

Application No.: A.26-06-XXX  
Exhibit No.: SDGE-6  
Witness: Kevin M. Counts

**PREPARED DIRECT TESTIMONY OF**  
**KEVIN M. COUNTS**  
**ON BEHALF OF**  
**SAN DIEGO GAS & ELECTRIC COMPANY**

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



**June 1, 2026**

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ACRONYM GLOSSARY



1 Cameron Corners BESS.<sup>2</sup> Lastly, SDG&E owns and operates two solar energy projects, one  
2 located in Ramona, California that can produce up to 4.32 MW and one located in Campo,  
3 California that can produce up to 0.875MW, both using fixed photovoltaic panels.

4 **A. Palomar Energy Center (“PEC”)**

5 The PEC is a 588 megawatt gas-fired combined-cycle plant with 2 GE 7FA model  
6 combustion turbines and a GE steam turbine. The plant is equipped with inlet-air chillers and a  
7 thermal energy storage tank that allows the plant to produce energy at its capacity during the  
8 summer months. Recycled water is used for cooling plant equipment.

9 **B. Desert Star Energy Center (“DSEC”)**

10 The DSEC, located in Boulder City, NV, is a 480 megawatt gas-fired combined-cycle  
11 plant with 2 Siemens 501-FC model combustion turbines and a Westinghouse steam turbine.  
12 This plant was acquired by SDG&E in October 2011 pursuant to D.07-11-046. This Decision  
13 permitted SDG&E to exercise an option to purchase the facility from El Dorado Energy, LLC, a  
14 subsidiary of Sempra Energy.

15 **C. Miramar Energy Facility (“MEF”)**

16 The MEF is a peaking plant with two GE LM6000 model turbines that together produce  
17 92 megawatts (MEF1 and MEF2). This site also provides black start services used for  
18 restoration of the electric grid. Operations and maintenance personnel based out of the Palomar  
19 Energy Center provide all plant services to this facility.

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<sup>2</sup> The MW ratings used in this Testimony are electric generation ratings and may differ from plant interconnect ratings used elsewhere.

1           **D.     Cuyamaca Peak Energy Plant (“CPEP”)**

2           The CPEP is a peaking plant with a Pratt & Whitney FT8 model turbine generator set that  
3 produces 45 megawatts. This site also provides black start services used for restoration of the  
4 electric grid. Operations and maintenance personnel based out of the Palomar Energy Center  
5 provide all plant services to this facility.

6           **E.     Escondido Battery Energy Storage System (“Escondido BESS”)**

7           The Escondido BESS was developed and constructed pursuant to Resolution (“Res.”) E-  
8 4791 on May 26, 2016<sup>3</sup>, SDG&E developed expedited energy storage projects to alleviate  
9 reliability issues associated with Aliso Canyon. CPUC approval was requested via Tier 3 Advice  
10 Letter (“AL”) 2924-E. The AL was approved in its entirety in Res. E-4798 on August 18, 2016.  
11 This energy storage system uses three lithium-ion battery assets each rated at 40 megawatt-hours  
12 with a maximum output of 10 megawatts for up to 4 hours. Personnel based out of the Palomar  
13 Energy Center operate the site while maintenance is provided by a long-term service agreement.

14           **F.     El Cajon Battery Energy Storage System (“El Cajon BESS”)**

15           The El Cajon BESS was developed and constructed under the same authorization as the  
16 Escondido battery project and uses lithium-ion technology for the energy storage system. This  
17 energy storage system is rated at 30 megawatt-hours with a maximum output of 7.5 megawatts  
18 for up to 4 hours. Personnel based out of the Palomar Energy Center operate the site while  
19 maintenance is provided by a long-term service agreement.

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<sup>3</sup> Res. E-4791.

1           **G.     Top Gun Battery Energy Storage System (“Top Gun BESS”)**

2           The Top Gun BESS was constructed pursuant to Assembly Bill (“AB”) 2514 and uses  
3 lithium-ion battery technology energy storage.<sup>4</sup> This energy storage system is rated at 120  
4 megawatt-hours with a maximum output of 30 megawatts for up to 4 hours. Personnel based out  
5 of the Palomar Energy Center operate the site while maintenance is provided by a long-term  
6 service agreement.

