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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 Comments on the Proposed Decision

Introduction

With approval of this Proposed Decision the California Energy Commission will have approved five data centers totaling 453.6 MW of potential peak demand[1] which the State of California appears to lack the resources to provide.[2] The five data centers McLaren, Laurelwood, Mission College, Walsh, and the Sequoia Data center have the potential to consume 3,785,186 MWh per year and have potential to emit 693,519 MTCO2e/yr[3] which exceeds SVP's 2030 GHG allowance of 485,000 MTCO2e/yr by 30% . No worries though the decision like the previous four data center decisions simply ignores the cumulative impacts of the five approved data centers.

The five data centers approved by the Commission will operate 232 diesel backup generators totaling 611.5 MW in an admitted environmental justice community which is part of BAAQMD's Community at Risk Program and is recognized by the SVP Integrated Resource Plan as a disadvantaged community.[4] No worries just ignore the other four data centers you permitted refuse to analyze emergency operations and deny the factual evidence which demonstrates that the Sequoia Data Center has significant

[1] Exhibit 303 Page 3
[2] Rolling blackouts were experienced in California on August 15-19
[3] Exhibit 303 Page 3
[4] Exhibit 27 Page 8-6

impacts to the environment , energy resources, and does not qualify for the Energy Commissions Small Power Plant Exemption.

The Sequoia Data Center does not qualify for the SPPE treatment.

The Proposed Decision finally admits that, "*The only CEC regulation that defines generating capacity is California Code of Regulations, title 20, section 2003 (Section 2003)*"[5] This is exactly the opposite position that Commission Staff, applicant and the Commission took in the Laurelwood Data Center decision which is still under judicial review.[6] In the Laurelwood case CEC Staff and Applicant, "*explained that the Backup Generators are diesel-fired with no turbines and that Section 2003 applies only to electric generating facilities with turbine generators*."[7] The Commission Decision on the Laurelwood Data Center agreed with the CEC Data Center staff and stated, "*The uncontested evidence shows that the Backup Generators constitute a thermal power plant with a generating capacity in excess of 50 MW and none are or use turbine generators. This makes Section 2003 inapplicable*."[8] CEC staff has maintained its position in this proceeding testifying that, "***section 2003, which uses nameplate capacity in addition to consideration of other factors, only addresses steam and combustion turbines, not diesel fueled gensets as used in the SBGF, and is therefore not controlling here.***"[9] The commission rejects staff and applicants position in this decision now deciding that Section 2003 is applicable to non turbine generators.

Utilizing Section 2003 to calculate generating capacity demonstrates that the Sequoia Data Center does not qualify for the SPPE process since its generating capacity is over 100 MW. The generating capacity for the SDC is 121.5 MW as computed by Section 2003 the only authority promulgated in the CEC regulations to compute generating capacity.[10] The initial Study claims Section 2003 is not controlling stating that, *"Title 20, California Code of Regulations, section 2003 specifies how the*

[5] PD Page 12
[6] Exhibit 30 TN 233086 Excerpts Form the Laurelwood Data Center Decision Submitted by Galati
[7] Exhibit 30 TN 233086 Excerpts Form the Laurelwood Data Center Decision Page 3 of 6
[8] Exhibit 30 TN 233086 Excerpts Form the Laurelwood Data Center Decision Page 3 of 6
[9] IS/MND Page 283 0f 322
[10] 54 X 2.25MW = 121.5 MW Continuous Rating 1.93 X 54 = 103.14 MW

Energy Commission calculates "generating capacity" for jurisdictional determinations, including the 50 MW threshold for the definition of a thermal power plant under section 25120. However, section 2003, which uses nameplate capacity in addition to consideration of other factors, only addresses steam and combustion turbines, not diesel fueled gensets as used in the SBGF, and is therefore not controlling here."[11]

