

DOCKETED

Docket Number:	17-SPPE-01
Project Title:	McLaren Backup Generating Facility
TN #:	225055
Document Title:	VDC's Response to Helping Hand Tools Additional Testimony and Proposed Exhibits
Description:	N/A
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Submitter Role:	Applicant Representative
Submission Date:	10/22/2018 9:54:18 AM
Docketed Date:	10/22/2018

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STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the Matter of:

Application For Small Power Plant
Exemption for the **McLAREN BACKUP
GENERATING FACILITY**

DOCKET NO: 17-SPPE-01

**VANTAGE DATA CENTERS'
RESPONSE TO ADDITIONAL
TESTIMONY PROVIDED BY
HELPING HANDS TOOLS AFTER
THE STATUS CONFERENCE**

INTRODUCTION

Vantage Data Centers (Vantage) files these comments to respond to the additional testimony and Exhibits filed by Robert Sarvey on behalf of Intervenor Helping Hands Tools on October 17, 2018 (TNs 225007, 225008, and 225014)¹ in support of its Application for Small Power Plant Exemption (SPPE) for the McLaren Backup Generating Facility (MBGF). The Committee allowed Mr. Sarvey to file additional testimony at the Status Conference and in its Order dated October 12, 2018 (TN 224975). The purpose of the testimony was to provide additional facts to answer the Committee questions posed in its prior order (TN 224822) not to attempt to rebut the testimony provided by Vantage in accordance with the Commission's evidentiary rules in advance of the Status Conference. Vantage does not object to the Committee receiving into evidence the additional testimony if the Committee considers this brief to respond to the misleading information which Mr. Sarvey has provided "out of context".

¹ Helping Hand Tools Proposed Exhibits 308, 309 and 307, respectively.

Mr. Sarvey's Testimony Regarding Exhibit 30

Exhibit 30 is a Jurisdictional Determination from the Executive Director issued to Vantage on August 25, 2017. Mr. Sarvey correctly notes that the determination was issued to Vantage specifically in the context of its Santa Clara Campus. However, as was discussed at the Status Conference, Vantage exchanged information with Staff in the context of the Santa Clara Campus to answer two fundamental questions. The first was to determine when independent backup generating facilities that support independent buildings that were planned and developed over time without a master plan of development should be added together to determine whether they are a "site" for purposes of the jurisdiction. The McLaren Data Center (MDC) was discussed and based on Exhibit 30, Staff advised Vantage that the MBGF since it was being planned as part of a larger master development plan for the MDC, even though it would be constructed in phases, should be considered one site.

The second and more relevant question was how to determine the generating capacity for a backup generating facility that is solely interconnected to a data center. As discussed at the Status Conference, the MDC was discussed during those meetings and the guidance provided concerning how to calculate generating capacity as outlined in the Exhibit 30 was used in preparing the MBGF SPPE Application. Therefore, it is inaccurate to say that Exhibit 30 was for a different project when its substance was developed for Vantage by Staff when both Staff and Vantage knew it would be used to develop the MBGF SPPE Application.

Mr. Sarvey's argument is entirely inconsistent with his contention that the Committee rely on a Jurisdictional Determination issued over 10 years ago to a different applicant for a different project². As discussed at the Status Conference Staff has a developed a more thorough understanding of data centers and believes that the methodology used for Exhibit 306 is not appropriate and also urges the Commission to rely on the methodology used in Exhibit 30.

Mr. Sarvey's Incorrect PUE Estimates

Mr. Sarvey contends in his testimony that the Committee should not rely on the testimony of Mr. Stoner and Mr. Myers because they are not engineers. Mr. Sarvey is not an engineer, nor a data center expert, yet desire the Committee to accept and rely

² Exhibit 306, Executive Director Jurisdictional Determination to DuPont Fabros Technology on April 21, 2008 for its Santa Clara 1 Data Center.

on his testimony on data center design, power utilization efficiency (PUE), electrical loading and other engineering aspects³. Mr. Stoner and Mr. Myers are data center experts entrusted to develop and construct data centers and employ numerous engineers supporting those efforts. They are qualified to discuss PUE and are qualified to provide expert testimony regarding the generating capacity of the MBGF since they are both intimately familiar with the design basis for both the MBGF and the MDC.

