| DOCKETED | |
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| **Docket Number:** | 19-SPPE-02 |
| **Project Title:** | Walsh Data Center |
| **TN #:** | 232974 |
| **Document Title:** | Intervenor Sarvey's Opening Testimony |
| **Description:** | Opening testimony of Robert Sarvey |
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State of California
State Energy Resources Conservation and Development Commission

| | |
|---|---|
| In the matter of: | |
| Walsh Data Center | Docket 19-SPPE-02 |

Intervenor Sarvey's Opening Testimony

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

The IS/MND 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.*"[1] 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 Santa Clara 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 2021.

Even if the Santa Clara CAP was applicable to this project, the WDC would still not be consistent with it. CEC Staff estimates that the GHG emissions from the WDC would be approximately 109,164 $MTCO_2e/yr$.[2]" The CEC Staff merely states that the project is complaint with the Santa Clara CAP but fails to analyze the projects individual and cumulative emissions[3] compared to the Santa Clara Action Plans goals and progress. From 2008 to 2016, the Santa Clara Climate Action Plan progress report shows the City of Santa Clara reduced GHG emissions by 85,122 MTCO2e/yr[4] as

[1] IS/MND Page 5.8-5
[2] IS/MND Page 5.8-11
[3] CEC Staff has approved two projects and is reviewing six more GHG impacts are shown later
[4] TN 232273 Climate Action Plan 2018 Progress Report Pages 10 of 29, and 8 of 29

illustrated in Table 3 below from the Climate Action Progress Report. The WDC emissions are 125% of the GHG reductions that the Santa Clara Climate Action Plan has achieved in eight years. The WDC emissions erase all gains made by the Santa Clara Climate Action Plan.

CEC Staff states that the project complies with the Santa Clara Action Plan because it implements some of the measures recommended in the plan. CEQA Guidelines § 15064(h)(3) states "When relying on a plan, regulation or program [to evaluate cumulative impacts], the lead agency should explain how implementing the particular requirements in the plan, regulation or program ensure that the project's incremental contribution to the cumulative effect is not cumulatively considerable." The IS/MND fails to meet this requirement.

**Table 3. Changes in $MTCO_2e$ 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 |

5

The WDC emissions are just part of a larger cumulative GHG emission impact that overwhelms any reduction achieved by the Santa Clara CAP. The cumulative GHG emission contribution from just six of the eight data center projects being permitted by the CEC is 947,641 MTCO2e/yr which is approximately 69% of the City of Santa

[5] TN 232273 Santa Clara Climate Action Progress Report Page 18 of 30

Clara's 2016 GHG emissions inventory without considering the Memorex Data Center and the Sycamore Data Center.

DATA CENTER APPLICATIONS BEFORE THE COMMISSION

| Facility | Docket # | Total MW | Annaul MWh | ($MTCO_2e/yr$) |
|---|---|---|---|---|
| McLaren Data Center | 17-SPPE-01 | 99 MW[6] | 665,760 MWh[7] | 154,958[8] |
| Laurelwood Data Center | 19 SPPE-01 | 99 MW[9] | 867,240 MWh[10] | 171,770[11] |
| Walsh Data Center | 19-SPPE-02 | 80 MW[12] | 700,800 MWh[13] | 109,164[14] |
| Sequoia Data Center | 19-SPPE-03 | 95.5 MW[15] | 846,340 MWh[16] | 170,865[17] |
| San Jose Data Center | 19-SPPE-04 | 99 MW[18] | 803,730 MWh[19] | 254,122[20] |
| 2305 Mission College Data | 19-SPPE-05 | 78.1 MW[21] | 684,156 MWh[22] | 86,762[23] |
| Memorex Data Center | | 99 MW[24] | N/A | N/A |
| Totals | | 650 MW | 4,568,006 | 947,641 [25] |

**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*

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

*diesel emissions from our communities.*[26] *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 the cleanest available technologies such as solar battery power, fuel cells, or Tier 4 generators."* [27] 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.

