

# San Diego Gas & Electric Company's 2020 Wildfire Mitigation Plan Remedial Compliance Plan

July 27, 2020



## Table of Contents

I.	Introduction .....	1
II.	Resolution WSD-002 – Class A Deficiencies .....	2
	A. Condition Guidance-3: Lack of Risk Modeling to Inform Decision-making .....	2
III.	Resolution WSD-005 – Class A Deficiencies .....	5
	A. Condition SDGE-13: Lack of Risk Reduction or Other Supporting Data for Increased Time-of-Trim Clearances .....	5
	Appendices	

## I. Introduction

Pursuant to Ordering Paragraph (OP) 7 of California Public Utilities Commission (Commission or CPUC) Resolution WSD-002, San Diego Gas & Electric Company (SDG&E or Company) submits this 2020 Wildfire Mitigation Plan Remedial Compliance Plan (RCP).<sup>1</sup> A copy of this RCP is being provided to the Director of the Commission's Wildfire Safety Division (WSD), the California Department of Forestry and Fire Protection (CAL FIRE), and the service list of Rulemaking (R.) 18-10-007.

In this RCP, SDG&E provides the information sought in Resolution WSD-002 and describes the steps it has taken or is taking to comply with the two Class A deficiencies that WSD identified in Resolutions WSD-002 and WSD-005, respectively.

---

<sup>1</sup> Resolution WSD-002, Guidance Resolution on 2020 Wildfire Mitigation Plans Pursuant to Public Utilities Code Section 8386 (June 11, 2020) at p. 45, Ordering Paragraph 7.

## II. Resolution WSD-002 – Class A Deficiencies

### A. Condition Guidance-3: Lack of Risk Modeling to Inform Decision-making

*Each electrical corporation shall submit in its remedial correction plan (RCP) the following:*

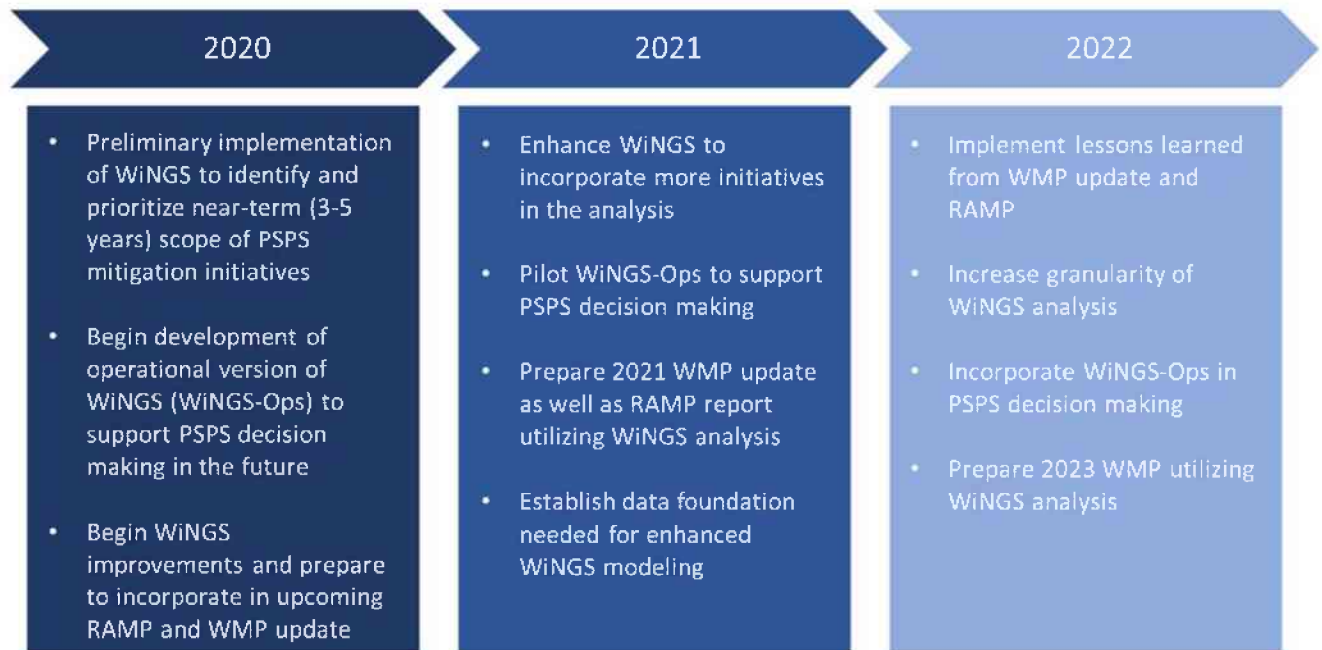
- i. how it intends to apply risk modeling and risk assessment techniques to each initiative in its WMP, with an emphasis on much more targeted use of asset management, vegetation management, grid hardening and PSPS based on wildfire risk modeling outputs;*
- ii. identify all wildfire risk analyses it currently performs (including probability and consequence modeling) to determine which mitigation is targeted to circuits and assets where initiatives will provide the greatest benefit to wildfire risk reduction;*
- iii. a timeline to leverage its risk modeling outputs to prioritize and target initiatives and set PSPS thresholds, including at least asset management, grid operations, vegetation management, and system hardening initiatives;*
- iv. how it intends to incorporate future improvements in risk modeling into initiative prioritization and targeting processes; and*
- v. how it intends to adapt its approach based on learnings going forward.*

SDG&E intends to apply risk modeling and risk assessment techniques to each initiative in its 2020 Wildfire Mitigation Plan (WMP) by continuing to build on its existing risk assessment capabilities and developing new methodologies based on lessons learned. This year, SDG&E has been working on developing refined modeling techniques to apply to each investment initiative in its WMP to improve its risk-informed decision-making processes. Specifically, SDG&E has developed a preliminary model as a part of its Public Safety Power Shutoff (PSPS) Mitigation Engineering effort that evaluates both wildfire and PSPS risks at the sub-circuit/segment level to inform its investment decisions by determining which initiatives provide the greatest benefit per dollar spent in terms of reducing the wildfire risk as well as reducing the impacts of PSPS. This new model is the Wildfire Next Generation System (WiNGS) and it builds on the Risk Spend Efficiency (RSE) methodology demonstrated in RAMP and the WMP.

