



GENERAL ORDER 165

**ELECTRIC DISTRIBUTION
CORRECTIVE MAINTENANCE PROGRAM**

REPORT FOR 2022

This report contains the results of San Diego Gas & Electric Company's (SDG&E) General Order (GO) 165 compliance program for inspection and maintenance of electric distribution facilities, which covers the period from January 1, 2022 through December 31, 2022.

SDG&E's GO 165 compliance program is called the Corrective Maintenance Program (CMP) and is managed by SDG&E's Program Management Group. Through coordination with the Construction & Operations (C&O) Centers' Electric Supervisors, Inspectors, Linemen, and other personnel, the inspections required by GO 165 are performed along with any corrective work.

Verification of Counts

In 2022, SDG&E continued to utilize the automated interface in place between GIS (SDG&E's system of record for facilities) and SAP-PM (SDG&E's system of record for inspection and maintenance records). This interface evaluates every SDG&E facility to verify that an appropriate inspection plan is assigned to it. Periodic reviews are conducted to ensure that the automated interface is working according to plan. In addition to the interface, automated reports are published weekly showing the year-to-date status of all CMP Detailed Inspections and Patrols scheduled for the year.

For intrusive inspections, an annual analysis was performed in the third quarter to determine if additional intrusive inspections were required. Any "Special Intrusive Inspections" were issued and completed by December 31, 2022. In addition, periodic reviews are conducted throughout the year to ensure all intrusive inspections scheduled for 2022 were completed within the calendar year.

Summary of the 2022 Year-end Report

Inspections:

SDG&E General Order 165 Maintenance 2022 Electric Distribution Inspections Report

Type of Inspection by Facility	Facilities Due	Facilities Outstanding
Overhead Detailed	40,440	0
Underground Detailed	23,175	0
Wood Pole Intrusive	17,133	0
Type of Inspection by Grid	Grids Due	Grids Outstanding
Patrols	26,959	0

In 2022, SDG&E did not have any late distribution inspections or patrols per the GO 165 guidelines. As stated before, SDG&E continues to utilize our asset integrity interface to assign each facility to an appropriate inspection plan. We also utilize automated reports throughout the year to monitor and track the progress of inspections and patrols to document that they are completed by the appropriate interval timeframe.

Division of Inspections

The quantity of facilities is dynamic because of additions and removals of equipment due to maintenance, demolition, new customers, new technology, reliability, and conversion of overhead lines to underground lines, and other changes to the electric distribution system. When new equipment is added, it is regarded as inspected as of the date of installation. The new piece of equipment is then scheduled for inspection during the next inspection cycle for the respective equipment type. All equipment in the current inventory is scheduled for inspection at the required interval.

All equipment on a given structure is inspected at the same time and the inspection record is documented in the structure record. The CMP goals for the year historically have been determined by the system-wide counts of facilities in each inspection type, divided by the number of years in the cycle length. This practice created inspection cycles setting the CMP goals for the year. The goals for the year are determined by the last inspection date. SDG&E's CMP cycles are designed to adhere to or exceed GO 165 requirements. The following section describes SDG&E's CMP cycles by equipment type.

Description of Major SDG&E CMP Cycles

- **OHVI (Overhead Visual, Five-year)**

This cycle consists of a detailed, walk-around inspection of all distribution poles, pole-mounted facilities with primary and secondary conductors, and distribution equipment on transmission poles. These inspections identify conditions that are out of compliance with GO 95. This is a five-year inspection cycle.

- **Above Ground 5 (Internal and External Inspections)**

This cycle consists of Above Ground Dead-front (AGDF) and Above Ground Live-front (AGLF) detailed external and internal inspections of dead-front and live-front pad-mounted facilities to identify conditions that are out of compliance with GO 128.

- *AGDF (Above Ground Dead-front, Five-year)*

- This cycle consists of a detailed external and internal inspection of dead-front pad-mounted facilities to identify conditions out of compliance with GO 128. The cycle is still named AGDF to separate the dead-front equipment data from live-front equipment data. This is a five-year inspection cycle.