**The IS/MND violates Section 15064.4 (a) of the CEQA Guidelines**

Section 15064.4 (a) of the CEQA Guidelines states that*, "The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency* ***shall*** *make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project."* CEC Staff estimates the projects operational GHG emissions to be approximately 109,164 MTCO2e/yr based on SVP's 2017 power source disclosure. SVP's most current 2018 power source disclosure shows that SVP has nonresidential and residential power sources. The residential power mix is 45% renewable and 55% large hydroelectric. The non-residential power mix is almost identical to the California power mix except the SVP non-residential power mix has more unspecified sources of power. The nonresidential power sources are almost identical to the state of California's power mix as seen in the 2018 power source disclosure chart below. CEC Staff is well aware of this as I have now raised the issue in three separate proceedings, and the issue has

[26] TN 232242 Bay Area Air Quality Management District Comments - Comment Letter for Sequoia Data Center MND Page 5 of 6
[27] TN 232242 Bay Area Air Quality Management District Comments - Comment Letter for Sequoia Data Center MND Page 5 of 6

never been addressed. SVP's non-residential power mix includes all of SVP's GHG emissions and is almost identical to the California power mix factor of 1,004 pounds of $CO_2e$ per MWh. The IS/MND violates Section 15064.4 (a) of the CEQA guidelines because the IS/MND fails to make a good faith effort to calculate the projects indirect GHG emissions from electricity use and ignores substantial evidence that the projects GHG emissions are much higher than the IS/MND estimates.

| CITY OF SANTA CLARA / SILICON VALLEY POWER | | | | | |
|---|---|---|---|---|---|
| **ENERGY RESOURCES** | **SANTA CLARA RESIDENTIAL MIX** | **SANTA CLARA NON-RESIDENTIAL MIX** | **SANTA CLARA GREEN POWER STANDARD MIX** | **SANTA CLARA GREEN POWER - NATIONAL MIX** | **2018 CA POWER MIX**** |
| **Eligible Renewable** | **45%** | **32%** | **29%** | **6%** | **31%** |
| Biomass & Biowaste | 0% | 2% | 0% | 0% | 2% |
| Geothermal | 0% | 5% | 0% | 0% | 5% |
| Eligible Hydroelectric | 0% | 13% | 0% | 0% | 2% |
| Solar | 27% | <1% | 29% | 0% | 11% |
| Wind | 19% | 11% | 0% | 6% | 11% |
| **Coal** | **0%** | **0%** | **0%** | **0%** | **3%** |
| **Large Hydroelectric** | **55%** | **11%** | **0%** | **0%** | **11%** |
| **Natural Gas** | **0%** | **34%** | **0%** | **0%** | **35%** |
| **Nuclear** | **0%** | **0%** | **0%** | **0%** | **9%** |
| **Other** | **0%** | **0%** | **71%** | **94%** | **<1%** |
| **Unspecified sources of power*** | **0%** | **23%** | **0%** | **0%** | **11%** |
| **TOTAL** | **100%** | **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.

| | |
|---|---|
| For specific information about this electricity product, contact: | **CITY OF SANTA CLARA/SILICON VALLEY POWER 408-244-SAVE (7283)** |
| For general information about the Power Content Label, please visit: | **HTTP://WWW.ENERGY.CA.GOV/PCL/** |
| For additional questions, please contact the California Energy Commission at: | **TOLL-FREE IN CALIFORNIA: 844-454-2906 OUTSIDE CALIFORNIA: 916-653-0237** |

28

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

**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 Walsh Data Center IS/MND states:

> *"The greenhouse gas (GHG) emissions analysis in the MND estimates that the Project would generate 970 MTCO2e during construction, 2,313 MTCO2e per year for readiness testing and maintenance of the back-up generators, and 109,164 MTCO2e per year from operation of the data center (e.g., electricity use and other nonstationary sources). The MND concludes that the project's GHG emissions "would not be a 'cumulatively considerable' contribution under CEQA because they would conform with all applicable plans, policies, and regulations adopted for the purpose of GHG reductions; so, the maximum operation for [the Project's] non-stationary source GHG emissions (109,164 MTCO2e/yr) are determined to have less than significant impacts." The MND has not evaluated, disclosed, or discussed the Project's consistency with State policies requiring long-term reductions in emissions of GHGs, including the 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 long-term impacts on GHG emissions, Air District staff recommends that CEC augment its GHG discussion to include an evaluation, disclosure, and discussion of whether the project will be consistent with these State policies."*[29]

As mentioned above the Santa Clara CAP is not applicable to the projects emissions as the emissions will occur after the 2020 timeframe analyzed in the Santa Clara CAP. The City of Santa Clara General Plan the other document the IS/MND relies on to demonstrate the project is CEQA compliant clearly states that, *"The City's 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*

[29] TN 232507 Page 1,2 Bay Area Air Quality Management District Comments - Comment Letter for Walsh Data Center MND

*established by EO S-3-05.(Significant Impact)"* [30] The City of Santa Clara General plan EIR states that the cumulative GHG emissions would not meet the statewide goals established by EO S-3-05. The Santa Clara Climate Action Plan is based on 2020 GHG reduction goals and is not applicable to the project. Therefore, the evidence demonstrates the project's GHG emissions are a significant impact.