Mr. Sarvey also contends that the MBGF's PUE is 1.5. This is also incorrect. Mr. Sarvey contends his new proposed Exhibits 308 and 309 support his contention that the MBGF PUE is 1.5. Exhibits 308 and 309 are both 2016 Letters from Rosendin Electric. Both letters are written **for the Santa Clara Campus and not the MDC**. The Santa Clara Campus utilizes a more energy intensive mechanical cooling system than the MBGF and therefore would have a higher PUE than the more efficient MDC. Second, the letters do not represent an engineer's estimate of PUE. They merely reflect an early calculation of the load profile using the mechanical contractor estimate of 1.5 PUE for another facility.

Mr. Sarvey also contends that Vantage hired Rosendin Electric to calculate the PUE for the MBGF. This is incorrect. Rosendin Electric was asked to calculate the loads for its Santa Clara Campus, not the PUE.

Mr. Sarvey further contends that the earlier City of Santa Clara environmental documents provide that the MBGF PUE should be 1.5. As Mr. Stoner and Mr. Myers testified, the earlier PUE estimates that were discussed in the City of Santa Clara's IS/MND and Response to Comments were for the **original configuration of the MDC**⁴. Since those estimates in 2016, the MDC has been redesigned to increase the efficiency of the MDC, which in turn resulted in the reduction in the size of the generators necessary for the MBGF. The redesign of the MDC led to the Revised SPPE Application for the MBGF presently before the Commission.⁵

As explained by Mr. Myers at the Evidentiary Hearing the 1.43 PUE estimated for the MBGF is the worst possible case with full customer IT loading and the mechanical load of the building operating for the hottest hour in the last 50 years. Mr. Myers explained the expected PUE is around 1.25 and that Vantage guarantees a PUE of 1.3 to its

³ Exhibit 300.

⁴ 8/30/18 RT 62-71.

⁵ Exhibit 20.

customers. Mr. Myers further explained that if Vantage exceeds a PUE of 1.3, Vantage incurs the additional energy costs.⁶

Therefore, Mr. Sarvey's Exhibits 308 and 309 are not applicable to the MBGF and do not contradict the expert opinions of Mr. Myers and Mr. Stoner. Mr. Sarvey did not challenge the qualifications of either Mr. Myers or Mr. Stoner nor does Mr. Sarvey possess the expertise necessary to provide an expert opinion regarding PUE.⁷

Regardless, as explained at the Status Conference, using a PUE estimate is just one way to calculate the loads of the MDC and therefore, the generating capacity of the MBGF. Staff's experts, who are engineers, calculated the loads of the MDC and the corresponding maximum generating capacity of the MBGF in Exhibit 202. Staff's method is entirely consistent with the PUE method. The PUE method estimates the mechanical building load necessary to support the Critical IT (Critical IT multiplied by the PUE). The method used by Staff in Exhibit 202 actually adds each potential maximum load for each customer data module (individual Critical IT by data module) and the portion of the total building mechanical load to support each of the customer data modules to arrive at the total load capacity of the MDC. These loads were identified by Vantage in its testimony and its SPPE Application for the worst case conditions used for as the design basis for the MDC. Either method (PUE⁸ or load addition⁹) results in a maximum generating capacity of the MBGF of less than 100 MW.

Additionally, the Commission can be assured that the MDC will never use more than 100 MW as evidenced by SVP's power supply agreement¹⁰ and the condition of approval that will be included in the City of Santa Clara's ultimate permit approval¹¹ for the MDC and the MBGF.

Lastly, Mr. Sarvey states in Proposed Exhibit 307, the PUE method would not include electrical losses such as: "including site substation, generators, transformers, and electrical losses". Even if that were accurate, which it is not, these clearly would be internal loads of the site that would be subtracted from, not added to, the generating capacity to determine the net generating capacity of the MBGF.

⁶ Ibid.

⁷ Exhibit 300, Qualifications of Mr. Sarvey.

⁸ Exhibit 31.

⁹ Exhibit 202.

¹⁰ Exhibit 32.

¹¹ Exhibit 33.

Alternative Technologies

Mr. Sarvey claims that alternative technologies should be used for the MBGF. In addition to these technologies being less reliable and cost prohibitive, the Committee simply need not consider them since the Air Quality Staff experts and Vantage experts agree that the MBGF will not result in significant impacts.¹²

Therefore, Exhibits 307, 308, and 309, if admitted into the evidentiary record, should not influence the Committee Decision which should grant the SPPE.

Dated: October 22, 2018

Respectfully Submitted,



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¹² Exhibits 200, 202, 205, 27, 28, 31, 34, and Staff's Issue Statement (TN 224909).