APPLICATION OF SOUTHERN CALIFORNIA GAS COMPANY & SAN DIEGO GAS & ELECTRIC COMPANY FOR AUTHORITY TO REVISE THEIR NATURAL GAS RATES AND IMPLEMENT STORAGE PROPOSALS IN THE 2027 COST ALLOCATION PROCEEDING (A.25-09-014)
DATA REQUEST SET 3 FROM CAL ADVOCATES – PUBADV-SCG_SDGE-003-ST - DATED NOVEMBER 18, 2025
SOCALGAS RESPONSE DATED: DECEMBER 10, 2025

Question 1.

1. Referring to Chapter 2 PDF Workpapers, pp. 2 and 26, weather station locations along with temperature zones are listed (Table 1 for SoCalGas and Table 1 for SDG&E).

   a) How does atmospheric temperature relate to indoor temperature and does SoCalGas/SDG&E account for such differences?

   b) When "system average temperature" is recorded, this is clearly an indirect measure of what temperature is experienced by SoCalGas/SDG&E customers within their houses, workplaces, retail sites or other gas-powered building. In what instances might the proxy of atmospheric temperature recorded at various weather stations fail to account for indoor temperatures experienced by customers, particularly at or near the 65-degree cut off for Heating Degree Days (HDD)?

   c) On p. 3 and p. 26, the claim is made that daily weather (including maximum and minimum) temperatures "are from the National Climatic Data Center or from preliminary data that SoCalGas captures each day for various individual weather stations as well as for its system average values of HDD." Please thoroughly distinguish, for every month and for every year, which values are NCDC as opposed to preliminary data that SoCalGas captures each day for various individual weather stations. Please reconcile the differences between both measures and elaborate on why SoCalGas chose to go with one over the other measurement in the same instances.

   d) Referring to p. 3, further break down the weights by weather station rather than by temperature zone. In addition, elaborate on how the weights were calculated. If weighed solely by the number of customers within each temperature zone, explain why further analysis was not conducted. For example, further analysis could have included data points on distance from weather station to each customer location, density of customer groups in respective areas at or near each weather station, type of customer and their contribution to such weight, etc…

   e) Referring to p. 26, please elaborate on how SDG&E calculated the weights for each temperature zone within its service territory. Explain the similarities and differences from the approach used for SoCalGas on p. 2.

   f) Referring to p. 26, were other weather stations available with recorded temperature measures beyond Miramar Naval Air Station, San Diego Lindbergh Field, and El

Cajon? If so, why weren't the measurements from such stations included in the analysis?

g) Provide all data on changes in weather station locations, equipment, or measurement protocols since 2005. Explain how such changes, if any, were accounted for in the HDD calculations to ensure data consistency.

h) Explain why urban heat island effects or microclimates are not explicitly modeled in the system average temperature and provide any analyses showing their impact on HDD accuracy.

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Response 1 a) – 1 h)

a) For the purpose of estimating changes in future annual HDDs, SoCalGas and SDG&E do not account for differences between atmospheric temperature relate to indoor temperature.

b) Applicants object to this request to the extent it assumes facts not in testimony and potentially misstates testimony. Subject to and without waiving the foregoing objections, Applicants provide the following response: See response to Question 1a.

c) SoCalGas and SDG&E confirmed that daily weather is solely from its weather vendor (DTN) that originates from local National Weather Service offices.

d) The weights are calculated based on temperature zones rather than weather stations. For each temperature zone, which may include multiple weather stations, SoCalGas calculates the zone's average HDD by taking the average HDD values from all stations in that zone. The weights are calculated by averaging the monthly meter counts for each ZIP code, aggregating these averages by temperature zones, and then degerming each zone's proportional share of the total aggregated average.

e) SDG&E's weighting methodology uses an equal weight of 1/3 for the three used stations. In contrast, SoCalGas uses six temperature zones, each with a fixed weight. See response for Question 1d) for details on how SoCalGas calculates the six weights.

f) Other weather stations with recorded temperature measures in addition to Miramar Naval Station, San Diego Lindbergh Field, and El Cajon in San Diego County. The SDG&E service territory has little temperature variation relative to larger utility service territories (like SoCalGas or Pacific Gas & Electric) reducing the need to additional weather station measurements.

g) SoCalGas and SDG&E are not in possession of information regarding changes in weather station locations, equipment, or measurement protocols since 2005.

h) SoCalGas's demand forecasts are used for establishing system-wide rates not for sub-system-wide rates. SoCalGas assumes that any urban heat island or microclimate impacts are reflected in recorded weather and usage history.

