



# **2025 Risk Assessment Mitigation Phase**

## **APPENDIX 4**

### **Environmental Social Justice (ESJ)**

#### **Pilot Study**

**May 15, 2025**

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## **I. INTRODUCTION AND SUMMARY REQUIREMENTS OF THE ESJ PILOT STUDY**

San Diego Gas & Electric Company (SDG&E) prepared this Environmental and Social Justice (ESJ) Pilot Study at the direction of the California Public Utilities Commission (Commission or CPUC), in accordance with Decision (D.) 22-12-027 (the Phase 2 Decision) in ongoing Rulemaking (R.) 20-07-013 (the Risk OIR). The Phase 2 Decision requires SDG&E and the other large California energy utilities<sup>1</sup> to “conduct an [ESJ] Pilot Study that includes consideration of Disadvantaged and Vulnerable Communities (DVCs)<sup>2</sup> as defined in this decision and [...] file the results of their Pilot studies as described in this decision”<sup>3</sup> with their next RAMP filing.

The Risk OIR Phase 2 Scoping Memo provides an opportunity for considering potential impacts on ESJ communities, including the potential impacts on achieving any of the nine goals set forth in the Commission’s ESJ Action Plan.<sup>4</sup> The CPUC adopted an ESJ Action Plan in February 2019 as a comprehensive strategy and framework for addressing ESJ issues in each CPUC proceeding.<sup>5</sup> The ESJ Action Plan’s “focus[es] on equity, defined as ‘increasing access to power, redistributing and providing additional resources, and eliminating barriers to opportunity, to empower low-income communities of color to thrive and reach full potential.’”<sup>6</sup>

The ESJ Action Plan “require[s utilities] to overlay planned infrastructure mitigations on the CalEnviroScreen map to identify what portions of the mitigations would occur within

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<sup>1</sup> Southern California Gas Company (SoCalGas), Pacific Gas and Electric Company (PG&E), and Southern California Edison Company (SCE).

<sup>2</sup> D.20-08-046 at 108, Conclusions of Law (COL) 2, The Commission defines a DVC as: Top 25% of census tracts according to CalEnviroScreen (CES); California Tribal lands; Census tracts with median household incomes less than 60% of state median income; Census tracts that score in the highest 5% of Pollution Burden within CalEnviroScreen, but do not receive an overall CalEnviroScreen score due to unreliable public health and socioeconomic data.

<sup>3</sup> D.22-12-027 at 65-67, Ordering Paragraph (OP) 5.

<sup>4</sup> R.20-07-013, Assigned Commissioner’s Phase II Scoping Memo and Ruling Extending Statutory Deadline (April 13, 2022) at 5.

<sup>5</sup> CPUC adopted the most recent version 2.0 of the ESJ Action Plan on April 7, 2022. More information and links to the ESJ Action Plan versions are available at <https://www.cpuc.ca.gov/news-and-updates/newsroom/environmental-and-social-justice-action-plan>.

<sup>6</sup> D.22-12-027 at 42.

disadvantaged communities when geographic locations of proposed mitigations are known.”<sup>7</sup>

The Phase 2 Decision confirms “CalEnviroScreen” refers to the Office of Environmental Health Hazard Assessment’s (OEHHA) geospatial California Communities Environmental Health Screening Tool,<sup>8</sup> which must be used in identification of DVC communities in addition to median income, tribal lands, and pollution burden. SDG&E utilizes the DVC map in Figure 1 to fulfill this requirement.

The Phase 2 Decision also requires SDG&E and other utilities to work with the CPUC’s Energy Division Staff and consult with the Disadvantaged Communities Advisory Group (DACAG) and the Community-Based Organization Working Group (CBOWG) prior to finalizing their ESJ Pilot Study plans, assessing “each utility’s ESJ Pilot Study plan is on an appropriate DACAG and CBOWG meeting agenda in time for these groups to provide meaningful feedback on the plans” so that “a public webinar on their ESJ Pilot Study during the planning phase of the pilot,”<sup>9</sup> with the following action items to be addressed in each ESJ Pilot Study:

- Action Item #1: Consider equity in the evaluation of consequences and risk mitigation within the Risk-Based Decision-Making Framework (RDF), using the most current version of CalEnviroScreen to better understand how risks may disproportionately impact some communities more than others;
- Action Item #2: Consider investments in clean energy resources in the RDF, as possible means to improve safety and reliability and mitigate risks in DVCs;
- Action Item #3: Consider mitigations that improve local air quality and public health in the RDF, including supporting data collection efforts associated with Assembly Bill 617 regarding community air protection program;
- Action Item #4: Evaluate how the selection of proposed mitigations in the RDF may impact climate resiliency in DVCs;

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<sup>7</sup> CPUC, *Environmental & Social Justice Action Plan Version 2.0* (April 7, 2022), Appendix A, ESJ Action Item 4.1.4 at 43, available at: <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/news-office/key-issues/esj/esj-action-plan-v2jw.pdf>.

<sup>8</sup> D.22-12-027 at 42 (citing CalEnviroScreen refers to the OEHHA, California Communities Environmental Health Screening Tool, available at <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>).

<sup>9</sup> *Id.* at 65-67 (OP 5).

- Action Item #5: Evaluate if estimated impacts of wildfire smoke included in the RDF disproportionately impact DVCs;
- Action Item #6: Estimate the extent to which risk mitigation investments included in the RDF impact and benefit DVCs independently and in relation to non-DVCs in the IOU service territory; and
- Action Item #7: Enhance outreach and public participation opportunities for DVCs to meaningfully participate in risk mitigation and climate adaptation activities consistent with Decision 20-08-046.<sup>10</sup>

In accordance with the instructions set forth in the Phase 2 Decision, SDG&E has complied with all requirements and submits the following results of its ESJ Pilot Study.<sup>11</sup>

## **II. EXECUTIVE SUMMARY**

### **About SDG&E**

For more than 140 years, SDG&E has provided safe and reliable energy to the 3.7 million community members that depend on us today. In addition to providing safe and reliable energy infrastructure, SDG&E is committed to helping California meet its ambitious carbon neutrality goal of reaching net-zero greenhouse gas emissions (GHG) by 2045. This commitment includes SDG&E adopting its own sustainability strategy and goal to reach net zero GHG emissions by 2045.<sup>12</sup> To that end, SDG&E published a California economy-wide decarbonization roadmap in April 2022, which showed that a holistic pathway to electrification and cleaner fuels is needed to mitigate climate change.<sup>13</sup> SDG&E maintains its unwavering commitment to clean, safe, and reliable energy while recognizing that energy costs are important to families, businesses, and our

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<sup>10</sup> *Id.*

<sup>11</sup> Also in accordance with D.22-12-027, SDG&E will submit a White Paper summarizing its ESJ Pilot Study within two months of its RAMP filing deadline, which will: (1) identify areas for further exploration and challenges they faced incorporating ESJ into the RDF; (2) discuss how to better target mitigations that improve local air quality; and (3) explore how to better target mitigations that improve climate resilience in disadvantaged and vulnerable communities. D.22-12-027 at 67 (OP 6).

<sup>12</sup> SDG&E, *Building a Better Future: Our Commitment to Sustainability* (October 2020) (Sustainability Strategy), available at: [https://www.sdge.com/sites/default/files/documents/SDG%26E%20Sustainability%20Report\\_0.pdf](https://www.sdge.com/sites/default/files/documents/SDG%26E%20Sustainability%20Report_0.pdf).

<sup>13</sup> SDG&E, *The Path to Net Zero: A Decarbonization Roadmap for California* (April 2022), available at: [https://www.sdge.com/sites/default/files/documents/path\\_to\\_net\\_zero.pdf?nid=21961](https://www.sdge.com/sites/default/files/documents/path_to_net_zero.pdf?nid=21961).

local communities. Energy affordability remains top of mind as SDG&E advances decarbonizing California in a just and equitable manner.

### **ESJ Pilot Study Plan**

In accordance with the Phase 2 Decision, Ordering Paragraph 5, SDG&E held the following workshops jointly with SoCalGas to review their ESJ Pilot Study Plans.<sup>14</sup>

- CBOWG Workshop – July 12, 2024
- DACAG Workshop – July 19, 2024
- Public Workshop – August 12, 2024

SDG&E appreciates these key engagements and stakeholder feedback, which included several important recommendations. Through this engagement, SDG&E affirmed its proposed approach to focus this ESJ Pilot Study on two risks: 1) Wildfire & Public Safety Power Shutoff (PSPS) and 2) Electric Infrastructure Integrity (EII).<sup>15</sup> As discussed in more detail below, (i) the Wildfire and PSPS Risk refers to the risk of a catastrophic wildfire, especially those initiated by SDG&E equipment, and/or PSPS events; and (ii) the EII Risk is the risk of an asset failure or an asset no longer complying with the latest engineering standards resulting in a public safety or reliability incident.

One of the recommendations from the workshops is for SoCalGas and SDG&E to consider alternative community vulnerability screening tools to help identify vulnerable geographic areas and populations across SoCalGas's and SDG&E's service territories. As a result of this feedback, SDG&E considered several other screening tools, described in Section III *infra*. At the suggestion of Safety Policy Division Staff, SDG&E contacted Michael Méndez, PhD, Assistant Professor of Environmental Policy & Planning, University of California, Irvine, on the wildfire smoke issue referenced in Action Item #5.<sup>16</sup> Dr. Méndez referred SDG&E to David Eisenman, MD, Internal Medicine, University of California, Los Angeles. Dr. Eisenman recommended a research paper, which SDG&E reviewed as discussed in Action Item #5.

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<sup>14</sup> Recordings and workshop material *available at* [www.cpuc.ca.gov/about-cpuc/divisions/safety-policy-division/risk-assessment-and-safety-analytics/risk-assessment-mitigation-phase/sempra-ramp/sempra-2025-ramp/environmental-and-social-justice-pilots](http://www.cpuc.ca.gov/about-cpuc/divisions/safety-policy-division/risk-assessment-and-safety-analytics/risk-assessment-mitigation-phase/sempra-ramp/sempra-2025-ramp/environmental-and-social-justice-pilots).

<sup>15</sup> See SDG&E's Chapter SDG&E-Risk-4: Wildfire and PSPS and Chapter SDG&E-Risk-5: Electric Infrastructure Integrity for further risk and mitigation definitions.

<sup>16</sup> Dr. Michael Méndez from UC Irvine (<http://www.michaelanthonymendez.com/>); see Section VIII *infra* for more information.

SDG&E also included Cost-Benefit Ratios (CBRs) as part of their analysis in the ESJ Pilot Study, consistent with Action Item #6’s requirement to “[e]stimate the extent to which risk mitigation investments included in the RDF impact and benefit DVCs independently and in relation to non-DVCs in the IOU service territory” and Safety Policy Division (SPD) guidance in PG&E’s RAMP proceeding.<sup>17</sup>

### **Key Findings from the ESJ Pilot Study**

#### Action Item #1: Risk Impacts in DVCs.

- Wildfire and PSPS: Within the DVCs in the SDG&E service territory, approximately 745 miles of the electric distribution system and about 9,000 customer electric meters are in the High Fire Threat District (HFTD). About 26% of HFTD Tier-3 Wildfire and PSPS Risk exists in these DVC areas, with a lower percentage (5%) in HFTD Tier-2. SDG&E estimates total annual Wildfire and PSPS Risk to be \$3,020 million in its service territory overall, with about \$540 million in these DVC areas or 18% of the exposure. In the SDG&E service territory, DVCs make up less than 10% of HFTD square mileage, with Tribal Lands making up the majority of DVCs in HFTD, and these areas have 31% of risk.
- Electric Infrastructure Integrity: About 7% of miles in the electric distribution system are in DVCs in SDG&E’s service territory, which includes approximately 150,000 DVC customer electric meters. SDG&E estimates total annual EII Risk to be about \$398 million with about \$28 million in DVCs or 7%. DVCs make up approximately 7% of total service area square mileage and they bear an approximately proportionate amount of EII Risk compared to their area (7%).

#### Action Item #2: SDG&E’s Clean Energy Resource Investments in DVCs

- Wildfire and PSPS: – Two notable safety and reliability controls that consider clean energy are Microgrids, when integrated with renewable sources, and Standby Power Program, when permanent solutions include renewable batteries charged by renewable sources. The Access and Functional Need (AFN) customer

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<sup>17</sup> See D.22-12-027 at 67 (OP 5(f)); see also CPUC, *Safety Policy Division Evaluation Report on PG&E 2024 RAMP Application (A.) 24-05-008* (November 8, 2024) at 36, available at: [spd-evaluation-report-2024-pge-ramp-final-with-attachments.pdf](#).

classification, which has significant overlap with DVC (all CalEnviroScreen census tracts have AFN population), is a criteria consideration for microgrid project selection. AFN is also relevant to other ESJ Pilot Study controls and mitigations in this risk.

- Electric Infrastructure Integrity: SDG&E maintains a system that will better support electrification and clean energy investments. EII Risk treatments mainly entail electric infrastructure upgrades to support public safety and reliability. Other areas of SDG&E's electric infrastructure planning and development may more directly support public health and air quality, such as capacity-driven electric distribution upgrade programs and overhead to underground electric distribution programs.

#### Action Item #3: Air Quality, Public Health & Assembly Bill (AB) 617

- The AB 617 communities in SDG&E service territory (11 census tracts with a population of 47,554) are all considered DVC communities and consist of portside communities and communities along the southwest area of the U.S.-Mexico border (see Figures 6 and 7 *infra*). Since 2017, SDG&E has been working with California Air Resources Board (CARB) and other stakeholders to implement AB 617 and help the Community Air Protection Programs be effective at reducing emissions.
- Wildfire and PSPS: While no Wildfire or PSPS control relates directly to improved air quality or public health, such controls do relate to technologies, communications, and partnerships to inform the public (including DVCs) about air quality so that they can make risk-informed decisions to manage their health and well-being.
- Electric Infrastructure Integrity: Because the scope of EII controls and mitigations are mostly focused on improving or preserving system reliability, there are no controls or mitigations directly related to improving local air quality or public health for this risk.



