58</sup> <https://www.santaclaraca.gov/home/showdocument?id=57321> Page 15 of 118

<sup>59</sup> <https://www.santaclaraca.gov/home/showdocument?id=57321> Page 40 of 118

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## 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**

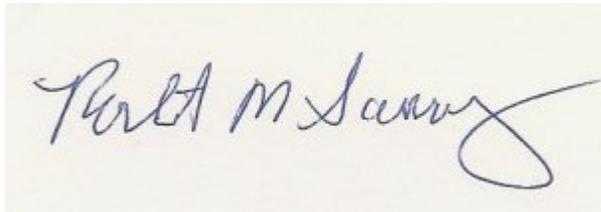
In the Matter of Sequoia Data Center  
Docket Number 19-SPPE-03

Declaration of Robert Sarvey

I Robert Sarvey Declare as Follows:

1. I prepared the attached rebuttal testimony for the Sequoia 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 March 23, 2020.

A handwritten signature in blue ink on a light-colored background. The signature reads "Robert M. Sarvey" in a cursive script.

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Robert M. Sarvey  
501 W. Grant Line Rd.  
Tracy, CA. 95376  
209 835-7162