Exhibit Reference: SDG&E-14 SDG&E Witness: Alan F. Colton

Subject: Reliability standards and customer expectations

Please provide the following:

- 1. Electric transmission lines are subject to National Electric Reliability Corporation (NERC) mandatory standards.
 - a. Are SDG&E's electric distribution lines subject to any mandatory reliability standards? If so, please provide the applicable standards in pdf format.
 - b. If the answer to subpart "a" above is yes, do these standards apply to all distribution lines in California? If not, please explain.

SDG&E Response 01:

- a. SDG&E objects to this request on the grounds that it is vague and ambiguous as to the term "reliability standards," and to the extent that it calls for legal conclusions and information in the public domain. Subject to and without waiving these objections, SDG&E responds as follows: Please see the CPUC's "Reliability Standards" website page (http://www.cpuc.ca.gov/General.aspx?id=4965), and the proceedings, decisions and authority cited therein, including R.14-12-014 (see http://www.cpuc.ca.gov/General.aspx?id=4520), opened pursuant to Cal. Public Utilities Code § 2774.1, and the final decision in that proceeding, D.16-01-008. See also the CPUC Staff's May 9, 2016, "California Electric Reliability Investor-Owned Utilities Performance Review 2006-2015," available at http://www.cpuc.ca.gov/uploadedfiles/cpuc public website/content/about us/organization /divisions/policy and planning/ppd work/ppd work products (2014 forward)/ppd%20r eliability%20review.pdf. More information on SDG&E's system reliability, including SDG&E's 2016 Annual Reliability Report (filed pursuant to D.16-01-008), can be found at https://www.sdge.com/system-reliability, and on the CPUC website at http://www.cpuc.ca.gov/General.aspx?id=4529.
- b. See response to a.

2. Are SDG&E's electric distribution lines subject to any voluntary reliability standards? If so, please provide the applicable standards in pdf format.

SDG&E Response 02:

SDG&E objects to this request on the grounds that it is vague and ambiguous, particularly with respect to the terms "reliability standards" and "voluntary reliability standards." Subject to and without waiving these objections, SDG&E responds as follows: SDG&E designs circuits to loading and capacity requirements on its distribution system. SDG&E uses engineering standards as guidelines in its design criteria. See also the responses to ORA-SDGE-139-TCR, Questions 1 and 3-5, and the sources referenced therein.

3. Does SDG&E follow any "best industry practices" regarding the reliable operation of its electric distribution lines? If so, describe these practices and provide any written documentation of these practices in pdf format.

SDG&E Response 03:

SDG&E objects to this request on the grounds that it is overbroad, vague and ambiguous as to the term "best industry practices," such that identifying a universe of supporting documentation is not possible and unduly burdensome. Subject to and without waiving this objection, SDG&E responds as follows: SDG&E provides employees with general work method practices intended to maintain safe and reliable operation of the system. These practices encompass nearly all electrical work activities within SDG&E. Additionally, SDG&E utilizes design guidelines that advise employees on how to perform an engineering analysis to evaluate system reliability in distribution line projects. See also the response to ORA-SDGE-139-TCR, Questions 1, 2, 4 and 5 and the sources referenced therein.

ORA DATA REQUEST ORA-SDGE-139-TCR SDG&E 2019 GRC - A.17-10-007 **SDG&E RESPONSE DATE RECEIVED: FEBRUARY 16, 2018**

DATE RESPONDED: MARCH 7, 2018

4. Are SDG&E's electric distribution lines subject to any internal or company specific reliability standards? If so, please provide the applicable standards in pdf format.

SDG&E Response 04:

SDG&E objects to this request on the grounds that it is vague and ambiguous as to the term "reliability standards." See the responses to ORA-SDGE-139-TCR, Questions 1-3 and 5 and the sources referenced therein.

5. Provide written documentation in pdf format of any other standards that guide SDG&E in operating its distribution system with a reasonable level of reliability.

SDG&E Response 05:

SDG&E objects to this request on the grounds that it is vague, ambiguous, overbroad, burdensome, and not reasonably tailored to lead to the discovery of admissible evidence. Subject to and without waiving this objection, SDG&E responds as follows: SDG&E has a great number of internal electric distribution operation procedures and training materials that guide SDG&E in operating its distribution system. These documents reside in several departments at varying locations throughout the service territory. Additional information regarding SDG&E's training programs can be found SDG&E's RAMP Report, Chapter SDG&E-17, addressing the "Workforce Planning" risk, which is available at https://www.sdge.com/regulatory-filing/20016/risk-assessment-and-mitigation-phase-report-sdge-socalgas, and in the Revised Direct Testimony of William Speer, Chapter SDG&E-15. See also the responses to ORA-SDGE-139-TCR, Questions 1-4 and the sources referenced therein.

- 6. Does SDG&E have quantified targets for the reliability of its system? If so provide:
 - a. These targets for each year 2009-2021,
 - b. SDG&E's recorded performance relative to those targets for 2009 2017,
 - c. If 2017 performance is not currently available, provide an ETA for the date of availability and provide an updated response when the data becomes available.