**The IS/MND fails to consider an appropriate time frame for the project as required by CEQA Guidelines § 15064.4 (b)**

CEQA Guidelines § 15064.4 (b) requires that, "*In determining the significance of a project's greenhouse gas emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. The agency's analysis should consider a timeframe that is appropriate for the project. CEQA requires agencies to consider a project's direct and indirect significant impacts on the environment, "giving due consideration to both the short-term and long-term effects."* The IS/MND fails to consider the timeframe of the project or estimate the project's lifetime emissions and long term effects. The IS/MND violates CEQA Guidelines § 15064.4 (b) because they fail to consider the project's lifetime impacts and 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 WDC, 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 determined that assessing air quality impacts of emergency operation of the standby generators could be speculative because, "*Emergency operations only occur when the facility has a power outage. Power outages in the SVP service territory have historically been very infrequent and*

[30] Exhibit 505 Page 11 of 14 (PDF Page 24 of 594)

*irregular and are expected to remain so."* Power outages are not the only cause of emergency generator operation at data centers. Data Center operators are generally secretive about their operations. 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.[31]

*"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 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."*[32]

Uptime institutes, "Publicly Reported Outages for 2019" report states that power outages only account for only 25% of data center outages.[33] Inclement weather, natural or man-made disasters, or electrical failure can put data centers at high risk of operational loss and cause backup generators to operate. Relying on SVP's knowledge of generator activity due to its own power losses is incomplete and misleading.

**BAAQMD and other agencies that deal with data centers analyze emergency operations.**

According to the IS/MND, "Based on staff's review of air quality agency practices summarized above, staff concludes that emergency operations are too infrequent and unable to be reliably evaluated for ambient air quality impacts."

The record contains only one air district's response to CEC's query on emergency operations.[34] CEC Staff asked the SJVAPCD about their emergency generator policy and the SJVAPCD told CEC Staff,

[31] 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
[32] https://www.datacenterknowledge.com/archives/2008/11/17/ups-failure-triggered-friendster-outage
[33] https://uptimeinstitute.com/publicly-reported-outages-2018-19
[34] TN 231420

> "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**."[35]

As reflected in SJVAPCD comments, most air districts are not confronted with an application for 33 generators at one site. This is common to most data centers, but most facilites do not have over 100 MW in backup diesel generators like the WDC does.

Much Like Santa Clara, Washington State has a high number of mega data centers with large backup diesel generator yards. 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. Most of the analysis centered on violations of the $NO_2$ 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.*"[36]

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*

[35] TN 231420 Email - AQIA Practices for Emergency Operations Page 2 of 3
[36] https://ecology.wa.gov/Air-Climate/Air-quality/Data-Centers

*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 combined for emergency usage*."[37] BAAQMD also evaluated the Santa Clara Data Center's 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**." [38]

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.

**No cumulative health risk assessment analysis has been performed.**

The IS/MND fails to perform a cumulative health risk assessment. BAAQMD, whose CEQA guidelines have been utilized to analyze this project, recommends in its comment letter that a cumulative health risk assessment be performed. BAAQMD's comments on the IS/MND state:

> "The Air District's CEQA Guidelines for assessing cumulative health risk impacts recommend that a lead agency evaluate all sources of toxic air contaminants (TACs) within 1,000 feet of a proposed project to ensure that the cumulative health risk from the project plus other nearby sources will not exceed a PM2.5 concentration of 0.8 µg/m3, a chronic Hazard Index of 10, or a carcinogenic risk of 100 additional cancers per million

