

Inspecting, Testing, and Maintaining Wood Poles

SUMMARY

There are millions of wood poles in PG&E’s electric distribution and transmission systems. These assets must be used safely and maintained properly to ensure safety and reliability.

This utility standard establishes the following requirements:

- Definition of wood poles.
- Inspecting and testing the structural integrity of wood poles in accordance with all applicable regulations.
- Reinforcing and reusing wood poles.
- Testing wood poles before climbing or changing either the stress or strain on wood poles.

This standard supports the following policies/orders:

- [Utility Operations \(UO\) Policy 3-7, “Gas and Electric Operation, Maintenance, and Construction”](#)
- [California Public Utilities Commission \(CPUC\) General Order \(G.O.\) 165, “Inspection Requirements for Electric Distribution and Transmission Facilities”](#)
- Relevant portions of [G.O. 95, “Rules for Overhead Electric Line Construction”](#)

TARGET AUDIENCE

This standard is intended for all personnel who climb, maintain, and/or inspect wood transmission and/or distribution poles.

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REQUIREMENTS

1 Safety Requirements



WARNING

IF there is any evidence or reasonable doubt that a pole is not safe to climb, OR IF it is not possible to test a pole,

THEN adequately support the pole before climbing or changing either the stress or strain on the wood pole.

1.1 To avoid personal injury, perform all work as described in the following utility procedures:

- [TD-2325P-01, "Intrusively Inspecting, Reinforcing, and Reusing Wood Poles"](#)
- [TD-2325P-02, "Testing Wood Poles Before Climbing"](#)
- [TD-2325P-04, "Inspecting Customer- and Contractor-Owned Poles"](#)
- [TD-2325P-08, "Intrusively Inspecting Wood Poles Using IML PowerDrill Inspection Tool"](#)

2 General Requirements

2.1 Wood poles, as defined in this standard include, but are not limited to:

- Single wood poles
- Multi-pole wood structures
- Wood streetlight poles
- Laminated wood poles
- Through-bore wood poles
- Wood stubs
- Intumescent-wrapped wood poles
- Idle wood poles
- Wood guys (pusher poles)
- Wood guy poles
- Wood poles inside substations/switching stations/transmission transition stations

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2.1 (continued)

NOTE

Trees are not considered wood poles.

- 2.2 This standard applies to wood poles owned by PG&E, customers, and communications companies.
- 2.3 Inspect, test, and evaluate PG&E-owned wood poles for serviceability and structural integrity on a case-by-case basis, as described in [Utility Procedure TD-2325P-01, "Intrusively Inspecting, Reinforcing, and Reusing Wood Poles,"](#) to ensure reliable, high-quality, and safe operation.
- 2.4 Never let the period between intrusive inspections of wood poles (measured in years) exceed the time specified in [G.O. 165, "Inspection Requirements for Electric Distribution and Transmission Facilities."](#) See [Table 1](#) below, excerpted from [G.O. 165](#), for these timeframes.
 - 1. PG&E applies the requirements shown in [Table 1](#) below to both transmission and distribution wood poles.
 - 2. PG&E Asset Strategy may choose to inspect on a more frequent basis, based on risk and/or strategy, such as on a 10-year cycle.

Table 1. Distribution Inspection Cycles (Maximum Intervals in Years)

| | Intrusive | |
|--|-----------|-------|
| | Urban | Rural |
| Wood poles under 15 years | --- | --- |
| Wood poles over 15 years which have not been subject to intrusive inspection | 10 | 10 |
| Wood poles which passed intrusive inspection | 20 | 20 |

- 3. Transmission and distribution wood pole inspection programs meeting the intrusive inspection requirements of [G.O. 165](#) must be carried out on a systemwide basis. These inspection programs detect poles with damage or decay from groundline to pole top.
- 4. Complete and retain [Form TD-2325P-01-F01, "Pole Inspection/Test Report,"](#) (or equivalent documentation supplied by Pole Test and Treat [PT&T] personnel), for all wood poles being inspected or tested.
 - a. Per [G.O. 165](#), Rule III.C, "Record Keeping," on Pages 2–3:

"The utility shall maintain records for ... the life of the pole for intrusive inspection activities. Such records shall be made available to parties or pursuant to Commission rules upon 30 days notice. Commission staff shall be permitted to inspect such records consistent with Public Utilities Code Section 314 (a)."

