

Application of SAN DIEGO GAS & ELECTRIC )  
COMPANY for Review of its Proactive De- )  
Energization Measures and Approval of Proposed )  
Tariff Revisions )  
(U 902-E) )  
\_\_\_\_\_ )

Application No. 08-12-\_\_\_\_\_  
Exhibit No.: (SDG&E-1) \_\_\_\_\_

**PREPARED DIRECT TESTIMONY**  
**OF DAVID L. GEIER**  
**ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY**

**BEFORE THE PUBLIC UTILITIES COMMISSION**  
**OF THE STATE OF CALIFORNIA**

**DECEMBER 2008**



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1 the San Diego County Office of Emergency Services, and the American Red Cross to develop its  
2 Fire Preparedness Plan. SDG&E, like other utilities, already is obligated to maintain the safety  
3 of its electric power system. Part of that obligation has involved, and continues to involve, de-  
4 energizing a circuit if a dangerous condition is observed that would make de-energization for  
5 public safety necessary. Our plan to proactively de-energize certain, selected circuits based on  
6 the extreme fire weather criteria described in Mr. Yari's testimony is a logical extension of our  
7 obligation to maintain the safety that we have always had. This improvement in public safety is  
8 possible based on available technology, as Mr. Yari explains in his testimony.

9         There are a number of significant changes in the conditions that are prevalent particularly  
10 in Southern California and/or SDG&E's service territory that lead to implementing a measure  
11 such as proactive de-energization. For example, there have been near-drought conditions for the  
12 past eight to ten years, and the fire agencies have declared that the "fire season" has become a  
13 virtually year-round phenomenon. Cyclic climate change has also contributed to the  
14 circumstance where measures such as proactive de-energization are appropriate for SDG&E's  
15 service territory.

16         SDG&E needs to be ready to implement the proactive de-energization phase of  
17 SDG&E's Fire Preparedness Plan prior to the most critical of the fire months, which is expected  
18 to begin on or about September 1, 2009. Due to the importance of the proactive de-energization  
19 portion of SDG&E's Fire Preparedness Plan, SDG&E requests that the Commission complete its  
20 review of this application expeditiously so as to allow implementation by September 1, 2009. As  
21 discussed in detail in the testimony of Mr. Yari, proactive de-energization would only occur in  
22 very specific locations, based on the "Highest Risk Fire Areas," if the fire conditions were  
23 accompanied by certain extreme weather conditions. As pointed out in Mr. Yari's testimony,  
24 operational measures that may be suitable in other parts of the country, or even in other parts of  
25 California, may not be sufficient for the unique SDG&E service territory. Given the history (two

1 major wildfires in the past five years), it is imperative to implement proactive de-energization  
2 measures for fire preparedness.

## 3 4 **II Fire Preparedness Measures Already Implemented or Underway**

5 SDG&E has performed an exhaustive effort to reduce fire risks in its system. As part of  
6 SDG&E's overall Fire Preparedness Plan, certain fire mitigation measures have already been  
7 implemented by SDG&E, or they are in the process of being implemented. One aspect of the  
8 Fire Preparedness Plan that has currently been suspended, however, is proactive de-energization  
9 of selected circuits under extreme fire risk conditions. These issues are discussed in more detail  
10 in the testimony of Mr. Yari. Some of the measures already implemented during heightened fire  
11 risk conditions, or in the process of being implemented, include the following:

- 12
- 13 • Reducing or eliminating automatic reclosure attempts following a fault on 69 kV or  
14 distribution facilities, depending on the degree of fire risk.
  - 15
  - 16 • Conducting a visual patrol to ensure the safety of the faulted facility before restoring  
17 power in the affected areas.
  - 18 • Enhanced vegetation management.
  - 19 • Conducting expanded aerial and ground inspections in excess of regulatory requirements  
20 of electrical facilities in high risk areas.
  - 21 • "Hardening" of the system through efforts such as wood-to-steel pole conversion,  
22 increased spacing between conductors.
  - 23 • Utilization of heavier conductors.<sup>1</sup>
  - 24 • Increased use of conductor spacers on distribution circuits.