7           **H.     Kearny Battery Energy Storage System (“Kearny BESS”)**

8           The Kearny BESS was developed and constructed as part of SDG&E’s Integrated  
9 Resource Plan. This energy storage system uses two lithium-ion battery assets each rated at 40  
10 megawatt-hours with a maximum output of 10 megawatts for up to 4 hours. The combination  
11 provides a total of 80 megawatt-hours with a maximum output of 20 megawatts for up to 4  
12 hours. Personnel based out of the Palomar Energy Center operate the site while maintenance is  
13 provided by a long-term service agreement.

14           **I.     Miguel Vanadium Redox Flow (“Miguel VRF”)**

15           The Miguel Vanadium Redox Flow (VRF) BESS was constructed as a demonstration  
16 project in partnership with Sumitomo, Japan’s New Energy, and Industrial Technology  
17 Development Organization (NEDO) and GO-Biz and uses flow technology. This energy storage  
18 system is rated at 8 megawatt-hours with a maximum output of 2 megawatts for up to 4 hours.

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<sup>4</sup> AB Stats. 2009-2010, Ch. 469 (Cal. 2010), amended by AB 2227 (AB Stats. 2011-2012, Ch. 606 (Cal. 2012)), as codified at Cal. Pub. Util. Code § 2835-2839 and § 9506, was designed to encourage California to incorporate energy storage into the electricity grid,. Energy storage can provide a multitude of benefits to California, including supporting the integration of greater amounts of renewable energy into the electric grid, deferring the need for new fossil-fueled power plants and transmission and distribution infrastructure, and reducing dependence on fossil fuel generation to meet peak loads.

1 Operations and maintenance personnel based out of the Palomar Energy Center provide all plant  
2 services to this facility.

3 **J. Fallbrook Battery Energy Storage (“Fallbrook BESS”)**

4 The Fallbrook BESS was constructed pursuant to AB 2514 and uses lithium-ion  
5 technology. This energy storage system is rated at 160 megawatt-hours with a maximum output  
6 of 40 megawatts for up to 4 hours. Operations and maintenance personnel based out of the  
7 Palomar Energy Center provide all plant services to this facility.

8 **K. Westside Canal Battery Energy Storage System (“Westside Canal BESS”)**

9 The Westside Canal BESS was constructed to support the Emergency Reliability OIR  
10 R.20-11-003. This energy storage system uses lithium-ion technology and is rated at 524  
11 megawatt-hours with a maximum output of 131 megawatts for up to four hours. Operations and  
12 maintenance personnel based out of the Palomar Energy Center provide all plant services to this  
13 facility.

14 **L. Ramona Air Attack Battery Energy Storage System (“Ramona AA Base  
15 BESS”)**

16 The Ramona AA Base BESS was constructed under the Wildfire Mitigation Plan. This  
17 energy storage system uses lithium-ion battery systems rated at 1.88 megawatt-hours with a  
18 maximum output of 0.47 megawatts for up to 4 hours. Personnel based out of the Palomar  
19 Energy Center operate the site while maintenance is provided by a long-term service agreement.

20 **M. Pala-Gomez Creek Battery Energy Storage System (“Pala-Gomez Creek  
21 BESS”)**

22 The Pala-Gomez Creek BESS was constructed under Res. E-5193. This energy storage  
23 system uses lithium-ion technology and is rated at 60 megawatt-hours with a maximum output of  
24 10 megawatts for 6 hours. Personnel based out of the Palomar Energy Center operate the site  
25 while maintenance is provided by a long-term service agreement.

1           **N.     Melrose Battery Energy Storage System (“Melrose BESS”)**

2           The Melrose BESS was constructed under Res. E-5193. This energy storage system uses  
3 two lithium-ion battery assets, each rated at 40 megawatt-hours with a maximum output of 10  
4 megawatts for up to 4 hours. Personnel based out of the Palomar Energy Center operate the site  
5 while maintenance is provided by a long-term service agreement.

