

SUMMARY

This utility procedure provides guidelines for assigning priority codes and due dates to conditions found in electric transmission line facilities.

This procedure supersedes <u>Electric Transmission Preventive Maintenance (ETPM) Manual</u> (TD-1001M), Sections 2.3.5.1 through 2.3.5.4, including Tables 3 and 4. The goal of these changes is to align the existing priority codes with <u>California Public Utilities Commission</u> (<u>CPUC</u>) <u>General Order (G.O.) 95, "Rules for Overhead Electric Line Construction,"</u> Rule 18, "Maintenance Programs and Resolution of Potential Violations of General Order 95 and Safety Hazards," Levels 1, 2, and 3.

Level of Use: Informational Use

TARGET AUDIENCE

This procedure applies to the following electric transmission personnel involved in the maintenance of transmission line facilities:

- Asset strategy
- Standards and work methods
- Maintenance and construction (M&C)
- System inspections (SI)
- Centralized Inspection Review Team (CIRT)
- Compliance
- Engineering and estimating

SAFETY

This procedure describes administrative tasks that do not expose personnel or the public to any specific hazards.

BEFORE YOU START

NA

TABLE OF CONTENTS

SECTION	TITLE	PAGE
1	Background Information	2
2	Assigning Priority Codes and Due Dates	2



PROCEDURE STEPS

1 Background Information

- 1.1 The original Table 4, "Guide for Assigning Priority Codes," of the <u>ETPM Manual</u> was based on Failure Mode and Effects Analysis (FMEA). The FMEA lists electric transmission line components with single failure modes that can cause an ignition, as determined by subject matter experts (SMEs) and Applied Technology Services (ATS) review and supplemental studies.
- 1.2 To properly allocate resources to the operational and safety risks related to wildfire, public/worker safety, and reliability, and to align with <u>CPUC G.O. 95</u>, "Rules for Overhead <u>Electric Line Construction,"</u> Rule 18, "Maintenance Programs and Resolution of Potential Violations of General Order 95 and Safety Hazards," a review of <u>ETPM Manual</u>, Table 4, "Guide for Assigning Priority Codes," was conducted and consisted of the following elements:
 - ATS testing and reporting
 - Benchmarking with other utilities
 - <u>G.O. 95</u>, Appendix I and J study
 - Technical analysis with internal and industry SMEs
 - Field Safety Review (FSR) historical data
 - Asset management review
- 1.3 As a result of the review described above, the existing priority codes, definitions, and conditions specified in Table 3, "Priority Codes," and Table 4 of the <u>ETPM Manual</u> have been superseded and revised. In addition, Table 4 was reorganized for clarity. Tables 3 and 4 of the <u>ETPM Manual</u> now correlate to <u>Table 2</u> on Page 4 and <u>Table 4</u> on Page 8 in this procedure.

2 Assigning Priority Codes and Due Dates

- 2.1 Assessing Conditions
 - 1. EVALUATE facility conditions at each location when performing patrols, inspections, or post-checking the completed work.
 - a. SEE <u>ETPM Manual, Section 2.4, "Asset Inspections,"</u> for the list of field conditions that require evaluation.
 - 2. Using T-Line experience and judgement, the Qualified Company Representative (QCR) DETERMINES the following:
 - Severity of the condition



2.1 (continued)

- Risk factors
- Appropriate priority level
- Reasonable time frame to plan, design, and complete required corrective work
- 3. The QCR and Centralized Inspection Review Team (CIRT) CONSIDER the following risk factors encountered in the field when recommending priority and repair codes:
 - The risk of exposure to the public, workers, or employees
 - The degree of abnormality encountered
 - Potential for the condition to further deteriorate
 - Risks, if the condition continues to deteriorate
 - Impact of the failure on system reliability, customers, and service, and/or the potential for injury
 - Potential ignition risk
- 4. CONSIDER additional potential external factors listed in <u>Table 1</u> below (not an exhaustive list) when determining time frames for planning, design, and repairs.