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<sup>1</sup> Importantly, "hardening" of the system not only contributes to fire risk mitigation, but it also provide a significant benefit for timely power restoration if a large fire were to occur.

- Investigation of additional undergrounding of circuits.

### III. Proactive De-Energization

#### a) Need for proactive de-energization.

The need for proactive de-energization is created by extreme weather conditions occurring in high fire risk areas in SDG&E's service territory. Without such de-energization, these extreme conditions exceed current design standards and hinder the ability to fight wildfires. SDG&E has already implemented many activities and changes in operations, as described in detail by Mr. Yari, to lessen the degree of fire risk. Yet, these actions are not sufficient to provide the degree of safety that only proactive de-energization can provide under the very extreme fire weather conditions that have been seen in SDG&E's service territory. Therefore, it is important that our policy of proactive de-energization be implemented. The concept of proactive de-energization has been developed as the last line of defense, not the first, in addressing fire risk. It is not something that SDG&E takes lightly. SDG&E has been working extensively and exhaustively to identify and develop operational and engineering solutions to decrease fire risk. However, such steps will not always be enough under very extreme fire weather conditions.

Proactive de-energization involves shutting off power in the Highest Risk Fire Areas: when a Red Flag Warning has been declared, there is an "Extreme Fire Condition" and winds are blowing at very high, dangerous levels. Although such a power outage would be extended until the winds have subsided and the circuits can be patrolled to ensure they have not been damaged, the power outage would not be as long as compared to the scenario in which a fire started and resulted in a power outage. For example, enough facilities were damaged in the 2007 fires that some customers were without power for three weeks. It is nevertheless expected that the proactive de-energization will only be triggered, if at all, a few days per year and only in the

1 specific discrete geographic areas where the extreme conditions exist. In 2009 approximately  
2 60,000<sup>2</sup> of SDG&E's 1.4 million customers could potentially be subject to proactive de-  
3 energization. Since weather conditions are being monitored in 15 discrete geographic areas, the  
4 outages would be localized to those areas. In addition, it is very unlikely that more than a few  
5 monitored areas would experience extreme conditions at the same time. During a de-  
6 energization event, the exact number and location of customers will depend on where the  
7 weather conditions meet or exceed all the extreme fire risk triggers based on available weather  
8 station data.

9 To allow the necessary flexibility to maintain an effective plan, SDG&E will modify the  
10 implementation details for proactive de-energization as conditions change to minimize customer  
11 impact while providing an adequate level of protection. In order to maintain a high level of  
12 protection to the public and the electric power system, the details of the plan will be modified  
13 from time-to-time, generally on an annual basis. In particular, the "Highest Risk Fire Areas"  
14 described by Mr. Yari<sup>3</sup> will be re-examined on an annual basis and re-defined when needed,  
15 which will affect which circuits would be subject to proactive de-energization each fire season.  
16 In addition, the triggers that SDG&E has currently set forth may be modified in the future.  
17 SDG&E will continue working with Cal Fire and other agencies in updating the specific details  
18 of its Fire Preparedness Plan for each annual fire season, or as otherwise warranted.

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<sup>2</sup> The 60,000 customer number is based on preliminary data which will be finalized in the first four months of 2009. In 2008, approximately 45,000 customers lived in or near the Highest Risk Fire Areas and would have been potentially impacted by proactive de-energization.

<sup>3</sup> For 2009, the Highest Risk Fire Areas are being expanded beyond what SDG&E had for 2008. The reason for this change is because no significant areas have been removed based on fire experience so far in 2008, yet significant portions of the area that was burned in 2003 is now becoming a Highest Risk Fire Area. This addition is due to the five years that have elapsed since 2003 that has allowed vegetation to re-grow and become the "fuel" that drives the definition of the Highest Risk Fire Areas.

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2           **b) Overview of Community Outreach efforts related to fire risk reduction.**

3           In 2008, SDG&E launched a comprehensive communications and outreach effort to  
4 inform and educate impacted customers about the Fire Preparedness Plan and proactive de-  
5 energization event notification processes. It is critical that affected customers understand the  
6 changes and are able to anticipate the possible timing and potential for a proactive de-  
7 energization and also be able to prepare for and take appropriate remedial action before proactive  
8 de-energization occurs.

