

**MUSSEY GRADE ROAD ALLIANCE DATA REQUEST
MGRA-DR-007
SDG&E/SOCALGAS 2021 RAMP REPORTS- A.21-05-011/014**

DATE RECEIVED: SEPTEMBER 30 2021

DATE RESPONDED: OCTOBER 14, 2021

The following questions relate to the circuit prioritization provided in SDG&E's partial response to MGRA Data Request Number 6:

Request 1 (MGRA-40): Does SDG&E include egress from single access HFTD areas in its estimation of circuit risk, RSEs, or prioritization?

SDG&E Response 1 (MGRA-40):

SDG&E does not directly include egress from single access HFTD areas in its estimation of circuit risk, RSEs, or prioritization. SDG&E recognizes this as a potential opportunity for improvement in future versions of its models. While egress is not directly incorporated in the risk modeling, it is a consideration in the scoping phase of grid hardening implementation.

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Request 2 (MGRA-41): If the answer to MGRA-40 is 'yes', then provide technical detail as to how SDG&E incorporates safety risk due to blocked evacuation in its risk estimates.

SDG&E Response (MGRA-41):

See Response to MGRA 40.

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Request 3 (MGRA-42): Does SDG&E include egress from single access HFTD areas in its determination of whether to initiate a power shutoff for a given circuit?

SDG&E Response (MGRA-42):

SDG&E does not directly include egress from single access HFTD areas in its determination of whether to initiate a power shutoff for a given circuit.

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Request 4 (MGRA-43): If the answer to MGRA-42 is 'yes', then provide technical detail as to how SDG&E incorporates safety risk due to blocked evacuation in its determination of whether to de-energize a circuit.

SDG&E Response (MGRA-43):

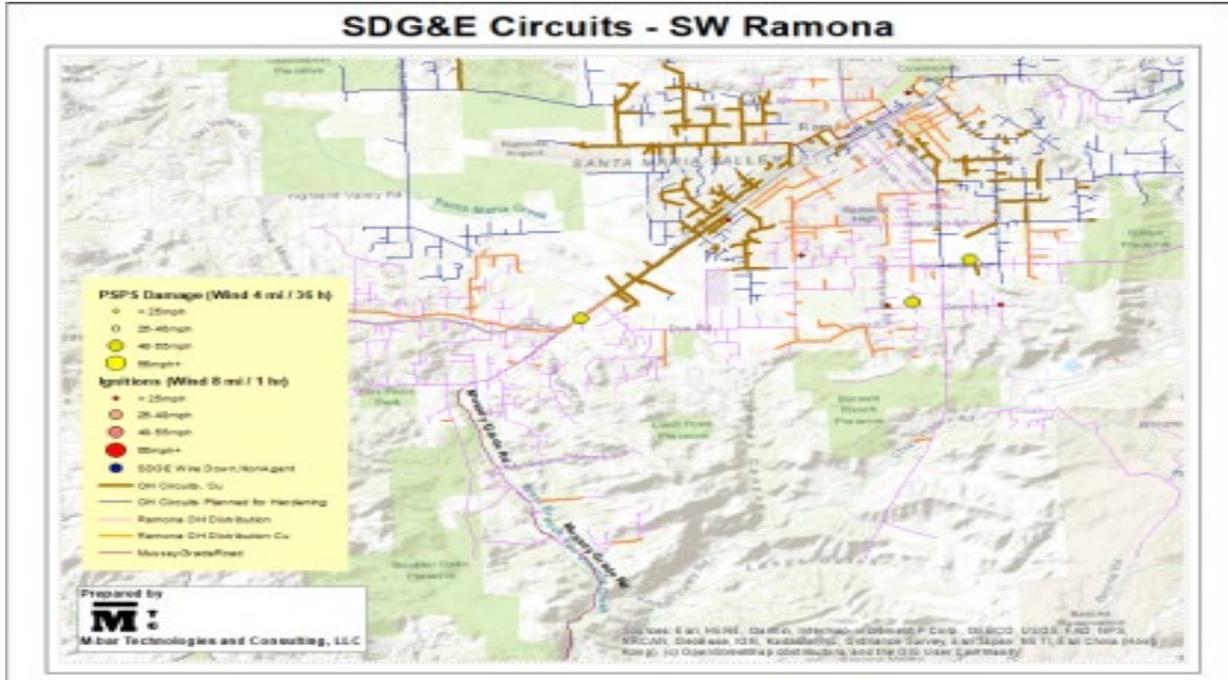
See Response to MGRA-42.

