

# P1806

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**Submitter Email:** [fafriend@aep.com](mailto:fafriend@aep.com)

**Type of Project:** Modify Existing Approved PAR

**PAR Request Date:** 02-Oct-2018

**PAR Approval Date:** 05-Dec-2018

**PAR Expiration Date:** 31-Dec-2020

**Status:** Modification to a Previously Approved PAR

**Root PAR:** P1806 **Approved on:** 24-Nov-2014

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**1.1 Project Number:** P1806

**1.2 Type of Document:** Guide

**1.3 Life Cycle:** Full Use

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**2.1 Title:** Guide for Reliability Based Placement of Overhead and Underground Switching and Overcurrent Protection Equipment Up to and Including 38 kV

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**3.1 Working Group:** Working Group on Switching and Overcurrent Protection - P1806 (PE/T&D/1806\_WG)

**Contact Information for Working Group Chair**

**Name:** Fredric Friend

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**Contact Information for Working Group Vice-Chair**

None

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**3.2 Sponsoring Society and Committee:** IEEE Power and Energy Society/Transmission and Distribution (PE/T&D)

**Contact Information for Sponsor Chair**

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**4.1 Type of Ballot:** Individual

**4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot:** 04/2019

**4.3 Projected Completion Date for Submittal to RevCom**

**Note:** Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 02/2020

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**5.1 Approximate number of people expected to be actively involved in the development of this project:** 23

**5.2 Scope:** This guide provides analytical techniques to assist in the placement of switching and overcurrent protection devices on distribution circuits for reliability purposes.

**Changes in scope:** This guide provides analytical techniques to assist in the placement of switching and overcurrent protection devices on ~~non-network~~ distribution circuits for reliability purposes.

**5.3 Is the completion of this standard dependent upon the completion of another standard:** No

**5.4 Purpose:** This guide provides means and methodologies for proper placement of switches and protective devices to achieve the desired performance characteristics and reliability for distribution circuits, including feeder and branch line equipment, with operating voltages up to and including 38 kV. Drivers for device placement, such as reliability and operational considerations are identified. Various types of switching and overcurrent equipment are covered such as: manual switches, automated switches, reclosers, sectionalizers, and fuses. Impacts on reliability and device placement are addressed for factors such as fault rate, interruption duration, exposure miles, customers affected and distribution automation and automated restoration.

**Changes in purpose:** This guide provides means and methodologies for proper placement of switches and protective devices to achieve the desired performance characteristics and reliability for ~~non-network~~ distribution circuits, including feeder and branch line equipment, with operating voltages up to and including 38 kV. Drivers for device placement, such as reliability and operational considerations are identified. Various types of switching and overcurrent equipment are covered such as: manual switches, automated switches, reclosers, sectionalizers, and fuses. Impacts on reliability and device placement are addressed for factors such as fault rate, interruption duration, exposure miles, customers affected and distribution automation **and automated restoration.**

**5.5 Need for the Project:** There is currently no IEEE guideline for identifying placement and quantities of protective devices on distribution circuits to achieve desired reliability and operational objectives. This guide will provide recommendations on the methodology used to achieve this objective.

**5.6 Stakeholders for the Standard:** Users of the guide include distribution engineers and others engaged in design and operation of distribution systems employing distribution automation and overcurrent protection equipment. The guide will also be useful to equipment manufacturers.

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#### **Intellectual Property**

**6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?:** No

**6.1.b. Is the Sponsor aware of possible registration activity related to this project?:** No

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**7.1 Are there other standards or projects with a similar scope?:** No

#### **7.2 Joint Development**

**Is it the intent to develop this document jointly with another organization?:** No

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**8.1 Additional Explanatory Notes:** The scope and purpose were modified to better reflect the content of the guide - there is discussion on loop systems which could be classified as network.