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December 10, 2014

Ms. Denise Tyrrell
Director, Safety and Enforcement Division
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

**SUBJECT: SAN DIEGO GAS & ELECTRIC COMPANY (SDG&E) DE-ENERGIZATION
REPORT**

Dear Ms. Tyrrell:

In accordance with Ordering Paragraph (OP) 2 of Decision 12-04-024, SDG&E is submitting this report in response to the De-Energization Events which occurred in SDG&E's service territory on November 24 and 25, 2014. As noted in the reporting requirements, this report has been verified by an SDG&E officer in accordance with Rule 1.11 of the Commission's Rules of Practice and Procedure.

If you have any questions regarding this report, please contact Wendy Johnson at (858) 654-1185, or at WDJohnson@semprautilities.com.

Sincerely,

Clay Faber
Director — Regulatory Affairs

SDG&E Report on De-Energization of Circuits 79-673R and 79-685R, and Tie Line 626 – Circuit 238 on November 24-25, 2014

The following report is submitted in response to the Power Events which occurred in SDG&E's service territory on November 24 and 25, 2014. SDG&E submits this report to the Director of Safety and Enforcement Division (SED) and includes the following information pursuant to Decision (D.)12-04-024.

The decisions to de-energize for public safety were taken at SDG&E's Emergency Operations Center (EOC), which at the time of the actions described in this report had been fully staffed (including by an officer) for a Red Flag Warning weather event. The SDG&E EOC is activated whenever a Red Flag Warning is declared by the National Weather Service. By procedure, if the wind gusts are forecasted to be below our design criteria, the EOC is activated in a monitoring mode using Emergency Services department personnel who provide periodic condition updates. If the wind gusts are forecasted to exceed our design criteria, the EOC is activated in full response mode so as to provide overall event coordination and ensure that an Officer-in-Charge receives operational updates, customer communications are initiated, regulatory and governmental notifications are completed, and logistical support is provided as needed. The EOC Red Flag Warning weather event full response staffing includes personnel from the electric operations group, the customer service group, the external affairs group, and selected responders from business support groups.

1. Explanation of SDG&E's decision to de-energize

Response:

The SDG&E Emergency Operations Center was fully activated 8:00 p.m. on November 24, 2014. This coincided with the period of strongest winds during the Red Flag Warning that was in effect since 4:00 a.m. on November 24, 2014. The Red Flag Warning, in combination with available data on fuel moisture content, relative humidity, and 10-minute wind measurements, indicated the threat of large and destructive wildfires should an ignition occur. SDG&E determined that conditions warranted de-energizing certain facilities which might otherwise provide a source of ignition of a fire should a system failure occur.

The decisions for SDG&E to de-energize Tie Line 626 – Circuit 238 and Circuits 79-673R and 79-685R on November 24 were made due to extremely high winds and associated fire danger given the extremely low humidity and dry fuel conditions at the time, among other factors. In each of these events, SDG&E carefully reviewed the situation and ultimately decided to de-energize to protect public safety and system reliability. The salient and material bases for these decisions included:

- Fire conditions were elevated throughout the SDG&E service territory, including high winds, low humidity and critically dry fuels;

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- The Fire Potential Index¹ was extreme and indicated that large fires were possible should ignitions occur.
 - Recorded wind gusts in the area of the de-energized circuits were in the 56-66 mph range for several consecutive reads with some gusting in excess of 80 mph;
 - Input from mobile field observers where possible;
 - Surrounding areas were forecast to and did see winds gusts in excess of 55 MPH;
 - Fire-suppression-air resources thought to be unavailable due to high winds;
 - The outages could be targeted so as to minimize impacts to customers; and
 - A review of active outages on SDG&E's system.
2. **All factors considered by SDG&E in its decision to de-energize, including visual observations by pre-positioned and mobile field personnel where possible, wind speed, temperature, humidity, and vegetation moisture content in the vicinity of the de-energized circuits.**

Response:

See attachments listed below for the factors considered for each of the three de-energization events (Circuit 79-673R, Circuit 79-685R and Tie Line 626 – Circuit 238), elevated fire weather conditions including wind speed, temperature, humidity and vegetation moisture in the area that was de-energized.

