MINUTES FOR C37.30.4 Working Group

Hilton Head Island – April 26, 2016

The working group met on Tuesday 4/26/16 for one session. An attendance sheet is included at the end of this document. There were 9 members and 17 guests in attendance.

Old Business

The following changes included in D6 from the Fall 2015 Meeting were reviewed:

- Reviewed the revised Figures and Notes for test circuits from Tom Stefanski. The figures and notes were accepted with the following comments:
  - Frank DeCesaro will provide more appropriate TRV curves for Figures 3 and 6.
  - Note 1 pertaining to Figure 5 was removed.
  - Frank DeCesaro will provide updated circuit diagrams for the Fault Making Current Tests.
- 8.1.2.2 – Agreed on suggestion from Tom Stefanski to change wording "Testing with a load-switching circuit (Figure 1 or Figure 2) that utilizes a 20% source impedance may be substituted for the loop-switching test." To the following new wording:
  "Testing with a load-switching circuit (Figure 1 or Figure 2) that utilizes 18-20% source impedance may be substituted for the loop-switching. Experience shows that load switching tests with higher source impedance result in TRV peaks exceeding those of Table 2. Usage of the above method should be accepted by the switch manufacturer."
- 8.1.2.2.1 – The following note was agreed to be added:
  "Note: This is a load current switching requirement and not to be considered as capacitor switching."
- 8.1.2.3 – Unloaded Transformer Switching Tests – as agreed from F15 meeting, Tom Stefanski reported the following:
  As requested, during recent STL Technical Committee meeting I requested members to share comments on their testing practices. The following is my summary of the discussion. I should soon receive the official meeting minutes and will forward to you as soon as available.

  It is impossible to create generalized circuit simulating all types of unloaded transformer switching. As a result, these tests can be only performed on a specific request using the actual transformer units (provided by the client) and duplicating TRV and circuit configuration. Otherwise, general assumption is made that tested switches are unconditionally capable of interrupting magnetizing currents and no tests are required.

  Based upon this it was agreed to keep the first paragraph in Section 8.1.2.3 unchanged as follows:

  "It is assumed that a switch that has passed the load-switching tests specified in Table 5 will also interrupt unloaded transformer magnetizing currents corresponding to a distribution transformer, rated 38 kV or less and also rated 2500 kVA or less; therefore, no tests are specified."

  And to replace the second paragraph in Section 8.1.2.3 with the following from IEC 62271-103:

  "Because of the variety of transformers and associated circuits, it is not possible to define a rated no-load transformer breaking current. Due to the non-linearity of the transformer magnetizing current core, it is not possible to correctly model the switching of transformer magnetizing current using linear components in a test laboratory. Tests conducted using an available transformer will only be valid for the tested transformer and cannot be representative of other transformers. If a special test is necessary, test circuits and test procedures have to be agreed between customer and manufacturer."

New Business

- The above actions are to be completed with response back to Bill Hurst by the end of November.
- Bill will updated document and distribute to the WG by the end of 2015 for review and comment with response to be provided by 1/31/16.
- Bill will finalize Document and submit for Editorial Review with intent to have this completed prior to the Spring 2016 Meeting.

Adjournment

The meeting adjourned at 5:45 PM.

Respectfully submitted,

Bill Hurst

Bill Hurst

C37.30.4 Working Group Chairman

C37.30.4 Working Group

Attendance – April 26, 2016

First Name	Last Name	Organization		4/26/16
Sam	Chang	PG&E	G	X
Stenlin	Cochran	MPS	G	X
Micheal	Colesami	Conoca	G	X
Frank	DeCesaro	Eaton – Copper Power	M	X
Steve	Donahue	Royal Switchgear	G	X
Glenn	Dorsey	Siemens	M	X
Rodolfo	Elizondo	ABB	G	X
Kenneth	Harless	Pascor Atlantic	M	E
Gary	Haynes	ABB	M	X
Danny	Hoss	Southern States	M	X
Jim	Houston	Southern Company	M	E
Bill	Hurst	Alstom Grid	M	X
Amir	Khosravi	BC Hydro	G	X
Thomas	Kohler	Ameren	G	X
Pete	Kowalic	Cleaveland Price	M	X
Paul	Leufkens	Power Projects Leufkens	G	X
Wangpei	Li	Eaton	G	X
Blake	Menard	Hubbell Power Systems	G	X
Neil	McCord	Southern States	G	X
Peter	Meyer	S&C Electric	M	X
David	McMullen	Southern Company	M	X
Jordan	Oliver	Hubbell Power Systems	G	X
Laura	Reid	Hubbell Power Systems	G	X
Carl	Reigart	Hubbell Power Systems	M	E
David	Rhein	Hubbell Power Systems	G	X
Andrew	Roberson	Siemens	G	X
Jim	Ruebensam	S&C Electric	G	X
Kyle	Stechschulte	AEP	M	X
Tom	Stefanski	Power Tech Labs	M	E
Jerry	Wen	BC Hydro	G	X