Action Item #4: How RAMP Mitigations May Impact Climate Resiliency – This topic is addressed in greater detail in SDG&E’s Chapter RAMP-5: Climate Change Adaptation and in SDG&E’s Climate Adaptation and Vulnerability Assessment (CAVA).<sup>18</sup>

- Wildfire and PSPS – Wildfire is identified as a Climate Hazard for electric distribution, transmission, substation, communication, facilities assets, and gas assets (pressure pipes, medium-pressure pipes, regulators, compressors, and valves). All controls and mitigations in the Wildfire and PSPS Chapter are intended to reduce utility-caused wildfires, thus all impact climate resiliency in and outside of DVCs in HFTD.
- Electric Infrastructure Integrity – Several controls for this risk facilitate infrastructure hardening, which consider the effects of climate change and extreme weather. Such programs include but are not limited to enhancements in system protection, vegetation management, and restoration of service. Substation Reliability for Distribution (Control 250) has a greater CBR for substations that are located in or serve DVCs. Other planned investments are proportionately applied to DVC communities or have similar impacts to both DVC and non-DVC communities.

Action Item #5: Wildfire Smoke – SDG&E lacks adequate information to make predictive estimates regarding Wildfire Smoke and defers to industry experts such as government, academia, and fire agencies to develop models or calculations. SDG&E’s comprehensive wildfire mitigation efforts, including but not limited to infrastructure hardening, situational awareness, and emergency operations, are key ways to mitigate the risk of wildfire smoke and are described in Chapter SDG&E-Risk-4: Wildfire and PSPS.

Action Item #6: Mitigation Impacts & Benefits

- Wildfire and PSPS – During 2028-2031, SDG&E plans to underground approximately 600 miles of overhead systems in HFTD, including 125 miles, or 21%, directly benefitting DVCs in the HFTD, resulting in an estimated wildfire risk reduction in these areas of 99% and near elimination of the need for PSPS.

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<sup>18</sup> Pursuant to D.20-08-046 and D.24-08-005, SDG&E's submitted its 2025 CAVA on May 15, 2025.

- Electric Infrastructure Integrity – SDG&E focused its analysis of RAMP controls and mitigations on three programs: 1) C236 Distribution Overhead Switch Replacement, 2) C250 Substation Reliability for Distribution, and 3) C269 Distribution Circuit Reliability. In some cases, and as discussed below, the mitigations directly benefit more customers in high-population density DVCs, resulting in relatively higher CBRs.
  - Approximately 13% of system circuit miles planned for C236 Distribution Overhead Switch Replacement are located in or serve DVCs. SDG&E forecasts approximately \$303,000 of program costs to be spent on overhead switches that serve DVCs. On these circuits, approximately 7,200 customer meters are in DVCs, compared to 49,000 in non-DVCs.
  - Approximately 6% of system circuit miles planned for the C250 Substation Reliability for Distribution program are located in or serve DVCs. SDG&E forecasts \$2.5 million of program costs to be spent on substations serving DVCs as part of the program. On these circuits, approximately 16,000 customer meters are in DVCs, compared to 242,000 in non-DVCs.
  - Approximately 6% of system circuit miles planned for the C269 Distribution Circuit Reliability program are located in or serve DVCs. SDG&E forecasts \$242,000 of program costs to be spent on distribution reliability for circuits serving DVCs as part of the program. On these circuits, approximately 2,000 customer meters are in DVCs, compared to approximately 28,000 in non-DVCs.

#### Action Item #7: Outreach and Public Participation

- Wildfire and PSPS – The Wildfire and PSPS controls having elements of customer outreach and engagement focus on program awareness and participation, awareness of community resources and services, and data and information available to them before, during and after times of crisis. Some of the controls are supported by CBOs, potentially increasing their effectiveness in DVC areas.

- Electric Infrastructure Integrity – One EII control provides robust customer education about the dangers and risks associated with electricity and working in proximity to SDG&E’s electrical equipment and infrastructure. This control is applied across SDG&E’s service territory, in both DVC and non-DVC communities.

### **III. DISADVANTAGED AND VULNERABLE COMMUNITIES IN SDG&E SERVICE TERRITORY**

For the ESJ Pilot Study, SDG&E used CalEnviroScreen 4.0 map to identify the relevant DVCs, as illustrated in Figure 1.<sup>19</sup> The CalEnviroScreen 4.0 map identifies the DVC population as

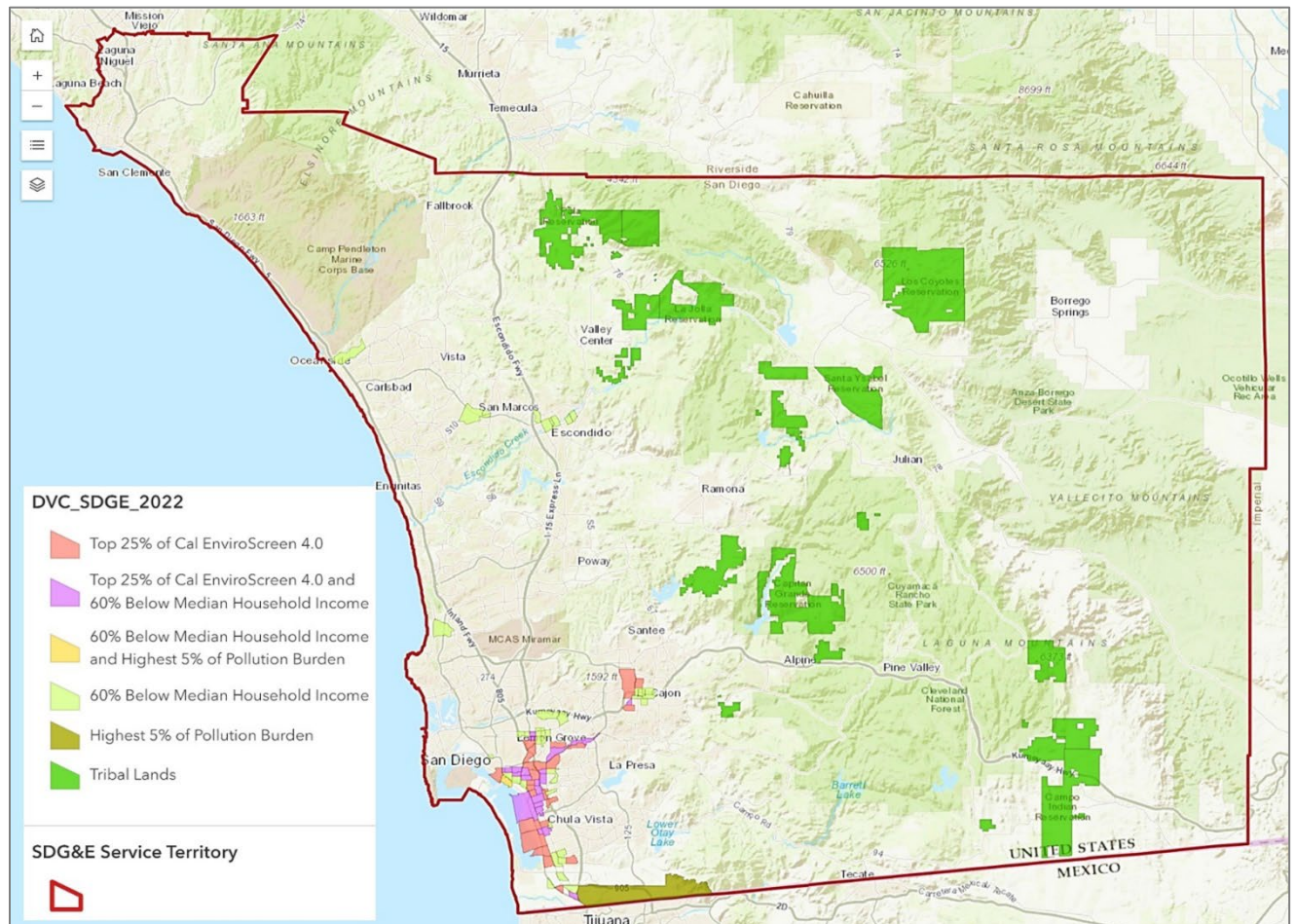
- California tribal lands;
- Communities in the 25% highest scoring census tracts of CalEnviroScreen;
- Census tracts that score in the highest 5% of Pollution Burden within CalEnviroScreen, but do not receive an overall CalEnviroScreen score due to unreliable public health and socioeconomic data; and
- Census tracts with median household incomes less than 60% of state median income.

There are no DVCs in the Orange County portion of SDG&E’s service territory (northwest region of Figure 1).

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<sup>19</sup> Figure 1 is excerpted from the OEHHA, California Communities Environmental Health Screening Tool, *see* Map of CalEnviroScreen 4.0, *available at* <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>).

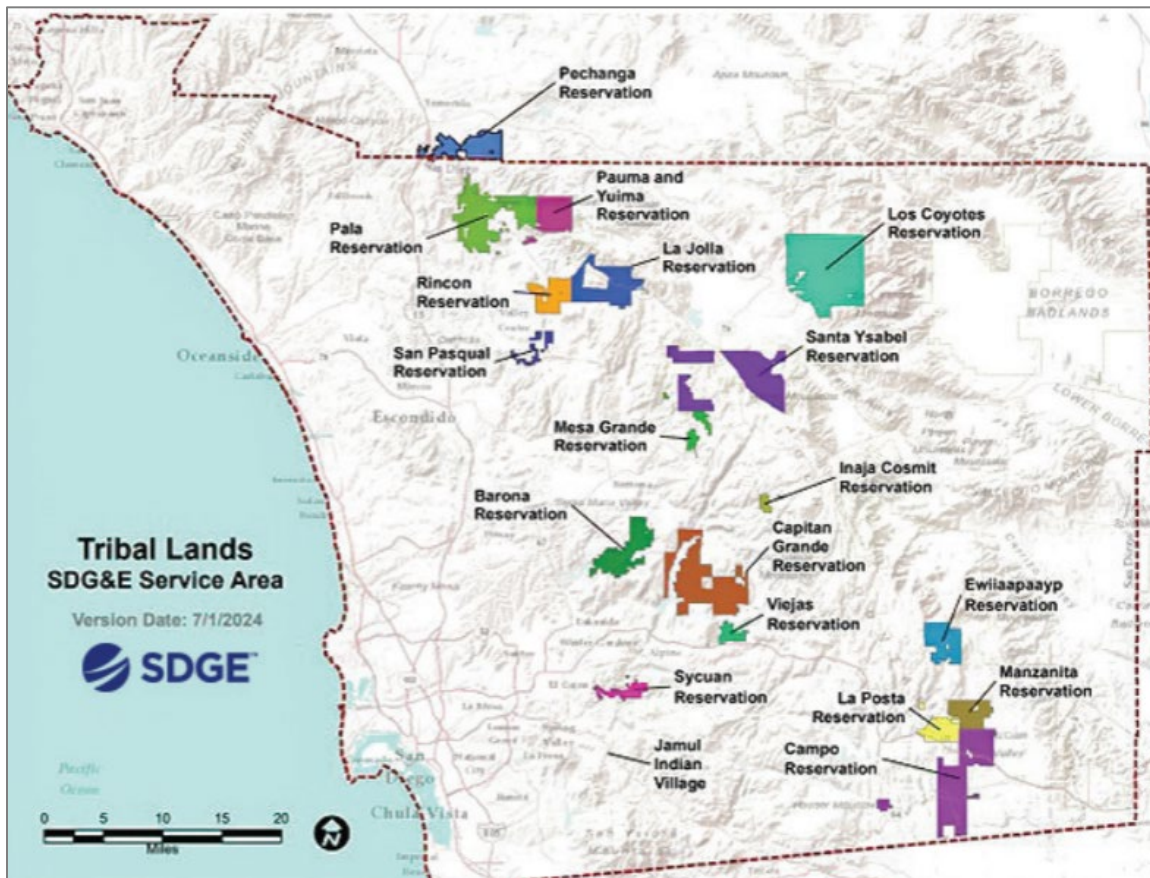
**Figure 1 - Disadvantaged and Vulnerable Communities in SDG&E Service Territory**



SDG&E is proud to be an energy partner to the 17 Tribal Nations within the Company's service territory and are illustrated in Figure 2.<sup>20</sup> San Diego County is home to the highest number of reservations in the United States.

<sup>20</sup> Figure 2 also recognizes the Capitan Grande and Pechanga reservations. See SDG&E, SDG&E Tribal Relations, Serving Tribal Nations, available at <http://www.sdge.com/tribal-relations>.

*Figure 2 - Tribal Lands in SDG&E Service Territory*



During the ESJ Pilot Study public workshops (described *supra* Section II), SDG&E was asked to consider vulnerability screeners in addition to CalEnviroScreen 4.0. SDG&E analyzed the following nine (9) additional vulnerable community screening tools and data.

1. Climate and Economic Justice Screening Tool;
2. California Healthy Places Index 3.0;
3. City of San Diego Climate Equity Index;
4. CDC/ASTDR Environmental Justice Index;
5. Environmental Defense Fund US Climate Vulnerability Index;
6. OEHHA DAC – defined by Senate Bill (SB) 535 (minus Tribal Areas);
7. FEMA National Risk Index;
8. AB 617 Communities; and

#### 9. CARB Climate Vulnerability Metric.

In general, each of the above-identified tools provided a slightly different screening to identify DVCs in SDG&E's service territory than CalEnviroScreen 4.0. These tools use different criteria to identify vulnerable communities, making a direct comparison of each screening tool difficult. When the results of vulnerability screening by all nine tools are considered in the aggregate, the defined DVC area expands to a larger community level than the census tract level viewpoint provided by CalEnviroScreen 4.0. Considering the above, SDG&E agrees that CalEnviroScreen is an effective tool to identify DVCs and agrees with the CPUC's requirement to use it for purposes of this ESJ Pilot Study.<sup>21</sup>

#### IV. ACTION ITEM #1: RISK IMPACTS

*Consider equity in the evaluation of consequences and risk mitigation within the Risk-Based Decision-Making Framework (RDF), using the most current version of CalEnviroScreen to better understand how risks may disproportionately impact some communities more than others.*

SDG&E evaluated the forecasted Potential Consequences and risk mitigations related to the Wildfire and PSPS and EII Risks in the identified DVCs. To address both Risk and control/mitigation impacts to DVCs, SDG&E focused on the risk analysis for Action Item #1 and evaluated applicable controls and mitigations in Action Item #6 for the same risk categories.