- Attachment 1: De-Energize Documentation - Circuit 79 – 673R
- Attachment 2: De-Energize Documentation – Tie Line 626 – Circuit 238
- Attachment 3 De-Energize Documentation - Circuit 79 – 685R
- Attachment 4: SDG&E's Fire Potential Index

3. The time, place, and duration of the event.

Response:

- a. De-energization on November 24, 2014:
 - i. At 11:13 p.m., de-energized Circuit 79 – 673R, impacting 87 customers
 - ii. At 11:17 p.m., de-energized Tie Line 626 – Circuit 238, impacting 1 customer
 - iii. At 11:18 p.m., de-energized Circuit 79 – 685R, impacting 2 customers
- b. Power restorations on November 25, 2014:
 - i. At 8:45 a.m., re-energized circuit 79-685R;
 - ii. At 9:30 a.m., re-energized circuit 79-673R;
 - iii. At 11:54 a.m., re-energized Tie Line 626 – Circuit 238

¹ The Fire Potential Index was created by SDG&E, and takes into consideration wind speed, relative humidity and fuel moisture content. See Attachment 4

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and Tie Line 626 – Circuit 238 on November 24-25, 2014**

c. See attachments to item 2 for details on locations affected by the event.

4. The number of affected customers, broken down by residential, medical baseline, commercial/industrial, and other.

Response:

The November 24-25 de-energization event affected customers as follows:

- a. Residential: 87 customers;
- b. Medical Baseline: 0 customers;
- c. Commercial and Industrial: 4 customers;
- d. Other: 0;
- e. Total: 91 customers;
- f. None of the customers affected were medical baseline customers; and,
- g. 4 commercial customers were affected.

5. Describe any wind-related damage to SDG&E's overhead power-line facilities in the areas where power is shut off.

Response:

No wind-related damage was found

6. Provide a description of the customer notice and any other mitigation provided by SDG&E.

Response:

- a. SDG&E made three separate contact attempts to customers affected by the Red Flag Warning and high wind event. Outreach was made via outbound dialer, email, mobile email/text messaging and personal phone calls.
- b. The attachments listed below contain the text of the notices to each affected customer:
 - Attachment 5: Day Ahead Call Overnight Outage Possible;
 - Attachment 6: Day of Call- Patrols To Begin; and
 - Attachment 7: Restoration Validation.

General customer communication was launched via SDG&E's website and social media. When the Red Flag Warning went into effect, a "banner" was posted on the sdge.com homepage. The banner included a link to our weather outage page where wind speeds and outages could be monitored by circuit. The banner link was active

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and readily accessible until the Red Flag Warning expired. For social media, our Facebook (FB) and Twitter channels were used after the Red Flag Warning was issued. The FB posts and tweets sent varied from providing weather conditions, number of customers affected by outages, and safety tips. In many messages, a link back to the SDG&E website was included so people could get the most up-to-date wind and outage information.

- 7. Include any other matters that SDG&E believes are relevant to the Commission's assessment of the reasonableness of SDG&E's decision to de-energize.**

Response:

SDG&E's response was targeted to specific circuits that were experiencing conditions that threatened public safety. All customers affected by the event received prior notice.

VERIFICATION

I am an officer of the applicant corporation herein, and am authorized to make this verification on its behalf. I am informed and believe that the matters stated in the foregoing document are true.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 10th day of December, 2014, at San Diego, California.

A handwritten signature in black ink, appearing to read "J. A. Sowers", written over a horizontal line.

John A. Sowers
Vice President, Electric Distribution Operations
SAN DIEGO GAS & ELECTRIC COMPANY

8330 Century Park Court
San Diego, CA 92123

**SDG&E Report on De-Energization of Circuits 79-673R and 79-685R,
and Tie Line 626 – Circuit 238 on November 24-25, 2014**

Attachment 1

De-Energization Documentation – Circuit 79-673R

SDG&E Report on De-Energization of Circuits 79-673R and 79-685R, and Tie Line 626 – Circuit 238 on November 24-25, 2014

De-Energization Documentation

Date and Time: November 24, 2014 2315 hrs

Circuit 79 Sectionalizing Device 673R De-energized at 2313 hrs - 87 customers affected.