6           **O.     Elliott Battery Energy Storage System (“Elliott BESS”)**

7           The Elliott BESS was constructed under Res. E-5193. This energy storage system uses  
8 lithium-ion technology and is rated at 50.5 megawatt-hours with a maximum output of 10  
9 megawatts for 5.5 hours. Personnel based out of the Palomar Energy Center operate the site  
10 while maintenance is provided by a long-term service agreement.

11          **P.     Paradise Battery Energy Storage System (“Paradise BESS”)**

12          The Paradise BESS was constructed under Res.E-5193. This energy storage system uses  
13 lithium-ion technology and is rated at 50.5 megawatt-hours with a maximum output of 10  
14 megawatts for 5.5 hours. Personnel based out of the Palomar Energy Center operate the site  
15 while maintenance is provided by a long-term service agreement.

16          **Q.     Boulevard Battery Energy Storage System (“Boulevard BESS”)**

17          The Boulevard BESS was constructed under Res. E-5193. This energy storage system  
18 uses lithium-ion technology and is rated at 50.5 megawatt-hours with a maximum output of 10  
19 megawatts for 5.5 hours. Personnel based out of the Palomar Energy Center operate the site  
20 while maintenance is provided by a long-term service agreement.

21          **R.     Clairemont Battery Energy Storage System (“Clairemont BESS”)**

22          The Clairemont BESS was constructed under Res. E-5193. This energy storage system  
23 uses lithium-ion technology and is rated at 29 megawatt-hours with a maximum output of 9

1 megawatts for 3.2 hours. Personnel based out of the Palomar Energy Center operate the site  
2 while maintenance is provided by a long-term service agreement.

3 **S. Borrego Dark Sky Battery Energy Storage System (“Dark Sky BESS”)**

4 Dark Sky BESS was constructed pursuant to California Energy Commission CEC-500-  
5 2019-013. This energy storage system uses lithium-ion technology and is rated at 14.66  
6 megawatt-hours with a maximum output of 7.33 megawatts for 2 hours. Personnel based out of  
7 the Palomar Energy Center operate the site while a majority of the maintenance is performed by

8 **T. Westside Canal 2B Battery Energy Storage System (“Westside Canal 2B  
9 BESS”)**

10 The Commission approved procurement of Westside Canal 2B BESS in Resolution E-  
11 5372. This energy storage system uses lithium-ion technology and is rated at 400 megawatt-  
12 hours with a maximum output of 100 megawatts for up to four hours. Personnel based out of the  
13 Palomar Energy Center operate the site while a majority of the maintenance is performed by  
14 RWE under an LTSA.

15 **U. Cameron Corners Battery Energy Storage System (“Cameron Corners  
16 BESS”)**

17 The Cameron Corners BESS was constructed under the Wildfire Mitigation Plan. This  
18 energy storage system uses lithium-ion battery systems rated at 1.88 megawatt-hours with a  
19 maximum output of 0.47 megawatts for up to 4 hours. Personnel based out of the Palomar  
20 Energy Center operate the site while maintenance is provided by a long-term service agreement.

21 **V. Ramona Solar Energy Project (“RSEP”)**

22 The RSEP was developed and constructed pursuant to D.10-09-016 and SDG&E’s AL  
23 2374E-A. The project is built with fixed photovoltaic panels and can produce up to 4.32  
24 megawatts. Operations and maintenance personnel based out of the Palomar Energy Center  
25 provide all plant services to this facility.

1           **W.     Cameron Corners Photovoltaic (“Cameron Corners PV”)**

2           The Cameron Corners PV was constructed under the Wildfire Mitigation Plan The  
3 project is built with fixed photovoltaic panels and can produce up to 0.875 megawatts.  
4 Operations and maintenance personnel based out of the Palomar Energy Center provide all plant  
5 services to this facility.