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The following questions are in regard to the following map derived from the TURN DR 6 response and MGRA analysis of SDG&E GIS data provided to WSD/OEIS. Note six instances of ignition and PSPS damage south of Ramona, only one of which is on a circuit planned for remediation.



Request 5 (MGRA-44): Has SDG&E conducted extensive hardening on circuits 971 and 973? If so, what fraction of these circuits have been hardened?

SDG&E Response (MGRA-44):

Currently over half of both circuit 971 (C-971) and circuit 973 (C-973) have been hardened.

For C-971, approximately 55% of the entire circuit is hardened: 21% is undergrounded and 43% of the remaining overhead portions is traditionally hardened.

For C-973, approximately 65% of the entire circuit is hardened: 54% of the circuit is undergrounded and 24% of the remaining overhead portions traditionally hardened.

See table below for current circuit level metrics.

Circuits	Wood Count	Steel Count	Fiberglass Count	Pole Hardening (% Traditional Hardening)	Total OH Length (miles)	Total UG Length (miles)	% of UG miles	% Total Hardened
971	784	588	0	43%	62.4	16.1	21%	55%
973	301	97	0	24%	22.2	26.3	54%	65%

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Request 6 (MGRA-45: How did SDG&E determine that the risk for circuit 972 (2.9E-3) is double that of circuit 971 (1.4E-3) and circuit 973 (1.1E-3).

SDG&E Response (MGRA-45):

Risk scores for circuits are based upon the summation of both Wildfire risk score and PSPS risk score calculations. Prior to this summation, both of these individual scores are computed formulaically within the WiNGS model utilizing various relevant input and variable factors. Therefore, the risk scores for individual segments, and subsequently whole circuits, is based upon many individual factors.

The table below summarizes the circuit level aggregation of key metrics used to calculate the aggregated risk scores for circuit 971 (C-971), circuit 972 (C-972), and circuit 973 (C-973).

Metrics	C-971	C-972	C-973
% Poles Hardened	42.4%	17.3%	23.8%
Sum of Segment WRRM Max	5,136,427	4,193,128	4,581,419
# of Total Downstream Customers	1215	3146	1374
# of Essential Customers	2	8	2
# of Trees w/ Strike Potential	797	765	89
Total Sum of OH Length (miles)	57.3	53.8	23.3
Average Vegetation Ignition Factor (# of Tree Strike / OH Length)	13.9	14.2	3.8
Count of segments	6	5	5

At the circuit level, the following key metrics contribute to C-972 having a particularly higher risk per the MAVF risk score calculation framework:

- C-972 is a comparatively long circuit (53.77 miles).
- C-972 has, relative to other circuits, less hardening work completed.
- C-972 has a larger average vegetation ignition factor compared to C-971 and C-973.
- C-972 has a higher PSPS risk score associated with this circuit serving more than double the number of customers compared to either C-971 or C-973, and of particular note, there is a higher number of essential customers present on C-972.

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Request 7 (MGRA-46): Consider an ignition southwest of San Vicente Road (Circuit 971, Object ID 90315, #4 Copper conductor, 116°52'43.381"W 33°0'21.656"N) under severe Santa Ana wind conditions. What would be the consequences from such an ignition and what would be the implications for evacuation? Provide results from Technosylva analysis.

SDG&E Response (MGRA-46):

SDG&E objects to this request under Rule 10.1 of the Commission's Rules of Practice and Procedure on the grounds that it requests SDG&E to perform a study or analysis on MGRA's behalf that does not exist. SDG&E further objects to this request on the grounds that it calls for speculation and is vague and ambiguous as to "consequences" and "implications for evacuation." SDG&E further objects to this request to the extent it seeks the production of information 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.

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Request 8 (MGRA-47): Consider an ignition south of Dye Road (Circuit 971, Object ID 90315, #6 Copper conductor, 116°53'57.278"W 33°0'9.667"N) under severe Santa Ana wind conditions. What would be the consequences from such an ignition and what would be the implications for evacuation? Provide results from Technosylva analysis.