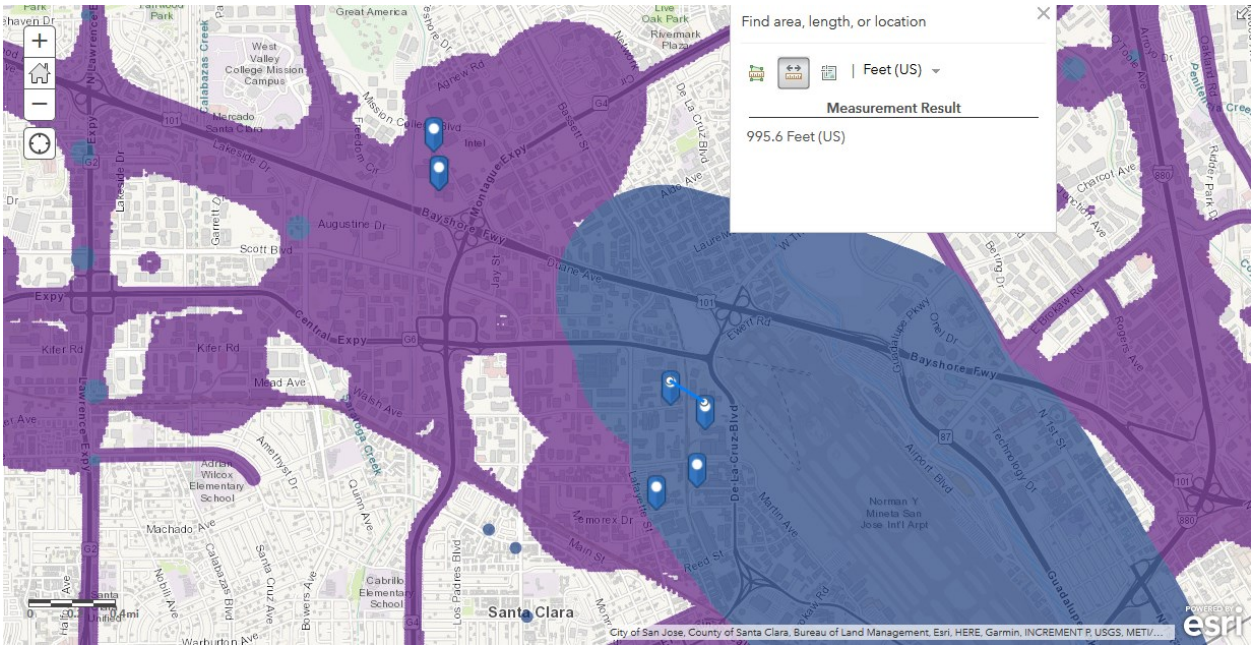
[37] 11 SPPE-01 Initial Study and Negative Declaration Recommendation Page 36 of 122 https://ww2.energy.ca.gov/2012publications/CEC-700-2012-001/CEC-700-2012-001.pdf

[38] Exhibit 2 BAAQMD Santa Clara Data Center ATC Page 11 of 110

exposed population. Air District guidance recommends expanding the project radius when large complex sources are nearby, such as the San Jose International Airport (SJC). The MND does not address cumulative health impacts, and Air District staff recommends that CEC include a cumulative TAC analysis. The CEC can contact the Air District to obtain guidance and available updated data."[39]

As noted above, Air District guidance recommends expanding the project radius when large complex sources are nearby. 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 Sequoia 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




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,

[39] TN 231467 Page 2

> **"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."**[40]

The IS/MND is not compliant with the BAAQMD CEQA guidelines as the air districted has informed CEC Staff in its comment letter.

**The IS/MND fails to perform a cumulative air quality impact assessment.**

CEC Staff concludes in the IS/MND that the project will not result in a cumulatively considerable net increase of any criteria pollutant because the annual emissions do not exceed any of BAAQMDS's thresholds of significance. But as 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. 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."**[41]

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[40] 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

[41] 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%3Fla%3Den&usg=AOvVaw2L1NtXPpSfbkxx5nWcghfv

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."[42]**

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."*[43]

The City of Santa Clara is currently host to 50 existing data centers[44] clustered in a three and a half square mile area. The publicly available locations of data centers are on the map below.