6           **III.     COMMISSION STANDARDS RELATED TO SDG&E-OWNED GENERATION**

7           During the record period, SDG&E operated and maintained its UOG resources in a  
8 reasonable and prudent manner, consistent with “Good Utility Practice” and the reasonable  
9 manager standard.<sup>5</sup> The Commission defined “Good Utility Practice” in D.02-12-069:<sup>6</sup>

10                   [A]ny of the practices, methods and acts engaged in or approved by a  
11                   significant portion of the electric utility industry during the relevant time  
12                   period, or any of the practices, methods and acts which, in the exercise of  
13                   reasonable judgment in light of the facts known at the time the decision  
14                   was made, could have been expected to accomplish the desired result at a  
15                   reasonable cost consistent with good business practices, reliability, safety  
16                   and expedition. Good Utility Practice does not require the optimum  
17                   practice, method, or act to the exclusion of all others, but rather is intended  
18                   to include acceptable practices, methods, or acts generally accepted in the  
19                   Western Electric Coordinating Council region.

20           Consistent with “Good Utility Practice,” during 2025, SDG&E followed an established  
21 maintenance program to maximize the availability of the units as a primary “desired result.”

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<sup>5</sup> The Commission has explained the “reasonable manager” standard in ERRRA compliance cases, as follows: Under the “reasonable manager standard, utilities are held to a standard of reasonableness based on the facts that are known or should have been known at the time. The act of the utility should comport with what a reasonable manager of sufficient education, training, experience, and skills using the tools and knowledge at his or her disposal would do when faced with a need to make a decision and act.” D.14-05-023 at 15. By meeting the “Good Utility Practice” standard and other Commission requirements stated herein, SDG&E maintains that likewise has met the “reasonable manager” standard during the 2024 record period. The Appendices to this testimony further provide SDG&E’s primary showing with respect to both standards. In addition, the Commission recently has confirmed that the compliance review to which various SDG&E accounts are subject in ERRRA compliance proceedings are not “reasonableness reviews.” D.17-03-016 at 3 and Findings of Fact 2.

<sup>6</sup> See D.02-12-069, Attachment A-3 at 5.

1 Specifically, this maintenance program factors in a number of considerations, including  
2 manufacturer guidelines, appropriate power industry practices, safety considerations, and good  
3 engineering and technical judgment to allocate resources most effectively to maximize  
4 availability of its UOG resources. Additionally, the SDG&E maintenance program incorporates  
5 practices that are generally accepted within the electric power generation industry and the  
6 Western Electricity Coordinating Council (“WECC”) and the North American Electric  
7 Reliability Corporation (“NERC”).

8         Additionally, SDG&E is required to comply with the Commission’s General Order  
9 (“GO”) 167 - Enforcement of Maintenance and Operation Standards for Electric Generating  
10 Facilities.<sup>7</sup> Sections 10.0 and 11.0 of GO 167 specifically outline each generator owner’s  
11 obligation to provide information and cooperate with Commission audits, investigations and  
12 inspections. In addition, each outage may warrant the creation of internal documentation,  
13 including but not limited to, equipment affected, parts replaced, work required to accomplish  
14 outage-related tasks, costs of repairs, other recommended actions that may be taken to mitigate a  
15 repeat of the failure, change to operating procedures required to address component or plant  
16 issues, changes to maintenance practices to improve reliability, communications with an original  
17 equipment manufacturer, and implementation of upgrades to improve reliability. Evidence of the  
18 above may be found in parts of the Computerized Maintenance Management System (“CMMS”)  
19 ordering documents, as well as work orders, vendor invoices, investigation reports, management  
20 of change documents, and communications with vendors.

21         GO 167 also requires SDG&E to meet specific maintenance and operations standards,  
22 which also suggest guidance detailed for maintenance and operations programs. These standards

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<sup>7</sup> GO 167.

1 and guidance are based on accepted power industry good practices. SDG&E is required to  
2 document and certify to these standards every two years and submit the documentation to the  
3 Commission Electric Safety and Reliability Branch (“ESRB”). The certification documentation  
4 includes a summary list of maintenance, operations and safety procedures that describe the  
5 programs and processes used in generation.

#### 6 **IV. ADDITIONAL REVIEW OF UOG OPERATIONS**

7 Additional review of SDG&E’s UOG operations is provided through Sempra Energy  
8 Internal Audit Department’s audits of SDG&E’s generating facilities. Consistent with auditing  
9 standards and industry best practices, the frequency and nature of such audits is determined  
10 based on the Internal Audit Department’s annual risk assessment, which determines the areas of  
11 the company, including utility operations, to be audited. This risk-based analysis may change  
12 from year to year.