Environment	Property/Land Use	Public/Worker Safety
Coastal/corrosion areas	Parking lot	 Proximity to school/park
Mountainous region	Agricultural area	Proximity to populous area
Agricultural area	Vacant field	Pedestrian traffic
• Urban	• Urban	Highway or major artery
Rural	Rural	crossing
Season:	Public thoroughfare	River crossing
 High wind 		 Pedestrian traffic
o Rain		
o Snow		
o Summer		
High Fire Threat District (HFTD)		
High Fire Risk Area (HFRA)		

Table 1. External Factors for Consideration in Time Frame Assessment



2.1 (continued)

5. <u>Table 2</u> below lists the priority codes and associated time frames for typical response/repair action.

Priority Code	G.O. 95, Rule 18 Level	Priority Description – Time Frame ¹
A	1	The condition is urgent and requires immediate response and continued action until the condition is repaired or no longer presents a potential hazard. SAP due date is 30 days – to allow time for post-construction processes and notification close-out.
В	-	Not used for maintenance corrective action priority.
E	2	 Corrective action is required, as follows: Within 6 months for HFTD Tier 3² Within 12 months for HFTD Tier 2/HFRA/Zone 1² Within 12 months for potential violations that compromise worker safety Within 36 months for all other potential violations
F	3	Corrective action is required within 60 months.

Table 2. Priority Codes

¹ Time frames listed are "Not to Exceed" and QCR/CIRT may define time frames according to site-specific conditions.

² IF the condition in the HFTD Tier 3 OR Tier 2/HFRA/Zone 1 does **not** create a fire risk (non-threatening), THEN the corrective action is required **within 36 months**.

- a. QCR and CIRT must FACTOR IN site-specific conditions AND DEFINE time frames, as necessary.
- b. REFER to <u>Section 2.2</u> on Page 5 and <u>Table 3</u>, "<u>Transmission Line Overhead</u> <u>Facilities Conditions – Impact on Ignition Risk</u>," on Page 6.
- c. QCRs must REPORT immediately any "Priority Code A" abnormal condition to the transmission line supervisor.
 - (1) REFER to <u>Utility Bulletin TD-8123M-B001</u>, "Priority A Notification Management for Transmission and Substation (T&S)."
 - (2) The transmission supervisor OR QCR CONTACTS the Grid Control Center (GCC).



- 2.2 Priority Code Due Dates for High Fire Risk Conditions within HFTDs
 - 1. During the Fire Safety Rulemaking in 2017 and 2018, new <u>G.O. 95</u> requirements impacting transmission lines were adopted, including the items listed below.
 - a. Rule 21.2D added a definition for HFTDs, as follows:
 - Zone 1 Tier 1 High Hazard Zones (HHZ) on the Tree Mortality Map
 - Tier 2 Areas on the CPUC Fire-Threat Map with an elevated risk for destructive utility-associated wildfires
 - Tier 3 Areas on the CPUC Fire-Threat Map with an extreme risk for destructive utility-associated wildfires
 - Zone 1 overlapping with Tier 2 and Tier 3 areas the strictest regulations apply
 - b. Rule 18 added requirements for the prioritization and correction of safety hazards that create a first risk in HFTDs. The following changes impact transmission:
 - Shortened time frames not to exceed timelines for correcting safety hazards that create a fire risk in HFTDs
 - 6 months in Tier 3 (fully implemented 9/1/18)
 - 12 months in Tier 2 (fully implemented 6/30/19)
 - 2. Updated <u>Numbered Document 072148</u>, "Fire Responsibility and CPUC Fire-Threat <u>Areas</u>," reflects the CPUC HFTDs. The Electric Transmission Geographic Information System (ET GIS), MapGuide, and Google Earth have also been updated with this information.
 - 3. <u>Table 3, "Transmission Line Overhead Facilities Conditions Impact on Ignition Risk,"</u> on Page 6 lists conditions for transmission line overhead facilities that may or may not create an ignition risk in the HFTDs (not an exhaustive list).