As the evidence reflects[12] the commission has applied section 2003 to the calculation of generating capacity for power plants that utilize IC engines many times before. In the Humboldt Generating Station Proceeding (06-AFC-07) the Commission determined that, *"The HBRP would consist of 10 dual-fuel Wärtsilä 18V50DF 16.3 MW reciprocating engine-generator sets and associated equipment with a combined nominal generating capacity of 163 MW."* [13] In the Eastshore Energy Center Proceeding (06-AFC-06) the commission used Section 2003 to determine that, "*The proposed facility would be a nominal 115.5 megawatt (MW) simple cycle power plant consisting of 14 Wartsila 8.4 MW 20V34SG natural gas-fired reciprocating engine generators and associated equipment."*[14] In the Quail Brush Proceeding (11-AFC-03) the Commission utilized Section 2003 when determining that the projects 11 internal combustion engines totaled 100 MW of capacity.[15]

The Commission has also utilized Section 2003 in determining the generating capacity of a data center. In the Santa Clara Data Center Phase 2 application the applicant claimed the commission had no jurisdiction because the maximum generating capacity of the backup generating system would be limited by the 49.1 MW load of the data center. As the Santa Clara SPPE application states "*In a letter dated April 21, 2008, the Commission asserted permitting jurisdiction over the backup generators. (See Appendix F.) Xeres disagrees with the Commission's assertion of jurisdiction because the Data Center will never sell power on the electrical grid, is not a "power plant" under the Warren-Alquist Act, and because the maximum output of the backup generators for both project phases is 49.1 MW, which is less than*

[11] IS/MND Page 283 0f 322
[12] Exhibit 300 Page 1-3
[13] https://ww2.energy.ca.gov/2008publications/CEC-800-2008-005/CEC-800-2008-005-CMF.PDF page 17 of 447
[14] https://ww2.energy.ca.gov/sitingcases/eastshore/documents/index.html
[15] https://ww2.energy.ca.gov/sitingcases/quailbrush/index.html

the Commission's 50 MW jurisdictional threshold."[16] The Commission clearly rejected data center load as the maximum generating capacity for the Santa Clara Data center in 2011. In the Santa Clara Data Center Initial /Study and Mitigated Negative Declaration CEC Staff calculated generating capacity stating , "*The current review by the Energy Commission considers the entire Data Center project, Phases 1 and 2, with the Phase 2 project as the trigger for analysis as it adds 16 additional backup generators, totaling 32 generators capable of 2.25 megawatts each, bringing total generation capacity of the backup system to 72 megawatts of installed capacity*."[17] In the commissions jurisdictional determination for the Santa Clara Data Center the commission rejected the data center load as the maximum generating capacity of the backup generating system. The jurisdictional determination found that each of the Santa Clara Data Centers 32 diesel generators had a maximum load of 2.87 MW which would bring the total generating capacity of the Santa Clara Data Center to 91.8 MW.[18]

Energy Resources

The Proposed Decision concludes there are no impacts to energy resources because, "*The IS/PMND looked to the criteria listed in Appendix F to analyze the Project's potential impacts on the environment and concluded that the Project would not have significant impacts on energy resources."* The IS/MND allegedly utilizes Appendix F but fails to analyze several requirements of Appendix F. Appendix F requires that the CEQA analysis examine, "The effects of the project on local and regional energy supplies and on requirements for additional capacity." The IS/MND and the PD simply

[16] 11-SPPE-01 SPPE Application Page 26 of 70 https://ww2.energy.ca.gov/sitingcases/santaclara/documents/applicant/SPPE_Application/01_SPPE_Application.pdf

[17] 11-SPPE-01 **XERES VENTURES LLC, SANTA CLARA SC-1 DATA CENTER Small Power Plant Exemption Initial Study and Negative Declaration Recommendation** Page 18 of 122 https://ww2.energy.ca.gov/2012publications/CEC-700-2012-001/CEC-700-2012-001.pdf

