

Meeting Minutes

C37.015 PAR Study Group

IEEE Guide for the Application of Shunt Reactor Switching

Chair: Mike Crawford
Secretary: Luke Collette
Time: 4:15 pm – 6:00 pm, April 18, 2023
Location: Clearwater, FL
Participants: 22 participants, including Chair and Secretary

1. Agenda and Topics

- Introduction of attendees
- IEEE SA patent policy review
- IEEE SA copyright policy review
- Objective and Deliverables
- Review of Draft PAR
- Document review and discussion
- Adjourn

2. Introduction

Welcome by Mike Crawford, Chair of the PAR SG followed by introduction of participants by entering their name, affiliation and location. Attendance recorded on paper list passed around the meeting room.

3. Review of IEEE SA Patent and Copyright Policies

IEEE SA patent and copyright policies were presented and reviewed. No patents or copyright claims were identified.

4. Objective and Deliverables

This is the first study group meeting, no previous meeting minutes to review. Document number: C37.015-2017, document expires December 31st, 2027.

Objective: Prepare a recommended PAR scope for presentation to the sponsor (HVCB SC).

Deliverables: Report addressing the criteria for consideration and, if appropriate, a draft PAR. The report should include a roster of participants and minutes of meeting.

5. PAR Draft Review and Discussion

Draft PAR contents were presented, including scope, purpose and proposed additional content. Regarding scope and content, the group agreed that it is adequate as written.

Additional proposed content includes:

- Guidance regarding system simulations.
- Additional data gained from shortened survey
- History of how reactors were switched in the past and how we have progressed to the table in the current revision

An entity PAR proposal for “IEEE Guide for the Application of Shunt Reactor Switching” was presented.

- It was suggested to add location of mitigation in the circuit to this guide, but ultimately decided that should be in a separate “Shunt Reactor Installation” document.
- Current survey is lengthy and very detailed, suggested to shorten survey to allow for more users to respond with data

Scope was reviewed:

A motion was put forward to approve the scope as drafted:

Motion: Jon Rodgers

Second: Carl Kurinko

Motion passed by consensus with none opposing, no abstentions.

A motion was put forward to approve the scope as drafted:

Motion: Dave Mitchell

Second: Mike Skidmore

Motion passed by consensus with none opposing, no abstentions.

A second motion was put forward to approve the scope as drafted (changes made):

Motion: Dave Mitchell

Second: Mike Skidmore

Motion passed by consensus with none opposing, no abstentions.

Scope of PAR:

This application guide applies to ac high-voltage (> 1000 V) circuit breakers rated for shunt reactor switching. This application guide provides the theoretical background of shunt reactor switching and how information obtained from test results and system studies should be used to predict overvoltages in the field and gives suggestions how to mitigate these overvoltages.

Purpose of PAR:

This guide is intended for general use in the application of ac high-voltage circuit breakers for shunt reactor current switching. Shunt reactor switching imposes a unique and severe duty on the connected system and the circuit breaker. Successful interruption is the result of a complex interaction between the circuit breaker and the circuit; this interaction can result in significant overvoltages. The purpose of the guide is to describe, principally for the benefit of the user, the shunt reactor switching duty, the overvoltages generated, and the control of those overvoltages. The guide further details the specification of circuit breakers and procedures to predict field performance based on test data.

6. Adjourn

The meeting was adjourned by the Chair.

Submitted by:

Mike Crawford, PAR SG Chair

Luke Collette, PAR SG Secretary

Attendance

Michael	Crawford	Mitsubishi Electric Power Products, Inc.
Lucas	Collette	Duquesne Light
Andy	Beckel	XCEL Energy
Andrew	Chovanec	Power Grid Components
Mark	Peterson	XCEL Energy
Casey	Weeks	Siemens Energy
Jon	Rodgers	Siemens Energy
Carl	Kurinko	Hitachi Energy
Mike	Skidmore	AEP
Devki	Sharma	Retired
Vern	Toups	Siemens Energy
Brian	Roberts	Southern States, LLC
Carl	Schuetz	American Transmission Company (ATC)
Jan	Weisker	Siemens AG
Richard	York	Mitsubishi Electric Power Products, Inc.
Marcus	Young	Mitsubishi Electric Power Products, Inc.
Dave	Johnson	Consultant
Vincent	Marshall	Southern Company
Dan	Schiffbauer	Toshiba International Corp
Jason	Cunningham	Southern States, LLC
Leo	Lopez	Wika Instrument
David	Mitchell	Southern States, LLC