2.2 (continued)

Table 3.	Transmission Line Overhead Facilities Conditions – Impact on Ignition R	lisk
	Tranoninoolon Ente eventieda i deindee eenadene inipaet en iginden it	

Type of Risk	Condition
Ignition Risk	Excessively sagging conductors
	Inadequate separation
	 Damaged or deteriorated conductors and associated conductor hardware (e.g., splices, jumpers, dampers)
	Broken insulators compromising adequate insulation values
	Damaged equipment (e.g., switches)
	Damaged or deteriorated crossarms
	Damaged or deteriorated bird guards
	Deteriorated, damaged, or excessively leaning poles
	Deteriorated, damaged, or excessively leaning towers or tower foundations
	Damaged or broken guys or guy systems (e.g., anchors, splices)
	 Equipment found as burnt, flaked, or with evidence of arcing (e.g., insulators, jumpers)
	Sagging guys
	 Deteriorated, damaged, or missing hardware that creates a fire risk (e.g., could cause structural failure, sparking)
	Insufficient clearance from vegetation
	Vegetation causing strain or abrasion
	Dead trees that could strike facilities
	Broken or exposed ground wire
	Missing or damaged wood pole bridging on underbuild
Non-Ignition	Preform cross ties not installed properly
Risk	Buckled or bent secondary member on a lattice structure
	Damaged marker balls
	Soil movement not compromising the insulators or conductor
	Non-seasonal standing water
	Damaged, deteriorated, or missing ground molding



- 2.3 Guide for Assigning Priority Codes
 - 1. The inspector's primary responsibility in an overhead electric facility inspection or patrol is to EXAMINE AND RECORD the specific conditions of the facilities.
 - a. PERFORM a detailed evaluation to identify any structural problems or hazards that may adversely impact safety, service reliability, or asset life, and to determine when each abnormal condition warrants corrective action.
 - (1) USE visual observation, measuring devices and tools, AND/OR routine diagnostic tests, as required.
 - 2. USE the guidelines in <u>Table 4, "Guide for Assigning Priority Codes,"</u> (Pages 8–18) to grade abnormal conditions that may adversely impact safety, service reliability, or asset life that, in the judgement of the QCR or CIRT, require corrective action.

NOTE

The Priority Code levels are for typical adverse conditions.

3. Inspector must ADJUST the priority code levels up or down, based on the actual condition observed.

NOTE

- <u>Table 4</u> does not provide a comprehensive list of all possible conditions.
- The list of conditions in <u>Table 4</u> undergoes continuous reviews and revisions on an as-needed basis.
- 4. REFER to <u>G.O. 95, Appendix J, "Exceptions from the Maximum Time Period for</u> <u>Corrective Actions for Level 3 Conditions in Rule 18,"</u> for items that may be considered as opportunity maintenance.
 - a. REFER to <u>Utility Procedure TD-1018P-01</u>, <u>"Transmission Construction</u> <u>Completion Standards Checklist (CCSC)</u>," for the opportunity maintenance process.



2.3 (continued)

Component 1	Priority Code		
Component ¹	A (Level 1 – Immediate)	E (Level 2 – 6/12/36 Months)	F (Level 3 60 Months)
Anchor-Steel (ANCS) Anchor-Wood (ANCW) Note: Anchor head buried (per <u>Numbered</u> <u>Document 025998</u> , e.g., incomplete inspection) ² See Job Aid <u>TD-1001M-JA13</u> .	A (Level 1 – Immediate)	 E (Level 2 – 6/12/36 Months) 25–50% Material loss. Anchor rod concrete has significant cracking; needs repair and resealing. Soil movement/slide. ³ Guy anchor being pulled out. Twisted/bent anchor rod. 	 F (Level 3 60 Months) 15–25% Material loss Anchor rod concrete has minor cracking; needs resealing. Anchor rod in concrete not sealed in corrosive environments. Re-seal deteriorated mastic.

¹ For Action Code abbreviations, use INST (Install), REPA (Repair), REPL (Replace)

² Return to field for completion. Do not process notification (keep in S5 status) until completed in field and anchor condition is identified.

³ For geotechnical concerns, contact civil engineering and geosciences personnel.