- *AGLF (Above Ground Live-front, Five-year)*

- This cycle consists of a detailed external and internal inspection of live-front pad-mounted facilities to identify conditions out of compliance with GO 128. This is a five-year inspection cycle.

- **Subsurface with Equipment, SS3 (Subsurface, Three-year)**

This cycle consists of a detailed inspection of subsurface structures (manholes, vaults, primary hand-holes and subsurface enclosures) containing distribution equipment. Thus, structures with only cable taps, splices or pass-throughs are excluded as they are not required by GO 165.

The SS3 cycle consists of a detailed inspection of these facilities to identify conditions out of compliance with GO 128. This is a three-year inspection cycle.

- **Switch, SW3 (Oil or Gas Switch, Three-year)**

This consists of a specialized inspection of all subsurface and pad-mounted oil and gas switches. Oil samples and gas pressure readings are obtained and recorded in SAP. The laboratory performs analysis of oil samples for low dielectric strength and high-water content. These results and the inspection records are stored in SAP. The status of “Do Not Operate Energized” (DOE) switches for prioritizing replacements are also tracked in SAP and GIS mapping system. Other conditions out of compliance with GO 128 are also identified. This is a three-year inspection cycle.

- **Wood Pole Integrity (10 year/15 year with special)**

Each pole is inspected visually, and if conditions allow, intrusively. This inspection occurs on a 10-year cycle with the exception of poles aged 15 years or more that have undergone a “special inspection” within the last 5 years as required by GO 95 Rule 44.2. For wood poles that have a passing intrusive “special” inspection within the last 5-years, the 10-year routine inspection would be deferred to the next cycle. So, a pole more than 15 years old that has a previous passing intrusive inspection could be inspected at a 15-year interval. The form of the intrusive inspection is normally an excavation about the pole base and/or a sound and bore of the pole at ground line. Currently, treatment is applied in the form of ground line pastes and/or internal chemical treatment during the inspection. The 10-year/15 year with special inspection cycle fulfills the requirements of GO 165, which are: (1) all poles over 15 years of age are intrusively inspected within ten years; and (2) all poles which previously passed intrusive

inspection are to be inspected intrusively again on a 20-year cycle. These are a 10-year inspection cycle, with exception for poles undergoing a special inspection.

The wood pole integrity inspections are currently performed by an SDG&E contractor who also applies wood preservative treatments and installs mechanical reinforcements (Steel Reinforcement). The type of treatment is dependent upon the age of the pole, the individual inspection history, and the overall condition of the structure.

During the course of the wood pole integrity inspections, SDG&E's contractor for wood pole integrity inspections will bore into the pole to determine if it needs reinforcement or replacement based on the remaining shell thickness and location. The choice to restore a pole rather than replace the pole is based on the strength of the pole (measured by remaining shell thickness) and compliance with SDG&E's internal standards and specifications. SDG&E's Transmission Engineering and Electric Distribution Standards Specification for Inspection, Treatment and Reinforcement of In-Service Wood Poles (Specification NO. TE-0108 and Specification NO. 337) specifies the criteria for the rejection of a pole and addresses a pole's suitability for steel reinforcement based on the remaining shell thickness for various lengths of pole and location. If a pole does not have sufficient shell thickness for steel reinforcement or is located in a high fire threat district, it is rejected and replaced.

- **Patrol 1 (urban patrol, one year)**

The purpose of the urban patrol is to identify obvious structural problems and hazards. This cycle consists of a simple visual inspection of every applicable overhead, underground and streetlight facility in rural areas. Under agreement of interpretation with Commission Staff, "urban" is defined as incorporated areas (GO 165 defined "urban" as those areas with 1000 persons or more per square mile). GO 165 defines a "patrol" as a "simple visual inspection, of applicable utility equipment and structures that is designed to identify obvious structural problems and hazards." When patrols have been completed, any identified structural problems and hazards are recorded in SAP. This is a one-year inspection cycle.

