

**DOCKETED**

<b>Docket Number:</b>	17-SPPE-01
<b>Project Title:</b>	McLaren Backup Generating Facility
<b>TN #:</b>	224284
<b>Document Title:</b>	COMMENTS OF HELPING HAND TOOLS (2HT) ON CEC STAFF'S INITIAL STUDY
<b>Description:</b>	N/A
<b>Filer:</b>	Robert Sarvey
<b>Organization:</b>	Robert Sarvey
<b>Submitter Role:</b>	Intervenor
<b>Submission Date:</b>	7/24/2018 1:33:44 PM
<b>Docketed Date:</b>	7/24/2018

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

In the Matter of  
McLaren Backup Generating Facility

Docket Number 17-SPPE-01

COMMENTS OF HELPING HAND TOOLS (2HT) ON CEC STAFF'S INITIAL STUDY

Project Description - What is the generating capacity of the McLaren Data Center?

The initial study does not provide a consistent project description. It is not clear whether the project will utilize three 900 kw safety generators or three 600 kw safety generators.<sup>1</sup> It is not clear what the total generating capacity of the project is. The initial study states that the project is 90.5 MW<sup>2</sup>, or 91.7 MW.<sup>3</sup> The applicant states that, *“At full build-out, the project will*

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<sup>1</sup> The project would include 47 emergency diesel generators with an engine horsepower of 4,043 at full load be used in the event of power grid failure and three (3) life safety generators with an engine horsepower of 900 at full load to be used to ensure fire response capability. IS Page 52 of 329

For the three smaller engines called Life Safety Generators, the applicant is proposing to use diesel engine made by Perkins, with a Tier 2 rating and an engine output at full load of 900 hp. IS 48 of 329

<sup>2</sup> Each generator would have a net continuous output capacity of 1.93 MW, totaling 90.5 MW. In addition, the MBGF would include three life safety emergency generators capable of generating 600 KW each, to support fire suppression and other emergency operation. IS Page 182 of 329

<sup>3</sup> The MBGF consists of 47 diesel- fired backup generators, each with a peak output capacity of 2.75 MW and with a continuous steady state output capacity of 1.93 MW, for a total generation capacity of up to 91.7 MW to support the need for the MDC to provide uninterruptible power supply for its tenants' servers. Three additional 600kW generators would provide continuous power to the pumps associated with the fire sprinkler system and other emergency operations for each building. IS Page 18 of 329

include forty-seven (47) 2.753-megawatts (MW) capacity Tier-2 emergency generators with diesel particulate filters (DPF) (a total backup capacity of 99.56 MW), three ~~one~~ 6500-kilowatts (kW) life safety generators.<sup>24</sup> So according to the applicant the generating capacity is 101.2 MW. Simple math that is used in all CEC siting cases to determine generating capacity, including all data center cases,<sup>5</sup> shows the McLaren data center with its 47 diesel generators rated at 2.75 MW and its three-line generators at 600kW totals over 131 MW in generating capacity.<sup>6</sup>

The Initial Study fails to examine the emergency operation of the back-up diesel generators.

The California Environmental Quality Act (CEQA) requires state and local agencies to identify the potentially significant environmental impacts of their actions, and then to avoid or mitigate those impacts if feasible. In order to identify the significant impacts from this project the initial study must analyze the project under its stated purpose which is to provide emergency back-up power to the data center operating all 47 diesel powered generators. All of the analyses in the initial study and the entire proceeding fail to analyze the environmental impacts of the emergency operation of the project. All emission impacts<sup>7</sup> estimates and health risk assessments included for this project analyze only the testing of the emergency generators for maintenance and air quality testing. The HRA and air quality impacts analysis do not include the actual emergency operations of the 47 back up diesel generators which is the projects purpose. The emission estimates for the health risk assessment and the NO2 assessment<sup>8</sup> only include the

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<sup>4</sup> TN #: 223484 Vantage Data Center's Revised SPPE Application for McLaren Backup Generating Facility - Air Quality and Public Health Page 15 Of 155

<sup>5</sup> The Decision for the Santa Clara SPPE Phase 2 states, “ Each backup generator has a capacity to generate 2,250 kilowatts, or 2.25 megawatts (MW), a total capacity of 72 MW. Under state law, power plants that generate up to 100 MW may be exempted from the Energy Commission's licensing process if the Energy Commission determines a project proposal qualifies for such an exemption.”