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- 2.5 Use the techniques described in [Utility Procedure TD-2325P-01, “Intrusively Inspecting, Reinforcing, and Reusing Wood Poles.”](#) to reinforce and reuse wood poles.
- 2.6 Test wood poles before climbing or changing either the stress or strain on those wood poles as described in [Utility Procedure TD-2325P-02, “Testing Wood Poles Before Climbing.”](#)
- 2.7 Inspect customer-owned wood poles before installation as described in [Utility Procedure TD-2325P-04, “Inspecting Customer- and Contractor-Owned Poles.”](#)
- 2.8 Use the IML PowerDrill inspection tool when applicable, as described in [Utility Procedure TD-2325P-08, “Intrusively Inspecting Wood Poles Using IML PowerDrill Inspection Tool.”](#)

3 Roles and Responsibilities

- 3.1 Electric Transmission and Distribution Standards personnel are responsible for:
 1. Providing technical consultation to ensure compliance with the requirements of this standard.
- 3.2 Maintenance and Construction (M&C) personnel are responsible for:
 1. Ensuring that M&C personnel are aware of and comply with the requirements of this standard.
 2. Ensuring that M&C personnel assigned to perform wood pole inspections, testing, and subsequent maintenance tasks are qualified to perform the tasks necessary to comply with this standard.
 3. Ensuring that wood pole inspections, testing, and maintenance work is performed safely, efficiently, and in a timely manner.
 4. Ensuring that any identified Corrective Action Program (CAP) issue is documented properly, completed promptly, and installed correctly, as well as using work verification to monitor results.
 5. Verifying the accuracy and completeness of records and documentation and ensuring that auditable records and documentation are current and readily accessible.
 6. Ensuring that wood pole testing and replacement work is tracked and reported correctly.
- 3.3 Asset Strategy personnel are responsible for:
 1. Creating, routing for approval, and distributing this standard and its associated work procedures.
 2. Developing a systemwide annual plan for wood pole testing and treating.
 3. Working with other teams to continue to improve the accuracy of the Asset Registry.

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3.4 PT&T/Sourcing personnel are responsible for:

1. Hiring PT&T contractors to perform wood pole testing, treating, and reinforcing.
2. Implementing an effective quality assurance (QA) program to assess compliance with this standard's requirements for wood pole testing, treating, and reinforcing.
3. Verifying the accuracy and completeness of the annual workplan and ensuring that auditable records and documentation are current and readily accessible.
4. Providing auditable PT&T records to regulatory compliance and system inspections personnel when requested.
5. Developing performance measures and establishing schedules for reporting the progress of the systemwide annual plan.

3.5 PT&T Quality Control (QC) personnel are responsible for:

1. Implementing a QC program to assess a subset of the completed inspections to ensure compliance with the requirements for wood pole testing, treating, and reinforcing.
2. Verifying the accuracy and completeness of the records and documentation.
3. Sharing feedback and trends with PT&T and Asset Strategy personnel in a timely manner to close gaps on systemic issues with items such as inspector training, guidance document updates, and inspection tool enhancements.

3.6 Personnel assigned to PT&T tasks are responsible for:

1. Effectively and efficiently performing their assignments.
2. Performing only tasks for which they are trained, knowledgeable, and qualified.
3. Notifying their supervisors of any additional training, equipment, or resources needed to effectively and efficiently perform assigned tasks.

3.7 Regulatory Compliance personnel are responsible for:

1. Providing auditable records and documentation to regulatory agencies upon request.
2. Developing responses to regulators for audits, data requests, self-reported non-compliances, and violations.
3. Submitting the systemwide plans and periodic reports to the CPUC, the California Independent System Operator (CAISO), and other regulatory agencies.

END of Requirements

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DEFINITIONS

Intrusive inspection: An intrusive inspection involves movement of soil, taking samples for analysis, and/or using more sophisticated diagnostic tools beyond visual inspections or instrument readings (including IML PowerDrill, THOR Poletest [“Thor Hammer”], and/or similar technology).

Non-wood pole: Light-duty steel poles, lattice steel structures, steel structures, steel towers, transmission steel poles, concrete poles, and fiberglass/composite poles.