Communities Affected: Descanso, Mt Laguna and Viejas

Anemometer: Sill Hill

Wind Speeds: See Chart

Humidity: 13%

LFM: 58%

FPI: Extreme - 15

Registered Wind Gusts for
Sill Hill Anemometer

1015 – 75 MPH

1025 – 74MPH

1035 – 86 MPH

1045 – 74 MPH

1055 – 81 MPH

1105 – 82 MPH

1115 – 87 MPH

Area fuels – Live Fuel Moisture is critically low (less than 60%), dead fuels are very dry, and grasses are fully cured. Cold weather is resulting in cooler fuel temperatures which *may* lower the risk of ignition slightly, however overall fuels conditions will support large fire activity should an ignition occur.

Observer report

Debris:

Have you observed any debris being carried by the wind? ☒ No ☐ Yes - if so, where _____

Vegetation:

Have you observed any damage or significant impacts to the vegetation? ☒ No ☐ Yes - if so, where _____

System:

Have you observed significant conductor/system movement? ☒ No ☐ Yes if so, where _____

Active fires? ☒ No ☐ Yes

Active Outages? ☐ No ☒ Yes if so, where: 1 outage in Camp Pendleton – shut off for safety at request of customer. No weather related outages

Air resources available: ☒ No ☐ Yes High winds

Comments: Other considerations: None

Contributors: Ken Fussell

**SDG&E Report on De-Energization of Circuits 79-673R and 79-685R,
and Tie Line 626 – Circuit 238 on November 24-25, 2014**

Attachment 2

De-Energization Documentation – Tie Line 626 and Circuit 238

SDG&E Report on De-Energization of Circuits 79-673R and 79-685R, and Tie Line 626 – Circuit 238 on November 24-25, 2014

De-Energization Documentation

Date and Time: November 24, 2014, 2014/2320 hrs

Tie Line 626 and Circuit 238 - De-energized at 2317 hrs – 1 customer (2 meters)

Communities Affected: Wynola

Anemometer: Sill Hill

Fire Risk Index: Extreme 15

Wind Speeds: See Chart

Humidity: 13%

LFM: 58%

Registered Wind Gusts for
Sill Hill Anemometer

1015 – 75 MPH

1025 – 74MPH

1035 – 86 MPH

1045 – 74 MPH

1055 – 81 MPH

1105 – 82 MPH

1115 – 87 MPH

Area fuels – Live Fuel Moisture is critically low (less than 60%), dead fuels are very dry, and grasses are fully cured. Cold weather is resulting in cooler fuel temperatures which *may* lower the risk of ignition slightly, however overall fuels conditions will support large fire activity should an ignition occur.

Observer report

Debris:

Have you observed any debris being carried by the wind? ☒ No ☐ Yes - if so, where _____

Vegetation:

Have you observed any damage or significant impacts to the vegetation? ☒ No ☐ Yes - if so, where _____

System:

Have you observed significant conductor/system movement? ☒ No ☐ Yes if so, where _____

Active fires? ☒ No ☐

Active Outages? ☐ No ☒ Yes if so, where: 2 outages neither weather related

Air resources available: ☒ No ☐ Yes No available due to high winds

Comments: Other considerations:

The customer on circuit 238 was notified via outbound dialer yesterday indicating outage overnight possible. It was reported the customer on circuit 238 has a generator

Contributors: Ken Fussell

**SDG&E Report on De-Energization of Circuits 79-673R and 79-685R,
and Tie Line 626 – Circuit 238 on November 24-25, 2014**

Attachment 3

De-Energization Documentation - Circuit 79 – 685R

SDG&E Report on De-Energization of Circuits 79-673R and 79-685R, and Tie Line 626 – Circuit 238 on November 24-25, 2014

De-Energization Documentation

Date and Time: November 24, 2014 2320 hrs

Circuit 79 Sectionalizing Device 685 De-energized at 2318 hrs - 2 customers affected.

Communities Affected: Descanso, Mt Laguna and Viejas

Anemometer: Lucky Five Ranch

Wind Speeds: See Chart

Humidity: 13%

LFM: 58%

FPI: Extreme - 15

Registered Wind Gusts for Lucky Five Ranch Anemometer 1015 – 56 MPH 1025 – 54MPH 1035 – 54 MPH 1045 – 55 MPH 1055 – 53 MPH 1105 – 58 MPH 1115 – 64 MPH
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Area fuels – Live Fuel Moisture is critically low (less than 60%), dead fuels are very dry, and grasses are fully cured. Cold weather is resulting in cooler fuel temperatures which *may* lower the risk of ignition slightly, however overall fuels conditions will support large fire activity should an ignition occur.

