

DOCKETED

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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

Robert Sarvey's Energy Resources Reply Testimony

The initial Study negative declaration claims that the projects energy impacts are insignificant. The analysis presented in the IS/MND fails to comply with the requirements of CEQA particularly the new requirements for energy resources recently enacted in 2019. Appendix F of the CEQA guidelines states, "*The goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include. decreasing overall per capita energy consumption, decreasing reliance on fossil fuels such as coal, natural gas and oil, and increasing reliance on renewable energy sources.*" The operation of the Walsh Data Center accomplishes none of these goals.

Decreasing overall per capita energy consumption.

According to the IS/MND, "On an annual basis, the project would consume up to the maximum electrical usage of 700,800 MWh per year."¹ The total energy use for Silicon Valley Power in 2019 was 3,729,345 MWh.² Addition of the power required to power the Walsh Data Center would increase energy use in Santa Clara by approximately 18% per year.³

¹ IS/MND Page 5.8-9

² Attachment 1 <https://www.siliconvalleypower.com/svp-and-community/about-svp/utility-fact-sheet>

³ $700,800 / 3,729,345 = 18.79 \%$

Decreasing reliance on fossil fuels such as coal, natural gas and oil

The project proposes to test all 50 generators and according to the IS/MND just the testing of the generators will consume approximately 8,171 barrels of diesel fuel per year (bbl/yr).⁴ Diesel fuel is recognized as the most polluting and carcinogenic fossil fuel available and its use will increase California's reliance on fossil fuels. The project can utilize biofuels in the emergency generators and therefore decrease reliance on fossil fuels and comply with the CEQA guidelines.

Santa Clara Data Centers consume all of SVP's natural gas resources.

Data Centers operate around the clock. The average load factor of SVP's industrial customers is 85 percent, while most large customers are operating 24 hours a day, 7 days a week and observe minimal differences between peak and off-peak load.⁵ Solar power is only available in the daylight and wind power is intermittent. These intermittent energy supplies will not supply the necessary energy to power the data center 24/7. As can be seen from Silicon Valley Power's 2018 Power content label (below) nonresidential energy consumes all of SVP's natural gas resources and all of SVP's unspecified sources of power. Most of the renewable zero carbon energy is allocated to residential sources and Santa Clara Green Power. The energy usage pattern of the data center will increase reliance on fossil fuel and unspecified sources of power which will increase California's reliance on fossil fuels.

⁴ IS/MND Page 5.5

⁵ Updated - Staff Paper - Review of Silicon Valley Power's 2018 Integrated Resource Plan Page 22 TN-230953

2018 Power Content Label

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%
<p>* "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.</p>					
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				

The Walsh Data Center will have a significant cumulative impact on SVP's resources.

The initial study declares without analysis that, "SVP and its suppliers have sufficient energy to serve the expected future demand of the project." The IS/MND provides no evidence that SVP has the supply to meet the energy demand of the Walsh Data Center and the other data centers being reviewed by the CEC and the City of

Santa Clara. The CEC has approved or is reviewing another 650 MW of load from the data center applications recently submitted.

Santa Clara Data Centers Under Commission Review

Facility	Docket #	Total MW	Annual 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 City of Santa Clara has also approved several other data centers in the middle of the data center cluster with a total of load of 64 MW. 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

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 College 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

Commission.²⁶ Construction of the project is scheduled to begin in March 2019 and be completed in 2021, a total of 25 months.²⁷ The data center would have a 27 megawatt (MW) connection to SVP service.²⁸

In August of 2019 the City of Santa Clara approved the 2175 Martin Avenue Data Center Project.²⁹ The total projected peak electrical demand for the project is 13 MW.³⁰

In May of 2018 the City of Santa Clara approved the Coresite 8 Data Center located at 3045 Stender Way.³¹ The SV8 data center would have 24 megawatt (MW) connections to SVP service.³²

According Silicon Valley's 2019 fact sheet peak demand in their service area was 587.8 MW in 2019.³³ The CEC has approved or is reviewing another 650 MW of load from the data center applications recently submitted. With the current load and the 650 megawatts of data center demand SVP's peak load would be approximately 1,237 MW and that does not include the Sycamore Data Center and the other data centers recently approved by the City of Santa Clara.

CEC Staff's analysis of SVP's 2018 procurement plan reports that SVP will have 998 MW of dependable capacity (See Table 2 below) procured by 2030³⁴ which leaves a procurement shortfall of approximately 187 MW, not including the newly announced Lafayette Data Center, and the recently approved data center projects by Santa Clara, and a 15% planning reserve margin. The Walsh Avenue Data Center in conjunction with the other data centers proposed would exceed SVP's contracted resources detailed in their 2018 procurement plan and would be a significant cumulative impact.