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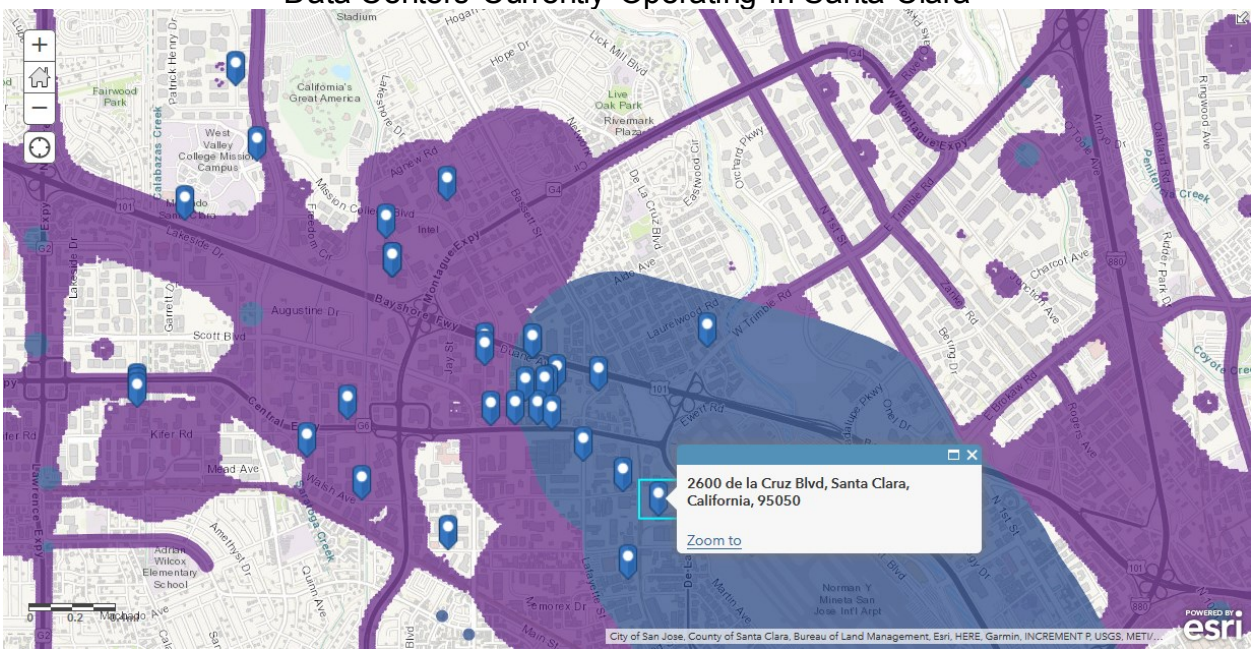
[42] Page 2 Thematic Responses to Comments https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwie8Zu9wq_pAhVIrJ4KHQgRBFgQFjAAegQIARAB&url=http%3A%2F%2Fopr.ca.gov%2Fdocs%2F20171127_OPR_Thematic_Responses_to_Comments_Nov_2017.pdf&usg=AOvVaw03iKw5ne5yzCp9pCsFxF-3

[43] https://www.baaqmd.gov/plans-and-climate/planning-healthy-places

[44] https://www.svpfiber.com/fiber-connect/data-centers-in-santa-clara

Data Centers Currently Operating in Santa Clara




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 just 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[45]

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

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

[45] This does not include the NOx emissions from the Memorex or Sycamore Data centers

Data Center now under CEQA review at the Energy Commission.[46] Construction of the project is scheduled to begin in March 2019 and be completed in 2021, a total of 25 months.[47] The 1150 Walsh Avenue Data Center has ten 3.25 MW diesel generators.[48] The project's generators are expected to generate 9 tons per year of NOx and .3 tons per year of diesel particulate.[49] Annual GHG emissions from the project are estimated to be 39,156 Metric tons of $CO_2e$.[50] Annual GHG emissions from the emergency generators is estimated to be 589 Metric tons of $CO_2e$.[51]

In August of 2019, the City of Santa Clara approved the 2175 Martin Avenue Data Center Project.[52] 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.[53] The project's diesel generators are expected to generate 8 tons of NOx annually.[54] 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.[55] The project's GHG emissions from the emergency generators is 635 MT per year of CO2e.[56] The project's annual indirect GHG emissions from electricity use is 12,178 MT per year of CO2e annually.[57]

In May of 2018, the City of Santa Clara approved the Coresite 8 Data Center located at 3045 Stender Way.[58] The project will employ ten 3 MW genrators for a generating capcity of 30 MW. [59] The project is estimated to emit 32,569 metric tons of CO2e per year. The emergency generators are estimated to emit 823 metric tons per year from generator testing.[60] Testing of the projects generators is estimated to