##### **Wildfire and PSPS**

For the purposes of this RAMP Report, SDG&E's Wildfire Risk is defined as "the risk of catastrophic wildfire, initiated by SDG&E equipment, whether through normal operation or failure, that may pose an immediate threat to the communities, the environment, and overall safety resulting in fatalities, widespread property destruction, and a multi-billion-dollar liability."<sup>22</sup> SDG&E defines PSPS Risk as "the risk created from proactive de-energization of

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<sup>21</sup> D.22-12-027 at 65-67 (OP 5); *see also* CPUC, *Environmental & Social Justice Action Plan Version 2.0* (April 7, 2022) Appendix A, ESJ Action Item 4.1.4 at 43, *available at*: <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/news-office/key-issues/esj/esj-action-plan-v2jw.pdf>.

<sup>22</sup> *See* Chapter SDG&E-Risk-4: Wildfire and PSPS, Section I.A.



infrastructure during extreme fire weather conditions, which can result in negative impacts on customers and communities.”<sup>23</sup>

Wildfire and PSPS Risk focuses on the primary electric distribution system contained within the HFTD, and EII Risk focuses on the primary electric distribution system contained in the non-HFTD portion of the SDG&E’s service area. The main analysis SDG&E performed for Action Item #1 overlaid SDG&E’s primary electric distribution system data within SDG&E’s identified DVC map.

SDG&E’s Wildfire and PSPS Risk reduction is focused on our HFTD Tier-2 and Tier-3 areas and finds the majority of DVCs in HFTD are Tribal Lands. SDG&E overlaid its primary electric distribution system data within the HFTD and DVC maps and measured the intersection of electric distribution lines through these census tract and tribal land polygons. Approximately 745 miles of the electric distribution system<sup>24</sup> overlaps with DVCs in HFTD. Of this, approximately 9,100 customer meters are in DVCs, as shown in Table 1.

To understand proportional impacts, SDG&E used GIS to analyze the total area of HFTD DVCs, in square miles, and compared it to the total HFTD square mileage.

About 26% of Tier-3 Wildfire and PSPS risk is in DVC areas, with a lower percentage (5%) in Tier-2. SDG&E estimates \$540 million of DVC Risk in HFTD. DVCs make up less than 10% of HFTD square mileage, with Tribal Lands being the majority of DVCs in HTFD, and they bear a disproportionate amount of risk compared to their area – approximately 31%.

***Table 1 - Wildfire and PSPS Risk: DVC and non-DVC in HFTD (2024 \$)***

	<b>DVC Customer Meters</b>	<b>Baseline Risk (M\$)</b>	<b>DVC Risk (M\$)</b>	<b>Non-DVC Risk (M\$)</b>	<b>DVC Risk (%)</b>
HFTD Tier-2	3,320	\$988	\$49	\$939	5%
HFTD Tier-3	5,794	\$1,905	\$491	\$1,414	26%
<b>Total HFTD</b>	<b>9,114</b>	<b>\$2,893</b>	<b>\$540</b>	<b>\$2,353</b>	<b>31%</b>

SDG&E’s risk analysis focused on customer meter counts. SDG&E understands there could be discrepancies between census tract populations and customer meter count. However,

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<sup>23</sup> *Id.*

<sup>24</sup> This estimate includes overhead and underground mileage.

using customer meters for the analysis is useful because no additional hypothetical assumptions are necessary to extrapolate the results to census tract populations.

### **Electric Infrastructure Integrity**

For the purposes of this RAMP Report, SDG&E's EII Risk is defined as the risk of an asset failure caused by degradation, age, operation outside of design criteria due to unexpected events or field conditions (*e.g.*, force of nature), or an asset no longer complying with the latest engineering standards, which results in a public safety or reliability incident.

SDG&E's EII Risk reduction prioritizes safety and reliability measures designed to protect its employees, customers, and the public. Since this risk is primarily concentrated on the distribution system, the ESJ Pilot Study also focuses on these areas.

SDG&E overlaid the electric distribution system to the DVC map for Action Item #1 and used census tract and tribal land polygons to measure the intersection of electric distribution line through these polygons. While EII Risk is concentrated on SDG&E's primary distribution system, EII Risk also exists outside of the distribution system. However, by examining the total mileage of primary electric distribution inside and outside DVCs, SDG&E uses estimates to find total EII Risk in DVCs using a percentage-based approach.

To understand proportional impacts, SDG&E used GIS to analyze the total area of DVCs, in square miles, compared to the square mileage of SDG&E's total service territory.

Approximately 7% of the electric distribution system miles overlap with DVCs, with approximately 150,000 customer meters located in DVCs and 1.34 million meters located in non-DVC areas. Total annual EII Risk is estimated at approximately \$398 million. Using the percentage-based approach, SDG&E estimates \$28 million of EII Risk relates to DVC areas. DVCs make up approximately 7% of total service area square mileage and they bear an approximately proportionate amount of EII Risk compared to their area (7%).

## **V. ACTION ITEM #2: CLEAN ENERGY INVESTMENTS**

*Consider investments in clean energy resources in the RDF, as possible means to improve safety and reliability and mitigate risks in DVCs.*

SDG&E considered 2025 RAMP programs that address clean energy resources and, where applicable, evaluated if and how DVCs could benefit from these projects by improving safety and/or reliability, or general risk reduction.

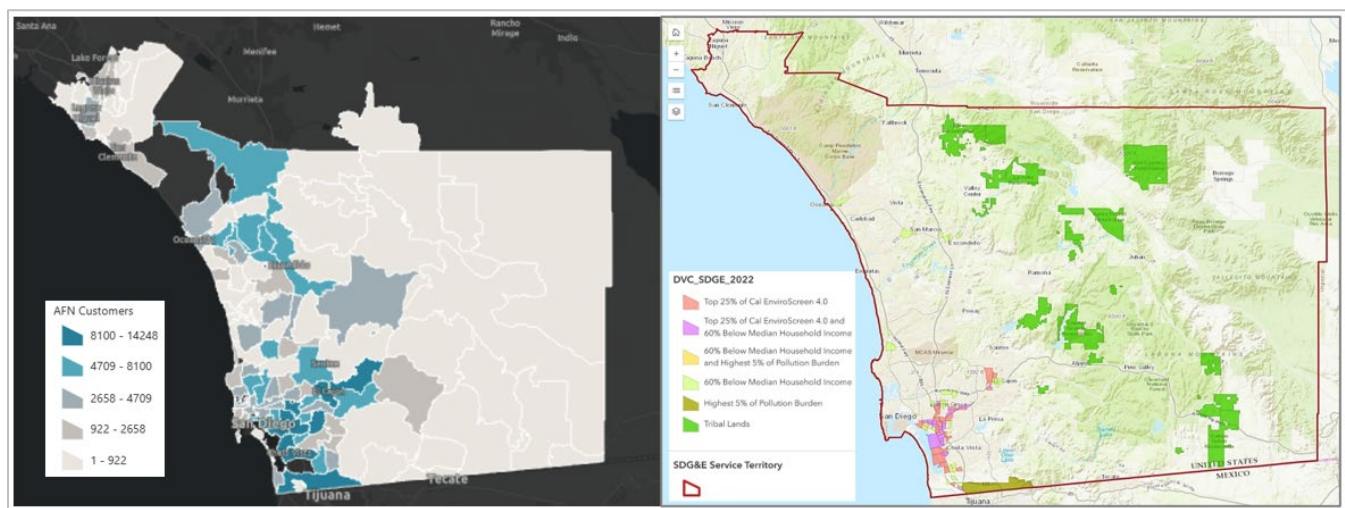


## Wildfire and PSPS

For Wildfire and PSPS, the two risks that support clean energy investments are C506 Microgrids, and C504 Standby Power Program (Fixed Backup Power Commercial).

C506 Microgrids is the control that best supports clean energy within the Wildfire and PSPS Risk mitigation portfolio. Microgrids are a critical component to SDG&E's efforts to keep customers energized during planned and unplanned outages. Microgrids are small electric grids that can operate independently from the larger grid. They are supportive of clean energy when integrated with a network of distributed energy resources, like solar panels and energy storage. AFN customers are a prioritization factor when identifying projects. Figure 3 depicts how AFN customers have significant overlap with DVC, namely in densely populated urban areas. Every CalEnviroScreen DVC census tract in SDG&E's service territory has AFN population ranging between 126 to 2,025 per census tract (and 4% to 33% of the population of each).

*Figure 3 - SDG&E AFN (left – zip code based) and DVC (right – census tract based)*



The C504 Standby Power Program (Fixed Backup Power Commercial) control offers backup power solutions to enhance resiliency. This control is supportive of clean energy when the solutions include permanent backup batteries when powered or charged by clean energy sources such as solar arrays. DVC benefits will depend on location and clean energy sources.

## Electric Infrastructure Integrity

Several of the EII controls focus on modernizing SDG&E's distribution system outside of HFTD, which ultimately supports building and maintaining clean energy infrastructure,

including substations, underground tee connectors, and supervisory control and data acquisition (SCADA) capacitors, for example. EII Risk mitigations mainly entail electric infrastructure upgrades to support public safety and reliability. Other areas of SDG&E's electric infrastructure planning and development may more directly support public health and air quality. For example, capacity-driven electric distribution upgrade programs may facilitate EV adoption that results in carbon emission reductions. Proactive overhead-to-underground electric distribution conversion programs may also reduce utility truck rolls associated with mandated overhead inspection and maintenance activities, resulting in reduced carbon emissions.

### **Examples of Non-RAMP Activities**

SDG&E is committed to clean energy efforts. Some examples of these efforts outside of the focus of RAMP include the following.

- SDG&E Path to Net Zero – A Decarbonization Roadmap for California (April 2022);<sup>25</sup>
- SDG&E Microgrid and Battery Energy Storage Systems (BESS);<sup>26</sup>
- Microgrid Incentive Program (MIP) – Customer/Community Owned;
- Hydrogen Innovation;<sup>27</sup>
- Hydrogen-fueled Fleets for Business;<sup>28</sup>
- Vehicle-to-Grid (V2G);<sup>29</sup> and
- Electric Program Investment Charge (EPIC)<sup>30</sup> Program.

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<sup>25</sup> SDG&E, *Path to Net Zero, A Decarbonization Roadmap for California* (April 2022) available at [www.sdge.com/sites/default/files/documents/netzero2.pdf](http://www.sdge.com/sites/default/files/documents/netzero2.pdf).

<sup>26</sup> SDG&E, *Battery Energy Storage Systems (BESS) and Microgrids*, Fact Sheet, available at <https://www.sdge.com/sites/default/files/BESS%20and%20Microgrids%20-%20Fact%20Sheet%20%281%29.pdf>.

<sup>27</sup> SDG&E, *Hydrogen Innovation*, available at [www.sdge.com/more-information/environment/sustainability-approach/hydrogen-innovation](http://www.sdge.com/more-information/environment/sustainability-approach/hydrogen-innovation).

<sup>28</sup> SDG&E, *Hydrogen-fueled Fleets for Business*, available at [www.sdge.com/more-information/environment/sustainability-approach/hydrogen-innovation/hydrogen-fueled-fleets-business](http://www.sdge.com/more-information/environment/sustainability-approach/hydrogen-innovation/hydrogen-fueled-fleets-business).

<sup>29</sup> SDG&E, *Vehicle Grid Integration*, available at <http://sdge.com/V2G>.

<sup>30</sup> SDG&E, *Electric Program Investment Charge, Pioneering clean energy technology*, available at [www.sdge.com/epic](http://www.sdge.com/epic).

## **VI. ACTION ITEM #3: AIR QUALITY, PUBLIC HEALTH, AND ASSEMBLY BILL (AB) 617**

*Consider mitigations that improve local air quality and public health in the RDF, including supporting data collection efforts associated with Assembly Bill 617 regarding community air protection program.*

SDG&E evaluated how EII and Wildfire/PSPS controls and mitigations may impact local air quality and public health, with specific emphasis on AB 617 communities.<sup>31</sup>

### **Background**

Two communities, the International Border Community<sup>32</sup> and Portside Environmental Justice Neighborhoods<sup>33</sup> in San Diego have been selected by the CARB Board to participate in the Community Air Protection Program, and SDG&E considered mitigations that improve local air quality and public health in these areas.

The AB 617 census tracts and neighborhoods within SDG&E's service territory are provided in Table 2. Figure 4 shows the location of the AB 617 Portside Environmental Justice Neighborhoods. Figure 5 shows the location of the AB 617 International Border Community.

In total, there are 11 census tracts with a population of 47,554 people. These tracts are also DVC communities.

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<sup>31</sup> CARB, *Community Air Protection Program*, available at: <https://ww2.arb.ca.gov/capp/about>. In response to AB 617 (C. Garcia, Chapter 136, Statutes of 2017), CARB established the Community Air Protection Program (CAPP). CAPP's focus is to reduce exposure in communities most impacted by air pollution..

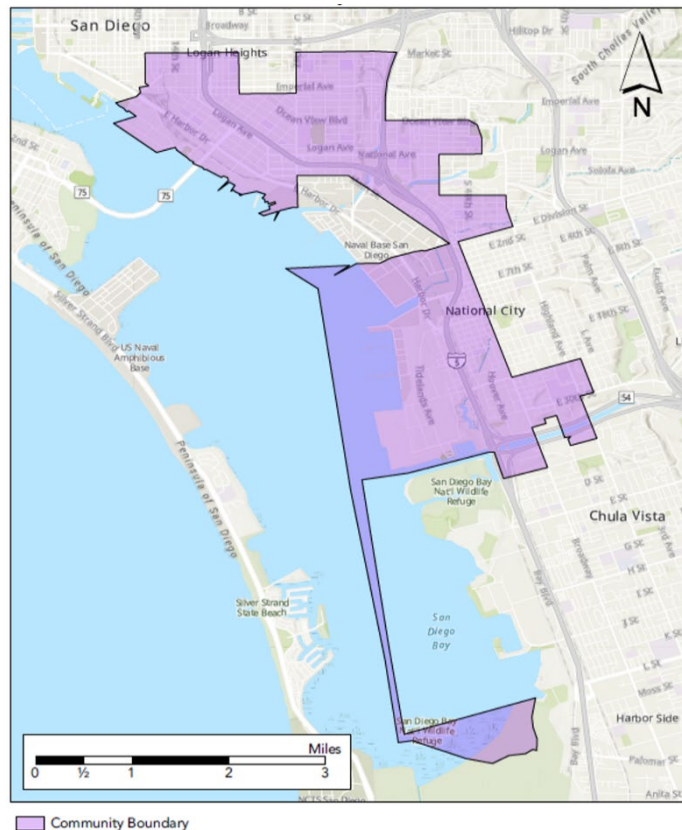
<sup>32</sup> CARB, *International Border Community*, available at: <https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program/communityhub-2-0/international-border-community>.