SDG&E currently performs various analyses to determine which mitigation is targeted to circuits and assets where initiatives will provide the greatest benefit to wildfire risk reduction. For example, SDG&E leverages the Wildfire Risk Reduction Model (WRRM) and the Pole Risk Mitigation Engineering (PRIME) models to target specific at-risk equipment and prioritize mitigation of such equipment based on an understanding of probability of failure and consequence of failure. These models help SDG&E prioritize its asset risk mitigation efforts based on where the greatest wildfire risk reduction can be achieved. In addition to these asset-specific models, SDG&E developed a common enterprise framework that is applied across the company to assess its risks and evaluate potential risk reduction benefits of mitigation

initiatives as described in its 2019 Risk Assessment Mitigation Phase (RAMP)<sup>2</sup> and WMP. These currently existing models will continue to play a role in supporting risk-informed decision-making and will ultimately be integrated with SDG&E’s WINGS model.

With that in mind, SDG&E has developed the following preliminary timeline for implementing its risk modeling outputs to support both long-term as well as operational decision-making:



SDG&E intends to incorporate WINGS into its investment initiative prioritization and targeting processes. WINGS determines each segment’s wildfire and PSPS risk level based on the segment’s unique characteristics that are driven by its location. These characteristics include wind speed, vegetation risk, amount of prior hardening, historical ignitions, potential fire spread/propagation and associated damages based on WRRM modeling, number and type of customers, as well as probability of experiencing PSPS.

Looking at the system at the segment level has become a critical component of investment decision-making because the segment level view is how PSPS operations are conducted. While this analysis focuses on targeting investments at the segment level, it does not take the place of asset-level analysis that SDG&E has been performing and will continue to perform to target at-risk equipment through its existing fire hardening programs such as the Fire Risk Mitigation (FiRM) and PRiME.

<sup>2</sup> Investigation (I.) 19-11-011, SDG&E Risk Assessment and Mitigation Phase Report (November 27, 2019).

In this initial implementation of the WiNGS model, the focus is on informing system hardening investment priorities. In the future, SDG&E plans to improve the model and expand it to evaluate other investment initiatives including vegetation management as well as PSPS operations. Such improvements to the model will need to be well-coordinated with other regulatory proceedings (e.g., RAMP and the Safety Model Assessment Proceeding (S-MAP) to ensure consistency in implementing risk assessments.

In addition to this initial implementation of WiNGS to identify and prioritize investment initiatives, SDG&E plans to explore the use of the model to guide future PSPS operations by enhancing its current capabilities and consolidating its decision-making criteria into a consistent framework that allows for trade-off analyses between wildfire risk and PSPS risk. Nevertheless, it is important to recognize that no model can take the place of subject matter expert (SME) input in the process because not all factors can be built into a model that can dynamically responds to real-time operational changes that arise during emergency situations.

As far as implementing lessons learned, SDG&E has taken the initiative on implementing lessons learned in 2020 by building this new tool to look at PSPS not just as a mitigation but also as a risk. As the Company's programs, risk environment, and regulatory and legislative guidance evolves, SDG&E will continue to work towards staying ahead and responding to lessons learned as they arise.

### III. Resolution WSD-005 – Class A Deficiencies

#### A. Condition SDGE-13: Lack of Risk Reduction or Other Supporting Data for Increased Time-of-Trim Clearances

*SDG&E shall submit an RCP with a plan for the following:*

- i. Comparing areas with and without enhanced post-trim clearances to measure the extent to which post-trim clearance distances affect probability of vegetation caused ignitions and outages.*
- ii. Collaborating with PG&E and SCE in accordance with Conditions PG&E-26 and SCE-12 to develop a consensus methodology for how to measure post-trim vegetation clearance distance impacts on the probability of vegetation caused ignitions and outages*

To address Condition SDGE-13, SDG&E participated in several meetings with Southern California Edison Company (SCE) and Pacific Gas and Electric Company (PG&E) to collaborate on developing a consensus methodology for how to measure post-trim distance impacts on vegetation caused ignitions and outages.<sup>3</sup> After a robust discussion, each utility agreed that they would document the dates that trees were trimmed to the enhanced clearance values and document the enhanced clearance trees in their databases. The utilities would then compare vegetation related outage data and ignition data on trees that did not meet the enhanced clearance to the vegetation related outages and ignition data to trees that did meet the enhanced clearance. Since these enhanced programs are new, the utilities acknowledged that it will take some time to gather enough data to have comparable sample sizes. However, going forward, each utility would be collecting data in a way that will inform and measure post-trim vegetation clearance distance impacts on the probability of vegetation caused ignitions and outages through data analysis over time.

In addition to the methodology outlined above, the utilities agreed that “fall in” data would be excluded from this analysis, as such data is more of a metric to define the success of the danger tree program than the type of vegetation contact reduction associated with post trim clearance. Also, as enhanced vegetation management will be focused on the high fire threat district (HFTD), all utilities agreed that the before and after comparison should be on the vegetation management performance within the HFTD only.

---

<sup>3</sup> SDG&E, SCE, and PG&E met on June 19, 2020, June 26, 2020, and July 10, 2020.