1. Appendix D to Exh. SCG-21 provides a "R&D Summary of Significant Recent Projects." Does SoCalGas issue any other reports or summaries of projects funded by its R&D program? If yes, please provide all such reports/summaries for the past three years.

SoCalGas Response 1:

SoCalGas creates an Annual Report of RD&D projects. See attached reports from years 2015, 2016, and 2017.

2. Please provide the "Zero Net Energy Assessment" referred to on page LLA-D-1 of Appendix D of Exh. SCG-21 (Alexander Testimony).

SoCalGas Response 2:

Please see the attachment Sierra Club-UCS-SCG-005 Q2 Attachment_Redacted – SCG ZNE Final Report 2017.

3. Response to Question 3 of Data Request Sierra Club/UCS-SoCalGas-2 states that the Decarbonizing Pipeline Gas Report "was funded out of the authorized 2014 revenue requirement." Were the costs of this report requested as an R&D expenditure? If not, how was this expenditure categorized?

SoCalGas Response 3:

No, these funds were not requested as an RD&D Expenditure. The cost of the report was categorized as GRC ratepayer funded operations and maintenance (O&M) expense.

SIERRA CLUB-_UCS DATA REQUEST SIERRA CLUB-SCG-05 SOCALGAS 2019 GRC – A.17-10-008 SOCALGAS RESPONSE DATE RECEIVED: APRIL 9, 2018

DATE RESPONDED: APRIL 27, 2018

- 4. Response to Question 13(b) of Data Request Sierra Club/UCS-SoCalGas-3 identifies R&D expenditures awarded to institutions, groups, and organizations.
 - a. Please explain how SoCalGas determines how funding is awarded to the listed recipients (competitive solicitation, grant proposal etc.). To the extent the listed entities applied for SoCalGas R&D funding, please provide the funding applications.
 - b. For each award of \$100,000 or above, please explain what the R&D funding is being used for.
 - c. Please explain the process by which SoCalGas ensures R&D funding to third parties is being used for its intended purpose.

SoCalGas Response 4:

- a. SoCalGas determines how funding is awarded in the following manner:
 - i. Consistent with the guidelines provided in Public Utilities Code (PU Code) Section 740.1, including but not limited to providing benefits to ratepayers and probability for success, SoCalGas determines eligibility for Research and Development funding by evaluating the potential benefit to ratepayers, the probability of success, and the budget availability for the specific area of research.
 - ii. Typically, SoCalGas identifies projects via (a) Consortia, where projects are proposed by consortium researchers and developed through technical advisory committees; (b) Grant Proposals, where projects are proposed by institutions, groups, or organizations; and (c) Co-Funding for competitive solicitations, where projects are proposed by institutions, groups, or organizations for submission to a competitive solicitation. In the case of the competitive solicitations, assuming the project meets vetting guidelines, SoCalGas only awards co-funding if the applicant is awarded funding by the third-party solicitor.
- b. See Sierra Club-UCS-SCG-005 Q4b Attachment, which provides information on expenditures over \$100,000.
- c. SoCalGas ensures that R&D funding to third parties is being used for its intended purpose through several methods:
 - i. Funding is tied to milestone completion Funding agreements require completion of specific, measurable milestones (*e.g.*, progress report, completion of a testing phase) prior to release of a portion of funding.

SoCalGas Response 4 Continued:

- ii. Participation on project advisory committees SoCalGas RD&D project managers and other subject matter experts serve on advisory committees that meet throughout the lifetime of the project to ensure that research is progressing in a timely manner and that the research focus area remains beneficial to ratepayers.
- iii. Third-party reporting requirements (*e.g.*, CEC project oversight) For projects co-funded through a competitive solicitation, the lead funding agency (*e.g.*, CEC, DOE) requires rigorous reporting of progress and ties funding to milestone completion. SoCalGas leverages the lead funding agencies' administrative work to ensure that funds are used for the intended purpose.

5. It is Sierra Club/UCS' understanding that passenger CNG vehicles are no longer available in US markets. (see https://www.automotiveworld.com/analysis/future-cng-passenger-vehicles/). Are passenger CNG vehicles currently available for purchase by SoCalGas? If yes, please indicate the manufacturer and model of any available CNG passenger vehicles.

SoCalGas Response 5:

NGV America keeps a list of light-duty vehicles, including passenger vehicles, available for purchase in the United States at http://www.ngvamerica.org/wordpress/wp-content/uploads/2017/01/Certified-Approved-Conversions-NGVAmerica-1.18.17-FINAL.pdf

6. In response to Question 5(b) in Sierra Club/UCS-SCG-003, which asked about the ratepayer benefit of new or upgraded NGV fueling stations, SoCalGas referenced the definition of ratepayer interest in Public Utilities Code section 740.8, reproduced in its entirety below.

"As used in Section 740.3 or 740.12, "interests" of ratepayers, short- or long-term, mean direct benefits that are specific to ratepayers, consistent with **both** of the following:
(a) Safer, more reliable, or less costly gas or electrical service, consistent with Section 451, including electrical service that is safer, more reliable, or less costly due to either improved use of the electric system or improved integration of renewable energy generation.

- (b) Any one of the following:
 - (1) Improvement in energy efficiency of travel.
 - (2) Reduction of health and environmental impacts from air pollution.
 - (3) Reduction of greenhouse gas emissions related to electricity and natural gas production and use.
 - (4) Increased use of alternative fuels." (emphasis added)

In response to Question 5(b), SoCalGas stated that NGV fueling stations meet the requirements of 740.8(b) because "Natural gas vehicles use an alternative fuel."