<sup>33</sup> CARB, *Portside Environmental Justice Neighborhoods*, available at: <https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program/communityhub-2-0/portside-environmental-justice>.

**Table 2 - AB 617 Census Tracts in SDG&E Service Territory**

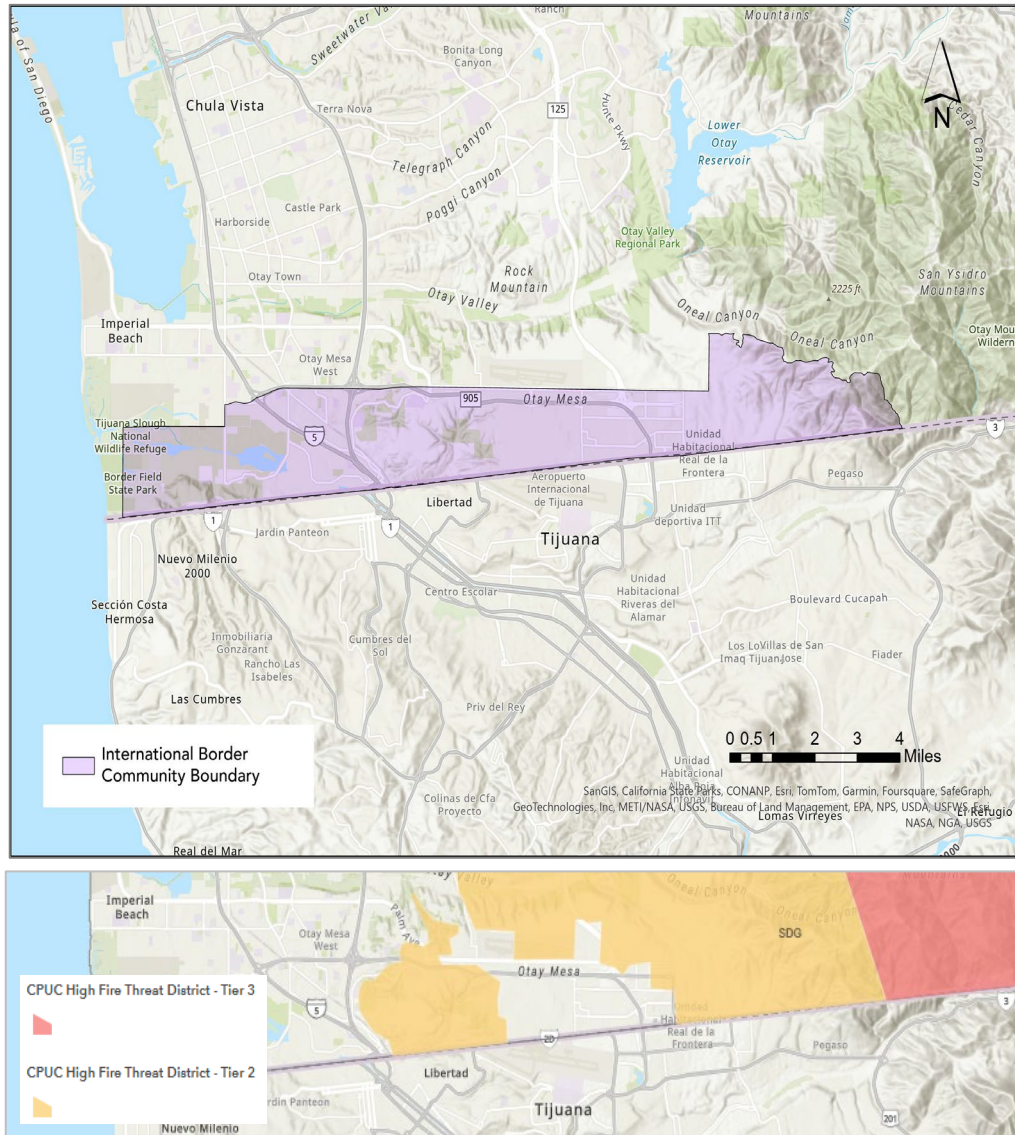
<b>Census Tract</b>	<b>Neighborhood</b>	<b>Population (CalEnviroScreen 4.0)</b>
6073005000	Barrio Logan	2,195
6073005100	Downtown	7,702
6073003902	Logan Heights / SE SD	4,388
6073003901	Logan Heights / SE SD	4,379
6073003603	Logan Heights / SE SD	3,907
6073003601	Logan Heights / SE SD	3,006
6073004000	Logan Heights / SE SD	4,513
6073003502	Logan Heights / SE SD	4,754
6073004700	Logan Heights / SE SD	1,703
6073011602	National City	3,900
6073021900	National City	7,107

**Figure 4 - Community Hub 2.0 / AB 617 Portside  
Environmental Justice Neighborhoods**





**Figure 5 - CommunityHub 2.0 / AB 617 International Border Community & SDG&E HFTD 2 & 3**



Since 2017, SDG&E has been working with CARB and other stakeholders to implement AB 617 and help the Community Air Protection Programs be effective at reducing emissions. Each community has a Community Emissions Reduction Program (CERP).<sup>34,35</sup> Within each, SDG&E is an important partner in the implementation of the AB 617 program in San Diego's disadvantaged communities.

AB 617 also requires compilation and submittal of emissions inventories for various industrial sources in the state (independent of location). SDG&E has been reporting its annual toxic and criteria emissions from its air permitted equipment (*i.e.*, combustion turbines at power plants and diesel engines at Construction & Operations (C&O) centers) to the Air Pollution Control District (APCD). For the annual reports submitted over the last few years, APCD has concluded that SDG&E-targeted sites are low-risk and do not pose any significant impacts to receptors (residential and commercial sites near the SDG&E-targeted sites).

### **Wildfire and PSPS**

While no 2025 RAMP controls and/or mitigations are designed for the express purpose of improving air quality or public health, the activities and programs discussed in the Wildfire and PSPS Chapter provide information about weather and air quality conditions that can increase public awareness of conditions and enable them to take self-preservation action.

For example, the Wildfire and PSPS Risk Chapter describes a group of controls that focus on Situational Awareness and Forecasting,<sup>36</sup> which help SDG&E monitor current wildfire, weather, and environmental conditions. The Emergency Preparedness, Collaboration and Public Awareness control provides public information before, during and after a Wildfire or PSPS event.<sup>37</sup> Together, monitoring and communication of current conditions help provide information and awareness of potentially adverse air quality conditions. Air Quality monitors

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<sup>34</sup> San Diego County Air Pollution Control District, *Community Emissions Reduction Plan, Portside Environmental Justice Neighborhoods* (Phase II, July 2021), available at: [www.sdapcd.org/content/dam/sdapcd/documents/capp/cerp/Portside-Environmental-Justice-CERP-July-2021.pdf](http://www.sdapcd.org/content/dam/sdapcd/documents/capp/cerp/Portside-Environmental-Justice-CERP-July-2021.pdf).

<sup>35</sup> San Diego County Air Pollution Control District, *International Border Communities, San Ysidro & Otay Mesa, Community Emissions Reduction Program* (March 2024), available at: [ww2.arb.ca.gov/sites/default/files/2024-07/IBCS%20CERP%2003.29.24.pdf](http://ww2.arb.ca.gov/sites/default/files/2024-07/IBCS%20CERP%2003.29.24.pdf).

<sup>36</sup> See Chapter SDG&E-Risk-4: Wildfire and PSPS, Section III.

<sup>37</sup> See *id.*

are a technology that, while not specifically mentioned, is a component of the Safety Compliance and Industrial Hygiene Program in the Employee Safety Chapter (SDG&E-Risk-6, C328). These monitors help support risk informed decisions for the safety of SDG&E employees and are also utilized by the Fire Science and Climate Adaptation (FSCA) business unit as a tool to support enhanced situational awareness. Finally, the data from these AQI monitors are also made available to the public, to raise awareness and promote risk-informed decision-making on exposure to air quality levels.

The Wildfire and PSPS controls that support this action item are discussed as follows. Note that the easternmost area of the International Border Community in Figure 5 is near the HFTD; therefore, that population may be applicable to any discussion about HFTD customers.

- C572 Situational Awareness and Forecasting is supported by various tools and technologies. Some of these technologies include cameras that are publicly accessible that could provide real-time visuals of smoke-related air quality conditions. Additional information about the cameras is provided in Action Item #5, which discusses SDG&E's Wildfire Mitigation Plan. Other tools that can provide public awareness and forecasting information include weather data, indexes and metrics, and fire detection.
- C328 Safety Compliance & Industrial Hygiene Program, presented as part of the Employee Safety Chapter, includes the deployment of Air Quality monitors – another tool that is used for situational awareness and employee safety. These monitors are also made accessible to the public and are discussed in more detail in Action Item #5.

### **Electric Infrastructure Integrity**

As noted above, EII Risk mitigations mainly entail electric infrastructure upgrades to support public safety and reliability. Other areas of SDG&E's electric infrastructure planning and development may more directly support public health and air quality. For example, capacity-driven electric distribution upgrade programs may facilitate EV adoption that results in carbon emission reductions. Proactive overhead-to-underground electric distribution conversion programs may also reduce utility truck rolls associated with mandated overhead inspection and maintenance activities, resulting in reduced carbon emissions.

## Examples of Non-RAMP Activities

SDG&E also engages in non-RAMP efforts to improve air quality and public health for its entire service territory, including DVCs and the AB 617 communities, by partnering with and supporting programs such as the following:

- CERP – Portside Environmental Justice Neighborhoods;<sup>38</sup>
- CERP – International Border Communities;<sup>39</sup>
- SDG&E Integrated Resource Plan - Minimizing Criteria Air Pollutants in DAC;<sup>40</sup>
- SDG&E Integrated Resource Plan - DAC Mitigations;<sup>41</sup>
- CAPP Participation;<sup>42</sup>
- Fleet / Zero-Emission Vehicles (ZEV);<sup>43</sup>
- Community Impact Platform;<sup>44 45</sup> and
- Tree Planting & Programs.<sup>46</sup>

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<sup>38</sup> San Diego County Air Pollution Control District, *Community Emissions Reduction Plan, Portside Environmental Justice Neighborhoods* (Phase II, July 2021), available at: [www.sdapcd.org/content/dam/sdapcd/documents/capp/cerp/Portside-Environmental-Justice-CERP-July-2021.pdf](http://www.sdapcd.org/content/dam/sdapcd/documents/capp/cerp/Portside-Environmental-Justice-CERP-July-2021.pdf).

<sup>39</sup> San Diego County Air Pollution Control District, *International Border Communities, San Ysidro & Otay Mesa, Community Emissions Reduction Program* (March 2024), available at: [ww2.arb.ca.gov/sites/default/files/2024-07/IBCSC%20CERP%2003.29.24.pdf](http://ww2.arb.ca.gov/sites/default/files/2024-07/IBCSC%20CERP%2003.29.24.pdf).

<sup>40</sup> R.20-05-003, 2022 Individual Integrated Resource Plan of SDG&E, Public Version (November 1, 2022) at 78-83.

<sup>41</sup> *Id.* at 36-38.

<sup>42</sup> *Id.* at 82.

<sup>43</sup> SDG&E, *SDG&E's Sustainability Strategy*, available at: <https://www.sdge.com/more-information/environment/sustainability-approach>.

<sup>44</sup> SDG&E, *SDG&E's Community Impact Platform Earns CIO 100 Award* (March 30, 2022), available at: <https://www.sdgetoday.com/news/sdges-community-impact-platform-earns-cio-100-award>.

<sup>45</sup> Sempra, *SDG&E's Digital Tool for Advancing Environmental Justice Named a Fast Company 2022 World Changing Idea* (May 10, 2022), available at: <https://www.sempira.com/sdges-digital-tool-advancing-environmental-justice-named-fast-company-2022-world-changing-idea>.

<sup>46</sup> SDG&E, *SDG&E Celebrates Arbor Day with New Milestone – 45,000 Trees Planted Since 2021* (April 26, 2024), available at: [www.sdgetoday.com/news/sdge-celebrates-arbor-day-new-milestone-45000-trees-planted-2021](http://www.sdgetoday.com/news/sdge-celebrates-arbor-day-new-milestone-45000-trees-planted-2021).



## **VII. ACTION ITEM #4: CLIMATE RESILIENCY**

*Evaluate how the selection of proposed mitigations in the RDF may impact climate resiliency in DVCs.*

SDG&E's 2025 CAVA identifies Wildfire as a Climate Hazard, which provides the foundation to this action item.<sup>47</sup> Climate vulnerabilities must be addressed with the goals of providing safe and reliable service and mitigating the increasing risk through innovative and community-centric approaches. As part of the CPUC's ongoing Climate Adaptation OIR, the CPUC, California IOUs, and various stakeholders and consultants are working to identify a climate and community resilience measurement that can be utilized within the CAVA framework, ultimately feeding into the RAMP and GRC. With new developments, SDG&E will work to utilize and align efforts across proceedings that ultimately aim to incorporate DVC and equity concerns into risk-informed decision-making. For additional information on the CAVA and a complete list of climate controls and mitigations included in RAMP, see Volume 1, Chapter SDG&E RAMP-5 Climate Change Adaptation.

Wildfire and PSPS and EII controls and mitigations may impact climate resiliency within DVCs, as follows:

### **Wildfire and PSPS**

CAVA identifies wildfire as a climate-related hazard for electric distribution, transmission, substations, communication, facilities assets, and gas assets including pressure pipes, medium-pressure pipes, regulators, compressors, and valves. All controls and mitigations in Chapter RAMP-1 Wildfire and PSPS support climate resiliency. Action Item #6 details the strategic underground control for Wildfire and PSPS Risk and DVCs.

### **Electric Infrastructure Integrity**

Several of the EII controls focus on hardening, modernizing, and maintaining the electric infrastructure, which will ultimately be supportive of climate resilience.

- C250 Substation Reliability for Distribution Components – Substations are essential to the daily operation of the electric system. Modern substation infrastructure relies on protective relaying devices to strategically isolate substation equipment to minimize the impact of an outage and increase reliability.

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<sup>47</sup> See discussion in SDG&E's 2025 CAVA, submitted pursuant to D.20-08-046 and D.24-08-005 on May 15, 2025.

Proactive planning and replacement will allow the distribution system to continue operating at optimum conditions and maintain its reliability, shorten outage times, and allow for operational flexibility to the system. This control could improve climate resilience to extreme temperatures, inland flooding, and coastal flooding. Impacts to DVC are discussed in Action Item #6.