Other areas show an increased number of ignitions or instances of PSPS damage and are not prioritized for hardening. For each of the circuits listed below, please provide information regarding previous hardening performed after ignitions or PSPS damage events and other factors that resulted in these circuits not making the cut line for 2022-2024 hardening.

SDG&E Response (MGRA-47):

SDG&E objects to this request under Rule 10.1 of the Commission's Rules of Practice and Procedure on the grounds that it requests SDG&E to perform a study or analysis on MGRA's behalf that does not exist. SDG&E further objects to this request on the grounds that it calls for speculation and is vague and ambiguous as to "consequences" and "implications for evacuation." SDG&E further objects to this request to the extent it seeks the production of information 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.

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Other areas show an increased number of ignitions or instances of PSPS damage and are not prioritized for hardening. For each of the circuits listed below, please provide information regarding previous hardening performed after ignitions or PSPS damage events and other factors that resulted in these circuits not making the cut line for 2022-2024 hardening.

Request 9 (MGRA-48): Viejas Reservation, Circuit 358.

SDG&E Response (MGRA-48):

Circuit 358 hardening-to-date:

Circuits	Wood Pole Count	Steel Pole Count	Fiberglass Pole Count	Pole Hardening Percentage (Traditional Hardening) ¹	Total OH Length (miles)	Total UG Length (miles)	% of UG miles	% Total Hardened
358	303	114	0	27%	18.9	12.1	39%	56%

As described in response to MGRA DR#6 (MGRA-28), higher wildfire risk segments in other circuits were prioritized over segments in this circuit when the RAMP analysis was completed in Q1 2021. As of today, this circuit is currently under consideration for hardening in 2024 but is still in the early review stages.

Related to Viejas Reservation, SDG&E has a project currently in design development phase for C-358 that is preliminarily scoped to underground approximately 45% of C-358 that is located within the Reservation.

¹ Traditional hardening is the prior method of overhead hardening that SDG&E deployed particularly hardening with bare conductor rather than covered conductor.

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Request 10 (MGRA-49): Viejas Reservation, Circuit 1458. What fraction of this circuit was put underground in 2021?

SDG&E Response (MGRA-49):

Circuit 1458 hardening to-date:

Circuits	Wood Pole Count	Steel Pole Count	Fiberglass Pole Count	Pole Hardening Percentage (Traditional Hardening)	Total OH Length (miles)	Total UG Length (miles)	% of UG miles	% Total Hardened
1458	323	91	0	22%	18.5	23.7	56%	66%

As described in response to MGRA DR#6 (MGRA-28), higher wildfire risk segments in other circuits were prioritized over segments in this circuit when the RAMP analysis was completed in Q1 2021.

SDG&E notes that C-1458 is not in the Viejas Reservation.

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Request 11 (MGRA-50): Rincon Reservation, Circuit 216.

SDG&E Response (MGRA-50):

Circuit 216 hardening to-date:

Circuits	Wood Pole Count	Steel Pole Count	Fiberglass Pole Count	Pole Hardening Percentage (Traditional Hardening)	Total OH Length (miles)	Total UG Length (miles)	% of UG miles	% Total Hardened
216	136	23	0	14%	6.8	1.7	20%	31%

Higher wildfire risk segments in other circuits were prioritized over segments in this circuit when the RAMP analysis was completed in Q1 2021.

SDG&E has projects currently in the design development phase that are preliminarily scoped to underground approximately 5.1 miles of C-216 located in the Rincon Reservation.

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Request 12 (MGRA-51): Hellhole Canyon, Circuit 1030. Does 2021 undergrounding address areas of circuit damage in December 2020?

SDG&E Response (MGRA-51):

Circuit 1030 hardening to-date:

Circuits	Wood Pole Count	Steel Pole Count	Fiberglass Pole Count	Pole Hardening Percentage (Traditional Hardening)	Total OH Length (miles)	Total UG Length (miles)	% of UG miles	% Total Hardened
1030	773	786	0	50%	79.9	23.9	23%	62%

As described in response to MGRA DR#6, higher wildfire risk segments in other circuits were prioritized over segments in this circuit when the RAMP analysis was completed in Q1 2021.

The section of C-1030 serving the Hellhole Canyon area, including areas associated with events that occurred in December 2020, has been fully undergrounded. This undergrounding includes the conversion of overhead services drops to underground service connections. Of note is that SDG&E's overhead electrical assets have been removed but the poles remained to support non-SDG&E communication assets.