²⁶ <https://www.santaclaraca.gov/Home/Components/BusinessDirectory/BusinessDirectory/295/3650>

²⁷ MND SV1 1150 Walsh Avenue Data Center Page 59 of 240

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

²⁸ MND SV1 1150 Walsh Avenue Data Center <https://www.santaclaraca.gov/home/showdocument?id=64292>
Page 7 of 240

²⁹ MND Martin Avenue Data Center Page 6 of 289

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

³⁰ <https://www.santaclaraca.gov/home/showdocument?id=65174>

³¹ <https://www.santaclaraca.gov/Home/Components/BusinessDirectory/BusinessDirectory/231/3650?npage=4>

³² <https://www.santaclaraca.gov/home/showdocument?id=58045> Page 7 of 307

³³ <https://www.siliconvalleypower.com/svp-and-community/about-svp/utility-fact-sheet>

³⁴ TN230953 Review of Silicon Valley Power's 2018 Integrated Resource Plan Page 21 of 53

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwj45c3g_znAhVG7J4KHbV0AyoQFjAAegQIBRAB&url=https%3A%2F%2Fefiling.energy.ca.gov%2Fgetdocument.aspx%3Ftn%3D230953&usq=AOvVaw3yMuAH-4pkX1Gqlbkdk7nV

Table 2: Capacity Resources by Type for 2019, 2025, and 2030 (MW)

Resource Type	2019	2025	2030
Peak Demand	583	695	716
Planning Reserve Margin	87	104	107
Peak Procurement Requirement	670	799	823
Non-RPS Resources			
Large Hydroelectric	289	217	217
Natural Gas	311	311	305
Generic Non-Renewable Procurement	0	157	72
RPS Resources			
Geothermal	50	50	50
Landfill Gas	11	11	9
Small Hydroelectric	99	61	61
Solar PV	9	26	26
Wind	69	137	137
Generic Renewable Procurement	0	38	122
Total Capacity Procured	839	1,008	998
Surplus/(Shortfall)	169	209	175

Source: California Energy Commission, based on 2018 SVP IRP filing.

The IS/MND fails to properly identify the projects power sources

CEQA Guidelines require that the lead agency identify the sources of power utilized by the proposed project. The IS/MND incorrectly describes the sources of power that will be utilized at the Walsh Data Center. The initial study claims that, “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). Following the link provided on page 5.6-7³⁵ in the

³⁵ IS/MND Page 5.6-7 **SVP 2017** – Silicon Valley Power (SVP). 2017 Power Content Label. Available online a <http://www.siliconvalleypower.com/svp-and-community/about-svp/powercontentlabel>

IS/MND provides the 2018 power content label (Below). As can be seen in 2018 non residential power is only 32% renewable, 11% hydroelectric, 34% natural gas, and 23% sources of unspecified power. The non-residential power supply mix utilizes all of SVP's natural gas generation and 23% of sources that are unspecified.

2018 Power Content Label

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The Walsh Avenue Data center is wasting energy with a high PUE

According to the IS/MND, “the average PUE for the WDC would be 1.53.”³⁶ This is an extremely high PUE. *“Industry best practices indicate that a PUE of lower than 1.2 is achievable.”*³⁷ 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.”³⁸ The Laurelwood Data Center is projected to achieve a 1.25 PUE or lower.³⁹ The average PUE for the Mission College Data Center at full buildout of both buildings would be 1.08.⁴⁰

This high PUE relative to industry standards and other data center projects under review leads to a wasteful and inefficient consumption of energy.

³⁶ IS/MND Page 5.6-4

³⁷ TN 232507 Bay Area Air Quality Management District Comments - Comment Letter for Walsh Data Center MND Page 3

³⁸ TN 231651 Sequoia Data Center IS/MND Page 5.6-4

³⁹ TN 232294 Final Commission Decision Page 5.64

⁴⁰ 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 an 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 by 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**

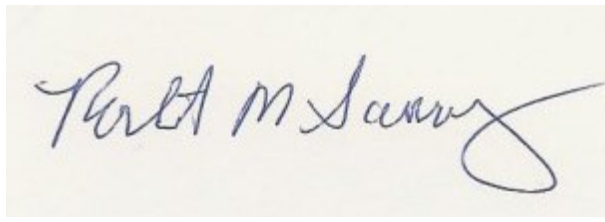
In the Matter of Walsh Avenue Data Center
Docket Number 19-SPPE-02

Declaration of Robert Sarvey

I Robert Sarvey Declare as Follows:

1. I prepared the attached rebuttal 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 April 15, 2020.

A handwritten signature in blue ink that reads "Robert M. Sarvey". The signature is written in a cursive style with a large, sweeping flourish at the end.

Robert M. Sarvey
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Tracy, CA. 95376
209 835-7162