- C253 Restoration of Service provides the reconstruction of overhead and underground distribution facilities that are damaged due to a variety of drivers including Climate Hazards such as wildfire and inland flooding. While this control responds to events as they occur, SDG&E also proactively prepares for event response under advisement from the Meteorology department, attempting to optimize costs and risk reduction as a regular practice with prearranged readiness for responding to these widespread events. This control could improve climate resilience to extreme temperatures, wildfires, inland flooding, and coastal flooding and is applied equally to the entire service territory.
- C254 Underground Cable Replacement Program – Reactive replaces underground cable and restores service after cable failures involved in severe weather conditions and other factors. This control could improve climate resilience to wildfires. This control is performed within the entire service territory.
- C262 Distribution Substation SCADA Expansions – Installs SCADA within the substation enables faster faulted circuit identifications, faster isolation of faulted electric distribution circuits, higher accuracy fault locating, and improved system performance. This control could improve climate resilience to wildfires. This control is performed within the entire service territory.
- C263 Non-HFTD Wireless Fault Indicator – Helps narrow search areas of system failures so SDG&E can quickly identify faults and dispatch crews, improving reliability and customer support. Enables a more complete system view enabling status information of all conductors downstream. This control could improve climate resilience to extreme temperatures. This control is performed within the entire service territory.
- C269 Distribution Circuit Reliability – By expanding the distribution SCADA-switching infrastructure and/or removing reliability deficiencies on a distribution

circuit, the infrastructure will be well-controlled and operated during times of climate emergencies. This control could improve climate resilience to extreme temperatures. Impacts to DVC are discussed in Action Item #6.

- C270 SCADA Capacitors – These modern capacitors can monitor imbalances and internal faults and provide a method for remote isolation, enabling situational awareness and response during extreme weather conditions. This control could improve climate resilience to wildfires. This control is performed within the entire service territory.
- C533 Vegetation Management Enterprise System – Maintaining and managing vegetation within the service territory is a critical component of wildfire mitigation efforts. This control could improve climate resilience to wildfires. This control is performed within the entire service territory.

## **VIII. ACTION ITEM #5: WILDFIRE SMOKE**

*Evaluate if estimated impacts of wildfire smoke included in the RDF disproportionately impact DVCs.*

For this action item, SDG&E took steps to accomplish the following:

- Identify current sources of publicly available smoke / air quality models;
- Review current research (with primary focus on research published in 2023 or 2024) as to how smoke relates to DVC communities, and report on findings;
- Discuss approach academia; and
- Review relevant information from SDG&E's 2026-2028 Wildfire Mitigation Plan (WMP).<sup>48</sup>

### **Background**

SDG&E's core wildfire mitigation efforts are aimed at reducing the risk of ignition, or the incidence of ignition evolving into a catastrophic wildfire. These efforts have the simultaneous effect of reducing the impacts of wildfire smoke. While SDG&E is recognized as a utility leader in preventing utility-caused wildfires, it does not have expertise on the science of smoke impacts (which are not utility-specific). SDG&E defers to leaders in the field (such as the

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<sup>48</sup> SDG&E's 2026-2028 Wildfire Mitigation Plan (May 2, 2025) (2026-2028 Base WMP), *available at* <https://www.sdge.com/2026-2028-wildfire-mitigation-plan>.

Federal government, state agencies and universities) for the mission/focus, tools, and resources to study and advance research on this topic. Utility-specific research presents several challenges, including the difficulty of accurately identifying and quantifying the potential number of SDG&E customers impacted by smoke related to utility-caused wildfires and assessing the extent of the effects on both customers and the environment. The complexity arises, for example, from the variability in wildfire behavior, identifying and quantifying the type of material burned, the duration of the fire, the diverse locations and existing characteristics of the customers impacted, and the difficulty in predicting long-term environmental impacts.

SDG&E is committed to collaborating with Safety Policy Division, Energy Safety, academia, and intervenors to accurately assess the impact of wildfire smoke on air quality, health, and the environment, and consider incorporating this impact into the risk and cost-benefit calculations.

### **2025 RAMP Controls Addressing Smoke**

Within Chapter SDG&E-Risk-4: Wildfire and PSPS, SDG&E discusses the control measure: C572 Situational Awareness and Forecasting, describing the Air Quality Management Program that monitors particulate matter from wildfire smoke. It does not forecast smoke impacts and the mitigation is for the safety of employees and the general public – inclusive but not specifically for DVC. In addition, air quality stations and cameras are discussed in greater detail in SDG&E’s 2026-2028 Base WMP in sections 10.2.1.2 Air Quality Station and 10.4.1.2 Cameras.

### **Review of Recent Smoke-Related Studies**

Studies show that vulnerable communities may be more susceptible to the adverse impacts of wildfire smoke in the event of a catastrophic wildfire, due to potential challenges in transportation/mobility, shelter/air conditioning and purifying technologies, working conditions / locations, reduced access to healthcare, etc. As technology, such as AI, and more sophisticated models leveraging AI are developed to help forecast smoke travel paths, there is hope that earlier notification, effective resource allocation and targeted actions could be identified.

SDG&E reviewed the following publicly available studies on health impacts of wildfire smoke in Table 3.

***Table 3 - Reviewed Publicly Available Studies on Health Impacts of Wildfire Smoke***

<b>Model</b>	<b>Link</b>
NASA “Wildfire Digital Twin” Pioneers New AI Models and Streaming Data Techniques for Forecasting Fire and Smoke	<a href="https://science.nasa.gov/science-research/science-enabling-technology/nasa-wildfire-digital-twin-pioneers-new-ai-models-and-streaming-data-techniques-for-forecasting-fire-and-smoke/">https://science.nasa.gov/science-research/science-enabling-technology/nasa-wildfire-digital-twin-pioneers-new-ai-models-and-streaming-data-techniques-for-forecasting-fire-and-smoke/</a>
It’s the Smoke, Not the Fire   AJPH   Vol. 113 Issue 7	<a href="https://ajph.aphapublications.org/doi/10.2105/AJPH.2023.307327">https://ajph.aphapublications.org/doi/10.2105/AJPH.2023.307327</a>
Social Vulnerability in US Communities Affected by Wildfire Smoke, 2011 to 2021	<a href="https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2023.307286">https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2023.307286</a>
A Comparison of Smoke Modelling Tools Used to Mitigate Air Quality Impacts from Prescribed Burning	<a href="https://www.nwfirescience.org/sites/default/files/publications/A%20comparison%20of%20smoke%20modelling%20tools%20used%20to%20mitigate%20air%20quality%20impacts%20from%20prescribed%20burning.pdf">https://www.nwfirescience.org/sites/default/files/publications/A%20comparison%20of%20smoke%20modelling%20tools%20used%20to%20mitigate%20air%20quality%20impacts%20from%20prescribed%20burning.pdf</a>
Tainted Air	<a href="https://socialecology.uci.edu/news/tainted-air">https://socialecology.uci.edu/news/tainted-air</a>
Policy Brief: Local Air Quality Monitoring During Wildfire Events: Reducing Hazardous Exposures for Farmworkers	<a href="https://socialecology.uci.edu/sites/default/files/users/mkcruz/policybrief_draft4_080824.pdf">https://socialecology.uci.edu/sites/default/files/users/mkcruz/policybrief_draft4_080824.pdf</a>
Air Quality Monitoring and the Safety of Farmworkers in Wildfire Mandatory Evacuation Zones	<a href="https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2024GH001033">https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2024GH001033</a>
CARB 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan)	<a href="https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp_1.pdf">https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp_1.pdf</a>
CARB 2022 Scoping Plan Appendix K: Climate Vulnerability Metric (CVM)	<a href="https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-k-climate-vulnerability-metric_0.pdf">https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-k-climate-vulnerability-metric_0.pdf</a>
CARB 2022 Scoping Plan Appendix G: Public Health	<a href="https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-g-public-health.pdf">https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-g-public-health.pdf</a>
Why It’s So Hard to Forecast Wildfire Smoke	<a href="http://www.newyorker.com/science/elements/why-its-so-hard-to-forecast-wildfire-smoke">http://www.newyorker.com/science/elements/why-its-so-hard-to-forecast-wildfire-smoke</a>
Fire Intensity and spRead forecAst (FIRA): A Machine Learning Based Fire Spread Prediction Model for Air Quality Forecasting Application	<a href="https://doi.org/10.1029/2024GH001253">https://doi.org/10.1029/2024GH001253</a>
Exploring spatial heterogeneity in synergistic effects of compound Climate Hazards: Extreme heat and wildfire smoke on cardiorespiratory hospitalizations in California	<a href="https://www.science.org/doi/10.1126/sciadv.adj7264">https://www.science.org/doi/10.1126/sciadv.adj7264</a>
Wildfires, Compound Extreme Events, Climate Change, and Cardiovascular Health Impacts of Fine Particulate Matter From Wildfire Smoke on Respiratory and Cardiovascular Health in California	<a href="https://www.jacc.org/doi/epdf/10.1016/j.jacc.2025.01.009">https://www.jacc.org/doi/epdf/10.1016/j.jacc.2025.01.009</a>
Smoke and COVID-19 case fatality ratios during California wildfires	<a href="https://iopscience.iop.org/article/10.1088/1748-9326/ac4538">https://iopscience.iop.org/article/10.1088/1748-9326/ac4538</a>
USC scientists use AI to predict a wildfire’s next move	<a href="https://today.usc.edu/using-ai-to-predict-wildfires/">https://today.usc.edu/using-ai-to-predict-wildfires/</a>

<b>Model</b>	<b>Link</b>
High-Resolution Smoke Forecasting for the 2018 Camp Fire in California Fire and Smoke Model Evaluation Experiment (FASMEE)—Phase 2	<a href="https://journals.ametsoc.org/view/journals/bams/103/6/BAMS-D-20-0329.1.xml">https://journals.ametsoc.org/view/journals/bams/103/6/BAMS-D-20-0329.1.xml</a>
Disruptions from Wildfire Smoke: Vulnerabilities in Local Economies and Disadvantaged Communities in the U.S	<a href="https://www.frbsf.org/wp-content/uploads/sites/3/disruptions-from-wildfire-smoke-cdrb06.pdf">https://www.frbsf.org/wp-content/uploads/sites/3/disruptions-from-wildfire-smoke-cdrb06.pdf</a>
Wildfire smoke impacts respiratory health more than fine particles from other sources: observational evidence from Southern California	<a href="https://www.frbsf.org/wp-content/uploads/sites/3/disruptions-from-wildfire-smoke-cdrb06.pdf">https://www.frbsf.org/wp-content/uploads/sites/3/disruptions-from-wildfire-smoke-cdrb06.pdf</a>

### **Discussions with Academia**

During the Public Workshop, SPD recommended that SDG&E contact Dr. Michael Méndez from UC Irvine, a professor whose latest research focuses on climate-induced disasters and social vulnerability. Through discussions with Dr. Méndez, SDG&E understands his agreement with SDG&E’s approach to the action item. Dr. Méndez suggested that SDG&E contact David Eisenman, who, upon contact, recommended “It’s the Smoke, Not the Fire,” which SDG&E included in the research.

### **External Smoke-Related Tools and Models**

SDG&E reviewed current public studies on wildfire smoke, as well as several tools and models that inform the public about wildfire smoke conditions. Table 4 summarizes these tools and models.

***Table 4 - Selected Smoke Related Tools and Models***

<b>Model</b>	<b>Type</b>	<b>Owner / Developer</b>	<b>Link</b>
HRRR-Smoke	Forecast	NOAA	<a href="https://apps.gsl.noaa.gov/smoke/index.html">https://apps.gsl.noaa.gov/smoke/index.html</a>
HYSPLIT / HEIMS	Forecast	NOAA	<a href="http://www.arl.noaa.gov/hysplit/smoke-forecasting">www.arl.noaa.gov/hysplit/smoke-forecasting</a>
ALERTCalifornia	Real-Time Data	UCSD with <b>SDG&amp;E Cameras</b>	<a href="https://cameras.alertcalifornia.org">https://cameras.alertcalifornia.org</a>
SDG&E AQI Monitors & Weather Awareness System	Real-Time Data	<b>SDG&amp;E</b>	<a href="https://sdgeweather.com">https://sdgeweather.com</a>
PurpleAir	Real-Time Data	Purple Air with <b>SDG&amp;E AQI Monitors</b>	<a href="https://map.purpleair.com">https://map.purpleair.com</a>

Model	Type	Owner / Developer	Link
AirNow Fire & Smoke Map	Real-Time Data	EPA	<a href="http://www.airnow.gov/fires/using-airnow-during-wildfires">www.airnow.gov/fires/using-airnow-during-wildfires</a>
Google Maps – Wildfire Layer	Real-Time Data	Google	<a href="http://www.google.com/maps">www.google.com/maps</a>
Google Maps – Air Quality Layer	Real-Time Data	Google	<a href="http://www.google.com/maps">www.google.com/maps</a>
AQview 3.0	Real-Time Data	CARB	<a href="https://aqview.arb.ca.gov/">https://aqview.arb.ca.gov/</a>
Smoke Ready CA App	Real-Time Data & Limited Forecast	CARB	<a href="https://ww2.arb.ca.gov/smokereadycalifornia">https://ww2.arb.ca.gov/smokereadycalifornia</a>
SD APCB Website	Real-Time Data (Simple)	SD APCB	<a href="http://www.sdapcd.org/content/sdapcd/air-quality/air-quality-forecast.html">www.sdapcd.org/content/sdapcd/air-quality/air-quality-forecast.html</a> <a href="http://sd.sdapcd.org/airvision">http://sd.sdapcd.org/airvision</a>
CalFire Smoke & Haze Forecast	Real-Time Data & Limited Forecast	CalFire	<a href="https://www.fire.ca.gov/incidents">https://www.fire.ca.gov/incidents</a>
Fire and Resource Assessment Program (FRAP) Map	Static Map of Fire Risk	CalFire	<a href="http://www.fire.ca.gov/what-we-do/fire-resource-assessment-program/fire-probability-for-carbon-accounting">www.fire.ca.gov/what-we-do/fire-resource-assessment-program/fire-probability-for-carbon-accounting</a>
High Fire Threat Districts (HFTD)	Static Map of Fire Risk	CPUC	<a href="https://egis.fire.ca.gov/FireProbability">https://egis.fire.ca.gov/FireProbability</a>

### **2026-2028 Wildfire Mitigation Base Plan**

Within SDG&E's 2026-2028 Base WMP, SDG&E discusses Air Quality Stations (Section 10.2.1.2) and Cameras and AI Technology (Section 10.4.1.2) as a way to monitor smoke.