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Question 2.

Referring to Chapter 2 PDF Workpapers, p. 7, SoCalGas calculated a fitted regression climate trend of -8.9 HDDs per year. This was 1.6 HDDs higher than the average changes in the 20-year rolling averages (-7.3 HDDs per year). SoCalGas state on p. 7 that "based on the fitted trend, it was decided to decrease average-year and cold-year forecasted HDDs by 7 HDDs per year, starting with the first forecast year of 2025."

a) Explain why, based on the fitted trend of -8.9 HDDs per year, SoCalGas decided to decrease the magnitude of the climate trend from -7.3 HDDs to -7.0 HDDs, even though the fitted climate trend was more negative.

b) Explain how the climate trend that SoCalGas went with and chose (-7 HDDs per year) accounts for the anomaly warm years from 2014-2018.

c) Were these years separated or embedded into the calculated climate trend?

d) Did SoCalGas consider removing these years when deriving its -7HDDs/yr trend?

e) Provide the full regression output for the fitted climate trend, including coefficients, standard errors, p-values, R-squared, and any diagnostic tests (e.g., for autocorrelation or heteroskedasticity). If alternative regressions were considered (e.g., with different time periods or variables), provide those outputs as well.

f) Explain why SCG did not use external climate projections (e.g., from CEC's Integrated Energy Policy Report or IPCC scenarios) to inform the warming trend and provide a comparison of SCG's -7 HDDs/yr assumption to those projections.

g) Provide sensitivity analyses in an active Excel spreadsheet showing the impact on demand forecasts and rates if alternative climate trends were used (e.g., no adjustment, -8.9 HDDs/yr, or -5 HDDs/yr).

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Response 2 a) – 2 g).

a) SoCalGas's weather design methodology is to round calculated trends in annual changes in HDDs to the nearest whole number.

b) See Chapter 2 testimony pages EM-2 to 4.

c) See response to Question 2 c).

d) See response to Question 2 c).

e) See attached PubAdv-SCG_SDGE-MPS-003-02-e.xlsx.

f) Other external climate projections are not prepared specifically for the SoCalGas and SDG&E service territories. The estimated average reduction in median Southern California Edison (SCE) HDDs for the 2024 IEPR for the period of 2025 to 2028 was -6.2. The SCE service territory is different than the SoCalGas service territory and the CEC uses a different methodology than SoCalGas and SDG&E

g) Applicants object to this request on the grounds that it seeks information not part of the testimony in this proceeding and to the extent it seeks analysis the Applicants have not performed. Applicants have not conducted this requested analysis.

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Question 3.

Referring to Chapter 2 PDF Workpapers, p. 30, it was stated that "after CGR 2022, which incorporated a trend of -6 HDD per year, HDDs of 3 consecutive years from 2022 to 2024 are colder than average years." Explain why this lone fact substantiates an increase of 3.6 HDD per year from the fitted climate change regression trend of -9.6 HDD per year, resulting in SoCalGas's estimated climate trend of -6 HDD per year.

Response 3.

Applicants object on the ground the request misstates testimony. Subject to and without waiving the foregoing, Applicants provide the following response: Applicants believe the request was in correct to reference SoCalGas with this question and that the question likely seeks this information from SDG&E, and interprets the question accordingly. To that end, Page 30 of Chapter 2 Workpaper refers to SDG&E's climate change adjustment calculation. As stated on page 30, SDG&E relied on the average annual decline in HDD from 2005 to 2024. SDG&E did not rely solely on the observed 2022 to 2024 HDDs to substantiate or arrive at its estimated climate trend.