<sup>6</sup> The applicant has further stated that each backup generator can sustain a 3 MW load, “All four systems share the approximate 3MW of mechanical load for a total load of 9MW. Should any one system fail, the surviving systems will have enough capacity to completely share the 9MW of total load at the maximum capacity of the surviving generators. During a utility outage, all four generators will start and be connected to their dedicated loads. If none of the generator systems fail during the utility outage, the total maximum load of 9MW will still be shared between the four generators, and will only be running at about 66% of the full capacity of the generator.” Under that assumption the projects total generating capacity would be 142.8 MW.

<sup>7</sup> In this case, engine emissions are based on nonemergency operations (primarily the schedule of “readiness” testing that is required for the generators) and the planned number of hours of non-emergency operations (in accordance with BAAQMD Regulation 2, Rule 5). TN #: 223484 Vantage Data Center's Revised SPPE Application for McLaren Backup Generating Facility - Air Quality and Public Health

<sup>8</sup> For the 1-hour NO2 NAAQS and CAAQS analyses for the 2.75 MW emergency back-up generators, a typical operating scenario was modeled that includes one 4-hour load banking

impacts of 1 generator being tested for one four-hour period. Even with testing only 1 generator the projects acute health risk is .8 which is at the border of significance for acute health risks from the project. The initial study does not inform the public or decision makers of what the actual health risk is when the project is in emergency operation and emitting 47 times the toxic air containments as the maintenance testing of one engine does. Similarly, the applicant has modeled the 1-hour NO<sub>2</sub> impact from the project utilizing the emissions from only 1 back up diesel engine for four hours not 47 engines operating under emergency conditions. Even with only 1 engine operating the NO<sub>2</sub> impact analysis still shows a 151.8 ug/m<sup>3</sup> impact.

CEQA requires that the project be analyzed under the worst operating conditions which would be the emergency use of the engines which is the projects purpose. The IS and the application fail to inform the public and the decision makers on the potential impacts from emergency operation of the project.

### Cumulative Impacts

CEQA defines cumulative impacts as “two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impacts.” Section 15130 of the CEQA Guidelines requires that an EIR evaluate potential environmental impacts that are individually limited, but cumulatively significant. The IS doesn’t even analyze the impact of the projects 47 generators operating in emergency mode much less do a CEQA level cumulative analysis.

During an outage it would be expected that all 47 generators would be operating concurrently. The IS and all other analysis in this proceeding only examine impacts from one generator at a time operating for 4 hours. Electrical outages will affect other facilities in the project area that also have backup diesel generators. For example, the Santa Clara Data Center located at 865 Matthew Street, is around 2,000 feet away with its 32 - 2.25 MW backup diesel generators. The 3105 Alfred Street Data Center has 6 two-megawatt diesel generators.

What other facilities near the project have back up diesel generators. What effect will the simultaneous use of 76 back up diesel generators have on air quality on the already overburdened

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test that is conducted for one generator at a time, once annually, for maintenance and readiness testing. TN #: 223484 Vantage Data Center's Revised SPPE Application for McLaren Backup Generating Facility - Air Quality and Public Health Page 73 Of 155

community. The initial study fails to inform the public and decision makers of the potential cumulative impacts that affect the environmental justice community from multiple diesel generators responding to a blackout.

### Environmental Justice

The initial study offers mitigation measures to protect historic resources and dead native Americans but does little to protect the minority environmental justice community that resides near the project from the cumulative impact in the project area.

#### Hazardous materials cumulative transportation and storage impacts.

EJ populations may experience disproportionate hazards and hazardous materials impacts if the storage and use of hazardous materials within or near EJ communities occur to a greater extent than within the community at large. The project site and the EJ community are surrounded by back up diesel generators from data centers and other industrial uses. According to the initial study, *“The MBGF will prepare a Spill Prevention, Control and Countermeasure Plan (SPCC) to address the storage, use and delivery of diesel fuel for the generators.”* Noticeably absent is any analysis or proposed mitigation measures designed to prevent transportation accidents and spills in the environmental justice community from the transportation of diesel fuel and hazardous materials for the project and surrounding land uses including the Sant Clara Data Center which the Commission itself certified. A materials safety transportation plan is needed for this project.