### **IX. ACTION ITEM #6: MITIGATION IMPACTS & BENEFITS**

*Estimate the extent to which risk mitigation investments included in the RDF impact and benefit DVCs independently and in relation to non-DVCs in the IOU service territory.*

SDG&E evaluated applicable Wildfire and PSPS and EII controls and mitigations with respect to the DVCs, to determine their benefits compared to the larger service territory.

#### **Wildfire and PSPS**

SDG&E's primary objective is to promote public safety by preventing ignitions during periods of high-fire weather and minimizing the scope, duration, and impact of PSPS on as many customers as possible. Proactive de-energization of overhead infrastructure for safety remains an

important component of SDG&E's wildfire mitigation strategy. SDG&E recognizes the challenges that de-energization events pose for customers, communities, and public safety partners, particularly in DVC communities. Therefore, the use of PSPS de-energization is a measure of last resort with the need to promote safety during high fire risk conditions affecting DVC communities.

#### *C518 Strategic Undergrounding*

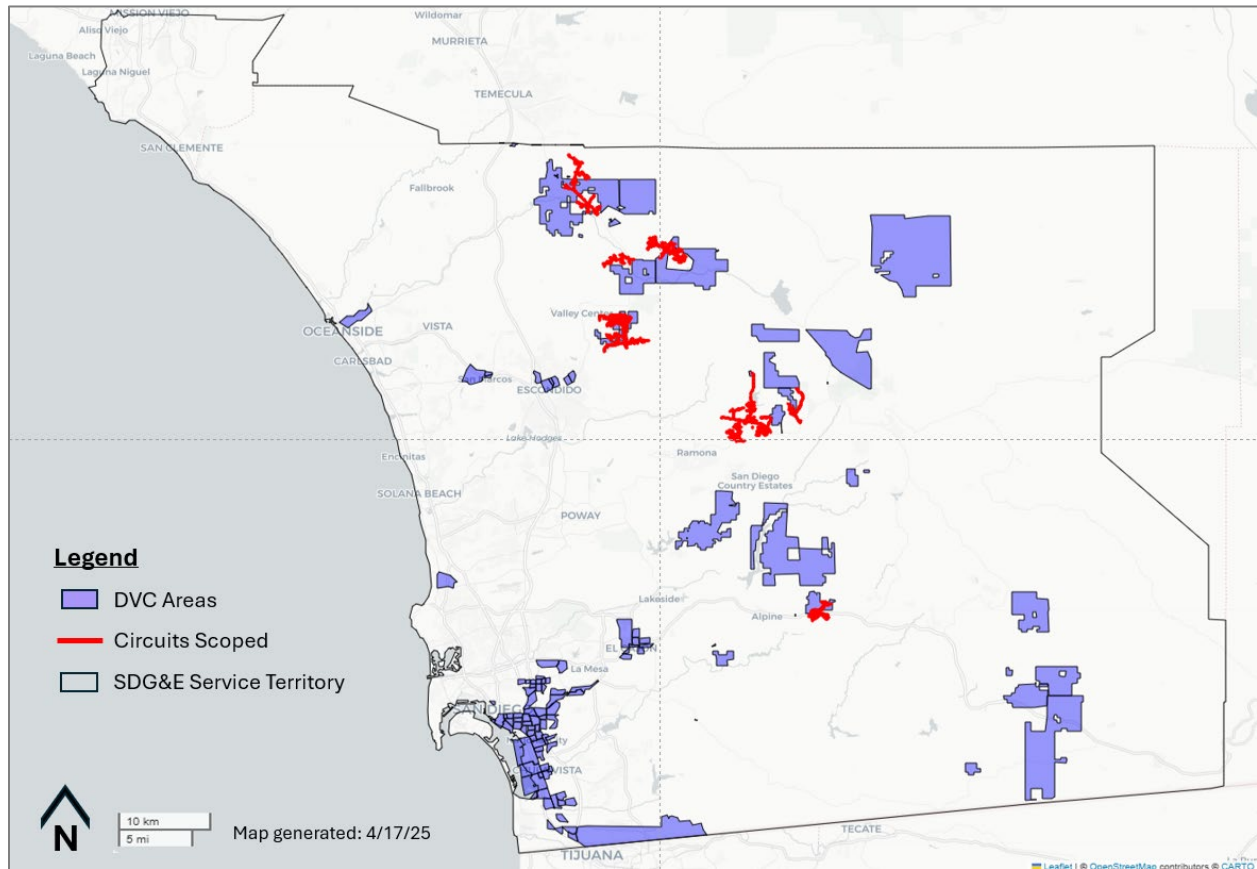
SDG&E continues to advocate for the deployment of strategic undergrounding in DVC communities instead of covered conductor deployment due to its superior wildfire risk reduction effectiveness (99%), which nearly eliminates the need for PSPS de-energizations during extreme fire weather. Additionally, the cost-effectiveness of strategic undergrounding is evident when comparing lifecycle costs of these two grid mitigation alternatives due to the continuous maintenance and inspections required for above-ground infrastructure, as well as the ongoing operational and economic costs associated with PSPS de-energizations.

Proposed circuits for strategic undergrounding were layered onto SDG&E's DVC map to identify locations where circuits served DVCs as shown in Figure 6. Through this analysis, SDG&E finds the only DVCs intersecting with the strategic undergrounding control are Tribal Lands.

In this RAMP and for years 2028-2031, SDG&E's mitigation plan includes undergrounding approximately 600 miles of overhead conductor, including 127 miles in the DVC shown in Table 5. The selection of these locations is based on SDG&E's WiNGS-Planning model that utilizes the Cost-Benefit Approach and evaluates wildfire, PSPS, and PEDS impacts at the span/segment level where evaluation of the risk benefit (in dollars) and installation and maintenance costs are performed to evaluate risk buy-down and cost-effectiveness of the projects.



**Figure 6 - Strategic Undergrounding Circuits Scoped and DVC Intersection**



**Table 5 - DVC Impacts of Undergrounding Overhead Conductor (2024 \$)**

Name	Feeder ID	Feeder-Segment	Total Customers <sup>49</sup> in feeder-segment	Total Customers <sup>50</sup> downstream of feeder segment	Total OH Miles	Baseline Risk (M\$)	Risk Reduced (M\$)	Risk Reduction (%)	PV Risk Reduced (M\$) Year 55	PV Total Cost Capital + O&M (M\$) Year 55	SUG CBR WA CC
San Pasqual Reservation	1030	1030-20R	140	283	15.91	25.24	24.82	98.3	\$ 375.71	\$ 32.22	11.6
San Pasqual Reservation	1030	1030-42R	293	697	16.91	28.31	27.81	98.2	\$ 420.87	\$ 34.33	12.2
Pala Reservation	217	217-835R	87	154	18.55	10.65	10.40	97.6	\$ 173.00	\$ 41.23	4.2
Mesa Grande Reservation	222	222-1433R	16	16	6.19	9.58	9.41	98.1	\$ 149.29	\$ 13.13	11.3
Mesa Grande Reservation	237	237-30R	296	296	32.13	65.30	64.18	98.2	\$ 971.31	\$ 65.04	14.9

<sup>49</sup> Customer meter counts.

<sup>50</sup> Customer meter counts.

Name	Feeder ID	Feeder-Segment	Total Customers <sup>49</sup> in feeder-segment	Total Customers <sup>50</sup> downstream of feeder segment	Total OH Miles	Baseline Risk (M\$)	Risk Reduced (M\$)	Risk Reduction (%)	PV Risk Reduced (M\$) Year 55	PV Total Cost Capital + O&M (M\$) Year 55	SUG CBR WA CC
Viejas Reservation	358	358-682F	172	173	10.58	37.48	36.91	98.4	\$ 613.81	\$ 23.56	26.0
Rincon Reservation	215	CB215	0	492	0.15	0.13	0.13	99.8	\$ 2.22	\$ 0.33	6.6
Rincon Reservation	215	215-38R	80	492	6.51	5.42	5.34	98.5	\$ 88.76	\$ 14.48	6.1
La Jolla Reservation Pauma and Yuima Reservation	214	214-1122R	223	355	20.17	26.19	25.70	98.1	\$ 371.00	\$ 38.95	9.5
Totals			1,307	2,958	127.1	208.3	204.7	98.4	\$3,165.97	\$ 263.28	12.0

### Electric Infrastructure Integrity

SDG&E focused the DVC mitigations analysis on the following three control programs. These were selected because SDG&E possessed granular data to distinguish between DVCs and non-DVCs. In addition, they have varied impacts to DVC areas.

- C236 Distribution Overhead Switch Replacement Program
  - C236 Alternative 2
- C250 Substation Reliability for Distribution
- C269 Distribution Circuit Reliability

SDG&E finds, for the three EII control programs selected, that CBRs for DVC are typically higher than the whole program CBRs.<sup>51</sup> However, these DVC-specific controls address less than a quarter of the overall risk reduction in each control. Focusing only on DVCs would not lead to a substantial reduction in EII Risk for the entire service territory.

DVCs are geospatial in the form of census tracts and tribal lands, thus, SDG&E used GIS analysis to understand how EII Risks could impact DVCs. Program location data overlaid with SDG&E's DVC map identified locations where assets could affect DVCs. If DVC areas were found to overlap with the asset or be connected to the same circuit as the asset, DVCs were

<sup>51</sup> SDG&E is providing CBR information in response to CPUC, *Safety Policy Division Evaluation Report on PG&E 2024 RAMP Application (A.)24-05-008* (November 8, 2024) at 36, available at: <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/safety-policy-division/reports/spd-evaluation-report-2024-pge-ramp-final-with-attachments.pdf>.

considered to be served by the asset. Including the connected circuit is valuable as the program impacts its immediate location as well as the surrounding area. SDG&E estimated the overlap of connected circuit miles inside a DVC to create a percentage-based calculation.

SDG&E's C236 Distribution Overhead Switch Replacement Program aims to replace overhead distribution switches that have shown signs of severe or quickly emerging corrosion that may lead to catastrophic switch failure. To mitigate the likelihood of a catastrophic switch failure, SDG&E may operate the next upstream protection device instead, causing a prolonged and expanded outage. Replacement of these switches allows for a reduced customer impact when isolation devices are needed during planned and unplanned outages. Program overhead switch location data were overlaid with SDG&E's DVC map to identify locations where the assets' connected circuits serve DVCs, as shown in Figure 7.

**Figure 7 - C236 Distribution Overhead Switch Replacement - Circuits Scoped and DVC Intersection**

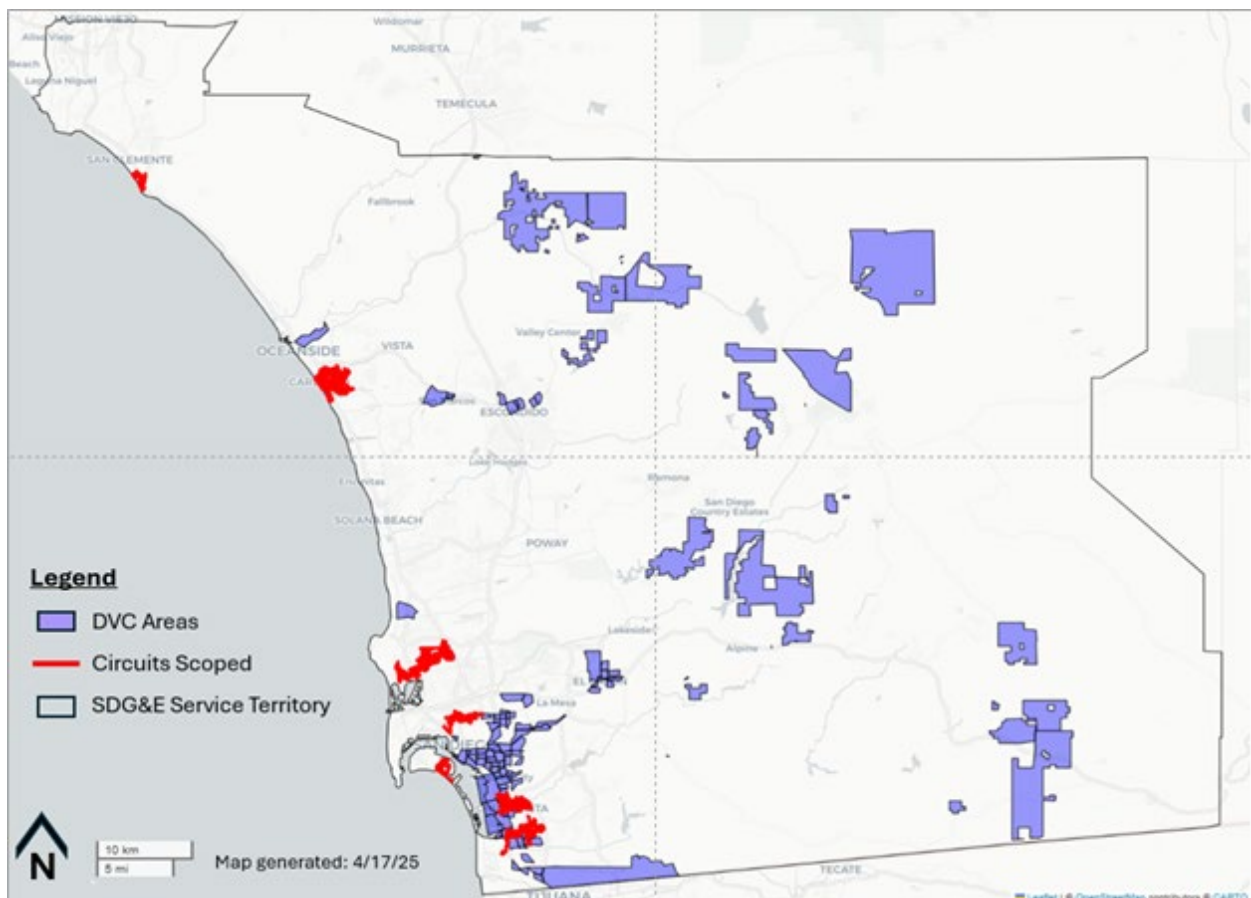


Figure 7 shows approximately 13% of C236 connected circuits overlapping with DVCs, of which SDG&E forecasts about \$303,000 of 2028-2031 program costs<sup>52</sup> to be spent on overhead switches that serve DVCs. SDG&E forecasts approximately \$21 million on risk reduction<sup>53</sup> in DVCs overhead switch replacement from 2028-2031. On these circuits, approximately 7,200 customer meters are in DVCs, compared to 49,000 in non-DVCs. The program has nineteen (19) projects forecasted in 2028, with 4 projects serving DVCs.