Component 1	Priority Code		
Component ¹	A (Level 1 – Immediate)	E (Level 2 – 6/12/36 Months)	F (Level 3 60 Months)
Guy Wire-Steel (GYWS) Guy Wire-Wood (GYWW) See Job Aid TD-1001M-JA13.	 A (Level 1 – Immediate) > 50% Material loss Broken or missing load bearing guy 	 E (Level 2 – 6/12/36 Months) 25–50% Material loss Broken or missing storm guy where required Slack or overtension guys ⁴ Clearance from energized conductor Framing configurations where a bird can land and reach energized parts and guy bonded and not sectionalized (e.g., does provide a path to ground). ⁵ Guy insulator in poor condition Preform grips not in thimbles Preform cross ties not properly installed Where automatic guy strand dead ends and splices exist, follow Job Aid <u>TD-1001M-JA13</u>. 	 F (Level 3 60 Months) 15–25% Material loss Fiberglass rod not installed or installed in wrong position ⁵ Turnbuckle out of threads

⁴ For slack or overtension load bearing guys, recommend to address within 3 months.

⁵ Follow guidance in <u>Numbered Document 022178</u>.



Component 1	Priority Code		
Component ¹	A (Level 1 – Immediate)	E (Level 2 – 6/12/36 Months)	F (Level 3 60 Months)
Conductor-Steel (CONS) Conductor-Wood (CNDW) Shield Wire/OPGW, ADSS, non-ADSS lashed ⁶ (SHLS) (SHLW) Jumpers (JUMS) (JUMW) Tie Wire (TIES, TIEW) Ground Wire (GRWS, GRWT, GRWW) See Job Aids TD-1001M-JA10 and TD-1001M-JA11.	 > 50% Material loss Broken strands and out-of- lay strands (e.g., gunshot) > 40%, <u>Numbered</u> <u>Document 028855</u> Active arcing Broken or loose tie wire (conductor not well seated in the saddle with vertical load or not fully captured with tie wire) 	 10–50% Material loss Broken strands and out-of-lay strands (e.g., gunshot) 5–40%, <u>Numbered Document 028855</u> Evidence of arcing ⁷ Broken or loose tie wire (conductor well seated in the saddle with vertical load or partially captured with tie wire) Broken ground wire ⁸ Loose connector or weight Twisted bundled conductor ⁷ Conductor kinked/pinched at clamp Vibrating (send to engineering personnel for evaluation) Ground wire in poor condition (corrosion, flashed, missing) 	 Broken strands and out-of-lay strands (e.g., gunshot); <u>Numbered Document 028855</u> Uneven sag (send to engineering personnel for evaluation)

⁶ For OPGW, ADSS, and non-ADSS lashed fiber cable, refer to the associated job aids referenced in Section 2.4.8 of the *ETPM Manual* for specific conditions and priorities.

⁷ Recommend to address within 3 months.

⁸ Consider elevating tag priority if condition represents imminent risk to public safety (i.e., break near ground level in urban setting).



Component 1	Priority Code		
Component ¹	A (Level 1 – Immediate)	E (Level 2 – 6/12/36 Months)	F (Level 3 60 Months)
Damper-Steel (DAMS) Damper-Wood (DAMW) Spacers (SPAS, SPAW)		 Broken spacer Broken/missing/out of position damper Bent > 45 degrees damper Missing spacer (where required) 	
Splices (SPLS) (SPLW) See Job Aids <u>TD-1001M-JA14</u> and <u>TD-1001M-JA19</u>	 > 50% Material loss Very hot (> 100-degree differential) 	 Hot (< 100-degree differential) ⁹ Any visible damage to splice Automatic Splice Any splice < 10 feet to clamp 	
Electrical clearances: GO95 Clear Infract- Tower (GO9S) GO95 Clear Infract- Wood (GO9W) Right of Way (ROW1) Vegetation (VEGN) Vegetation-Tower (VEGT) See Job Aids TD-1001M-JA10 and TD-1001M-JA20	 Tree contacting line or showing signs of contact (burnt leaves or limbs) Encroachments 	 Trees clearance < G.O. 95 or PG&E-required Circuit-to-circuit Burnt Ground clearance < G.O.95 or PG&E-required Grade change (ground clearance < G.O.95 or PG&E-required) Significant vegetation around base of structure; may be impacting climbing or ability to inspect base of structure Jumper clearance less than requirement; <u>Numbered Document 068177</u> 	Encroachments to be resolved via Land Management

⁹ Recommend to address within 3 months.