[18] Exhibit 300 Attachment 1 Page 1 *"We also understand that each back up generator has a generating capacity of 2.87 MW which would make the total generating capacity 91.8 MW."*

ignore the projects potential electrical consumption of 846,340 MWh[19] per year which is 23% of SVP's 2018 retail sales of 3,694,312 MWh which will require new resources.[20]

The PD and IS/MND never discuss or examine the Appendix F requirement to analyze the effects of the project on peak and base period demands for electricity and other forms of energy. The projects demand of 96.5 MW is 18 % of SVP's current peak demand. Considering the recent rolling blackouts peak demand requirements should be analyzed but CEC staff and the commission believe that energy resources are unlimited a fact disproved by the recent rolling blackouts in August.

And as with all the data center analyses the PD never considers the other four data centers the commission has now approved with a combined maximum electrical usage of 3,785,186 MWh per year[21] which is more than the entire retails sales of SVP in 2018 of 3,566, 293 MWh.[22] The five approved data centers with a combined peak demand of 451 MW is 86% of SVP's 2018 peak demand of 526 MW.[23] This is especially irresponsible considering the recent rolling blackouts.

The PD completely ignores impacts to energy resources from the waste of diesel fuel in the testing and maintenance of the diesel generators a prime argument in the proceeding. While the diesel generators are operating the energy from the testing is completely wasted, batteries could be provided to store the generated energy. Staff witness Salyphone testified that the energy from the generators could be stored in a battery therefore preventing the waste of diesel fuel.[24]

Emergency Operations

The PD admits that, "*The IS/PMND does not contain an analysis of emission impacts caused by the use of the Backup Generators to provide power in the event of an interruption of electrical service from SVP. Staff concluded that "assessing the air quality impacts of emergency operations would require a host of unvalidated,*

[19] Sequoia Data Center Application TN 229419-1 Page 106 of 222
[20] Exhibit 300 TN 232270 Page 29 of 32
[21] Exhibit 300 Page 13
[22] Exhibit 300 Page 28
[23] Exhibit 300 Page 28
[24] RT Page 205,206 Lines 22-25 and 1 -5

unverifiable, and speculative assumptions about when and under what circumstances such a hypothetical emergency would occur.

The PD concludes that, *"In sum, we find there is evidence supporting the IS/PMND conclusion that the Backup Generators would operate very infrequently, if at all, for emergency operations."* That statement rings hollow considering the energy commission just used 100 MW of diesel backup engines from data centers in Santa Clara as a demand response mechanism during the latest August rolling blackouts.

The PD goes on to rationalize not evaluating emergency operation, the purpose of the project because, "*In the IS/PMND, Staff also pointed out that emergency operations are highly unlikely, testifying that the risk of an outage at any data center within the SVP service territory has historically been 1.6 percent per year.*" While there are other reasons for emergency operation like the CEC ordering the generators to be used for demand response there are now 5 approved data centers and the likelihood of one of those data centers experiencing a power outage is now 9% (1.5% X 5 = 9 %) a year. Over a 10 year period there is a 90% chance one or more of these data centers will experience a power outage.

The PD further rationalizes not evaluating emergency operation in the environmental justice community by stating, *"This fact, in conjunction with the number of assumptions that would need to be made to estimate air quality impacts due to emergency operations, renders quantification of those impacts too speculative to be meaningful and is therefore not required by CEQA."* The PD admits that, *"that a similar analysis was done for the Laurelwood Data Center by CEC Staff, and for the Santa Clara Data Center by BAAQMD",* and for a data center project in Washington State. Despite the fact that it was not too difficult for other agencies to evaluate emergency operations, including BAAQMD the responsible air quality agency, the PD refuses to require evaluation of emergency operations in the environmental justice community.