9           In order for the proactive de-energization element of the Fire Preparedness Plan to be  
10 successfully implemented, SDG&E provided impacted residential and commercial customers  
11 access to information regarding the Fire Preparedness Plan. This communication and outreach  
12 effort included customer direct mail to all potentially impacted customers, numerous customer  
13 meetings, participating in over 40 local community events and organization meetings, and  
14 extensive personal contact with two important customer groups: residential special needs<sup>4</sup>  
15 customers and essential<sup>5</sup> customers. SDG&E estimates it would be contacting its special needs  
16 and essential customers as many as seven (7) times throughout the various elements and stages  
17 of the Fire Preparedness Plan. This would include with early notification to customers letting  
18 them know that they were located within the potential de-energization area and continue

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<sup>4</sup> Special Needs customers have been defined as those on Medical Baseline Allowance and/or Life Support (Special Needs). Low-income customers are defined as those on California Alternate Rates for Energy "CARE" (Low-Income). Special Needs customers have special energy needs due to medical conditions. Therefore, each household will be contacted to discuss its emergency readiness.

<sup>5</sup> Essential customers are those customers who require special consideration because their energy usage is vital to public safety, such as Police and Fire Departments, hospitals and skilled nursing facilities, water districts, communications companies, Federal Agencies (US Border Patrol, US Forestry Service), military bases and branches, and state and local government agencies.

1 throughout the year including the calling of an actual event. These various contacts and  
2 notifications are described in greater detail in the testimony of Mr. Lawless for special needs  
3 customers and Mr. Velasquez for essential customers.

4 For 2009, we believe it is important that SDG&E's customers are well-informed about  
5 our Fire Preparedness Plan, particularly de-energization, and specifically how these measures  
6 may impact them. SDG&E will implement a pre-season educational campaign prior to high fire  
7 season to inform customers of the latest Fire Preparedness Plan details. The campaign will focus  
8 on fire safety and emergency preparedness. The ultimate goal will be to fully familiarize  
9 customers in the Potential Outage Area, as shown in the map in Mr. Yari's testimony, with the  
10 Fire Preparedness Plan. On or before September 1, 2009, SDG&E will launch an annual fire  
11 season communications campaign. The objective of this campaign will be to alert customers that  
12 the Elevated Fire Condition is upon us. Emergency preparedness tips and preparation reminders  
13 will be provided. Communication channels may include direct mail, e-mail, community meetings  
14 and automated phone messages. In addition, an interactive website will be maintained that will  
15 allow customers to see if their service address will be impacted by the proactive de-energization  
16 part of the Fire Preparedness Plan. The details of this outreach effort are covered in more detail  
17 by Mr. Velasquez and Mr. Lawless.

18 SDG&E realizes that during extreme fire risk conditions there will be tradeoffs. The  
19 hardship of a temporary power outage, however, is counter-balanced by the decreased possibility  
20 of a major wildfire.

21 This concludes my prepared direct testimony.  
22

1 **IV. Qualifications of David L. Geier**

2 My name is David L. Geier. My business address is 8330 Century Park Court, CP33, San  
3 Diego, California. I am employed by SDG&E as Vice President - Electric Transmission and  
4 Distribution and have held this position since 2004. In this role, I oversee the planning of  
5 SDG&E's distribution and transmission system and substations and design and engineering for  
6 new and existing distribution, transmission and substation facilities, including civil and structural  
7 engineering and licensing of new facilities. Prior to my current role, I served as director of  
8 electric grid services for SDG&E. Other roles have included director of electric distribution  
9 services (in 2002), manager of direct access implementation and manager and supervisor at  
10 several of SDG&E's operations and maintenance facilities. I joined SDG&E in 1980 and have  
11 held positions of increasing responsibility.

12 I hold a Bachelor of Science degree in Electrical Engineering from the University of  
13 Illinois and a Masters of Science in Electrical Engineering from San Diego State University. I  
14 am a registered Professional Electrical Engineer in the state of California.

15 I am sponsoring the policy testimony in this Application. I have previously testified  
16 before the CPUC.