DOCKETED	
Docket Number:	19-SPPE-01
Project Title:	Laurelwood Data Center (MECP I Santa Clara I, LLC)
TN #:	229077
Document Title:	Report of Conversation Re. Silicon Valley Power Questions from Staff
Description:	N/A
Filer:	Lisa Worrall
Organization:	California Energy Commission
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CALIFORNIA ENERGY COMMISSION
REPORT OF CONVERSATION

Siting, Transmission and Environmental Protection Division

		FILE: n/a	
	PROJECT TITLE: Laurelwood Data Center		**Docket:** 19-SPPE-01
TECHNICAL AREA(s): Air Quality			
☐ **Telephone**	☒ **Email**	☐ **Meeting Location:**	
NAME(s):	Mark Hesters, Senior Transmission Planner	**DATE:** 7/2/19	**TIME:** 2:23pm
WITH:	Kevin Kolnowski, Assistant Director, SVP		
SUBJECT:	**Siliocon Valley Power (SVP) Questions from Staff**		

COMMENTS:

During the Laurelwood Status Conference #2, held on July 23, 2019, Mr. Harris with the applicant, requested staff docket the questions staff asked SVP and referenced in the status conference.

The following attachment is the email sent to Kevin Kolnowski with SVP asking questions about Laurelwood and other data centers.

cc:	**Signed:** |s| _____ |s| Lisa Worrall
	Name: Mark Hesters, Senior Transmission Planner Lisa Worrall, Planner II

From: Hesters, Mark@Energy
To: Worrall, Lisa@Energy; Layton, Matthew@Energy
Subject: FW: Laurelwood and other data center questions
Date: Tuesday, July 23, 2019 3:03:21 PM

Mark Hesters
California Energy Commission
(916)654-5049

From: Hesters, Mark@Energy
Sent: Tuesday, July 02, 2019 2:23 PM
To: kkolnowski@santaclaraca.gov
Subject: Laurelwood and other data center questions

Energy Commission staff (staff) are trying to understand when, why, and for how long backup generators would need to operate for any purpose other than readiness testing or maintenance at the proposed Laurelwood data center in the Silicon Valley Power (SVP) service area. This is largely dependent on the design and resulting reliability of the SVP transmission and distribution network and specifically the 60 kV loops and their connection to 115/203 kV feeds. Project proponents for other recently proposed data centers provided descriptions of the SVP transmission network and a couple of the outages on the SVP 60kV system. Kevin Kolnowski, from SVP, provided oral testimony at Energy Commission hearings on the McClaren data center and staff is hoping that SVP is willing to provide a written version of that testimony and answer a few follow up questions.

While the request and information are intended for the Laurelwood licensing review case in front of the Energy Commission today, staff hopes that the questions and responses can be broadened to address any generic data center that has to undergo licensing review at the Energy Commission. Staff is aware of two more SVP-served data centers that may file in June or July, and two addition SVP-served data centers that may file by the end of the year.

The following series of questions may help direct any written content for Laurelwood, but include questions that may broaden the response to address future data centers served by SVP. At the same time, staff appreciates that SVP has a business relationship with its customers that may limit the answers to some questions.

1. Please provide for the 60 kV loop on the SVP system that will serve the Laurelwood data center:
    a. A physical description
    b. The interconnection points to SVP service
    c. The breakers and isolation devices and use protocols
    d. A list of other connected loads and type of industrial customers
    e. A written description of the redundant features that allow the system to provide continuous service during maintenance and fault conditions
2. Please provide a description of the SVP system in general and the other 60 kV loops that would serve data centers.
    a. Could you provide a one-line diagram and a "*.shp" file of the 60 kV and

above lines serving the Silicon Valley Power System? Would you have any concerns with us using either of these in a public document?

b. Are each of the 60 kV loops designed similarly or do some of them have features that make them more or less reliable than the others?

3. Please describe any outages or service interruptions on the 60 kV systems that will serve the proposed data centers:
   a. How many 60 kV double looped lines serve data centers in SVP, and how many data centers are on each?
   b. What is the frequency of 60 kV double-looped lines having a "double outage" that would require use of backup generators?
   c. How long were any outages and what were their causes?
   d. Have there been any changes to the SVP system that would prevent these types of outages from occurring in the future?
   e. Given the large number of data centers with backup generators being developed in the SVP service area, would future outages likely affect more than one data center or are there elements of the SVP system design that might limit the impact of transmission outages?
   f. Are there data center customers served by SVP (ie, legacy data centers) that are not on the 60kV loops? How are they served and what are the expected service outage types and rates?
4. During the proceeding for the McClaren Backup Generating Facility, the project owner described a 5/29/2016 outage at their Vantage Santa Clara Campus. The project owner provided information that six backup generators operated during that outage; of those, two operated for 7 hours while four others operated approximately 19 hours.
   a. What was the reason for the outage?
   b. How long did it last for the Vantage customer? For other customers on that loop?
   c. Is the anything about the location or interconnection of the proposed data centers that protect against a similar outage?
   d. Does this description of one recent outage at the MECP1 Santa Clara 1, LLC seem to be a reasonable description of the event and applicable for the Laurelwood Data Center?

> "SVP has indicated they expect a zero-outage frequency on the 60 kV Northwest Loop. There has been one system-wide outage on the SRS-Central 60 kV system within the past 5 years due to a bird coming in contact with the 60 kV line. The duration of the outage was approximately 40 minutes due to SVP maintenance staff inspecting the line in order to locate the fault and determine whether it was safe to re-energize the line. However, because SVP's grid is a looped system and not a radial system, no customers lost power during this

outage."

5. Pacific Gas and Electric Company and other utilities have developed Public Safety Power Shutoff protocols that could disconnect electrical services during periods of concern in order to prevent their equipment from starting wildfires. These potential shutoffs could last hours or even days. How would these new protocols potentially affect SVP's service territory or access to bulk transmission assets?

Mark Hesters
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