Observer report: None taken due no observers on site. See other comments

Debris:

Have you observed any debris being carried by the wind? N/A

Vegetation:

Have you observed any damage or significant impacts to the vegetation? N/A

System:

Have you observed significant conductor/system movement? N/A

Active fires? ☒ No ☐ Yes

Active Outages? ☐ No ☒ Yes if so, where: 2 outages neither are weather related

Air resources available: ☒ No ☐ Yes High winds

Comments: Other considerations: Unable to get observer to circuit due to safety concerns as a result of darkness.

Contributors: Ken Fussell

**SDG&E Report on De-Energization of Circuits 79-673R and 79-685R,
and Tie Line 626 – Circuit 238 on November 24-25, 2014**

Attachment 4

SDG&E's Fire Potential Index

**SDG&E Report on De-Energization of Circuits 79-673R and 79-685R,
and Tie Line 626 – Circuit 238 on November 24-25, 2014**

THE FIRE POTENTIAL INDEX

SDG&E has developed a comprehensive assessment, known as the “Fire Potential Index”, which is used as a tool for making operational decisions which would reduce fire threats and risks. This tool converts environmental, statistical and scientific data into an easily understood forecast of the short-term fire threat which could exist for different geographical areas in the SDG&E service territory. The Index is generated for a seven-day forecast period and provides SDG&E personnel and threatened communities time during which they may plan and prepare accordingly.

The FPI is calculated as follows:

$$FPI = WX + \frac{DL}{LFM} + G$$

where WX represents the weather component (rated 0-6), DL represents the GACC's Dryness Level, LFM represents the Live Fuel Moisture of Chamise, and G represents the greenness of the grasses (rated 0-5) as determined by satellite-derived Normalized Difference Vegetation Index (NDVI).

The weather component of the Fire Potential Index represents a combination of sustained wind speeds and dewpoint depression as determined using the following scale:

FPI Weather Component (WX)

Dewpoint/Wind	>5 knots	5 to 9	10 to 15	16 to 19	20 to 24	>24 knots
≥50°F	2	3	3	4	5	6
40°F to 49°F	2	2	3	3	4	5
30°F to 39°F	1	2	2	3	3	4
20°F to 29°F	1	1	2	2	3	3
10°F to 19°F	0	0	1	1	1	1
≤9°F	0	0	0	0	0	0

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The Fuels Moisture Component of the Fire Potential Index measures the overall state of potential fuels which could support a wildfire. Values are assigned based on the overall state of available fuels (dead or live) for a fire using the following equation:

$$FMC = \frac{DL}{LFM}$$

Where **FMC** represents “Fuels Moisture Component” in the scale below; and **DL** represents the GACC’s Dryness Level; and **LFM** represents Live Fuel Moisture (percentage).

The product of this equation represents the fuels moisture component that is reflected in the Fire Potential Index as follows:

FPI Fuels Moisture Component (FMC)

Very Wet					Very Dry
1	2	3	4	5	6

The state of native grasses, or “Green-Up Component”, of the Fire Potential Index is determined using satellite-derived Normalized Difference Vegetation Index (NDVI)¹ for various locations. This component is rated on a 0-to-5 scale ranging from very wet (or “lush”) to very dry (or “cured”). The scale is tied to the NDVI, which ranges from 0 to 1,¹ as follows:

FPI Green-Up Component (G)

Very Wet/Lush: ≥ 0.65	0.60 – 0.64	0.55 – 0.59	0.50 – 0.54	0.40 – 0.49	Very Dry/Cured ≤ 0.39
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¹ The Normalized Difference Vegetation Index (“NDVI”) is a simple graphical indicator that can be used to analyze remote sensing measurements, typically but not necessarily from a space platform, to assess whether the target area under observation contains live green vegetation or not. More information on the NDVI scale is available at the following address:

http://en.wikipedia.org/wiki/Normalized_Difference_Vegetation_Index, <http://gacc.nifc.gov/oscc/> .

