Publication Date: 01/06/2022 Effective Date: 03/06/2022 Rev: 0

Transmission Line Corrective (LC) Notification Maintenance Strategy

SUMMARY

This utility procedure discusses the strategy for addressing past-due Line Corrective (LC) notifications that are due to the following causes:

- "Reasonable circumstances" beyond PG&E's control, as defined in <u>California Public</u>
 <u>Utilities Commission [CPUC] General Order [G.O.] 95, "Rules for Overhead Electric</u>
 <u>Line Construction," Rule 18, "Maintenance Programs and Resolution of Potential</u>
 <u>Violations of General Order 95 and Safety Hazards," Part B, "Maintenance Programs,"</u>
 <u>Section 1.b.</u>
- Resource limitations, including, but not limited to, personnel, clearance constraints, and material availability (applies to priority "E" and "F" notifications only).

This procedure also addresses the Field Safety Reassessment (FSR) requirement and process for mitigating the risk of past-due notifications with the potential for further degradation.

This procedure supplements the information contained in the <u>TD-1001M, "Electric</u> Transmission Preventive Maintenance (ETPM) Manual."

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
- Maintenance and construction (M&C)
- Work management
- System inspections work management
- System inspections
- Centralized Inspection Review Team (CIRT)
- Quality control/compliance

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SAFETY

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

BEFORE YOU START

NA

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PROCEDURE STEPS

1 General Information

- 1.1 Since 2019, transmission line overhead inspection methods have improved. Enhanced inspection for each asset includes detailed ground and aerial inspections, and may also include a climbing inspection.
- 1.2 These changes have resulted in a significant increase in the number of corrective notifications, leading to a backlog of notifications that cannot be addressed within the timelines prescribed in TD-1001M, "Electric Transmission Preventive Maintenance (ETPM) Manual," Table 3. Additionally, notifications may become past-due as a result of "reasonable circumstances," as defined in CPUC G.O 95, "Rules for Overhead Electric Line Construction," Rule 18, "Maintenance Programs and Resolution of Potential Violations of General Order 95 and Safety Hazards," Part B, "Maintenance Programs," Section 1.b. Past-due notifications fall under two categories and are described in Section 2 and Section 3.
- 1.3 Managing the large volume of notifications requires the following steps:
 - PRIORITIZE the work based on risks.
 - 2. ENSURE that the conditions of late notifications have not deteriorated further.
 - DOCUMENT reasons for delay.

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- 1.4 The following three main processes constitute LC notification maintenance strategy:
 - 1. **Notification exemption process:** Ensuring oversight of notifications where maintenance is delayed due to "reasonable circumstances," as defined in <u>G.O. 95</u>, Rule 18.b.1.b.
 - 2. **Notification prioritization due to resource limitations:** Prioritizing higher-risk corrective "E" and "F" notifications and FSRs over lower-risk notifications and FSRs.
 - 3. **FSR:** Reassessing the outstanding notifications that may degrade with time, when maintenance cannot be performed within the timeline of the "B", "E," or "F" notifications. This process helps ensure that the condition has not deteriorated further.

NOTE

In this document, the term "due date" refers to the notification's required end date OR, if an FSR supported a date extension, the funded repair date.

Past Due LCs Outside of PG&E's Control – Exemption Process ("B", "E", or "F" Priorities)

To extend the due date of an LC notification, the exemption process documents the request, the reason for the extension, and the approval.

NOTE

Notifications with an "A" priority do not qualify for due date extensions or exemptions from their original required end date.

- 2.1 DOCUMENT each request by providing the following information:
 - Notification number
 - Notification description
 - Notification date
 - Priority
 - Description of the reason for delay (SEE Subsection 2.2 on Page 4)
 - Steps taken, including permit requests and required FSRs (SEE <u>Section 4.</u>)
 - Electric transmission line (ETL) number and/or line name
 - Work type code and/or facility/damage/action
 - Required end date

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2.2 DOCUMENT reasons for delay.

Corrective action times may be extended for reasonable circumstances defined in <u>G.O. 95</u>, Rule 18.b.1.b, such as the following:

- Third-party refusal
- Customer issue
- No access
- Lack of required permits
- System emergencies (e.g., fires, severe weather conditions)
- 2.3 M&C and quality control/compliance personnel PERFORM the following actions **before** the notification reaches its due date:
 - ENSURE the completeness of the exemption request.
 - 2. USE Electric Document Routing System (EDRS) for approval process.
 - a. M&C director APPROVES exemption request/date extension
 - b. COPY asset strategy personnel on the exemption request/date extension.

NOTE

Exemptions are granted on a case-by-case basis only.