As for hazardous material storage the project proposes to store a potential 296,100 gallons of diesel fuel at the project site above ground. In the Santa Clara Data Center proceeding a project located a couple of thousand feet from the McLaren Center the Commission considered that storing the diesel fuel in an underground tank reduces the risk from an accidental release of hazardous materials to an insignificant level.<sup>9</sup> The project should be required to utilize underground storage tanks considering its proximately to residential housing in an environmental justice community.

### Noise

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<sup>9</sup> Commission Decision Santa Clara Data Center Phase 2 Page 78 of 141

According to the initial study, *“As previously discussed, the nearest residence is located approximately 400 feet west of the project site. Worst-case construction noise (based on the assumptions described above) at a distance of 400 feet could be up to 68 dBA LEQ based on distance alone, not accounting for ground effect attenuation or shielding offered by intervening buildings”*<sup>10</sup> Both the initial study and Santa Clara MND claim that noise limits under the Santa Clara noise ordinance limit noise at residential uses to 55 db. The IS never confirms that the project can meet the 55 db noise limit. The initial study does not disclose that the City of Santa Clara’s noise ordinance prohibits noise from exceeding 50 db between 10 pm and 6AM. Can the project comply with this limit? The initial study is silent as it doesn’t recognize the 50 db nighttime limit?

#### GHG Emissions

As with the other emission estimates for this project CEC staff only considered engine testing and maintenance emissions for GHG emission estimates. Potential emergency use of the diesel fired engines was not evaluated. The initial study with its piecemeal analysis concludes that the GHG emissions from the McLaren data center would be insignificant. BAAQMD provided comments on McLaren Data Center MND which disagree with the Initial Study’s conclusions. BAAQMD stated in its comment letter on the MND for the McLaren data center,

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

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<sup>10</sup> IS Page 293 of 329

***Therefore, the MND does not appear to provide the substantial evidence needed to justify a less than significant determination”.***<sup>11</sup>

BAAQMD has spent considerable effort in reducing GHG emissions in the air district. One of its major efforts is aimed at data centers and their extensive energy use. BAAQMD provided these comments on Santa Clara’s Climate action Plan.

*“However, in order to meet the State’s and the air districts climate stabilization goal of an 80 percent reduction below 1990 levels by 2050 (Executive Order S-3-05 Resolution) California will need to explore all feasible avenues to achieve significant emission reductions. In this spirit we have identified additional feasible measures that have proven effective at reducing GHG emissions in other jurisdictions and are not included in the plan. Air district staff recommends that the Plan strengthen its GHG reduction approach by .....**requiring existing rather than just new data centers to achieve a power usage effectiveness rating of 1.2 or lower. Staff recommends that this measure also encourage and incentivize data centers to utilize alternatives to diesel powered back-up generators to reduce GHG emissions and other air pollutant from the testing and use of diesel generators.**”*<sup>12</sup>

The McLaren Data Center as proposed fails to achieve a power usage effectiveness rating of 1.2 or lower. According to the applicant, *“With implementation of the proposed mechanical and electrical design of the building and the anticipated data center occupancy, the PUE will be 1.5 at the proposed data center.”* The data center also continues the use of dirty diesel fired back up engines another component of BAAQMD’s strategy to reduce GHG and TAC emissions in the air district.

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<sup>11</sup> [www.baaqmd.gov/~media/files/planning-and-research/ceqa-letters/2017/mclaren-data-center\\_ceqa-ltr\\_030817-pdf.pdf?la=en](http://www.baaqmd.gov/~media/files/planning-and-research/ceqa-letters/2017/mclaren-data-center_ceqa-ltr_030817-pdf.pdf?la=en)

<sup>12</sup> [www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA%20Letters/Santa%20Clara%20CAP%20letter\\_11\\_20\\_13.ashx?la=en](http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA%20Letters/Santa%20Clara%20CAP%20letter_11_20_13.ashx?la=en)