



Christopher M. Lyons
Managing Attorney
San Diego Gas & Electric Company
8330 Century Park Court, CP32D
San Diego, CA 92123
Tel: 858-654-1559
Fax: 619-699-5027
clyons@sdge.com

January 13, 2021

VIA EMAIL

Wildfire Safety Division
California Public Utilities Commission
300 Capitol Mall
Sacramento, CA 95814

Re: Reply Comments on Quarterly Report for the Fourth Quarter 2020

Dear Wildfire Safety Division,

Pursuant to the Guidance provided by the Wildfire Safety Division (WSD),¹ San Diego Gas & Electric Company (SDG&E) submits this reply to the January 6, 2021 stakeholder comments on SDG&E's Quarterly Report on 2020 Wildfire Mitigation Plan (WMP) for the Fourth Quarter 2020 (QR) by the Mussey Grade Road Alliance (MGRA) and the Green Power Institute (GPI). These stakeholders make various claims regarding the sufficiency of the information SDG&E provided in its QR to satisfy its Class B deficiencies, specifically Condition Guidance-9 regarding pilot programs. As discussed below, SDG&E submits that its QR provided sufficient information related to Condition Guidance-9 and met the intent of the condition.² In certain instances, where appropriate, SDG&E provides additional information to further address stakeholder concerns.

I. Condition SDGE-9: Insufficient Discussion of Pilot Programs

A. Falling Conductor Protection

MGRA (at 2-3) is concerned that SDG&E's Falling Conductor Protection (FCP) pilot has a long evaluation time as data needs to be accumulated on outages and wire downs to validate the program. They also criticize SDG&E for not stating how many circuit miles are covered by protection devices running in test mode. While FCP is currently deployed in a test mode on a small number of circuits, as explained in its QR (at 8), SDG&E has performed extensive lab and

¹ Wildfire Safety Division, Guidance on the Remedial Compliance Plan & Quarterly Report Process Set Forth in Resolution WSD-002 (July 17, 2020) (hereinafter, Guidance), as modified by Resolution WSD-011, Attachment 3 at 7.

² As required by Condition Guidance-9, SDG&E provided an update on the 11 pilot programs/demonstrations set forth in its 2020 WMP. In particular, SDG&E provided the status and results of the pilots and explained how it is working to remedy any ignitions or faults revealed during the pilot. SDG&E also discusses proposals for how to expand the use of the technology in cases where ignition risk was materially reduced.

field testing to collect data and assess the effectiveness of the technology at mitigating energized broken conductor events in the field. Through these test results, SDG&E has validated that FCP is a viable solution to mitigate wildfire risk. When considering new protection systems and technologies, it is common industry practice to conduct lab studies, including field testing and deployments prior to implementation. Often, the technology is first deployed on a small scale to ensure the new technology does not have the unintended consequence of impacting system operations. As set forth in its QR (at 8), SDG&E will continue to monitor wire down events that occur within the FCP pilot zones of protection to ensure correct field operation before wide-cycle deployment and fully enabling the system in a tripping mode. Currently, SDG&E has approximately 180 circuit miles covered by protection devices running in test mode.

B. Covered Conductor

Similar to its concerns with the FCP, MGRA (at 2-3) notes SDG&E has a small segment of covered conductor deployed, which could take many years for sufficient data to be accumulated to assess pilot effectiveness. SDG&E agrees that the small mileage associated with this pilot likely means that additional time will be required to validate the reliability performance of this equipment. But industry research and laboratory simulations already justify the benefits of covered conductor and proof of concept. As explained above, it is common practice to limit the first installation of new equipment to a small scale to reduce risk if the equipment does not perform as intended. Further, when SDG&E introduces new equipment into its system, it is critical for the equipment to withstand multiple weather seasons and experience dramatic changes in load. This provides for better insight into the asset's performance.