Component ¹	Priority Code		
Component ·	A (Level 1 – Immediate)	E (Level 2 – 6/12/36 Months)	F (Level 3 60 Months)
Foundation/Concrete- Tower (FOND) ¹⁰ Note: Earth covered/buried foundation (covering steel member) (incomplete inspection) ¹¹ Direct Buried Grillage Note: Uncover 6 inches to determine conditions. If no issue, rebury, no tag needed. Based on condition seen, if additional excavation needed, expose stub < 18 inches ¹² See Job Aid TD-1001M-JA12	 Significant soil erosion or movement causing lack of support around the foundation ¹³ Damage to, or separation of, main structural support members or stub angle tower leg that compromised structural integrity Direct buried grillage > 50% material loss 	 Soil movement (e.g., movement causing bowing of tower members) ¹³ Erosion (vertical) > 3 feet ¹³ Slide 10–15 inches ¹³ Direct buried grillage rust, 30–50% material loss Stub in concrete, has significant cracking, needs repair and resealing Rebar exposed with > 50% material loss 30–50% material loss of foundation or stub Buckled rebar, concrete spalling Cracked (cracks > ½ inch) ¹⁴ Exposed wood pile (contact civil engineering personnel for assessment) Rotated 	 Erosion 1–3 feet ¹³ Stub in concrete, has minor cracking, needs resealing Stub in concrete needs resealing Cracked (cracks 1/16–1/2 inch)

¹⁰ For structural integrity or other significant concerns, request an engineering assessment by directly contacting civil engineering or through the local supervisor.

¹¹ Return to field for completion. Do not process (keep in S5 status) until completed in field and foundation condition is identified.

¹² Less than 18 inches minimizes the need for extensive excavation that could compromise tower stability and compaction effort.

¹³ For geotechnical concerns, contact civil engineering and geosciences personnel.

¹⁴ For cracks that extend to the stub, recommend to address within 3 months.



Component ¹	Priority Code		
Component ·	A (Level 1 – Immediate)	E (Level 2 – 6/12/36 Months)	F (Level 3 60 Months)
Insulator (INSU) Insulator-Steel (INSS)	> 50% Material lossContaminated (arcing)	 30–50% Material loss Contaminated (heavy) ¹⁵ Tracking (heavy) 	 Contaminated (medium) Tracking (medium) Out-of-plumb post insulator >
Insulator-Wood (INSW) Note: For insulators that are flashed, cracked, broken, gunshot, or chipped > 1-1/2 inches, see Job Aid <u>TD-1001M-JA07</u> .		 Missing/loose cotter key in retainer pin ¹⁶ Out-of-plumb, post or suspension insulator, exhibiting signs of impacting conductor Chalking/cracking on polymer ¹⁷ Corona rings damaged, missing (where required), or improperly installed (500 kilovolt [kV] only) 	6 inches

¹⁵ Recommend to address heavy guano contamination within 3 months.

¹⁶ Other missing or loose cotter key configurations will be prioritized based on site-specific conditions.

¹⁷ Recommend to address within 12 months.



Component 1A (Level 1 – Immediate)E (Level 2 – 6/12/36 Months)F (Level 3 60 Months)Hardware (HRDS) (HRDT) (HRDD)• > 50% Material loss • Cracked > 50%• 30–50% Material loss 20 • Cracked 5–50% 20LooseBolts, J-Bolts, U-Bolts, links, clamps, hot-end or cold-end hardware, shoe assembly, shackles, cotter key/pin, turnbuckle• Contaminated (arcing) • Cotter key missing and retainer pin not fully seated • < ½ inch material remaining on plate 18, 19• Missing cotter key or loose cotter key in retainer pin 21 • ¼ – ½ inch material remaining on plate 18, 20 • Missing hardware (if necessary, send to engineering personnel for evaluation)Loose	Component 1	Priority Code		
(HRDT) (HRDD) • Cracked > 50% • Cracked 5–50% ²⁰ Bolts, J-Bolts, U-Bolts, links, clamps, hot-end or cold-end hardware, shoe assembly, shackles, cotter • Contaminated (arcing) • Missing cotter key or loose cotter key in retainer pin ²¹ • Contaminated (arcing) • Cotter key missing and retainer pin not fully seated • ¼ - ½ inch material remaining on plate ^{18, 20} • Missing hardware (if necessary, send to engineering personnel for evaluation) • Missing hardware (if necessary, send to engineering personnel for evaluation)	Component ·	A (Level 1 – Immediate)	E (Level 2 – 6/12/36 Months)	F (Level 3 60 Months)
Hanger Plates Job Aid TD-1001M-JA07.	Hardware (HRDS) (HRDT) (HRDD) Bolts, J-Bolts, U-Bolts, links, clamps, hot-end or cold-end hardware, shoe assembly, shackles, cotter key/pin, turnbuckle Hanger Plates	 > 50% Material loss Cracked > 50% Contaminated (arcing) Cotter key missing and retainer pin not fully seated < ¼ inch material 	 30–50% Material loss ²⁰ Cracked 5–50% ²⁰ Missing cotter key or loose cotter key in retainer pin ²¹ ¼– ½ inch material remaining on plate ^{18, 20} Missing hardware (if necessary, send to engineering 	