- 2.4 Notifications meeting the criteria listed in <u>Subsection 2.2</u> above must receive an FSR (SEE <u>Table 1</u> on Page 7).
- 3 Past-Due LCs Due to Resource Limitations ("E" or "F" Priorities)
- 3.1 General Information
 - 1. This section defines the risk-based prioritization of "E" and "F" notifications, used to determine which notifications to include in the repair plan for the following year and which notifications to defer.
 - 2. PG&E resources (time, personnel, clearance constraints, material availability, etc.) may contribute to delayed maintenance on notifications.
 - The LC notification prioritization process is intended to address higher-risk conditions before lower-risk conditions. This is an extension of <u>TD-1001M</u>, <u>"Electric Transmission Preventive Maintenance (ETPM) Manual," Section 2.3.5, "Assigning Priority Codes and <u>Due Dates."</u>
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3.1 (continued)

- 4. This prioritization does not affect priority "A" and "B" notifications. "A" notifications remain the highest priority, followed by "B" notifications.
 - a. For "A" and "B" notifications, MAKE all attempts to perform the repairs within the established required end date.
- 3.2 Considerations for Prioritization of "E" and "F" Notifications Based on Risk Asset Strategy
 - PRIORITIZE ignition-related notifications on structures in high fire threat districts (HFTD) or PG&E-designated high fire risk areas (HFRA) over non-ignition notifications or notifications in non-HFTD areas.

NOTE

Permanently de-energized lines in HFTDs are considered non-wildfire risk; however, double-circuit structures, where one circuit is energized and the other is not, are considered to have wildfire risk.

- 2. DIVIDE ignition-related notifications into time-dependent and non-time-dependent notifications.
 - a. PRIORITIZE time-dependent notifications above non-time-dependent notifications, because deferring the repairs may cause the condition to degrade further.
- 3. PRIORITIZE notifications in high fire risk or consequence areas ahead of notifications in lower-risk or consequence areas.
- 3.3 These considerations result in the following prioritization (highest to lowest) of "E" and "F" notifications:
 - 1. Ignition notifications on high fire risk or consequence structures in HFTD or HFRA.
 - 2. Time-dependent ignition notifications on lower fire risk or consequence structures in HFTD or HFRA.
 - 3. Non-time-dependent ignition notifications in HFTD or HFRA.
 - 4. Notifications outside of HFTD or HFRA, with high risk to safety and reliability.
 - 5. Non-ignition related notifications, in accordance with the original find date.
- 3.4 While performing work on notifications under these priorities, REPAIR other notifications with lower priority, for efficiency reasons. These include, but are not limited to, the following circumstances:

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3.4 (continued)

- 1. WHEN repairing a time-dependent ignition notification on a structure,
 - THEN also REPAIR non-ignition-related or non-time-dependent notifications on the same structure.
- 2. WHEN taking a transmission system clearance to perform repairs in high fire risk or consequence areas,
 - THEN also REPAIR other structures on the same circuit that are in lower-fire risk or consequence areas.

3.5 Prioritization Procedures

- 1. This prioritization process happens mostly automatically in the T-Line Maintenance (TLM) Tracker, for each new notification originating after March 2020.
- 2. Each notification receives a classification, referred to as the "Tag Bucket."
 - a. Typically, at the end of each year, transmission asset strategy personnel LOCK the buckets into their year-end values, to prevent changes in buckets that would affect the next year's work plan.
- 3. Transmission asset strategy personnel DOCUMENT in TLM the tags/buckets included in the work plan for the year (e.g., with the notation "2022 Plan").
- 4. Time-dependent notifications (SEE <u>DEFINITIONS</u>) that are forecast to become past-due, require an FSR to ensure the condition of the notification has not deteriorated (SEE <u>Section 4 below</u>).
- 5. PG&E is currently executing priority "E"/"F" notifications as efficiently as possible, opportunistically bundling work, and not scheduling to individual notification due dates. Typically, PG&E is managing risk for priority "E"/"F" notifications to their work plan due dates. These dates are 8/31 of the calendar year for all HFTD and 12/31 of the calendar year for non-HFTD.

4 Field Safety Reassessments (FSRs)

4.1 Requirements

- 1. CONDUCT FSRs to evaluate the current condition of a "B", "E," or "F" notification that may have deteriorated in the time between the original find date and the present date.
- 2. DO NOT USE FSRs to justify allowing work to become past-due.
- For notifications that are past-due as a result of reasonable circumstances outside of PG&E's control OR prioritization due to resource limitations, FSRs ensure that the risk posed by the condition has not escalated, thus requiring more immediate corrective actions.