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Question 4.

As mentioned previously, it is noted that "3 consecutive years from 2022 to 2024 are colder than average years." The number of HDDs for these years were 1422, 1635 and 1404, respectively (+242.86, +455.46 and +224.06 respectively from the 20-year rolling average in 2025 of 1179.4 avg HDDs). Explain and justify the following discrepancy in methodology: the number of HDDs during the "warm" years from 2014-2018 are adjusted upwards in the analysis to account for an implied standard deviation inflation. However, the slew of "cold" years from 2022 to 2024 are not proportionally adjusted downward before the calculation of the non-inflated standard deviation.

Response 4.

SDG&E did not adjust upward the observed HDDs from 2014 to 2018 in its calculation of future annual changes in HDD. The upward adjustment for 2014-2018 pertains to SDG&E's peak demand forecast methodology.

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Question 5.

Referring to the peak day design calculations, SoCalGas states on p. 12 (SoCalGas) and p. 35 (SDG&E) that "the statistical methods we use to analyze this data employ software developed to fit three generic probability models: the Generalized Extreme Value (GEV) model, the Double-Exponential or GUMBEL (EV1) model and a 2-Parameter Students' T-Distribution (T-Dist) model." It is further stated on p. 13 (SoCalGas) and subsequently p. 36 (SDG&E) that "the results obtained for the T-Dist model were selected since the fit to the ECDF was better than that of either the GEV model or the EV1 model." Please provide the outputs for the other two models in excel format, similar to the output provided on the excel file "Ch 2 Martinez_ SoCalGas Weather Dsgn_Peak_Day_Design CAP 2027.xlsx" and "Ch 2 Martinez_Sdge Weather Dsgn_Peak_Day_Design CAP 2027.xlsx" in response to DR PubAdv-SoCalGas/SDG&E-MPS-01. Provide any additional supporting material, information or written reasoning as to why the T_Dist model is superior to the other two probability models for the purpose of this analysis.

Response 5.

See Excel file, PubAdv-SCG_SDGE-MPS 003-05.xlsx for the outputs. The calculated root mean square error (RMSE) of 0.58 makes the T_Dist the best fit for the lower tail among the three models as it has a smaller error measurement among the three models.

Question 6.

Provide analyses showing how the weather designs in Chapter 2 impact the storage capacity proposals in Chapter 1 (Dandridge), including any scenarios where colder-than-expected weather could strain proposed allocations. If no such analyses exist, explain why they were not conducted.

Response 6.

The storage capacity proposals in Chapter 1 were based off data from the 2024 CGR, not Chapter 2 data.

Chapter 1 storage capacity proposals focused on meeting core reliability for demand for an average year, a 1-35 cold year winter and a 1-35 peak day (see Chapter 1, Table MMD-2) with an explanation of how each of those demand scenarios would be met (Chapter 1 pages MMD-5 to MMD-7). Core wholesale customers were allocated storage capacities equal to approximately 3% of core allocations to meet their demand. All customers can use storage capacities allocated to balancing, make spot and monthly purchases, and can also contract for storage services available under the unbundled storage (UBS) program to help meet its colder than expected demand.

Also, the storage withdrawal capacities in Chapter 1 Table MMD1 reflect median Envoy postings from 2024-2025 operations. The winter withdrawal median of 1,826 MMcfd represents the 50th percentile of daily capacity availability from the winter of 2024-2025, with approximately half of operating days experiencing higher capacity enabling upward proration and additional withdrawal capacity for customer use to meet colder than expected demand.

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Question 7.

Provide historical accuracy assessments of prior CAP weather designs (e.g., from 2024 CAP) by comparing forecasted vs. actual HDD and peak day temperatures for 2024-2025. Explain any deviations and adjustments made to the current methodology based on those results.

Response 7.

See Excel file, PubAdv-SCG_SDGE-MPS 003-07.xlsx.