¹⁸ Thickness of material (i.e., plate thickness) can determine if Priority A or Priority E. A relatively thin plate (e.g., less material) is a Priority A.

¹⁹ For legacy towers designed with ½ inch starting hanger plate material (e.g., San Joaquin Light and Power K-type towers found on Coalinga #1-San Miguel 70 kV and Wishon-Coppermine 70 kV, but not limited to), Priority E is adequate for 1/4–3/8-inch material remaining.

²⁰ Recommend to address within 3 months.

²¹ Other missing or loose cotter key configurations will be prioritized based on site-specific conditions.



Pacific Gas and Electric Company®

Electric Transmission Line Guidance for Setting Priority Codes

Component ¹	Priority Code		
	A (Level 1 – Immediate)	E (Level 2 – 6/12/36 Months)	F (Level 3 60 Months)
Switch (SWTC)	 > 50% Material loss 	• 30–50% Material loss	Contaminated (medium)
Switch-Steel (SWIS)	 Cracked > 50% 	Cracked 5–50%	Tracking (medium)
Switch-Wood (SWIW)	Arcing or evidence of arcing	Contaminated (heavy)	
Note: For switch	arcingSwitch operating	Tracking (heavy)	
insulators that are	mechanism unlocked	Loose/broken/missing parts or hardware	
flashed, cracked, broken, gunshot, or chipped	Inoperable	Heating	
	 Out of adjustment (blades and load break devices not 	Bent/bowed control rod or platform	
/ id <u>10 100 im 0/107</u> .	fully seated)	 Switch handle not bonded to platform ²³ 	
SCADA-Steel (SCDS)	 Missing/damaged switch attachment ²² 		
SCADA-Wood (SCDW)	Inform GCC that SCADA is		
See Job Aid <u>TD-1001M-JA15.</u>	not operational (no tag required unless instructed)		

²² Priority A may be addressed by contacting the GCC and marking the switch inoperable with a caution tag and repair tag time frame as appropriate.

²³ For switch handles not bonded to platform, address within 12 months.



Component 1	Priority Code		
Component ¹	A (Level 1 – Immediate)	E (Level 2 – 6/12/36 Months)	F (Level 3 60 Months)
Structure-Steel (STRS) ²⁴ Structure-Tower (STRT) ²⁵ Shield Wire Plates Crossarms (CRSL, CRST) See Job Aid TD-1001M-JA04	 Critical/main member: > 50% Material loss Cracked > 50% Broken/missing Severe damage to main structural support members compromising structural integrity (stub, leg, cross arm) Internal corrosion of tubular members 	 30–50% Material loss Cracked 10–50% Broken/missing secondary member Moderate damage to main structural support members compromising structural integrity (stub, leg, cross arm) ²⁶ H-Frame cross-brace broken Missing bolts on single bolt connection on critical member Pack-rust at joints, crevices, or overlaps ²⁷ Buckled/bent secondary member Out of plumb (send to engineering personnel for evaluation) Twisted 	 Single bolt missing of multi-bolt connection Loose bolts Vibrating members Climbing steps in poor condition Paint/galvanizing finish deteriorating and little rust or metal loss
Markers (i.e., signs)- Steel (MRKS) Markers (i.e., signs)- Wood (MRKW) Guy Markers (GMKS, GMKW) FAA Lighting and Batteries	Facilities or structures with a recent history of trespass or third-party unauthorized access	 Marker balls in poor condition and wearing on conductor Marker balls damaged FAA battery no good; FAA lighting missing or no good 	 Anti-climbing guards broken, cracked, damaged Anti-climbing guards missing where required, per <u>TD-1009S-F01</u> Cracked, broken, loose, missing

