MUSSEY GRADE ROAD ALLIANCE DATA REQUEST
MGRA-DR-008
SDG&E/SOCALGAS 2021 RAMP REPORTS- A.21-05-011/014
DATE RECEIVED: OCTOBER 5, 2021
DATE RESPONDED: OCTOBER 19, 2021

The following questions relate to 1) SDG&E's response to MGRA Data Request 7, 2) SDG&E's response to MGRA Data Request 3, Question 4, and 3) SDG&E's response to TURN Data Request 2, Question 1:

Question 1 (MGRA-52): For SDG&E's gamma function used to fit financial consequences, what is the median financial loss?

SDGE Response 1 (MGRA-52):

For a gamma (3, 0.8) distribution, the median (P50) value is $2.1 billion. This value is calculated using Python's SciPy library.

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Question 2 (MGRA-53): For SDG&E's gamma function used to fit financial consequences, what is the 98% financial loss?

SDGE Response 02 (MGRA-53):

For a gamma (3, 0.8) distribution, the median (P98) value is $6.0 billion. This value is calculated using Python's SciPy library.

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Question 3 (MGRA-54): For SDG&E's gamma function used to fit safety consequences, what are the median, average, and 95% and 98% fatality equivalents?

SDGE Response 3 (MGRA-54):

As reflected on slide 19 from the August 13, 2021 RAMP workshop, safety consequences were estimated by SDG&E's subject matter experts after reviewing historical data. As such, SDG&E did not calculate fatality equivalents as part of its RAMP analyses. Also, as mentioned in SDG&E's RAMP Report,[1] SDG&E did not develop their Risk Quantification Framework to imply a statistical value of life. The S-MAP Settlement, approved in D.18-12-014, provides six MAVF principles. Notably, statistical value of life is not required or discussed in the minimum requirements adopted in D.18-12-014 and the accompanying settlement agreement.

[1] Chapter SCG/SDG&E-RAMP-E at 20.

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Perform a sensitivity analysis replacing the gamma distribution used in financial and safety consequence models with a truncated power law distribution (power law distribution with an assumed maximum loss limit). See the attached PG&E power law analysis for guidance and reference. For maximum loss, use $50 B, and for shape/exponent use best fit or SME guidance.

Question 4 (MGRA-55): Calculate the median, average, 95% and 98% financial losses based on the power law distribution.

SDGE Response 4 (MGRA-55):

SDG&E performed the financial sensitivity analysis using data points resulting from a gamma (3, 0.8) distribution to fit a power law distribution. The results of this analysis are as follows:

P(50): $3.7 billion
P(95): $13.0 billion
P(98): $13.8 billion
Average: $4.6 billion

Values are calculated using Python's SciPy library.

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Question 5 (MGRA-56): Calculate the median, average, 95% and 98% safety consequences in equivalent fatalities based on the power law distribution.

SDGE Response 5 (MGRA)-56:

SDG&E objects to this question under Rule 10.1 of the Commission's Rules of Practice and Procedure on the grounds that it seeks the creation of information that does not exist and that is neither relevant to the subject matter involved in the pending proceeding nor is reasonably calculated to lead to the discovery of admissible evidence. The question is out of scope as it asks SDG&E to perform a calculation unrelated to any analysis SDG&E performed as part of its RAMP Report. As stated in Response 3 (MGRA-54) above, and consistent with the discussions during the August 13, 2021 RAMP workshops and in SDG&E's RAMP Report,[2] SDG&E did not calculate or use equivalent fatality values as part of their RAMP analysis and do not support using the MAVF values for that purpose.

[2] Chapter SCG/SDG&E-RAMP-E at 20.

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Question 1 (MGRA-52): For SDG&E's gamma function used to fit financial consequences, what is the median financial loss?

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For a gamma (3, 0.8) distribution, the median (P98) value is $6.0 billion. This value is calculated using Python's SciPy library.

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SDGE Response 5 (MGRA)-56:

SDG&E objects to this question under Rule 10.1 of the Commission's Rules of Practice and Procedure on the grounds that it seeks the creation of information that does not exist and that is neither relevant to the subject matter involved in the pending proceeding nor is reasonably calculated to lead to the discovery of admissible evidence. The question is out of scope as it asks SDG&E to perform a calculation unrelated to any analysis SDG&E performed as part of its RAMP Report. As stated in Response 3 (MGRA-54) above, and consistent with the discussions during the August 13, 2021 RAMP workshops and in SDG&E's RAMP Report,[2] SDG&E did not calculate or use equivalent fatality values as part of their RAMP analysis and do not support using the MAVF values for that purpose.

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Question 6 (MGRA-57): Using the power law distribution as described above, calculate risk scores for the 20 circuits described in SDG&E's response to TURN DR #6.

SDGE Response 6 (MGRA-57):

Initial response on October 19, 2021:
SDG&E informed MGRA on October 19 that additional time is required to respond.

Supplemental response provided on October 29, 2021:
WiNGS was not built using SDG&E's gamma distribution analysis. However, WiNGS was calibrated to align with the outcomes of that analysis. This calibration centered around the average consequence of the gamma distribution, which is a value of $2.4B. Therefore, for this sensitivity analysis, the WiNGS spreadsheet provided in TURN DR #6 was recalibrated using the average value from the power law distribution, which is $4.6B. The ratio between these two values is approximately 1.916, which was used as a multiplier to adjust the financial consequences in WiNGS, in accordance with SDG&E's understanding of the sensitivity analysis requested. No other consequence attribute was adjusted.

The resulting risk scores of this adjustment in the financial consequence are provided in the separately attached Excel spreadsheet, "FINAL MGRA_DR_8_Workpaper_10_29_302.xlsx."

Note: The WiNGS spreadsheet to which SDG&E applied the-above referenced multiplier was provided with TURN DR #6 and is called "TURN DR6 Excel Responses.xlsx."