STATE OF CALIFORNIA Edmund G. Brown Jr., Governor

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

Ms. Rebecca Giles
Regulatory Case Administrator
San Diego Gas & Electric
Southern California Gas Company

December 19, 2013

(via email: RGiles@semprautilities.com)

Subject: ***San Diego Gas & Electric Company – Master Special Use Permit and Permit to Construct Power Line Replacement Projects, PTC Application No. 12.10.009— Data Request No. 4***

Dear Ms. Giles:

Based on comments received during the public scoping period, the California Public Utilities Commission (CPUC) and United States Forest Service have identified additional information required to complete the analysis of the Master Special Use Permit and Permit to Construct Power Line Replacement Projects as listed in Attachment A. We would appreciate your response to this data request by January 16, 2014.

If you have any questions or need additional information, please contact me at 415.703.1966 or lob@cpuc.ca.

Sincerely,

/s/ Lisa Orsaba

Lisa Orsaba, Project Manager
Energy Division
California Public Utilities Commission

Cc: *Tim Knowd, SDG&E (TKnowd@semprautilities.com)*
Robert Hawkins, US Forest Service (rhhawkins@fs.fed.us)
Debbie Hobbs, US Forest Service (dshobbs@fs.fed.us)
John Porteous, Dudek (jporteous@dudek.com)

ATTACHMENT A
Data Request No. 4 – December 19, 2013
Application No. A.12-10-009
SDG&E Master Special Use Permit and
Permit to Construct Power Line Replacement Projects

1.0 PROJECT DESCRIPTION

Concern has been raised that the proposed project, which is intended primarily for fire hardening (wood to steel pole replacement), will also add capacity to the system. The concern is that adding capacity to the system could be potentially growth inducing by providing additional system capacity which would allow and provide incentive for additional renewable energy projects in the area to tie into the system that otherwise could not. The following data requests have been prepared based on comments received during the public review period and review of SDG&E responses provided to the December 7, 2013 Forest Service comments on the Preliminary Plan of Development (*SDG&E 02/15/13 Complete Response Cleveland National Forest Review of the San Diego Gas & Electric Preliminary Plan of Development for the Master Special Use Permit (Dated December 7, 2012)*; available on the project website here: http://www.cpuc.ca.gov/environment/info/dudek/CNF/Main/CNF%20USFS%20DR1%20Complete%20Response%20(02-15-13S).pdf).

1.1 Proposed Conductors

a) Please provide the rationale for the proposed conductors on the 69 kV power lines. Why the conductor size is increased with implementation of the fire hardening project. Also, please indicate if there are specific regulations requiring the proposed conductors.

b) Please provide the temperature rise used to rate both new and existing conductors and explain how proposed new conductors and associated rating could affect the maximum permitted conductor temperature.

1.2 System Capacity

The Forest Service, in its December 7, 2012 comments on the preliminary Plan of Development asked the following question: Section, 4.1, Single to Double Circuit Conversion, Question 1: *"The POD emphasizes that the proposed action would not increase system capacity, yet doubling certain circuits would appear to increase the capacity of the system between selected substations. The proposed action should explain any changes to system capacity that will result from the additional circuits*."

Follow-up questions to SDG&E's response (02/15/13) are as follows:

a) The common definition of "system capacity" is the maximum amount of power, generally expressed in terms of MVA or MW that can be transferred from one location to

another. In the context of a transmission line the term "capacity" would imply the maximum amount of electric power that can be transferred over the transmission facility in a reliable manner. While the **voltage** of the facility is a key parameter the amount of **current** (ampacity) the conductor can safely transmit is also critical in determining the power transferred. For example a 69kV line capable of carrying 100 amps will have twice as much capacity to transmit power as a line carrying 50 amps.

In light of the above please provide all sources relied upon in support of the statement " *'System capacity', as used in this context, refers to the nominal operating voltages of the transmission facilities in question"* Fully explaining why capacity is solely tied to voltage and not to power being transmitted.

b) Describe the basis for SDG&E's statement that "*These proposed reconfigurations do not in any way alter the potential system load nor* ***allow for an increase in system capacity.***"

Is SDG&E suggesting that increasing the size of the conductor will not result in a corresponding increase in the ability of the lines to carry additional current and hence increase the system's ability to transmit power? If so, fully explain the electrical and applicable laws of physics used in support of the statement. If not, fully describe the impact the new conductor will have on the lines ability to transmit power.

c) With regard to the following statement:

From a technological perspective, the capacity of these power lines is limited to the voltage ratings of the substation facilities and ***other related equipment****. To increase the system capacity, the* ***installation of additional substation and associated equipment*** *would be required. The Proposed Action does not include the installation of such equipment; therefore, the voltage rating and system capacity will remain the same. In addition, SDG&E would have to obtain CAISO approval and CPUC authority to increase the voltage ratings (i.e., the capacity of these lines). SDG&E is not requesting this authority from the CPUC or CAISO.*

Please list all equipment that is referred to as placing limitations on the transmission of power over the referenced facilities once the planned larger conductors have been installed. Please provide the rating (expressed in Amps or MVA) for each limiting piece of equipment as well as the ampacity of the existing and proposed conductor.