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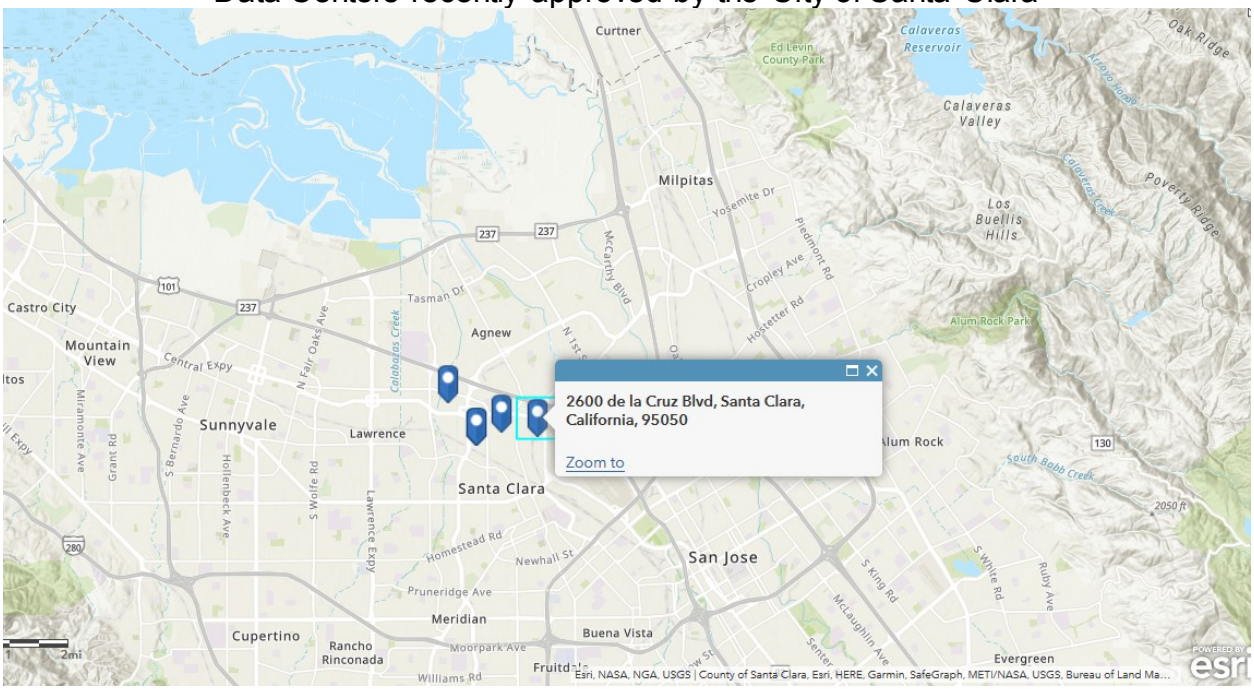
[46] https://www.santaclaraca.gov/Home/Components/BusinessDirectory/BusinessDirectory/295/3650
[47] MND SV1 1150 Walsh Avenue Data Center Page 59 of 240
https://www.santaclaraca.gov/home/showdocument?id=64292
[48] https://www.santaclaraca.gov/home/showdocument?id=64292 Page 38 of 240
[49] MND SV1 1150 Walsh Avenue Data Center Page 59 0f 240
[50] https://www.santaclaraca.gov/home/showdocument?id=64292 Page 82 of 240
[51] [51] https://www.santaclaraca.gov/home/showdocument?id=64292 Page 82 of 240
[52] https://www.santaclaraca.gov/Home/Components/BusinessDirectory/BusinessDirectory/339/3650
[53] https://www.santaclaraca.gov/home/showdocument?id=65174 Page 5 of 289
[54] https://www.santaclaraca.gov/home/showdocument?id=65174 PAGE 73 OF 289
[55] https://www.santaclaraca.gov/home/showdocument?id=65174 Page 106 of 289
[56] https://www.santaclaraca.gov/home/showdocument?id=65174 Page 109 of 289
[57] https://www.santaclaraca.gov/home/showdocument?id=65174 Page 110 of 289
[58] https://www.santaclaraca.gov/Home/Components/BusinessDirectory/BusinessDirectory/231/3650?npage=4
[59] https://www.santaclaraca.gov/home/showdocument?id=57321 Page 15 of 118
[60] https://www.santaclaraca.gov/home/showdocument?id=57321 Page 40 of 118

produce 12.9 tons per year of NOx and .3 tons of diesel particulate matter.[61] 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 overburdend with pollution before the many new data centers spew their diesel particulate and NOx emissions. A fair argument has been made above that an air quality cumulative impact assesement is required for this project due to the existing and future data centers.

## Responses to Committee Questions

### Public Health Pertaining to Toxic Air Contaminants (TACs):

• In "Staff's Responses to Comments Received on the Initial Study",[19] Staff states that it will work with BAAQMD staff to resolve BAAQMD's comments on the TACs analysis and Health Risk Assessment (HRA).[20] Has Staff resolved BAAQMD's comments regarding whether the analysis of TACs and the HRA is correct? Explain.

[61] https://www.santaclaraca.gov/home/showdocument?id=57321 Page of 118

Intervenor has no idea as he has not been included in the discussions between BAAQMD and the CEC Staff despite communicating interest to both parties. The CEC brags about its open public polices but most of the important decisions are made between the CEC and responsible agencies or the applicant and are conducted without any public participation behind closed doors. A workshop would be the appropriate vehicle to discuss BAAQMD's recognized deficiencies in the CEC Staff's IS/MND HRA.