One of the goals for this pilot is to gauge success based on safely constructing the new equipment introduced to the workforce, passing the post-construction quality assurance checks without any significant issues, and evaluating it after extreme weather events.³ With zero loss time for the crews who installed the product and beginning the process of performing the post-construction, SDG&E is on track to identify this pilot as a success. In addition, SDG&E plans to use the recent Santa Ana wind events that occurred in its service territory as an opportunity to inform the effectiveness of this pilot project. A decrease in reliability outages within this area pertaining to wire-related ignitions (e.g., wire to wire slap failures or foreign object) will also strengthen the validity behind this technology and this analysis will take time to justify. SDG&E estimates it will take two years to gather additional reliability data for these particular locations. But SDG&E is not waiting two years to consider additional installation of covered conductor at other locations within the service territory. SDG&E has plans to significantly increase covered conductor installations in the years 2021 and 2022.

C. Distribution Infrared Inspection Program

MGRA (at 4-5) suggests that SDG&E has collected a considerable amount of data for its Distribution Infrared Inspection program that may inform an evaluation of the effectiveness of the pilot. They recommend that SDG&E provide data and analysis comparing infrared inspections versus visual inspections. Currently, the pilot program is focused on Tier 3 of the

³ See SDG&E's Quarterly Report on 2020 WMP for Q3 2020 (September 9, 2020).

HFTD, utilizing circuits with the highest fault counts in prior years for initial circuit selection. The data from these inspections informs SDG&E's analysis of program effectiveness. The table below provides the current inspections, findings, and ignition rate for the Distribution Infrared Inspection program and compares the results with the issues found on SDG&E's visual inspection program performed in the same area.

	HFTD Tier 3 Visual Inspections	Distribution Infrared Inspections (Tier 3)
Findings – Emergency (0-30)	18	0
Findings – Priority (4-30)	84	2
Findings - Non-Critical	362	0
Findings – Fire Risk Infractions	464	2
Inspection Count	13,013	13,077
Estimated Faults Avoided	11	2
Estimated Ignitions Avoided	0.29	0.055

The data from the infrared inspections depicts that Tier 3 connections are in good condition, however, there were more issues found during the visual inspections of the same area. While SDG&E believed using infrared technology to inspect connection and splice health would lead to a significant risk reduction compared to what could be found visually, the findings of the pilot have shown this inspection program is not as effective in Tier 3 of the HFTD. Tier 3 structures are often in rural locations where a distribution circuit or segment may only be carrying load for a small number of customers. The infrared technology takes the energy radiated from wires and connections and converts this to temperatures, and the thermography team uses these temperatures to analyze any differentials to identify the potential for future failure. This low load value on the distribution segments combined with a low corrosive environment led to minimal findings. That said, SDG&E plans to pilot the technology this year in Tier 2 of the HFTD, where circuits are located in a more urban setting with higher electrical loads, which could put more stress (and heat) on the connections and splices in those areas. SDG&E will continue monitoring and assessing the effectiveness of this pilot program as it moves to the more urban circuits within Tier 2.

D. Vegetation Management LiDAR

GPI (at 2-3) seeks clarification on SDG&E's schedule for mitigating vegetation clearance issues identified by LiDAR and also whether LiDAR surveys may serve as a vegetation management inspection tool itself. SDG&E is still in the early stage of leveraging LiDAR technology for vegetation inspection on distribution facilities. The following factors have shown that LiDAR may not easily be adaptable into a predefined utility work management schedule. First, timing for LiDAR capture and processing is very complex and the delivery of a finished product in a user-friendly format for field use can take several weeks, in some cases months. As mentioned in its QR, the results from recent field reviews identified some concerns with the vendor data modeling to ensure vegetation clearances are captured to the correct voltage and conductor types. Another concern was the ability for LiDAR to penetrate dense tree canopy and therefore resulted in no data capturing conductors or equipment. SDG&E is working diligently

with its vendors to further review and refine the data processing in 2021 with plans to implement a phased approach into the HFTD inspection program. The primary purpose of supplementing LiDAR with HFTD patrols will help draw the inspector's attention to not only vegetation clearance to conductor but tree strike potential. This application for LiDAR will help remove the human judgment and alert SDG&E inspectors of trees tall enough to strike the facility.

In response to GPI's concern with timely mitigation of noncompliance findings, SDG&E would follow its current process to mitigate any noncompliance by dispatching a tree crew on the same day to mitigate. The project findings identified secondary matters, which complied with regulatory clearance requirements. Hence more refinement and field reviews will be necessary to determine the quality and accuracy of LiDAR reporting and prevent premature dispatching of tree crews.