13 Further, SDG&E’s Insurance Risk Consultants conduct site inspections to review and  
14 evaluate the plant’s physical condition, maintenance, and operations processes. These  
15 inspections are performed from a risk perspective and cover maintenance practices, operations  
16 practices, material condition, and fire protection. The report may offer recommendations for  
17 improvement to systems, facilities, and processes.

18 SDG&E is also required to meet certain electric reliability standards from the NERC and  
19 WECC. NERC and WECC perform periodic audits of SDG&E to ensure compliance with the  
20 reliability standards.

21 Furthermore, SDG&E generation plants are subject to site visits from various regulators  
22 concerning implementation of permits. There are periodic onsite inspections and data requests  
23 concerning the implementation of requirements for air permits, water permits, and water

1 discharge permits. SDG&E’s Palomar Energy Center is also required to meet permit conditions  
2 detailed in the California Energy Commission (“CEC”) Operating Permit.

3 SDG&E’s Generation personnel have communicated with the following agencies in 2025:

- 4 • California Energy Commission (“CEC”)
- 5 • California Public Utilities Commission (“CPUC”)
- 6 • California Air Resource Board (“CARB”)
- 7 • U.S. Energy Information Administration (“US EIA”)
- 8 • Environmental Protection Agency (“EPA”) Region 9
- 9 • Clark County Department of Air Quality (“DAQ”)
- 10 • Nevada Division of Environmental Protection (“NDEP”)
- 11 • San Diego Air Pollution Control District (“APCD”)
- 12 • Regional Water Quality Control Board (“RWQCB”)
- 13 • CA-EPA State Water Board
- 14 • City of Escondido
- 15 • Western Electricity Coordinating Council (“WECC”)
- 16 • North American Electric Reliability Corporation (“NERC”)
- 17 • Certified Unified Program Agencies (“CUPA”)

18 **V. OUTAGES - UTILITY OWNED GENERATION**

19 Many preventive and corrective maintenance work activities require planned outages,  
20 whereas unplanned corrective maintenance is performed under short-notice or forced outages.

21 Appendix A, below, provides narratives for forced outages greater than 24 hours for  
22 natural gas generation facilities 25 MW or larger. Appendix B, below, provides narratives for  
23 planned outages for natural gas generation that are greater than 24 hours for all facilities 25 MW  
24 or larger, where the outage was extended by two weeks or fifty percent longer, whichever is  
25 greater, from its planned schedule. Appendix C, below, provides narratives for forced outages

1 greater than 10 days for energy storage facilities 10 MW or larger. The narratives address, as  
2 applicable, the following points:

- 3 1. The nature of the outage.
- 4 2. The cause(s) of the outage, if known.
- 5 3. Possible steps to prevent similar occurrences.
- 6 4. Whether the outage may have prevented (or minimized the duration of) a future  
7 outage.

## 8 **VI. CONCLUSION**

9 My testimony describes SDG&E's UOG resources located in San Diego County and  
10 Nevada. SDG&E consistently followed the Commission's guidance and "Good Utility Practice"  
11 and met the "reasonable manager" standard during the 2025 record period.

12 This concludes my prepared direct testimony.

1 **VII. QUALIFICATIONS**

2 My name is Kevin M. Counts. My business address is 2300 Harveson Place, Escondido,  
3 CA 92029. I am currently employed by SDG&E as Sr Mgr, Fossil Power Ops for Electric  
4 Generation. My responsibilities include overseeing a staff that operates these power plants and  
5 energy storage sites.

6 I began employment at SDG&E in 2005 as an Operations Technician for Palomar Energy  
7 Center and Miramar Energy. My experience prior to employment at SDG&E (approximately 11  
8 years) includes various positions in the US Nuclear Navy and with Reliant Energy at the Bighorn  
9 Generating Station.