Wood pole: Poles made of wood, including single wood poles, two-pole wood structures, three-pole wood structures, wood streetlight poles, laminated wood poles, through-bore wood poles, wood stubs, intumescent-wrapped wood poles, idle wood poles, wood guys (pusher poles), wood guy poles, and wood poles inside substations/switching stations/transmission transition stations. Trees are not considered to be wood poles.

IMPLEMENTATION RESPONSIBILITIES

Regulatory Compliance managers communicate this standard to supervisors and personnel and ensure all personnel are adequately trained on this standard.

Area electric superintendents communicate this standard to electric supervisors in their areas.

Electric supervisors ensure all personnel are adequately trained on this standard.

Area electric superintendents communicate this standard to electric compliance supervisors in their areas.

Compliance supervisors ensure all compliance inspectors are adequately trained on this standard.

Service Planning and Estimating supervisors communicate this standard to Service Planning and Estimating personnel.

PT&T personnel supervisors communicate this standard to PT&T personnel and contractors.

GOVERNING DOCUMENT

NA

COMPLIANCE REQUIREMENT / REGULATORY COMMITMENT

Information and Records Management:

PG&E Data, Information, and Records are company assets that must be traceable, verifiable, accurate, and complete and can be retrieved upon request. Functional Areas are responsible for complying with the Information & Records Governance Policy, Standards, and the Information and Records Retention Schedule. Refer to [GOV-7101S, “Enterprise Records and Information Management Standard”](#) for further guidance or contact Information & Records Governance at Information&RecordsGovernance@pge.com.

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COMPLIANCE REQUIREMENT / REGULATORY COMMITMENT (continued)

CPUC G.O.s:

- [95, “Rules for Overhead Electric Line Construction”](#)
 - Rule 31.1, “Design, Construction and Maintenance,” on Page III-5 requires personnel to maintain electric supply overhead systems in a condition that enables them to provide safe, proper, and adequate service.
 - Rule 31.2, “Inspection of Lines,” on Page III-6 requires personnel to inspect lines frequently and thoroughly to ensure that they are in good condition.
 - Rule 44.3, “Replacement,” on Page IV-11 requires personnel to replace or reinforce poles before safety factors are reduced to less than 2/3 of the original numbers due to deterioration or changes in construction.
- [165, “Inspection Requirements for Electric Distribution and Transmission Facilities,”](#) requires personnel to patrol and inspect the electric transmission and distribution systems on a specifically defined minimum basis.

REFERENCE DOCUMENTS

Developmental References:

[Code of Safe Practices \(CSP\)](#)

[Utility Standard SAFE-1001S, “PG&E Injury & Illness Prevention Plan \(IIPP\)”](#)

Supplemental References:

[UO Policy 3-7, “Gas and Electric Operation, Maintenance, and Construction”](#)

Utility Procedures:

- [TD-2325P-01, “Intrusively Inspecting, Reinforcing, and Reusing Wood Poles”](#)
 - [Form TD-2325P-01-F01, “Pole Inspection/Test Report”](#)
- [TD-2325P-02, “Testing Wood Poles Before Climbing”](#)
- [TD-2325P-04, “Inspecting Customer- and Contractor-Owned Poles”](#)
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APPENDICES

NA

ATTACHMENTS

NA

DOCUMENT REVISION

This utility standard cancels Utility Standard TD-2325S, "Inspecting, Testing, and Maintaining Wood Poles," Rev. 2, dated 02/26/2019.

DOCUMENT APPROVER

██████████, Senior Director, Distribution Asset Strategy

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REVISION NOTES

| Where? | What Changed? |
|---|--|
| Entire document | Updated content to address outstanding Corrective Action Program (CAP) and CPUC commitments, including references to specific rules and requirements. Updated content to ensure both transmission and distribution are referenced. Updated content to include contractors. |
| Section 2 | Added timeframes and cited their source. |
| Section 3 | Added new Section 3, "Roles and Responsibilities," with content previously in Implementation Responsibilities. |
| Definitions | Added definitions for intrusive inspections, non-wood poles, and wood poles. |
| Implementation Responsibilities | Updated content. |
| Compliance Requirement / Regulatory Commitment | Added Enterprise Records and Information Management (ERIM), "Information and Records Management," statement. |
| Reference Documents | Removed CPUC G.O.s. Added UO Policy 3-7 and several utility procedures. |
| Attachments | Moved utility procedures to Reference Documents. |
| Document Approver, Document Owner, and Document Contact | Updated document approver, owner, and contact information. |