

# P2779

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**Submitter Email:** [xiaogang-wang@sgcc.com.cn](mailto:xiaogang-wang@sgcc.com.cn)

**Type of Project:** New IEEE Standard

**PAR Request Date:** 26-Jul-2017

**PAR Approval Date:** 28-Sep-2017

**PAR Expiration Date:** 31-Dec-2021

**Status:** PAR for a New IEEE Standard

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**1.1 Project Number:** P2779

**1.2 Type of Document:** Guide

**1.3 Life Cycle:** Full Use

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**2.1 Title:** Guide for Assessment of Geological Stability of Transmission Corridors

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**3.1 Working Group:** Assessment of Geological Stability of Transmission Corridors (BOG/CAG/Geological Stability)

**Contact Information for Working Group Chair**

**Name:** Hao Hu

**Email Address:** [hao-hu@sgcc.com.cn](mailto:hao-hu@sgcc.com.cn)

**Phone:** 0086-10-6659-7594

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

None

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**3.2 Sponsoring Society and Committee:** IEEE-SA Board of Governors/Corporate Advisory Group (BOG/CAG)

**Contact Information for Sponsor Chair**

**Name:** Philip Wennblom

**Email Address:** [wennblom@ieee.org](mailto:wennblom@ieee.org)

**Phone:** 408-765-4437

**Contact Information for Standards Representative**

None

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**4.1 Type of Ballot:** Entity

**4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot:** 03/2020

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

**Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.:** 10/2020

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**5.1 Approximate number of entities expected to be actively involved in the development of this project:** 10

**5.2 Scope:** This guide applies to the assessment of geological stability for transmission corridors in such domains as investigation and design, project handover as well as power system operation and maintenance, and deals with the contents regarding geological investigation, patrolling and inspection, hazard monitoring and forewarning as well as methods of evaluating geological stability.

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

**5.4 Purpose:** The purpose of this guide is to 1) present methods of geological investigation as well as patrolling and inspection for transmission corridors, and 2) develop approaches for risk recognition and evaluation of danger levels, thereby improving protective capability of transmission corridors against geological disasters.

**5.5 Need for the Project:** The recent years have seen active occurrence of geological disasters, especially seismic disasters and subsequent secondary disasters. These disasters would cause tremendous economic losses to the grid as transmission corridors are inevitably distributed throughout the widespread geologically fragile regions. For instance, a great number of substations and transmission lines were subject to damage to varying degrees in "5 12" Wenchuan Great Earthquake, a 7.8-magnitude quake that struck Wenchuan County of southwest China's Sichuan Province on May 12, 2008. The direct economic losses caused by the earthquake and its secondary disasters, e.g., landslides, mudslides and geological subsidence counted billions of yuan. Taking into account the assessment of geological stability of transmission corridors can therefore minimize the losses.

Secured operation of transmission corridors and transmission lines are directly threatened by 1) the absence of standards concerning risk evaluation of geological disasters and grid reconstruction, and 2) failure of the conventional disaster monitoring measures in meeting the demands of the micro topographical and meteorological environment of transmission corridors. These concerns have produced urgent needs for engineering-based technical breakthroughs in geological stability assessment of transmission corridors. This guide, based on the experience and

research results in terms of grid construction, operation and maintenance, is thus essential to guiding the secured construction, operation and maintenance of transmission lines.

**5.6 Stakeholders for the Standard:** The universality of this standard relates to not only technical aspects, but also to manufacturers, utilities, energy service companies, and other interested entities.

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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:**