The Forest Service, in its December 7, 2012 comments on the preliminary Plan of Development asked the following question: Section, 4.1, Single to Double Circuit Conversion, Question 2: *"Upgrading the conductors on the 69 kV systems would also appear to increase overall system capacity. Please explain any changes to the system capacity that will result from the upgraded conductors.*"

Follow-up questions to SDG&E's response (02/15/13) are as follows:

a) SDG&E includes the following statement in its response:

Although the proposed conductors are physically capable of transmitting voltages higher than 69 kV, as discussed previously, the Proposed Action does not include or authorize any increase in voltage rating. Any such increases to system capacity would require changes to the substation and other infrastructure.

Why does SDG&E link increases in system capacity, which is a measure of power transfer (generally measured in MVA or MW), only to voltage and does not recognize that capacity (power transfer) will be increased as a result of larger conductors operating at 69kV? What would the transfer capacity (measured in MVA or MW) of the lines be, based on the new conductor and existing substation equipment?

b) Is there a megawatt limit to what could interconnect with the system, e.g., could renewable energy projects interconnect with the power line facilities being installed? If yes, please explain.

1.3 Pole Size Increase

1. Please provide the rationale for why the pole heights are increased with implementation of the fire hardening project. Also, please indicate if there are specific regulations requiring the increase in the poles heights.
2. Please confirm that all constructed facilities e.g. cross arms, guy wires if used will remain in SDG&E's existing ROW easements.
3. Please describe the performance of the existing wood poles compared to the proposed steel poles in extreme weather including heat and/or wildfire/lighting effects, wind and snow.

2.0 HAZARDS/FIRE

1. In order to understand the usefulness of the SDG&E weather station network in terms of determining the areas where electrical transmission system hardening is best applied, we request additional weather station network information. In particular, please provide the type of weather stations in use, a map of their locations, how they are monitored (i.e., via the Web or other remote system), and whether there are any other current uses for the weather station data, such as determining when field activities are restricted (e.g., when humidity is lower than 10% or winds over 15 mph, then no hot works should occur, etc.).
2. Please describe how SDG&E applies the weather data collected in their decisions to shutoff power lines (i.e., what level wind would trigger shutoff; what other weather conditions would lead to a similar action?)

3.0 NOISE

1. Please provide a list of all the types of helicopters that could be used for this project and the associated noise levels with each type.

2. APM-NOI-06 provides that no more than 64 helicopter flights per day will be conducted. What is the anticipated average helicopter use per day (total flight duration, and typical hovering time/time in one specific work zone (pole location etc.), per day, and for how many days at a specific work zone)? Also, what is the anticipated total number of helicopter flights and associated flight hours over the 5-year construction period?

4.0 PALEONTOLOGICAL RESOURCES

1. Please provide a copy of the Paleontological Resource Report prepared by the San Diego Natural History Museum in March 2012.
2. In the Existing Conditions file (12-03-12S) submitted with response to CPUC data request no. 1 (December 2012), please explain why in Table 8, TL 625, TL 626, and TL 629 have two rows of numbers in the columns. Also, if not in the Paleontological Resource Report, please provide a similar table as Table 8 for the Potential Fossil Yield Classification Ranking for each circuit.
3. Please clarify the discrepancy in the Preliminary POD regarding the sentences on pages 103 and 105 that indicate, "TL 682 is the only [Proposed Action /Connected Action] powerline that contains poles located within areas of high sensitivity for buried fossil deposits" and the POD text and Table 8 of the existing conditions file (12-03-12S) that

indicates there are no Class 4 (high) or 5 (very high) geologic units located within the [Proposed Action/Connected Action] ROW.

5.0 TRANSPORTATION AND TRAFFIC

1. Please provide the excel file (or GIS if available) for Tables 35, 36, and 37 of the Plan of Development.

6.0 SOLID WASTE

1. Please provide information regarding the following:
    a. Is the brush/plant waste collected during maintenance of the existing transmission lines is sent to a recycling facility?
    b. How much waste is generated annually from the maintenance of these transmission lines?
    c. Please provide the waste facility names of where the hauling company(s) dispose of the plant materials collected.

7.0 WATER RESOURCES

1. Please provide the estimated quantity of water that will be required during the construction phase as well as the amount of water needed on an annual basis for operations and maintenance. Please provide the source of this water.

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