It is important to note that LiDAR is not meant to replace foot patrols and inspections. Currently, LiDAR is not capable of identifying structural tree hazards such as included bark, decay, disease and infestation, or compromises to the root system of the trees. This requires a certified inspector to determine hazards and requirements for work.

SDG&E is considering LiDAR for its QA/QC program, however, this raises concerns regarding capture and processing of the LiDAR (similar to discussion above). The cost to re-fly segments of completed work would be additional costs and with the current schedule and timing for QA/QC, there is a very short window before the next activity.

Therefore, SDG&E will need more time to fully identify any cost impacts to the program, schedule impacts to completion of work and program benefits utilizing LiDAR for vegetation management purposes.

E. Fuels Management Program

GPI (at 4) recommends SDG&E provide details regarding its fuels management projects. The following table provides metrics relating to the grants SDG&E has awarded to fund third party fuels management projects.

Grant Recipient	Grant Amount	Acres	Homes	Miles	Poles	Circuit/TL
Deer Springs Fire Safe Council	\$50,000	40	40	3.5	20	C353; TL23030; TL688
Wynola Fire Safe Council	\$50,000	3	100	2.5	46	C221;C222
La Jolla Band of Luiseno Indians	\$75,000	100	50	3	19	C214; TL682
Pauma Band of Luiseno Indians	\$75,000	140	75	8	37	C217
Rincon Band of Luiseno Indians	\$75,000	280	400	4	21	C216; C909; TL6926

Each of these fuel management projects is described below:

Deer Springs Fire Safe Council – The Moosa Canyon Project

The Moosa Canyon project will maintain the five-mile long fuel break that has been created through a fire safe council (FSC) managed grant program along the rim of Moosa Canyon in the Hidden Meadows area of Deer Springs. The fuel break reduces the risk of structure ignition in the event of a vegetation fire, reduces the risk from a structure fire spreading into the adjacent vegetation, and protects SDG&E distribution and transmission facilities. The project area accomplished 40 acres belonging to more than 40 property owners as well as protection of 20 distribution and transmission facilities.

Wynola Fire Safe Council Project

The Wynola FSC initiated a project for the purpose of community fire protection, evacuation route safety, and electrical infrastructure. The community roads are the only ingress for firefighters and emergency vehicles as well as the evacuation route for the community. This project accomplished the treatment of 2.5 miles of roadways, protection of 100 homes, and 46 distribution poles.

La Jolla Band of Luiseño Indians – Wildfire Urban Interface Hazard Fuels Project

The La Jolla Band of Luiseño Indian's implemented a wildland urban interface hazard fuels project for the purpose of providing defensible space to community homes and tribal buildings, as well as reducing the risk of fires being ignited along roadways on the reservation. Included in this project was the protection of electrical infrastructure, which serves and traverses the reservation. The project accomplished 100 feet around identified structures, 25 feet along roadways, and protection of 19 distribution and transmission poles.

Pauma Band of Luiseño Indians – Wildfire Urban Interface Hazard Fuels Project

The Pauma Band of Luiseño Indians initiated a project to reduced hazard fuels in the wildland urban interface on reservation tribal trust lands. The project was broken into defensible space and roadside brushing areas. The project used mechanical treatments to significantly reduce the potential effects of devastating wildfire on the reservation. The project accomplished the reduction of flammable fuels surrounding dwellings within 100-foot, roadside fuels within 15 feet of the road's edge, and 37 electrical distribution poles.

Rincon Band of Luiseño Indians Project – Wildland Brush Management Program

The Rincon Band of Luiseño Indian's implemented a Wildland Brush Management Program in concert with the Rincon Fire Department to reduce the impact of a wildland fire by providing protection to the reservation's community 400 homes and electrical infrastructure. The project included both defensible space around reservation structures and along roadways. The project accomplished treating 280 acres, which included 400 homes and 21 distribution and transmission poles.

II. CONCLUSION

SDG&E appreciates the opportunity to provide these reply comments on the QRs and looks forward to working with the Wildfire Safety Division and interested stakeholders on these issues.

Respectfully submitted,

/s/ Christopher M. Lyons

Attorney for
San Diego Gas & Electric Company