²⁴ For hanger plates, refer to the <u>Hardware section</u> of this table (Page 14).

²⁵ For structural integrity or other significant concerns, request an engineering assessment by directly contacting civil engineering or through the local supervisor.

²⁶ For damage to main structural support members compromising structural integrity that is not an immediate risk, address within 3 months.

²⁷ Contact civil engineering for further assessment.



Component 1	Priority Code		
Component ¹	A (Level 1 – Immediate)	E (Level 2 – 6/12/36 Months)	F (Level 3 60 Months)
Road (ROAD)	Posing threat to facilities due to wash-out or land motion.		Access road repair or replacement
Structure-Wood (STRW) Guy Stub (STUS, STUW) (Also referred to as Guy Pole) Note: Includes pole, crossarms (CRSW, CRSL), bonding, bearing plates. SEE Job Aid TD-1001M-JA06	 Burnt/rotten > 50% material loss Crossarm bracing missing or broken, compromising insulator and conductor Bond wire broken < ¼ inch gap Severe pole top damage or split top, compromising hardware, or crossarm integrity Cracked (not checks) Broken 	 Burnt/rotten 20–50% material loss Crossarm bracing loose/missing Bond wire broken > ¼-inch gap Pole top damage or split top, compromising hardware or crossarm integrity ²⁸ Twisted H-Frame cross brace broken or missing ²⁸ Out of plumb > 3 feet and causing insulators and conductor to be compromised ²⁸ Slide > 5 feet ²⁹ Soil movement (erosion > 3 feet in the ground) ²⁹ Worn/woodpecker/insect damage (severe and/or near hardware) Standing water (not including seasonal conditions) Ground molding in poor condition or missing 	 Slide 1–5 feet ²⁹ Soil movement (erosion 1–3 feet in the ground) ²⁹ Worn/woodpecker/insect damage (medium or minor damage near hardware) Climbing steps in poor condition

²⁸ Recommend to address within 3 months.

²⁹ For geotechnical concerns, contact civil engineering and geosciences.



Table 4. Guide for Assigning Priority Codes

Component ¹	Priority Code		
	A (Level 1 – Immediate)	E (Level 2 – 6/12/36 Months)	F (Level 3 60 Months)
Structure (Fiberglass, Composite, or Concrete)	 Crossarm bracing broken/missing causing insulator and conductor to be compromised Buckled (deformation) 	 Cracked fiberglass ³⁰ Cracked concrete into rebar ³⁰ Out of plumb > 3 feet and causing insulators and conductor to be compromised ³¹ Soil movement (erosion > 3 feet in the ground) ³² Slide > 5 feet ³² H-Frame cross brace broken or missing ³¹ Crossarm bracing loose/missing 	 Cracked concrete (cracks > ½ inch) not into rebar ³⁰ Soil movement (erosion 1–3 feet in the ground) ³² Slide 1–5 feet ³² Pole access device or climbing steps in poor condition
Idle Facilities (any facility type) (De-energized) See <u>TD-1003P-01,</u> <u>"Management of Idle Electric Transmission Line Facilities."</u>	Removal of idle facilities posing an immediate threat to life, property, or reliability.		Removal of non-emergency idle facilities.

END of Instructions

³⁰ Contact civil engineering for further assessment

³¹ Recommend to address within 3 months.

³² For geotechnical concerns, contract Civil Engineering and Geosciences.



DEFINITIONS

Refer to ETPM Manual (TD-1001M), Appendix A, "Acronyms and Definition of Terms."

IMPLEMENTATION RESPONSIBILITIES

Transmission line asset strategy personnel ensure that this document is provided to M&C, system inspections, CIRT, and other appropriate personnel.