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4.2 Scope

- 1. DO NOT CONDUCT an FSR for Priority "A" notifications.
 - a. RESPOND to all Priority "A" notifications immediately, in accordance with their definition as an "immediate risk of high potential impact to safety or reliability."
- 2. PG&E MONITORS AND PERFORMS an FSR for each open LC notification that meets **all** the following criteria:
 - a. LC notification is priority "B", "E," or "F."
 - b. LC notification is past-due or forecasted to become past-due.
 - c. LC notification is not scheduled for inspection or repair in the current year's work plan before 7/31 (HFTD/HFRA) or 12/31 (non-HFTD).
 - d. LC notification is time-dependent.

NOTE

Additional FSRs, not meeting the criteria above, can be requested through work plan change control, based on analysis of tag and structure risk metrics (e.g., Operability Assessment results and wildfire consequence data).

4.3 Due Dates

1. IF Priority "B" tags are not scheduled for corrective resolution by their required end date.

THEN they must receive an FSR by the required end date (SEE Table 1).

a. RE-ASSESS "B" tags every 90 days until completion, to ensure the condition has not deteriorated further into an emergency (priority "A" tag).

Table 1: FSR Scheduling Requirements*

	Complete FSR by		
FSR or Combined FSR/Inspection	B priority	HFTD (Tier 3, Tier 2, Zone 1), HFRA, and Non-HFTD	Required end date
FSR or Combined FSR/Inspection	E/F priority	HFTD and HFRA	July 31
FSR or Combined FSR/Inspection	E/F priority	Non-HFTD	December 31

^{*} PG&E is currently executing priority "E"/"F" notifications as efficiently as possible, opportunistically bundling work and not scheduling to individual notification due dates. Typically, PG&E is managing risk for priority "E"/"F" notifications to their work plan due dates; these dates are 8/31 of the calendar year for all HFTD and 12/31 of the calendar year for non-HFTD.

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4.3 (continued)

- 2. For notifications with priority "E" or "F" that meet the requirements but are on structures that are scheduled for an overhead inspection, the inspection satisfies the FSR requirement.
- 3. For FSRs or combined FSR/inspections, the due dates depend on the scenarios listed in <u>Table 1</u> on Page 7.
 - a. COMPLETE FSRs by the dates listed in <u>Table 1</u> for tags with due dates contained in that year.
- 4.4 Changes to Priority and Due Date
 - 1. For notifications set as Priority "B" following the FSR, SET the Funded Repair Date at **3 months** from the date of the FSR.
 - 2. For notifications set as Priority "E" following the FSR, SET the Funded Repair Date at **1 year** from the date of the FSR.
 - a. Extensions of 1 year allow tag re-prioritization for consideration in the next year's work plan AND may be applied to HFTD, HFRA, and non-HFTD tags.

NOTE

Extensions of 1 year through an FSR/inspection include Tier 3 tags that initially had 6-month due date, so that tags on structures receiving an inspection do not require an additional FSR in the same year.

- b. Extensions shorter than 1 year are allowed.
 - (1) IF the new due date is within the same calendar year,

THEN COMMUNICATE any extension shorter than 1 year to both asset strategy and work management personnel, since these extensions require changes to the current year work plan.

- 3. For notifications set as Priority "F" following the FSR, SET the Funded Repair Date at **2 years** from the date of the FSR.
- 4. The due date for any notification cannot be extended more than 5 years beyond the initial Date Found in Field (SAP = notification date).
- 4.5 FSRs are not inspections: the sole purpose of the reassessment is for the qualified electrical worker (QEW) to confirm the current condition of the FDA identified on the LC notification.
 - 1. IF any additional FDAs that pose significant safety or ignition risks exist at the time of the reassessment,

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4.5 (continued)

THEN QEW must IDENTIFY these FDAs.

- 4.6 Field inspectors may EVALUATE open notifications using an FSR during their inspection.
 - 1. Non-time-dependent conditions that are not re-evaluated during the concurrent inspection do not require an additional FSR (a.k.a. "go-back").
- 4.7 The QEW DOCUMENTS AND UPDATES the priority, as follows:
 - 1. TAKE a minimum of three new photos, including the structure number, issue underlying the notification, AND an overview photo.
 - 2. VERIFY that the current condition of the issue identified on the LC notification matches the priority code identified on the LC notification.
 - 3. DETERMINE if there is a need to escalate the priority code based on the <u>ETPM</u> Manual in effect at the time of the FSR.
 - 4. IF the required completion date cannot wait 1 year,

THEN PROVIDE comments, as follows:

- a. ENSURE that comments are professional and focused on describing the current field condition.
- b. TREAT requests to escalate to priority "A" as a newly created "A" tags.
- c. ENSURE that requested escalations to priority "A" or "B" have detailed supporting comments that describe the field condition that warrants escalation.
- 5. IF the LC is a duplicate or found completed on arrival,

THEN DETERMINE if there is a need to cancel the LC.