10 I hold a Bachelor of Science degree in Business from the University of Phoenix.

11 I have previously testified before the Commission.

## APPENDIX A

### SDG&E'S 2025 NATURAL GAS GENERATION FACILITIES FORCED OUTAGES GREATER THAN 24 HOURS FOR FACILITIES 25 MW OR LARGER

1. **Desert Star Energy Center ("DSEC") combustion turbine #2 (CT2) forced outage – January 1, 2025, through December 31, 2025 – 365.0 days.**

Continuing from 2024, and lasting the entire year of 2025, and continuing into 2026. CT2 was shut down due to high generator bearing vibrations. A replacement generator rotor has been built and is expected to be installed in the 2nd quarter of 2026. It is likely that the replacement rotor will prevent future generator vibration issues and should prevent future vibration outages.

2. **DSEC combustion turbine #1 (CT1) and Steam Turbine (ST) forced outage – January 14, 2025, through January 17, 2025 – 2.72 days.**

On January 14, 2025, CT1 turning gear gearbox failed to operate causing a forced outage. The faulty gearbox was replaced and CT1 was restarted. Replacing the gearbox possibly prevented future outages. (Note: with CT2 not available, this outage also put the steam turbine (ST) in a forced outage for the same period).

3. **Miramar Energy Facility (MEF) 13.8 kV Switchgear Arc Flash – February 13, 2025, through July 1, 2025 – 138.23 Days**

On February 13, 2025, shortly after startup, the plant tripped offline and entered a forced outage due to an arc-flash event within the 13.8 kV switchgear. The failure was caused by water intrusion into the switchgear, which resulted in the arc-flash event. Following completion of repairs, the unit was released for operation. In response to the findings, changes were implemented to the maintenance program to include inspection of switchgear weatherproofing, which is expected to reduce the risk of a similar future outage.

**4. DSEC ST forced outage – March 8, 2025, through March 10, 2025 – 2.08 days.**

On March 8, 2025, the steam turbine was placed in a forced outage after shutdown due to an oil leak on the ST generator circuit breaker. Additional oil was procured and added to the generator circuit breaker. On March 10, 2025, the forced outage ended. The breaker will be overhauled during our next outage of sufficient duration, and oil will be kept in stock to prevent future related outages.

**5. DSEC ST forced outage – April 27, 2025, through April 30, 2025 – 3.35 days.**

On April 27, 2025, after plant shutdown, the ST was placed in forced outage due to the ST pressure equalizing valve not closing properly. The valve was rebuilt and on April 30, 2025, the forced outage ended. Rebuilding the equalizing valve is likely to prevent future related outages.

**6. Palomar Energy Center (PEC) Steam Turbine Generator High Vibration Trip – May 10, 2025, through May 15, 2025 – 4.98 Days.**

On May 10, 2025, during startup the Steam Turbine Generator (STG) tripped due to high vibrations on Bearing #2. While troubleshooting, it was discovered that the STG Cold Reheat (CRH) out non-return check valve failed causing unwanted steam admission to the STG during start up. This additional heat caused uneven metal warm-ups between rotating & stationary parts, causing high vibrations and a trip. The plant was placed on a forced outage while the STG CRH out non-return check valve was repaired. Following the repair, the unit was released from the outage and made fully available. It is unlikely that this outage prevented or minimized the duration of a future outage.

**7. DSEC CT1 forced outage – August 16, 2025, through August 19, 2025 – 3.50 days.**

On August 16, 2025, CT1 was shutdown to cool the unit down and take it off turning gear for vibration reduction balancing. During shutdown, a balance weight adjustment was made

on the collector fan, and August 19, 2025, the forced outage was ended. This outage prevented additional high vibration issues including trips and forced outages.

**8. DSEC ST forced outage – August 29, 2025, through September 6, 2025 – 8.45 days.**

On August 29, 2025, the ST was placed in forced outage due to the throttle valve temporarily sticking partially open before fully closing. The valve was disassembled cleaned and adjusted. After reassembly and testing the ST forced outage ended on September 6, 2025. This effort did not prevent the following forced outage identified in Outage 10.