• If Staff has not resolved BAAQMD's comments on the TACs analysis and HRA, is the analysis nonetheless CEQA compliant and consistent with the BAAQMD methodology? Explain.

No, the TAC analysis and the HRA both fail to meet CEQA and BAAQMD CEQA requirements. Both CEQA and BAAQMD Guidelines require that reasonably foreseeable future projects be included in the health risk analysis. In this case, the Sequoia Data Center is less than 1,000 feet away from the Walsh project but is not considered in CEC Staff analysis. Further, BAAQMD has commented on the Walsh Data Center IS/MND noncompliance with BAAQMD CEQA guidelines stating, "*Air District guidance recommends expanding the project radius when large complex sources are nearby, such as the San Jose International Airport (SJC). The MND does not address cumulative health impacts, and Air District staff recommends that CEC include a cumulative TAC analysis. The CEC can contact the Air District to obtain guidance and available updated data."* There are many sources in the project area that are large complex sources with high cancer risk.

Greenhouse Gas (GHG) Emissions:
• What is the CEC's legal obligation to evaluate potential impacts of GHG emissions from the Project, including operations of the Data Center, beyond calendar year 2020? What thresholds of significance must or may be applied?

CEQA Guidelines § 15064.4 (b) requires that, "*In determining the significance of a project's greenhouse gas emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. The agency's analysis should consider a timeframe that is*

*appropriate for the project. CEQA requires agencies to consider a project's direct and indirect significant impacts on the environment, 'giving due consideration to both the short-term and long-term effects.'"* The IS/MND fails to consider the timeframe of the project or estimate the projects lifetime emissions and long-term effects.

The initial study utilizes BAAQMD's significance criteria. For commercial/industrial land use development projects, BAAQMD has adopted a numeric threshold of 1,100 million metric tons of CO2e per year (MTCO2e/yr) and a qualitative threshold of complying with a qualified greenhouse gas reduction strategy. According to BAAQMD's CEQA guidelines, compliance with a qualified GHG reduction plan like the Santa Clara Climate Action Plan would be required if a project exceeds the 1,100 metric ton significance criteria.

The IS/MND states, "*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."*[62] 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 Santa Clara 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 2021.

The City of Santa Clara General Plan, the other document the IS/MND relies on to demonstrate the project is CEQA compliant, clearly states, *"The City's 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)"*[63] The City of Santa Clara General plan EIR states that the cumulative GHG emissions would not meet the statewide goals established by EO S-3-05.

[62] IS/MND Page 5.8-5

[63] Exhibit 505 Page 11 of 14 (PDF Page 24 of 594)

• Were any of the methodologies or thresholds identified in CEQA Guidelines sections 15064.4 or 15183.5, or the BAAQMD CEQA Guidance used? If so, identify where, using reference to docketed documents specifying titles, transaction numbers and specific page numbers. If not, explain why and the legal significance, if any, of not including the methodologies or thresholds identified in CEQA Guidelines sections 15064.4 or 15183.5, or the BAAQMD CEQA Guidance.

The initial study uses BAAQMD CEQA Guidelines to evaluate the projects GHG emissions. BAAQMD has taken exception to the IS/MND analysis. BAAQMD stated in its comment letter on the Walsh Data Center IS/MND, " *The MND has not evaluated, disclosed, or discussed the Project's consistency with State policies requiring long-term reductions in emissions of GHGs, including the 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 long-term impacts on GHG emissions, Air District staff recommends that CEC augment its GHG discussion to include an evaluation, disclosure, and discussion of whether the project will be consistent with these State policies*."

Considering the CEC Staff chose to evaluate the project under BAAQMD's 2017 CEQA guidelines it hard to argue with the author (BAAQMD) on whether the IS/MND analysis is compliant with BAAQMD's standards.

• Explain whether and how the goal identified in the City of Santa Clara's 2020 Climate Action Plan, for data centers to achieve a power usage effectiveness below 1.2, is applicable to and whether it is feasible for the Project?

Santa Clara's CAP is not relevant to the analysis in this proceeding. The project is not eligible to use the Santa Clara 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 2021.

According to the IS/MND, "the average PUE for the WDC would be 1.53."[64] The Walsh data center can easily meet or exceed its projected 1.53 PUE and could achieve a PUE of 1.2 or lower. *"Industry best practices indicate that a PUE of lower than 1.2 is achievable."*[65] The other data centers currently being reviewed by the CEC are all proposing lower PUE's than the Walsh Data Center is proposing. The Sequoia Data center is proposing an "average PUE of 1.23."[66] The Laurelwood Data Center is projected to achieve a 1.25 PUE or lower.[67] The average PUE for the Mission College Data Center at full buildout of both buildings would be 1.08 which is lower than the 1.2 PUE proposed in the Santa Clara CAP.[68]

• If the GHG emissions impacts from Project operation are found to be significant, what, if any, mitigation measures could be adopted to bring the GHG emissions below the threshold of significance?