- 6. CONFIRM if the location cannot be verified in the field (e.g., LC is linked to the wrong pole or structure).
- 4.8 The mobile application used to perform the FSR in the field (Inspect or Construct application) automatically records the name of the QEW and the date of the FSR in SAP.
 - 1. A "Safety Reassessment" task (SFTY task code) is added and completed in SAP to record the date and LAN ID of QEW.
 - 2. Standard verbiage based on the scenario selected in the application is added to the notification "long text."
 - All comments recorded by the QEW are added to the notification "long text."

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- 4.9 The CIRT PERFORMS the following actions during the FSR process:
 - REVIEW the FSR result in SAP.
 - 2. UPDATE applicable fields in SAP, which may include the following entries:
 - Priority code
 - Funded repair date
 - The FDA
 - DETERMINE if LC will be canceled.

NOTE

A "Reassess" task (REAS task code) is added to the notification in SAP to record CIRT's review of a completed FSR.

The REAS task records the date and LAN ID of the CIRT personnel who completed the review.

- 4. For all notifications that QEWs have recommended to expedite to a priority "B," (SEE scenario 2 in <u>Table 2</u>), CIRT must REVIEW these scenarios within 5 business days.
- 5. CIRT must REVIEW other recommended scenarios (SEE scenarios 3–5 in <u>Table 2</u>) within 20 business days.
- 6. CIRT is not required to reassess notifications that did not need an FSR (e.g., conditions that are non-time-dependent).

Table 2: FSR Scenarios

Scenario	Name	Description
001	Emergency	Emergency – current field condition requires immediate response. Create an "A" tag
002	Expedite to Priority "B"	Current field condition needs to be expedited to Priority "B" (complete in the next 3 months).
003	Priority "E": Address field condition in the next 12 months	Current field condition needs to be addressed within the next 12 months.
004	Priority "F": Low safety/reliability impact	Existing Priority "F" LC; corrective action for facilities needed within the next 24 months.
005	Cancel	Notification needs to be cancelled (duplicate or all work found completed in the field).
006	CGI	Cannot Get In: unable to field-validate. Include additional comments, as needed.

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4.10 For LCs where CIRT has "returned" the notification to the field/QEW for more information (e.g., missing photos, commentary from QEW does not support recommended escalation), the field must RESPOND to the request for more information within 5 business days, when feasible.

END of Instructions

DEFINITIONS

Due Date: Notification's required end date or, if an FSR was performed and supported a date extension, the funded repair date.

Ignition risk notification: Notifications with Facility, Damage, Action (FDA) codes related to components included in the 2019 Failure Modes and Effects Analysis (FMEA) or vegetation. Ignition risks can be either time-dependent (e.g., worn hardware or cracked foundation) or non-time-dependent (e.g., missing guy insulator or automatic splice present).

Non-ignition risk notification: Notifications that do not pose an ignition risk and are not considered to be a failure mode for a component in the 2019 FMEA (e.g., a missing "high voltage" sign).

Non-time-dependent notification: Notifications that will not worsen with time, e.g., a missing sign or a missing guy insulator.

Time-dependent notification: Notifications that may worsen with time, e.g., mechanical or chemical degradation, including fatigue and corrosion.

NOTE

Attachment 1 provides a list of time-dependent conditions (also listed in the ETPM Manual, Table 4). Each condition was assigned time dependency (YES or NO) and whether or if it requires an FSR (YES, REVIEW, or NO). This guidance was completed by a technical SME team based on experience, knowledge, and historical data. Upon review of a specific tag, CIRT SMEs may determine a final assessment of the time dependency.

IMPLEMENTATION RESPONSIBILITIES

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

GOVERNING DOCUMENT

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

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COMPLIANCE REQUIREMENT / REGULATORY COMMITMENT

<u>CPUC General G.O. 95, "Rules for Overhead Electric Line Construction," Rule 18, "Maintenance Programs and Resolution of Potential Violations of General Order 95 and Safety Hazards," 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 GOV-7101S, "Enterprise Records and Information Management Standard," 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:

TD-1001M, "Electric Transmission Preventive Maintenance (ETPM) Manual"

APPENDICES

NA

ATTACHMENTS

Attachment 1, "Guidance List of Time-Dependent T-Line Damage Conditions for FSR Consideration"

DOCUMENT RECISION

This utility procedure cancels and supersedes Utility Bulletin TD-1001M-B011, "PG&E's Line Corrective (LC) Notification Maintenance Approach," Rev. 1, dated 02/25/2021.

DOCUMENT APPROVER



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REVISION NOTES

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