- **Patrol 2 (rural patrol, one year)**

The purpose of the rural patrol is to identify obvious structural problems and hazards. This cycle consists of a simple visual inspection of every applicable overhead, underground and streetlight facility in rural areas. Under agreement of interpretation with the CPUC, "rural" is defined as unincorporated areas (GO 165 defined "rural" as those areas with less than 1000 persons per square mile). GO 165 defines a "patrol" as a "simple visual inspection, of applicable utility equipment and structures that is designed to identify obvious structural problems and hazards."

Consistent with D. 09-08-029, SDG&E conducts annual patrol inspections in rural areas, which include areas within SDG&E's designated Tier 2 & Tier 3 areas of the High Fire-Threat District as per D. 17-12-024 in R. 15-05-2006. When patrols have been completed, any identified structural problems and hazards are recorded in SAP. This is a one-year inspection cycle.

SDG&E CMP INSPECTION CYCLES

SDG&E Electric Distribution System Inspection Cycles (Maximum intervals in years)

	PATROL		DETAILED		INTRUSIVE	
	Urban	Rural	Urban	Rural	Urban	Rural
Transformers						
Overhead	Patrol1	Patrol2*	OHVI 5	OHVI 5		
Underground (Subsurface)	Patrol1	Patrol2*	SS 3	SS 3		
Pad Mounted (live front)	Patrol1	Patrol2*	AGLF 5	AGLF 5		
Pad Mounted (dead front)	Patrol1	Patrol2*	AGDF 5	AGDF 5		
Switching/Protective Devices						
Overhead	Patrol1	Patrol2*	OHVI 5	OHVI 5		
Underground (Subsurface)	Patrol1	Patrol2*	SS 3	SS 3		
Pad Mounted (live front)	Patrol1	Patrol2*	AGLF 5	AGLF 5		
Pad Mounted (dead front)	Patrol1	Patrol2*	AGDF 5	AGDF 5		
Oil & Gas switches (above or below surface)	Patrol1	Patrol2*	SW 3	SW 3		
Regulators/Capacitors						
Overhead	Patrol1	Patrol2*	OHVI 5	OHVI 5		
Underground (Subsurface)	Patrol1	Patrol2*	SS 3	SS 3		
Pad Mounted (live front)	Patrol1	Patrol2*	AGLF 5	AGLF 5		
Pad Mounted (dead front)	Patrol1	Patrol2*	AGDF 5	AGDF 5		
Overhead Conductors and Cables	Patrol1	Patrol2*	OHVI 5	OHVI 5		
Street Lighting	Patrol1	Patrol2*	x	x		
Wood Poles under 15 years	Patrol1	Patrol2*	OHVI 5	OHVI 5	Wood Pole Intrusive 10	Wood Pole Intrusive 10
Wood Poles over 15 years which have not been subject to intrusive inspection	Patrol1	Patrol2*	OHVI 5	OHVI 5	Wood Pole Intrusive 10	Wood Pole Intrusive 10
Wood Poles which passed intrusive inspection			OHVI 5	OHVI 5	Wood Pole Intrusive 15	Wood Pole Intrusive 15

*Patrol inspections conducted once per year within all of SDG&E's Service Territory, including within Tier 2 & Tier 3 of the High Fire-Threat District as per D.17-12-024 in R. 15-15-006.

OFFICER VERIFICATION

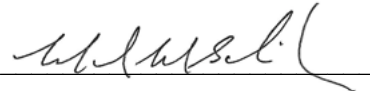
I, Michael Schneider, declare the following:

I am an Officer of San Diego Gas & Electric and am authorized to make this verification on its behalf.

I am informed and believe that the matters stated in the foregoing 2022 General Order 165 Report are true to my own knowledge, except as to matters which are therein stated on information and belief, and as to those matters, I believe them to be true.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct based on my information and belief.

Executed this 3rd day of July 2023, in San Diego, California.



Michael M. Schneider
Vice President – Risk Management & Compliance,
Chief Compliance Officer, Chief Risk Officer
SDG&E