In the A210 Alternative 2, SDG&E considered a program that would only replace distribution overhead switches that benefit customers living within the DVC. The limited scope of this alternative program was developed using a subset of those projects. This is discussed further in EII Chapter SDG&E-Risk-5.

Program CBRs are shown in Table 6 with Alternative 2 to highlight DVC vs non-DVC.

***Table 6 - 2028-2031 CBRs for C236 Distribution Overhead Switch Replacement and Alternative 2***

<b>Controls</b>	<b>Total Cost (2028-2031)</b>	<b>Total Benefit (2028-2031)</b>	<b>DVC Overlap<sup>54</sup></b>	<b>DVC Cost (2028-2031)</b>	<b>DVC Benefit (2028-2031)</b>	<b>CBR</b>
C236 WACC	\$2,097,334	\$72,087,537	13%	\$272,653	\$9,371,380	34.37
C236 Hybrid	\$2,097,334	\$97,634,825	13%	\$272,653	\$12,692,527	46.55
C236 Societal	\$2,788,719	\$317,462,544	13%	\$362,534	\$41,270,131	113.84
A210 - DVC Only - WACC	\$84,709	\$5,334,798	100%	\$84,709	\$5,334,798	62.98
A210 - DVC Only - Hybrid	\$84,709	\$7,176,654	100%	\$84,709	\$7,176,654	84.72
A210 - DVC Only - Societal	\$109,810	\$22,833,584	100%	\$109,810	\$22,833,584	207.94

The CBR is higher for DVC in C236 but reduces about \$23 million of risk in 2028-2031 using the societal discount, compared to \$317 million total C236 program risk (7%).

SDG&E's C250 Substation Reliability for Distribution Components aims to mitigate substation risk as substations play a critical role in our electric grid. Asset age and equipment characteristics (e.g., transformer type) can be predictable and impactful asset data leading to the

<sup>52</sup> Averaged 2028-2031 costs for each discount rate, applied DVC percentage (13%).

<sup>53</sup> Averaged 2028-2031 benefits for each discount rate, applied DVC percentage (13%).

<sup>54</sup> Control distribution miles overlapping with DVCs.

natural decline of substation electric infrastructure integrity. Program substation location data and their connected circuits were overlaid with SDG&E's DVC map to identify locations where a substation serves DVCs, as shown in Figure 8.

*Figure 8 - C250 Substation Reliability for Distribution - Substations Circuits Scoped and DVC Intersection*

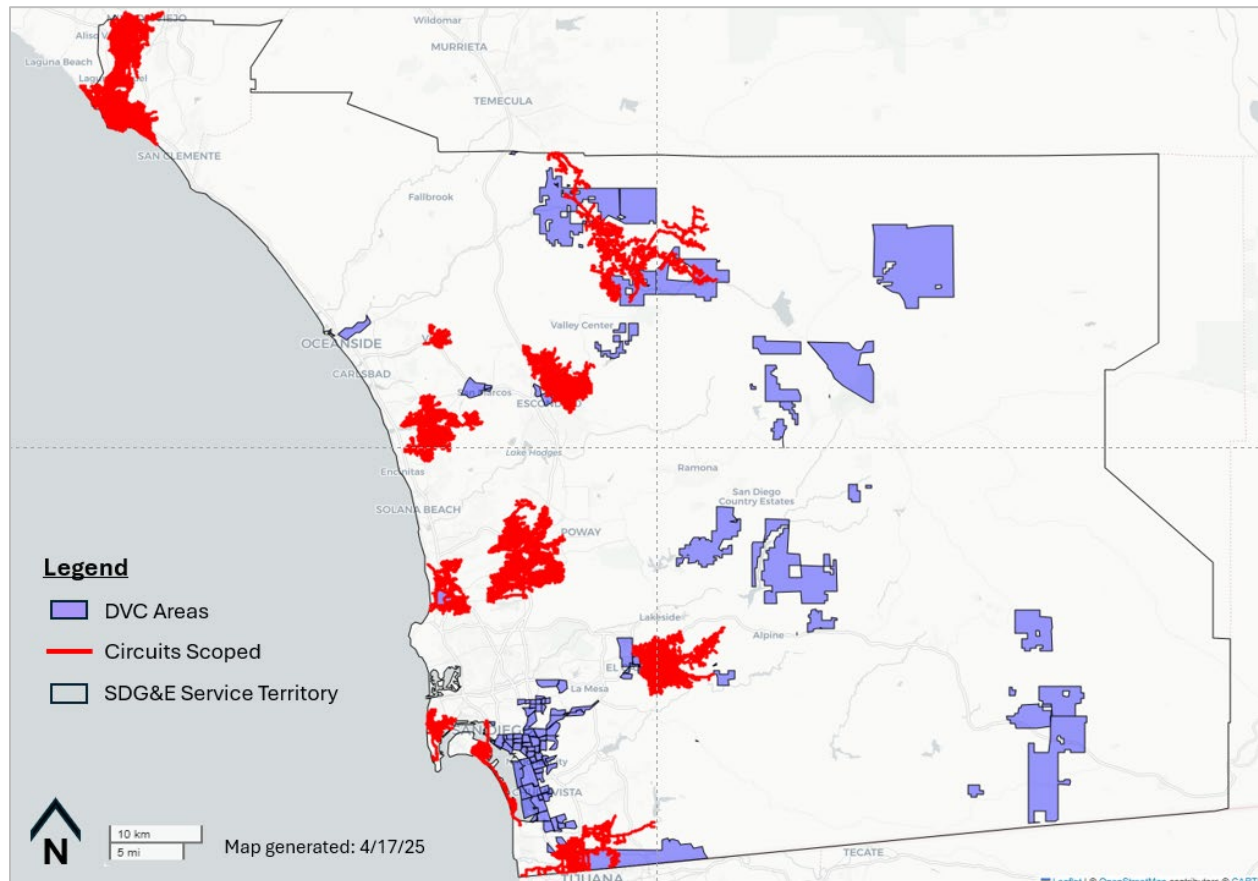


Figure 8 shows approximately 6% of C250 substations connected circuits overlapping with DVC, of which SDG&E forecasts about \$2.5 million of 2028-2031 program costs<sup>55</sup> to be spent on substations serving DVCs. SDG&E forecasts approximately \$580,000 on risk reduction<sup>56</sup> in DVCs for substation reliability 2028-2031. On these circuits, approximately 16,000 customer meters are in DVCs, compared to 242,000 in non-DVCs. Four (4) of the 15

<sup>55</sup> Averaged 2028-2031 costs for each discount rate, applied DVC percentage (6%).

<sup>56</sup> Averaged 2028-2031 benefits for each discount rate, applied DVC percentage (6%).

substations in this control were tagged as located in or serving a DVC. SDG&E has 14 circuit breakers and 3 power transformers targeted for replacement at these substations.

With substations, SDG&E can isolate the specific CBRs for DVCs. C250 program CBRs are shown in Table 7, with the top three rows showing all program substations and the bottom three rows analyzing the substations serving DVCs.

*Table 7 - 2028-2031 CBRs for C250 - Substation Reliability for Distribution - DVC and All Service Territory*

<b>Control</b>	<b>Total Cost (2028-2031)</b>	<b>Total Benefit (2028-2031)</b>	<b>DVC Overlap<sup>57</sup></b>	<b>DVC Cost (2028-2031)</b>	<b>DVC Benefit (2028-2031)</b>	<b>CBR</b>
C250 WACC	\$37,000,090	\$5,435,724	6%	\$2,220,005	\$326,143	0.15
C250 Hybrid	\$37,000,090	\$6,802,719	6%	\$2,220,005	\$408,163	0.18
C250 Societal	\$49,441,516	\$16,754,119	6%	\$2,966,491	\$1,005,247	0.34
C250 DVC Substations - WACC	\$2,745,982	\$1,178,267	21%	\$567,112	\$243,341	0.43
C250 DVC Substations - Hybrid	\$2,745,982	\$1,474,581	21%	\$567,112	\$304,537	0.54
C250 DVC Substations - Societal	\$3,381,603	\$3,631,682	21%	\$698,383	\$750,030	1.07

While the CBR is higher for the DVC portion of C250, reducing about \$3.6 million of risk in 2028-2031 using the societal discount, the total program risk reduction of \$16.7 million (22%) is higher compared to only looking at the DVC portion by itself.

SDG&E's C269 Distribution Circuit Reliability program helps mitigate the EII Risk by expanding the distribution SCADA-switching infrastructure and/or removing reliability deficiencies on a distribution circuit. This program allows for the addition of equipment necessary and/or the re-arrangement of circuit(s) to improve service reliability of electric customers and maintain reliability standards. Electric service reliability deteriorates in the absence of comprehensive remedial solutions offered by these projects and consistent review of distribution circuits. Program circuit data was layered onto SDG&E's DVC map to identify locations where assets and their connected circuits serve DVCs, as shown in Figure 9.

<sup>57</sup> Control distribution miles overlapping with DVC.



**Figure 9 - C269 - Distribution Circuit Reliability - Circuits Scoped and DVC Intersection**

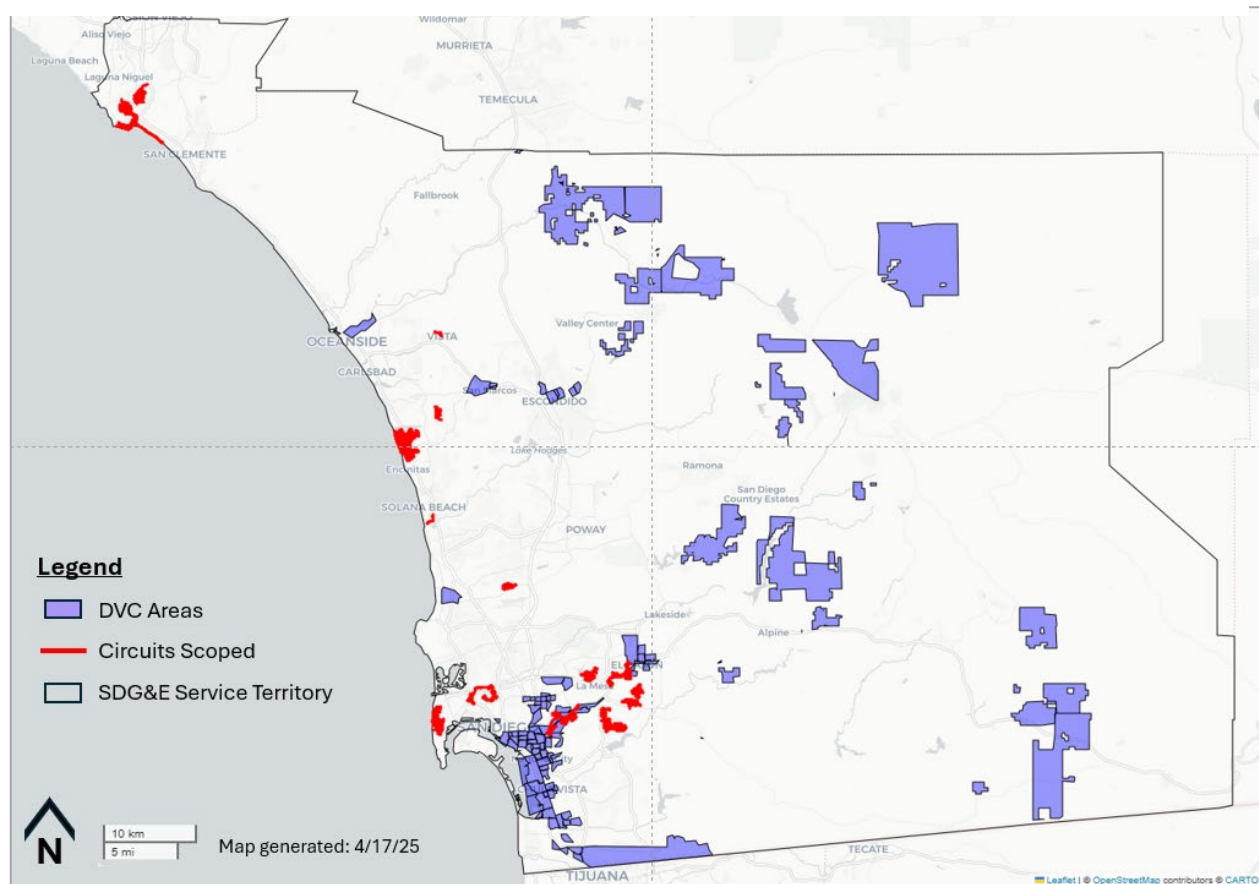


Figure 9 shows approximately 6% of C269 connected circuit mileage overlapping with DVCs, of which SDG&E forecasts about \$242,000 of 2028-2031 program costs<sup>58</sup> to be spent on distribution circuit reliability serving DVCs. SDG&E forecasts approximately \$13.5 million<sup>59</sup> on risk reduction in DVCs for distribution circuit reliability 2028-2031. On these circuits, approximately 2,000 customer meters are in DVCs, compared to approximately 28,000 in non-DVCs. The program preliminarily has 14 projects forecasted in 2028, with 3 projects serving DVCs.

The program CBRs shows no distinction from all circuits and DVC CBRs as shown in Table 8.

<sup>58</sup> Averaged 2028-2031 costs for each discount rate, applied DVC percentage (6%).

<sup>59</sup> Averaged 2028-2031 benefits for each discount rate, applied DVC percentage (6%).