SDG&E Response 06:

SDG&E objects to this request as vague and ambiguous, with respect to the phrase "quantified targets for the reliability of its system." SDG&E may have many different types of goals and targets that are related to reliability in any given year. Subject to and without waiving this objection, SDG&E responds as follows: See the responses to ORA-SDGE-139-TCR, Questions 1-5, and the sources referenced therein. SDG&E's performance-based ratemaking targets for 2016-2018 are shown in its tariffs at http://regarchive.sdge.com/tm2/pdf/3135-E.pdf, and as ordered by D.17-09-005. SDG&E's performance-based ratemaking targets for 2015 are shown in D.16-06-054 at 64-66. SDG&E was not subject to electric reliability performance-based ratemaking targets from 2008-2014, as discussed in the direct testimony of Will Speer at WHS-92 and WHS-93. SDG&E's past performance for the last 10-years is documented in its 2016 Annual Reliability Report (filed pursuant to D.16-01-008), which can be found at https://www.sdge.com/system-reliability, and on the CPUC website at https://www.sdge.com/system-reliability, and on the CPUC requires SDG&E to report its prior annual reliability performance by July 15 of each year. SDG&E's electric reliability performance for 2017 will be reported July 15, 2018.

7. Page AFC-75 of Exhibit SDG&E-14 states that "customer expectations about the availability of service continue to increase." Provide all surveys, data, analyses, and reports that support this assertion.

SDG&E Response 07:

SDG&E objects to this request as vague, overly broad and unduly burdensome with respect to its request for "all" surveys data, analyses and reports. Subject to and without waiving this objection, SDG&E states as follows: As shown in the direct testimony of William Speer (Exhibit SDG&E-15), and in the sources cited in response to ORA-SDGE-139-TCR, Question 1, SDG&E has been recognized for having a very reliable electric system. From 2005 through 2016, SDG&E has been ranked "Best in the West" in reliability by PA Consulting Group, earning their regional ReliabilityOne award for eleven consecutive years. This is consistent with the Commission Staff's May 9, 2016, "California Electric Reliability Investor-Owned Utilities Performance Review 2006-2015" (CPUC Reliability Review- Available at

http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/About_Us/Organization/Divisions/Policy_and_Planning/PPD_Work/PPD_Work_Products_(2014_forward)/PPD%2

0Reliability%20Review.pdf.) finding that "reliability in the SDG&E service territory has maintained a consistently high level of reliability," (at iii.). In SDG&E's experience, providing a consistently high level of reliability brings with it an expectation that reliability will remain high and continue to improve going forward.

See the accompanying PDF, "ORA-SDGE-139-TCR-Question 7.pdf" for data from J.D. Power's Perfect Power Expectations for additional support that customer expectations around electric reliability has increased. (See, e.g., slides 3 and 6, showing: "The implication from the data suggests that customers have higher expectations for perfect power and the satisfaction uplift for delivering perfect power is less than it used to be.") SDG&E has received permission to share this document that is proprietary to J.D. Power within the context of this CPUC proceeding.

8. Page AFC-75 of Exhibit SDG&E-14 states that "customer expectations about the availability of service continue to increase." Is it SDG&E's understanding that these expectations are independent of the cost of service? Please explain and provide supporting evidence if not provided in response to question 7 above.

SDG&E Response 8:

SDG&E objects to this request on the grounds that it is vague and calls for speculation. Subject to and without waiving the foregoing objection, SDG&E responds as follows. In SDG&E's experience, SDG&E understands that customer expectations about the availability of service may be considered independent of the cost of service.

9. Page AFC-75 of Exhibit SDG&E-14 states that "customer expectations about the availability of service continue to increase." Is it SDG&E's understanding the reliability metrics reported annually to the CPUC accurately quantify the "availability of service" in this context? If not, please explain.

SDG&E Response 9:

Please see the CPUC's "Reliability Standards" website page (http://www.cpuc.ca.gov/General.aspx?id=4965), and the proceedings, decisions and authority cited therein, including R.14-12-014 (see http://www.cpuc.ca.gov/General.aspx?id=4520), opened pursuant to Cal. Public Utilities Code § 2774.1, and the final decision in that proceeding, D.16-01-008, for a discussion of the CPUC's reporting requirements and the policy rationales supporting them. Reported metrics include systems average interruption duration index (SAIDI), the system average interruption frequency index (SAIFI) and number of momentary outages per customer per year (MAIFI). See also the CPUC Staff's May 9, 2016, "California Electric Reliability Investor-Owned Utilities Performance Review 2006-2015," available at <a href="http://www.cpuc.ca.gov/uploadedfiles/cpuc_public_website/content/about_us/organization/divisions/policy_and_planning/ppd_work/ppd_work_products_(2014_forward)/ppd%20reliability%20re_view.pdf. More information on SDG&E's system reliability, including SDG&E's 2016 Annual Reliability Report (filed pursuant to D.16-01-008), can be found at https://www.sdge.com/system-reliability, and on the CPUC website at https://www.cpuc.ca.gov/General.aspx?id=4529.