**9. Cuyamaca Peak Energy Plant (CPEP) Failed Oil Hose – September 16, 2025, through October 3, 2025 – 16.59 days.**

On September 16, 2025, while the plant was running an Engine B Lube Oil Tank low level alarm was received. A lube oil hose was found leaking on Engine B causing the breaker to trip and placing the plant was placed into a forced outage. The lube oil hose and the 150A Load Break Fuses were replaced, and the unit was released for operation. To help minimize future outages SDG&E will continue to perform recommended preventative maintenance on lube oil hoses to help ensure proper operation and minimize outages due to failures.

**10. DSEC ST forced outage – October 13, 2025, through November 23, 2025 – 40.40 days.**

On October 13, 2025, the ST was placed in forced outage due to the throttle valve temporarily sticking partially open before fully closing. Some of the valve internal components clearances were found to be out of tolerance, the throttle valve and the inline governor valve were fully disassembled, repaired reassembled and tested. On November 25 the ST forced outage ended. This outage will prevent similar occurrences as both the throttle valve and the governor valves were fully rebuilt, and this should prevent future outages related to these valves.

**11. DSEC ST forced outage – November 25, 2025, through December 11, 2025 – 15.90 days.**

On November 25, 2025, the ST tripped on high vibration on multiple bearings during start up. The ST was fully inspected for damage. All access points to the steam turbine flow path were opened and subjected to borescope inspection. With no damage detected, the ST declared available on December 11. This outage and inspection did not detect damage that could have prevented the following forced outage identified in Outage 12.

**12. DSEC ST forced outage – December 11, 2025, through December 20, 2025 – 9.11 days.**

On December 11, 2025, ST was placed in forced outage due to an oil leak on the thrust bearing. Investigation found that a bearing inspection cover was leaking. Each inspection cover for the thrust bearing were removed and resealed, and the ST was declared available on December 20. This did not prevent future outages, as it was later discovered that the thrust bearing turbine shaft oil seals had been damaged during the November 25 high vibration trip and were also leaking.

## **APPENDIX B**

### **PLANNED OUTAGES DURING 2025 THAT WERE 24 HOURS OR LONGER FOR ALL FACILITIES 25 MW OR LARGER THAT WERE EXTENDED BY TWO WEEKS OR FIFTY PERCENT LONGER, WHICHEVER IS GREATER, FROM ITS PLANNED SCHEDULE**

There were no Appendix B outages in this reporting period.

## APPENDIX C

### SDG&E'S 2025 ENERGY STORAGE FACILITIES FORCED OUTAGES GREATER THAN 10 DAYS FOR FACILITIES 10 MW OR LARGER

**1. Escondido Battery Energy Storage System (“Escondido BESS”) Array 100 forced outage due to fire on site – January 1, 2025, through December 31, 2025 – 365.0 days.**

The asset experienced a forced outage that began in 2024, remained in effect throughout 2025, and continued into 2026. The Escondido BESS Array 100 was placed into a forced outage when the system was shut down as a precautionary response to a fire on a separate array at the facility in September 2024. The extended shutdown period caused the battery state of charge to drop below normal recovery limits, requiring manual charging to restore operation. The conservative shutdown approach mitigated the risk of equipment damage at the time of the event. The outage is ongoing and was implemented for safety and equipment protection. Because the asset has not yet returned to service, it is unknown whether this outage has prevented or minimized a future outage.

**2. Escondido Battery Energy Storage System (“Escondido BESS”) Array 200 forced outage due to fire on site – January 1, 2025, through December 31, 2025 – 365.0 days.**

The asset experienced a forced outage that began in 2024, remained in effect throughout 2025, and continued into 2026. The Escondido BESS Array 100 was placed into a forced outage when the system was shut down as a precautionary response to a fire on a separate array at the facility in September 2024. The extended shutdown period caused the battery state of charge to drop below normal recovery limits, requiring manual charging to restore operation. The conservative shutdown approach mitigated the risk of equipment damage at the time of the event.

Because the asset has not yet returned to service, it is unknown whether this outage has prevented or minimized a future outage

**3. Escondido Battery Energy Storage System (“Escondido BESS”) Array 300 forced outage due to fire on site – January 1, 2025, through December 31, 2025 – 365.0 days.**

The asset experienced a forced outage that began in 2024, remained in effect throughout 2025, and continued into 2026. As a result of a fire that occurred in September 2024, the affected battery array was removed from service and remained unavailable throughout the entirety of 2025, continuing into 2026. The fire caused extensive damage to the battery modules and associated equipment, requiring full replacement of the array to restore functionality. Although the outage remains ongoing, full replacement of the asset with newer equipment is expected to improve overall reliability and reduce the potential for similar outages in the future.

