 CALIFORNIA ISO <small>California Independent System Operator</small>	TRANSMISSION MAINTENANCE PROCEDURES	Procedure No.	7
		Version Number	2
Preparing, Submitting, and Amending Maintenance Practices		Approved Date	7/21/05
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Preparing, Submitting, and Amending Maintenance Practices



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		Effective Date	7/21/05

TABLE OF CONTENTS

7.1 Purpose	7.1
7.2 Scope	7.2
7.3 Preparation	7.3.1 thru 7.3.4
7.4 Submittals	7.4
7.5 Amendments	7.5.1 thru 7.5.2

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7.1 Purpose

This procedure provides instructions for the preparation and submission of unadopted Maintenance practices and amending of Maintenance Practices. Terms used in this procedure are defined in Appendix C.

7.2 Scope


As may be appropriate, each PTO's Maintenance Practices will address the Transmission Facilities as identified in TCA Appendix C Section 5.2.

7.3 Preparation

Unadopted Maintenance practices will be written to meet the requirements of Appendix C, Section 5 and should be addressed in two separate sections: Transmission Lines (including Overhead and Underground) and Stations. PTOs may opt to create common or separate "Introduction", "Purpose", and "Definition" subsections.

7.3.1 Subsections –Items A through C will be provided as described above. Items D through G will be included in the Transmission Line and Station sections.

- A. Introduction** - Provides introductory statement, descriptions of departments, responsibilities, and accountability.
- B. Purpose** - Describes the intent of each unadopted Maintenance practice.
- C. Definitions** - Defines uncommon terms and phrases, or clarifies terms and phrases with multiple meanings.
- D. Inspection** – Described in 7.3.2, below.
- E. Condition Assessment** – Described in 7.3.3, below.
- F. Maintenance** – Described in 7.3.4, below.
- G. Record Keeping** - Describes specific Maintenance records. (See Appendix C, Section 6.)

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7.3.2 Inspection

Methodology - This subsection describes the PTO's inspection program:

- Describe inspection techniques and tools utilized, (ground, climbing, aerial, infrared, visual, and/or other inspection techniques) and discuss the general approach to each.
- Describe how inspections are documented (paper, computer, checklists, photographs, video, audio tape, etc.).
- Describe why inspections are scheduled or unscheduled and the conditions or events triggering unscheduled inspections.

Frequency - This subsection describes the inspection triggers or frequency for each type of Transmission Facility.

7.3.3 Condition Assessment - This subsection describes the inspection criteria used to evaluate the condition of Transmission Facilities, including the finding, priority, and any response timelines.

7.3.4 Maintenance - This subsection describes maintenance, repair, and replacement activities, including the processes and procedures used to trigger and track these activities.


This subsection will also describe, in general terms, the PTO's repair/replacement capability for the 500 and 230 kV Transmission Facilities listed below:

A. Transmission Lines

- Structures
- Cable
- Conductor

B. Stations

- Circuit breakers
- Power transformers
- Major reactive components

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The following examples illustrate the level of detail intended to describe the PTO's repair/replacement capability.

Examples: Transmission Lines

- PTO has material and resources readily available to restore a 2-mile section of a 500 kV transmission line.
- PTO has procedures in place to make temporary repairs to 500 and 230 kV lines. These procedures utilize mutual-assistance agreements and strategic sourcing partnerships with vendors that include the storage of material at designated locations throughout the system.
- PTO has material and resources readily available to replace x number of feet of 230 kV High Pressure Gas Filled (HPGF) cable and accessories.


Examples: Stations

- PTO system design provides for double bus, double breaker scheme at 500kV to handle breaker failure contingencies.
- PTO has three(3) single phase 500kV transformers in spare positions at various Stations that could be moved and used to restore a complete bank failure at another Station.

7.4 Submittals

Each prospective PTO will submit its unadopted Maintenance practices to the ISO in a timely manner. The ISO will review and initially adopt these proposed Maintenance practices in accordance with Section 5.3.1. of Appendix C. The PTO's designated representative and the ISO's Manager of Transmission Engineering & Maintenance should be the contact persons during the initial adoption period.

- The PTO will specify the transition period needed to implement the Maintenance Practices.

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		Effective Date	7/21/05

7.5 Amendments

PTOs may amend the Maintenance Practices in conformance with Sections 5.3.2 and 5.3.3 of Appendix C and the guidelines below. The PTO's TMCC representative and the ISO's Manager of Transmission Engineering & Maintenance should be the contact persons during the amendment process.

7.5.1 Proposed amendments will be submitted to the appropriate ISO or PTO contact and will include a transmittal letter which:

- A. Summarizes the titles and section/subsection numbers being amended, including a description of each amendment.
- B. Explains why the amendment is necessary and, if necessary, how the amendment might impact Availability.
- C. Identifies the contact person.
- D. Includes a copy of the amended section/subsections, with the amendments highlighted.

7.5.2 The ISO will keep a log of each PTOs proposed and approved amendment and denote the following information:

- A. Titles/section numbers of the sections
- B. Date the proposed amendments were sent, received, returned, denied, appealed, or adopted
- C. Action taken
- D. PTO and ISO contact names