

Stray and Contact Voltage Working Group
Matthew Norwalk, Chair
Chuck DeNardo, Vice Chair
Scott Kruse, Secretary

2019 IEEE PES General Meeting
Hilton Atlanta
Atlanta, GA

August 5, 2019
1PM – 5PM

Approved Meeting Minutes

Attendees

Bryan Beske – American Transmission Co.	Scott Kruse – Power Survey Co.
Thomas Callsen – Weldy Lamont	James Leary – Con Edison of NY
Anthony Cedrone – Con Edison of NY	Giancarlo Leone – SR3 Engineering
Chuck DeNardo – Consultant	Sal Martino – Duke Energy
Alexander Dornhelm – Con Edison	Chris Mullins – Power Monitors, Inc.
Doug Dorr – EPRI	Matt Norwalk– SCE
Bryan Glenn - SCE	Paul Ortmann – Idaho Power Co
Kevin Grant – Con Edison	Clay Stocklin – Power Engineers
Stuart Hanebuth – Power Survey Co	Muayad Tarabain – Hydro One
Andrea Helmig – SR3 Engineering	Steve Tatum – Alabama Power
Steven Hensley – Sargent & Lundy	Jeremy Wright – UK Power Networks
David Kalokitis – Power Survey Co.	Bo Yang - Hitachi

The Stray and Contact Voltage Working Group met at the 2019 IEEE PES General Meeting on Monday afternoon August 5th at the Hilton Atlanta, Atlanta, Georgia. There were 24 people in attendance.

The meeting began with an introduction by the Chair and introductions of the officers. Then moved into a review of the meeting Agenda. There was one change to the Agenda, Muayad Tarabain would be presenting a case study.

Next were attendee introductions, circulation of the sign in sheet and review of the obligatory patent slides. No one had any patents to mention.

There was a review of the Garden Grove meeting minutes, and no changes were requested. Anthony Cedrone made a motion to approve the minutes and it was seconded by Chuck DeNardo. The minutes were approved.

Muayad Tarabain from Hydro One, presented Farm Stray Voltage Case Study. A farm located across from a distribution station was reporting that the cows were not drinking from a heated water bowl and a woman felt a minor shock at a washing station. It was ultimately determined that the voltage was Stray Voltage from NEV due to the fact that the farm was located so close to the distribution station, but they had to mitigate because it was above the allowable, Ontario Farm Stray Voltage Regulation, voltage of .5V. After considering a few options a neutral isolator was selected and installed. Muayad wanted to get the groups input regarding the NEV profile he observed and the use of neutral isolators. The group held discussion and it was determined that the NEV trend was common and neutral isolators have been used on several farms to mitigate Stray Voltage. It was recommended, that although neutral isolators generally fail closed, he should add a test to verify it actually closes under the rated fault current. Additionally, it was mentioned a neutral isolator test should be in the guide.

Group took a break from 2:00-2:17PM.

The meeting continued with a review of the case studies for the panel session to be held Wednesday, Aug 7th at 1-3PM. Matt Norwalk presented a shock complaint that was caused by induced voltage. Matt noted that the flow chart in the guide may need to be updated to account for induction sources when you have <5%THD. Doug Dorr presented a pool shock investigation at an apartment complex. Doug felt he was only able to make 60% of the measurements he needed by following the guide, but he has ideas on what needs to be added. It was discussed that the mitigation steps, which would remove the voltage from the pool and make it safe, still leave the underlying source of the issue undetermined. The guide should explain the importance of finding the source as well as installing an equipotential grid.

Group took a break from 3:22 -3:39PM.

Anthony Cedrone, Kevin Grant and Alexander Dornhelm presented Contact/Stray voltage detection and repair in an urban environment. Alex would like to see Advanced Metering Infrastructure (AMI) added to Section 6 as a method of detection.

The Chair went through a brief review of comments that he submitted for the P1617 Draft Guide for Assessment, Mitigation, and Control of Corrosion of Metallic Shields for Extruded Dielectric Cables Rated 5kV to 26kV. He found that they hadn't referenced IEEE Std 1695 – 2016 and there were instances where the terms stray and contact voltage should be applied. He noted that it is important for the group to be aware of guides that are up for balloting and need reviewers.

Guide revision updates. There were no new updates to the sections. Now that the new formatted draft of the guide is on iMeet, the section leads can download it and make changes to their sections and then all the changes will be compiled into a master revision. Additionally, it was discussed that the group did not define the changes that need to be made. The Chair agreed to send out an Excel document to the group members for them to add suggested changes.

New Business: The Chair inquired if anyone wanted to hold a panel session at the T&D expo in Chicago. It was decided that an abstract should be submitted. The Chair would write the abstract and circulate it for comment prior to submission.

Round Table: Doug Dorr asked the group which section of the guide should someone with a horse farm look for information about horses jumping back from the trough and could they get enough information to determine customer or utility responsibility? It was suggested to look at the confined livestock section, but for a better understanding of the concepts they should read the whole guide.

Motion to adjourn by Anthony Cedrone, seconded by Sal Martino. Meeting adjourned at 4:41PM.

The next meeting will be at the 2020 IEEE PES Joint Technical Committee Meeting, January 12-16, 2020 in Jacksonville, FL.