**4. Westside Canal 2B Battery Energy Storage System (“Westside Canal 2B BESS”) forced outage due electrical failure in the Generator Step Up (GSU) transformer. – July 31, 2025, through December 4, 2025 – 126.9 days.**

The asset experienced a forced outage on July 31, 2025, due to an internal failure of the generator step-up transformer. The root cause of the failure remains under investigation, and a formal root cause analysis is pending. The affected transformer was shipped back to the manufacturer, where it is currently undergoing evaluation and repair to restore it to specification. To mitigate the impact of the outage, a spare transformer was installed, limiting the total outage duration to 126 days and significantly reducing downtime. In the absence of a spare unit, the facility would have remained offline until repairs were completed, and the transformer was returned to service.

**5. Boulevard Battery Energy Storage System (“Boulevard BESS”) forced outage due pad mount transformer failure. – October 8, 2025, through December 31, 2025 – 57.4 days.**

The asset experienced a forced outage on October 8, 2025, during preliminary microgrid commissioning due to elevated high-voltage conditions observed on site. While the root cause remains under investigation, preliminary findings indicate the outage was most likely caused by the loss of a ground reference when in island mode. Corrective actions are being developed to ensure the grounding bank remains closed during islanded conditions. As part of these efforts, new control logic is being evaluated to automatically initiate a shutdown if the grounding bank opens. In parallel, system-wide control logic is being reviewed to reduce the risk of similar ground reference issues across both current and future microgrid sites

**6. Melrose Battery Energy Storage System (“Melrose BESS”) Unit 2 forced outage due firewall failure. – October 13, 2025, through December 16, 2025 – 64.2 days.**

The asset experienced a forced outage on October 13, 2025 due to a hardware failure that impacted the site’s cybersecurity firewalls. The initiating event was an emergency distribution outage that took the site offline. When power was restored, all network equipment was re-energized, however, the air conditioning system did not automatically restart. As a result, the equipment room overheated, leading to the failure of the firewall devices. Subsequent analysis revealed that the air conditioning units require manual restart following a power outage. This event also highlighted two key gaps: the absence of replacement firewalls, which prolonged the recovery time, and the lack of awareness that the cooling system would not automatically return to service. Corrective actions addressing these issues have been identified, and the lessons learned from this outage will help prevent or reduce the impact of similar outages at this site in the future.

## ACRONYM GLOSSARY

APCD	San Diego Air Pollution Control District
BESS	Battery Energy Storage System
CARB	California Air Resource Board
CEC	California Energy Commission
CMMS	Computerized Maintenance Management System
CPEP	Cuyamaca Peak Energy Plant
CPUC	California Public Utilities Commission
CT	Combustion Turbine
CTG	Combustion Turbine Generator
CUPA	Certified Unified Program Agencies
GE	General Electric
D	Decision
DAQ	Clark County Department of Air Quality
DSEC	Desert Star Energy Center
ERRA	Energy Resource Recovery Account
ESRB	Electric Safety and Reliability Branch
GO	General Order
HRSG	Heat Recovery Steam Generator
LP	Low Pressure
MEF	Miramar Energy Center
MW	Megawatt
MWh	Megawatt hour
NDEP	Nevada Division of Environmental Protection
NERC	North American Electric Reliability Corporation
NO <sub>x</sub>	Nitrous Oxides
OEM	Original Equipment Manufacturer
ORA	Office of Ratepayer Advocates
PEC	Palomar Energy Center
RSEP	Ramona Solar Energy Plant
RWQCB	Regional Water Quality Control Board
SCR	Selective Catalytic Reduction
SDG&E	San Diego Gas & Electric
STG	Steam Turbine Generator
UOG	Utility Owned Generation
US EIA	U.S. Energy Information Administration
WECC	Western Electricity Coordinating Council