**Table 8 - 2028-2031 CBRs for C269 - Distribution Circuit Reliability - DVC and All Service Territory**

<b>Control</b>	<b>Total Cost (2028-2031)</b>	<b>Total Benefit (2028-2031)</b>	<b>DVC Overlap<sup>60</sup></b>	<b>DVC Cost (2028-2031)</b>	<b>DVC Benefit (2028-2031)</b>	<b>CBR</b>
C269 WACC	\$3,628,086	\$112,910,857	6%	\$217,685	\$6,774,651	31.12
C269 Hybrid	\$3,628,086	\$148,983,010	6%	\$217,685	\$8,938,981	41.06
C269 Societal	\$4,824,084	\$415,606,648	6%	\$289,445	\$24,936,399	86.15

### **Examples of Non-RAMP Activities**

SDG&E's Climate Adaptation Vulnerability Assessment includes details about the Climate Intelligence Platform (CIP), which uses digital twin technology for a granular geospatial visualization of the CAVA findings.<sup>61</sup> The CIP overlays Climate Hazard data (e.g., extreme heat index, inland flooding, sea level rise) onto a fine-grained hexagonal grid along with DVCs, SDG&E's assets to visualize climate vulnerability across multiple time horizons (2030, 2050, 2070) and across different emission-linked climate change scenarios.

## **X. ACTION ITEM #7: OUTREACH & PUBLIC PARTICIPATION**

*Enhance outreach and public participation opportunities for DVCs to meaningfully participate in risk mitigation and climate adaptation activities consistent with Decision 20-080046.*

SDG&E summarizes relevant outreach and public participation opportunities from its Community Engagement Plan, discusses outreach and public participation controls from the Wildfire and PSPS Risk and the EII Risk, and supplements the discussion with references to similar SDG&E activities outside of RAMP.

### **Community Engagement Plan / CAVA Outreach**

SDG&E's CAVA addresses the requirements set forth in the CPUC Climate Adaptation OIR (R.18-04-019), among them the requirements to conduct community engagement in all DVCs (see Figure 10) and file a Community Engagement Plan (CEP)<sup>62</sup> every four years. SDG&E's community engagement approach, as detailed in the CEP, centers around key

<sup>60</sup> Control distribution miles overlapping with DVC.

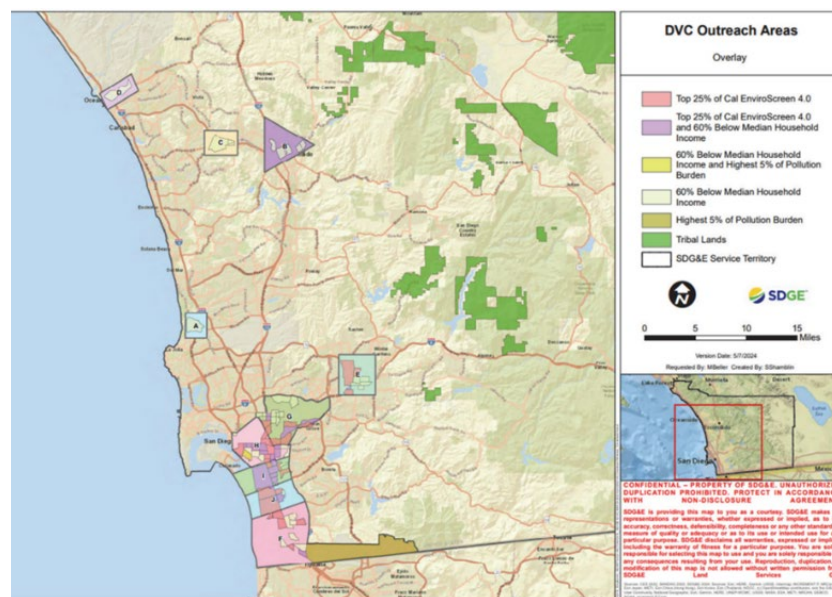
<sup>61</sup> See discussion in SDG&E's 2025 CAVA, submitted pursuant to D.20-08-046 and D.24-08-005 on May 15, 2025.

<sup>62</sup> R.18-04-019, SDG&E Community Engagement Plan (May 15, 2024), available at [https://www.sdge.com/sites/default/files/regulatory/R1804019\\_SDGE%20CEP.pdf](https://www.sdge.com/sites/default/files/regulatory/R1804019_SDGE%20CEP.pdf).



foundational principles, which includes: (1) partnering with trusted Community-Based Organizations (CBOs) to facilitate mutually beneficial networks; (2) working with Tribal Nations, centering the two-way exchange of information between SDG&E and tribes, for which the foundation is reciprocity and respect; and (3) considering a set of elements in the organization of outreach events, such as the provision of both in-person and virtual meeting options, the availability of food while upholding support to local vendors, the potential inclusion of incentives in the form of giveaways or raffles, and the creation of partnerships and the use of trusted community spaces. Outreach efforts help facilitate the meaningful inclusion and participation of communities in the CAVA process and support informed decision-making that incorporates climate and equity concerns.

***Figure 10 - SDG&E Community Engagement Plan (CEP) - DVC Outreach Areas***



## Wildfire and PSPS

There are several RAMP Wildfire and PSPS controls that provide outreach to communities (including DVC) to participate in risk control activities. While several of the controls increase public awareness, the following are most supportive of meaningful participation. SDG&E strives to reach all customers, including DVC, in the most effective way, and in many instances, through multiple channels.

- C506 Microgrids – DVC is one of the selection criteria for targeting locations within the Microgrid Incentive Program (MIP).<sup>63</sup>
- C512 Customized Resiliency Assessments provide customers frequently impacted by PSPS de-energizations with resiliency assessments to better understand their resiliency to de-energizations and their awareness of services and resources. Provides information about PSPS, resiliency options, services, and resources available to them. This mitigation is provided to DVC and non-DVC customers equally (outside of the PSPS frequency).
- C516 Generator Assistance Program – Eligible customers receive program materials via mail and email campaigns and are directed to an online portal to learn more about the program. Customers enrolled in the California Alternate Rates for Energy (CARE) program are eligible for an enhanced rebate. This mitigation is provided to DVC and non-DVC customers equally.
- C572 Situational Awareness and Forecasting – Provides situational awareness that customers can access that is delivered through various tools and technologies. Among the capabilities available to the public are monitors of particulate matter from wildfire smoke and a network of cameras to provide visual assessments. SDG&E’s Weather Awareness System and Fire Potential Index (FPI) is available for customers to see current and forecasted susceptibility metrics to provide them with situational awareness of risk to customers. This mitigation is available to DVC and non-DVC customers equally.
- C556 Engagement with AFN Populations – SDG&E conducts a dedicated campaign focused on communicating with AFN customers, promoting PSPS resources and services through its partnerships and robust support model. Because of the large overlap of AFN customers with DVC communities, the DVC community is a beneficiary of this control.
- C557 Public Outreach and Education Awareness – Outreach and awareness programs are delivered through SDG&E’s approximately 50 CBO Energy Solutions Partner Network, providing supports before, during and after wildfire,

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<sup>63</sup> D.23-04-034.

PSPS, and other potential emergency events. DVC benefits will be dependent upon the activity and outreach success CBO that serve them.

- C567 Public Emergency Communication Strategy – The Wildfire Safety Public Education and Outreach plan increases community resiliency to wildfires and mitigates the impact of PSPS de-energizations. Media updates, in-community signage, and situational awareness postings are used across social media and SDG&E’s external-facing blog to provide the latest real-time updates to customers and the general public. Social media toolkits are also developed and shared with community partners to help amplify and reach a broader audience. This mitigation is provided to DVC and non-DVC customers equally, however certain community partners could provide additional benefit to DVC.

### **Electric Infrastructure Integrity**

The EII control that provides safety outreach to the public (including DVC) to increase awareness of the risk and encourage the public to take actions for personal safety is described below.

- C215 Electric Public Safety Communications – Through a dedicated marketing campaign, SDG&E provides education to customers and the general public about the dangers and risks associated with electricity and working in proximity to SDG&E’s electrical equipment and delivery infrastructure. This is primarily accomplished through a variety of integrated tactics, including bill messaging, organic and paid social media, television, out-of-home (*e.g.*, billboards & bus shelters to reach those who might not have bills nor access to traditional media), print and digital advertising, press releases, messaging on company website (including internal company employee site, PowerUp) and warning signage near electric facilities.

This control is performed across the entire service territory.

### **Examples of Non-RAMP Activities**

SDG&E conducts several types of community outreach, including specialized focus on vulnerable communities. Some of the efforts to engage the public and encourage participation in services and offerings are as follows.

- Outreach to DAC<sup>64</sup> – a population with large overlap of DVC;<sup>65</sup>
- Partnerships and strategy identified in “Equity-First Community Engagement for Climate Adaptation Planning Efforts;”<sup>66</sup>
- Annual Support to Access and Functional Needs (AFN)<sup>67</sup> Population During PSPS<sup>68</sup> (a larger population that includes DVC, see Figure 11 below);
- Tribal Outreach – in 2024, SDG&E conducted over 100 meetings with tribes; and
- Community Based Organizations (CBO) Outreach – in 2024, SDG&E participated in over 700 booth events and presentations reaching over 90,000 customers.

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<sup>64</sup> OEHHA, *SB 535 Disadvantaged Communities*, available at: <https://oehha.ca.gov/calenviroscreen/sb535>.

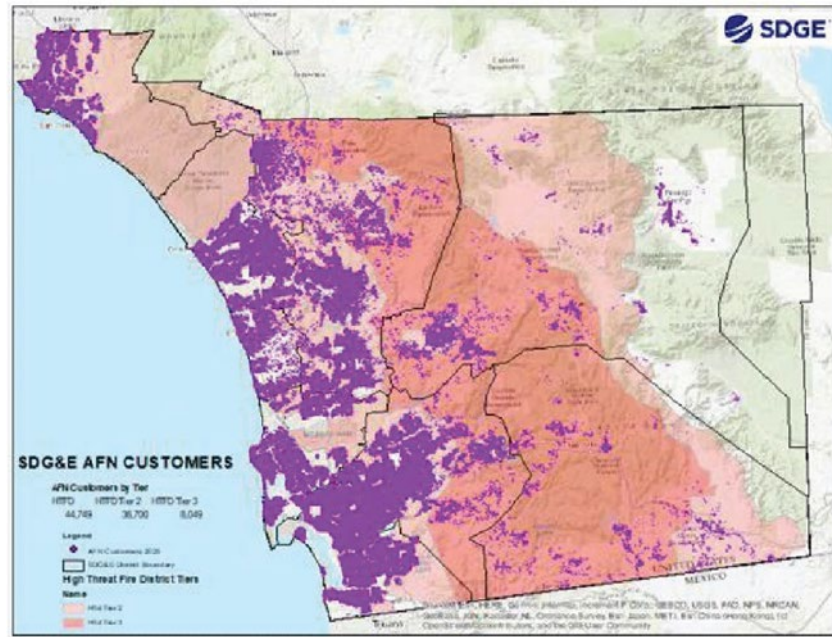
<sup>65</sup> R.20-05-003, 2022 Individual Integrated Resource Plan of SDG&E, Public Version (November 1, 2022) at 81.

<sup>66</sup> SDG&E, *Development & Recommendations for Equity-First Community Engagement for Climate Adaptation Planning Efforts* (2023), available at: [www.sdge.com/sites/default/files/documents/FINAL\\_Framework%20Outline%20%26%20Development\\_04192023.pdf](http://www.sdge.com/sites/default/files/documents/FINAL_Framework%20Outline%20%26%20Development_04192023.pdf).

<sup>67</sup> SDG&E, *Commitment to Supporting Accessibility*, available at: [www.sdge.com/access-and-functional-needs-afn](http://www.sdge.com/access-and-functional-needs-afn).

<sup>68</sup> R.18-12-005, SDG&E 2025 Plan to Support Access and Functional Needs Populations During Public Safety Power Shutoffs (January 31, 2025).

*Figure 11 - SDG&E AFN Customer Locations*



## **XI. CONCLUSION**

The goal of the ESJ Pilot Study Plan was to evaluate the impact of selected risks and mitigation activities to DVC and how those topics compare to non-DVC areas. To accomplish that, SDG&E focused on applying the CPUC's six Action Items to two risks: 1) Wildfire and PSPS; and 2) EII. SDG&E also reviewed recent studies and models of smoke impacts to DVCs.

In assessing risk by geographic region, the results show Wildfire and PSPS impacted the Tribal Nations the most, due to that DVC sub-group's location within the HFTD. EII Risk was most impactful to the other (non-Tribal) DVC communities due to the population densities within the boundaries of the controls. Planned EII Risk mitigation investments in DVCs are proportional to the percentage of DVC customer meters.

The controls and mitigation programs of both risks identify potential benefits to DVCs. To effectively manage the risks from an enterprise and service territory-wide perspective, SDG&E's risk reduction strategy entails implementing risk reduction programs within various DVC and non-DVC communities.

The Action Items that addressed Clean Energy and Air Quality/Public Health were difficult to consider within the focus and objectives of RAMP. While SDG&E has several non-RAMP activities associated with these topics, they are not the focus of the safety, reliability, and financial risk attributes of RAMP. Therefore, some of the controls and mitigations that

addressed these topics may provide yet-to-be quantified benefits that are not within RAMP's current scope.

Regarding Action Item #5 (Smoke Impacts), SDG&E maintains that the company is not an expert on forecasting smoke impacts to DVC communities nor otherwise. SDG&E is willing to be a participant in future studies but defers to subject matter leaders to perform the studies and subsequent analysis.

Finally, with regard to DVC outreach and public participation described in Action Item #7, SDG&E recently increased the frequency of several public engagement activities involving Wildfire and PSPS Risk, driven by inputs from the CBO network. The EII mitigation portfolio also has an outreach activity focusing on public safety, and while it does not have a specific DVC focus, SDG&E takes pride in its efforts to reach all communities and customer types in their communications. In addition, SDG&E's Community Engagement Plan is consistent with this ESJ Pilot Study Action Item with respect to climate adaptation and vulnerability engagement.

SDG&E is exploring the best approach to incorporate and apply the key takeaways from its CAVA into its RAMP and GRC efforts, recognizing the potential insights and intersectionality with this ESJ Pilot Study. This effort will continue in the near term, with consideration for inclusion in other applicable regulatory policy filings as part of a broader, integrated data-driven approach to grid and community resilience. Technological innovations and digital tools like SDG&E's Climate Intelligence Platform discussed in SDG&E's CAVA may provide further insights into this intersection (climate, asset, and community) of vulnerabilities in our service territory through the lens of future climate scenarios. Outputs from this digital solution may also help inform SDG&E's upcoming ESJ whitepaper and climate resilience measures that are fit for purpose, bolstering the resilience of SDG&E's grid and the communities it serves.

SDG&E will further discuss lessons learned in its upcoming White Paper, consistent with the requirements of the Phase 2 Decision.<sup>69</sup>

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<sup>69</sup> D.22-12-027 at 67 (OP 6).