"Diesel Free by 33"

BAAQMD Staff has pleaded with the Energy Commission to require data center applicants to use another fuel besides diesel to power the backup generators in the last

three data center proceedings. BAAQMD has created the "Diesel Free by 33" initiative to eliminate diesel use in the Bay Area by 2033. The PD claims that the Diesel Free Initiative is not applicable to the Sequoia project. The PD states, "*Mr. Sarvey has not presented evidence that Diesel Free by '33 is an applicable GHG emissions reduction strategy, program, or law or that the Project is inconsistent with it."* The PD like the other data center Decisions completely ignores the BAAQMD's comments which provide the evidence that the project is inconsistent with the "Diesel Free by 33" initiative. BAAQMD stated in its comments on the IS/MND that, ***"In September 2018, the Air District launched Diesel Free by '33 to eliminate diesel emissions from our communities. 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."***[25] The BAAQMD comment letter which is evidence in the proceeding (Exhibit 301) clearly states the "Diesel Free by 33" initiative applies to the project and that the mayor of Santa Clara has committed to its implementation. The PD attempts to place the burden of proof on the intervenor but it is the applicant that has the burden of proof.

PM 2.5 levels are increasing in the project area.

The PD make the unsupported conclusion that PM 2.5 levels are decreasing in the project area. The PD states, *"BAAQMD's monitoring data indicates that PM2.5 levels in the Project area have been trending downward since 2013."* Its not clear what data the PD is referencing. The IS/MND shows that annual PM 2.5 concentrations are higher in 2018 than they were in 2013. Annual PM 2.5 concentrations have been steadily increasing from 8.4 µg/m3 in 2016 to 12.9 µg/m3 in 2018. The 24-hour PM 2.5 concentrations have increased from 20 µg/m3 in 2016 to 133.9 µg/m3in 2018. Pm 2.5 levels have been increasing in the project area for many years. The PD is dead wrong.

[25] Exhibit 301 Page 3

TABLE 5.3-3 AMBIENT AIR QUALITY MONITORING DATA

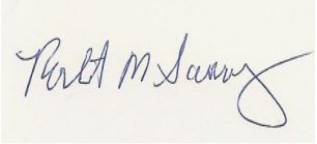
Pollutant	Averaging Time	2013	2014	2015	2016	2017	2018
O_3 (ppm)	1-hour	**0.093**	0.089	**0.094**	0.087	**0.121**	0.078
	8-hour	**0.079**	0.066	**0.081**	0.066	**0.098**	0.061
PM10 (µg/m³)	24-hour	**58.1**	**54.7**	**58**	41	**69.8**	**155.8**
	Annual	**22.2**	20	**21.9**	18.3	**21.3**	**23.1**
PM2.5 (µg/m³)	24-hour (98th percentile)	35	28	32	20	**41**	**133.9**
	Annual	**12.4**	9.3	10.6	8.4	10.1	**12.9**
NO_2 (ppb)	1-hour (maximum)	59	58	49	51	68	86
	1-hour (98th percentile)	52	55	44	42	50	59
	Annual	15.18	13.07	12.81	11.26	12.24	12
CO (ppm)	1-hour	3	2.4	2.4	1.9	2.1	2.5
	8-hour	2.5	1.9	1.8	1.4	1.8	2.1
SO_2 (ppb)	1-hour (maximum)	2.5	3	3.1	1.8	3.6	6.9
	1-hour (99th percentile)	2	2	2	2	3	na
	24-hour	1.4	0.9	1.1	0.8	1.1	1.1

Notes: Concentrations in **bold** type are those that exceed the limiting ambient air quality standard.
na – Not available.
Sources: ARB 2019b, US EPA 2019, BAAQMD 2019c

Conclusion

For all the reasons outlined above the Energy Commission should reject the Proposed Decision and require the applicant to file an Application for Certification. If the Energy Commission wants to use data centers as a demand response tool they should follow BAAQMD's advice and require the applicant to comply with the "Diesel free by 33" initiative which is applicable to the project.

Respectively Submitted,



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