The final decision should require a much lower PUE for this project than the proposed 1.53 PUE. The commission should require that the applicant utilize as much solar power as feasible at the project site. The Commission can require the use of biodiesel in the backup diesel generators which would reduce GHG emissions by as much as 74%. The commission can require a large battery storage facility at the site allowing the project to store and use renewable energy during the day that might otherwise be curtailed. The battery storage would also facilitate reliability in the project area and supply energy during short duration power outages.

[64] IS/MND Page 5.6-4
[65] TN 232507 Bay Area Air Quality Management District Comments - Comment Letter for Walsh Data Center MND Page 3
[66]TN 231651 Sequoia Data Center IS/MND Page 5.6-4
[67] TN 232294 Final Commission Decision Page 5.64
[68] TN 230848 MCBGF SPPE Application Page 11

## 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.

**CPUC Proceeding A.11-12-003: Application of PG&E for Approval of Amendments to Qualifying Facility Power Purchase Agreement with Thermal Energy Development Partnership.** Decision 13-06-022 in the proceeding stated my testimony, *"Demonstrated that the Facility is aging and better priced alternatives may exist in the future, Demonstrated that the firm Capacity amendment is not cost effective. The facility is not needed to meet PG&E's RPS Requirements in later years. The additional 5 MW of capacity is not needed to meet PG&E's RPS goals. Better alternatives exist and an RFO should be held for additional Generation. The commission has previously allowed the price amendment to be paid from the date of execution of the contract in Resolution E-4412, E-4427, and E- 4455."*
http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=70757356

**CPUC Proceeding 09-09-021**: **Application of Pacific Gas and Electric Company for Approval of 2008 Long-Term Request for Offer Results and for Adoption of Cost Recovery and Ratemaking Mechanisms (U 39 E)** Provided Testimony as consultant for CARE. Decision D.11-03-020 credited my testimony for demonstrating that PG&E failed to follow the Commissions protocol in evaluating the environmental impacts of the project. Decision credited my testimony for demonstrating that PG&E's demand had fallen since its procurement authorization in D. 07-12-052 and its procurement should be limited to the lower range of need. Decision concluded that my testimony demonstrated that PG&E was seeking unauthorized procurement in other CPUC proceedings. Decision credited my testimony that demonstrated that the Oakley PSA was not fairly valued or just and reasonable.
http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=446662

**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**: Application of Pacific Gas and Electric Company for Approval of Agreements Related to the Novation of the California Department of Water Resources Agreement with GWF Energy LLC, Power Purchase Agreement with GWF Energy II LLC - Provided Testimony on behalf of CAlifornians for Renewable Energy. Decision 11-01-024 credited my analysis that the, *"Upgrades were not needed because*

*of recent developments altering the forecast in D.07-12-052. California Energy Commission's (CEC's) more recent 2009 forecast shows that peak demand in 2015 will be 597 MW (4.48%) lower than the 2007 forecast, CEC issued a report which forecasts that exports will be 100 MW to 1,100 MW in 2015. The CEC issued and incremental demand forecast which showed additional energy efficiency savings not included in forecast in D. 07-12-052."* Decision states that my testimony, *"presented an analysis of the cost of the Upgrade Purchase Power Agreements (PPAs). The details of the analyses and conclusions are confidential. In general, they state that the 254 MW of incremental capacity provided the Upgrade PPAs has a substantial negative market value (as calculated by the IE) in both absolute terms and relative to other projects."* http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=441638

**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.

**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%

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

In the Matter of Walsh Avenue Data Center
Docket Number 19-SPPE-02

Declaration of Robert Sarvey

I Robert Sarvey Declare as Follows:

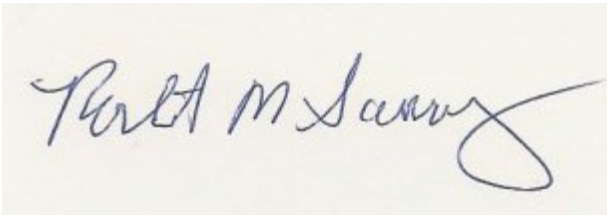
1. I prepared the attached +testimony for the Walsh Avenue Data Center.

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 May 13, 2020.



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