GOVERNING DOCUMENT

Utility Standard TD-8123S, "Electric System (T/S/D) Patrol, Inspection, and Maintenance Program"

COMPLIANCE REQUIREMENT / REGULATORY COMMITMENT

<u>CPUC G.O. 95, "Rules for Overhead Electric Line Construction," Rule 18, "Maintenance</u> <u>Programs and Resolution of Potential Violations of General Order 95 and Safety Hazards,"</u> <u>Part B, "Maintenance Programs," Section 1.b.</u>

Records and Information Management:

Information or records generated by this procedure must be managed in accordance with the Enterprise Records and Information Management (ERIM) program policy, standards, and Enterprise Records Retention Schedule (ERRS). Refer to <u>GOV-7101S</u>, "<u>Enterprise Records</u> and <u>Information Management Standard</u>," and related standards. Management of records includes, but is not limited to:

- Integrity
- Storage
- Retention and Disposition
- Classification and Protection

REFERENCE DOCUMENTS

Developmental References:

NA

Supplemental References:

<u>Electric Transmission Preventive Maintenance (ETPM) Manual</u> (TD-1001M)



REFERENCE DOCUMENTS (continued)

Job Aids:

- <u>TD-1001M-JA04, "Identifying Levels of Deterioration and Corrosion on Transmission</u> <u>Line Steel Structures and Supports"</u>
- <u>TD-1001M-JA06, "Identifying Levels of Damage and Condition on Wood Poles and</u> <u>Non-Steel Framing on Transmission Line Structures and Supports"</u>
- <u>TD-1001M-JA07, "Identifying Levels of Corrosion and Condition of Hardware and</u> <u>Insulators on Transmission Line Structures and Supports"</u>
- <u>TD-1001M-JA10, "Identifying Conductor Conditions"</u>
- TD-1001M-JA11, "Evaluating Conditions of OPGW in Transmission Line"
- <u>TD-1001M-JA12, "Identifying Foundation Condition on Transmission Line Structures</u> and Supports"
- <u>TD-1001M-JA13, "Identifying Levels of Damage and Condition of Guys and Anchors of</u> <u>Transmission Line Structures and Supports"</u>
- <u>TD-1001M-JA14, "Identifying Levels of Damage and Condition of Splices on</u> <u>Transmission Line Structures and Supports"</u>
- <u>TD-1001M-JA15, "Identifying Levels of Deterioration and Corrosion on Transmission</u> <u>Line Switches"</u>
- <u>TD-1001M-JA19, "Evaluating Conditions from Infrared (IR) Inspection in Transmission</u> <u>Line"</u>

Numbered Documents:

- 022178, "Construction Requirements for Pole Line Guys"
- 025998, "Inspection and Corrosion Protection of Anchor Rods"
- <u>028855, "Methods for Repairing Damaged Overhead Transmission and Distribution</u> <u>Conductors"</u>
- <u>068177, "Overhead Transmission Line Design Criteria"</u>

Form TD-1009S-F01, "Evaluation of Transmission and Distribution Towers or Lattice Steel Poles for Prevention of Unauthorized Climbing"

Utility Procedure TD-1003P-01, "Management of Idle Electric Transmission Line Facilities"



APPENDICES

NA

ATTACHMENTS

NA

DOCUMENT RECISION

This utility procedure cancels and supersedes <u>*Electric Transmission Preventive Maintenance</u> (<u><i>ETPM*) <u>*Manual*</u> (TD-1001M), Sections 2.3.5.1 through 2.3.5.4, including Tables 3 and 4.</u></u>

DOCUMENT APPROVER

Manager, Transmission Standards and Work Methods

DOCUMENT OWNER

Manager, Transmission Standards and Work Methods

DOCUMENT CONTACT

Senior Consulting Electric Standards Strategy Engineer

Senior Electric Standards Strategy Engineer

Principal, Standards and Work Methods Specialist

Principal, Standards and Work Methods Specialist

Senior Consulting Electric Standards Strategy Engineer

Supervisor, Transmission CIRT

REVISION NOTES

Where?	What Changed?
NA	This is a new utility procedure.