Does SoCalGas contend that new and upgraded NGV refueling stations meet the requirement in section 740.8(a)? If yes, please explain how new and upgraded NGV refueling stations provide "safer, more reliable, or less costly gas service."

SoCalGas Response 6:

SoCalGas objects to this request on the grounds that it calls for a legal opinion or conclusion rather than the production of evidence or clarification of a factual matter. SoCalGas further objects to the request to the extent it would require SoCalGas to search their files for matters of public record including in CPUC proceedings (decisions, orders, etc.). This information is equally available to the Sierra Club. SoCalGas also objects to this request on the grounds that it is improperly argumentative and lacks foundation. SoCalGas objects to the request pursuant to Rule 10.1 of the Commission's Rule of Practice and Procedure to the extent it seeks information that is neither relevant to the subject matter involved in this proceeding nor is reasonably calculated to lead to the discovery of admissible evidence. Subject to and without waiving these objections, SoCalGas responds as follows:

Yes. Per D.05-05-010, "... The utilities' LEV programs are designed to develop and support motor vehicles powered by electricity and natural gas. We approved IOU ratepayer funding for LEVs in 1993 in D.93-07-054, after the Legislature enacted Pub.

SoCalGas Response 6 Continued:

Util. Code § 740.3 et seq. The statute provides that the Commission should work with other state agencies, air quality management districts, the motor vehicle industry and the IOUs to facilitate the use of electric power and natural gas to fuel LEVs. The statute prohibits the Commission from passing funding for such programs through to ratepayers unless the programs are in the ratepayers' interest. In 1999, the Legislature amended Pub. Util. Code § 740.8 to provide that 'interests of ratepayers, short- or long-term, mean direct benefits that are specific to ratepayers in the form of safer, more reliable, or less costly gas or electrical service.' As described in D.03-10-086, the IOUs' LEV programs have three facets. First, the IOUs share information they have gained as operators of their own LEV fleets with other actual or potential fleet owners. This information sharing is the key focus of the IOUs' "customer education" activities. Second, they evaluate new LEV products to determine their impact on the energy grids they operate. This appears to be their principal activity aimed at enhancing system reliability. Third, they provide information on safe fueling and charging techniques to third parties who use IOU-owned fueling stations and charge electric vehicles..." As established by the Commission, operation of utility-owned, public access CNG stations are a critical component in providing "safer, more reliable, or less costly gas service" to ratepayers.

7. SoCalGas notes that Sierra Club / UCS omitted question 7 from the DR.

- 8. Data request response ORA-SCG-044-LMW, Q.3 (provide to Sierra Club/UCS as response to Question 5 of Sierra Club-UCS-SCG-003) is an update to the natural gas refueling station workpaper (Page 7 of SCG-23-WP-S-C).
 - a. Please identify those refueling stations identified in this response that require additional expenditure after 2019 to compete the requested construction/upgrade.
 - b. Have expenditures identified in years 2017 and 2018 been approved by the Commission?

SoCalGas Response 8:

- a. SoCalGas objects to this request on the grounds that it is vague and ambiguous as to the term "expenditure." Subject to and without waiving the same, SoCalGas responds as follows: The following projects may have potential expenditures for construction/upgrade after 2019: Azusa, Garden Grove, Oxnard, Beaumont, Blythe, Redlands, San Luis Obispo, Santa Maria, Valencia, and Visalia.
- b. SoCalGas objects to this request on the grounds that it assumes facts not in evidence and lacks foundation. SoCalGas objects to this request on the grounds that it is vague and ambiguous as to the term "expenditure." Subject to and without waiving this objection, SoCalGas responds as follows: Please see the 2016 workpapers for Carmen L. Herrera, SCG-15-CWP, Table 734-A1 for a listing of previously forecasted NGV stations. The forecasted dollar amounts for these stations were approved in the Decision Addressing the General Rate Case of San Diego Gas & Electric Company and Southern California Gas Company and the Proposed Settlements.

- 9. Response to Question 11 of Sierra Club/UCS-SoCalGas-02 states that "Fleet-Public NGV stations are planned based on surveys conducted by the SoCalGas NGV team" and that "Analysis was performed to support the need for new proposed public NGV refueling stations" but that the "actual analysis cannot be provided since customer vehicle data used in the analysis cannot be provided since customer data used in the analysis was purchased, is proprietary and under the terms of the purchase agreement cannot be provided to 3rd parties." Response to Question 1 of Sierra Club/UCS-SoCalGas-03(a) "clarifies that the surveys referenced in the original response [to Q. 11 of DR 2] were conducted by a third party" and that "SoCal has no knowledge of the methodology used for the survey and SoCalGas is not in possession of the surveys of responses."
 - a. Please provide all non-proprietary information in SoCalGas' possession supporting the need for the proposed Fleet-Public NGV stations.

SoCalGas Response 9:

SoCalGas objects to this request on the grounds that it is unduly burdensome. SoCalGas objects to this request on the grounds that it has been asked and answered and argumentative. SoCalGas objects to this request to the extent it mischaracterizes SoCalGas' responses. Subject to and without waiving these objections, SoCalGas responds as follows: As stated in the Response to Question 11 of Sierra Club-SCG-002, "Analysis was performed to support the need for new proposed public NGV refueling stations. The analysis reviewed the potential number and fuel use of customer fleets operating within several miles of each SoCalGas operating base and the number and fuel use of utility vehicles at each SoCalGas operating base". The customer fleet information was based on proprietary information. The utility Fleet information is non-proprietary and included in the attached spreadsheet, Sierra Club-UCS-SCG-005-Q9-Planned Fleet-Public NGV Station List".