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0	1	2	3	4	5
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The individual numeric values representing the three variables reflected in the Fire Potential Index, shown above, are combined and placed on the following scale:

Fire Potential Index

Normal	Elevated	Extreme
1 to 11	12 to 14	15 to 17

**SDG&E Report on De-Energization of Circuits 79-673R and 79-685R,
and Tie Line 626 – Circuit 238 on November 24-25, 2014**

Attachment 5

Day Ahead Call 11/24

**SDG&E Report on De-Energization of Circuits 79-673R and 79-685R,
and Tie Line 626 – Circuit 238 on November 24-25, 2014**

Message Delivered November 24, 2014 12:25 p.m.

Voice Recording

This is SDG&E calling with an important message. The National Weather Service has declared a Red Flag Warning. The extremely strong winds expected in your area in the late evening or overnight could likely cause outages or require us to turn off power for public safety. If this is necessary, the power will remain off for as long as it takes our crews to assess any damage to the electrical system and determine when power can be turned on safely. It won't be turned back on until it's safe. Please be prepared to activate your personal emergency plan. For more information, visit sdge.com or call SDG&E at 1-800-411-7343.

Email

Subject Line: Important from SDG&E. Red Flag Warning could cause outages.

The National Weather Service has declared a Red Flag Warning. Forecasted high winds expected in the late evening or overnight could likely cause outages or require us to turn off power for public safety. If outages do occur, the power will stay off until our crews can assess any damage to the electrical system and determine when power can be restored. It won't be turned back on until it's safe. Please be prepared to activate your personal emergency plan. For more information, visit sdge.com or call 1-800-411-7343.

Mobile Email

Important Message from SDG&E. Red Flag Warning. Outages possible or SDG&E may turn off power for public safety. Have emergency plan ready. Call 18004117343

**SDG&E Report on De-Energization of Circuits 79-673R and 79-685R,
and Tie Line 626 – Circuit 238 on November 24-25, 2014**

Attachment 6

Patrols To Begin – Power To Be Restored Within 4 Hours

**SDG&E Report on De-Energization of Circuits 79-673R and 79-685R,
and Tie Line 626 – Circuit 238 on November 24-25, 2014**

Message Delivered November 25th 2014 6:00 a.m. – Patrols To Begin – Power To Be Restored
Within 4 Hours

Voice Recording

This is SDG&E calling with an update on your power outage. Due to extremely strong winds in your area, the power was turned off for public safety. Right now, our crews are assessing the electrical system to determine how quickly power can be restored safely. Some inspections could take place on your property. If no damage is found, power should be restored within the next four hours. We thank you in advance for your cooperation and do appreciate your patience. For up-to-date information on outages and restoration times, visit sdge.com/outages or call us at 1-800-411-7343.

Email

Update On Power Restoration

Due to extremely strong winds in your area, power was turned off for public safety. Our crews are assessing the electrical system to determine how quickly power can be restored safely. Some inspections could take place on your property. If no damage is found, power could be restored within the next four hours. We thank you in advance for your cooperation and do appreciate your patience as we work in your area to restore power. For up-to-date information on outages and estimated restoration times, visit sdge.com/outages or call us at 1-800-411-7343.

Mobile Email

SDGE Update: Crews assessing system to restore power. If no damage found, power could be back on within four hours. Call 18004117343.

**SDG&E Report on De-Energization of Circuits 79-673R and 79-685R,
and Tie Line 626 – Circuit 238 on November 24-25, 2014**

Attachment 7

Restoration Validation

**SDG&E Report on De-Energization of Circuits 79-673R and 79-685R,
and Tie Line 626 – Circuit 238 on November 24-25, 2014**

Message Delivered November 25th 2014 – Restoration Validation

Voice Recording

This is SDG&E calling with an important message. Some areas of the county have experienced strong winds and potentially hazardous conditions. As a result, electrical outages have occurred. We at SDG&E appreciate your patience during this time. Your power should be back on now. If the power is still out, please call us at 1-800-411-7343. You also can get more information at sdge.com.

Email

Power Restoration Notice From SDG&E

Your power should be restored at this time. We appreciate your patience and understanding. Some areas of the county have experienced power outages due to strong winds and potentially hazardous conditions. If the power is still out, please call us at 1-800-411-7343. You also can get more information at sdge.com.

Mobile Email

SDGE update. Electrical outages have occurred in some parts of the county due to strong winds. Your power should be restored. If not, call 18004117343.