

Chair: Keith Wallace

Meeting Location

Las Vegas

1. Introductions of all attendees
2. Attendance list circulated
3. The IEEE Patent slides were reviewed
4. Goal is to produce a draft by next meeting that can go to ballot
5. Impedances of about 600 transformer examples were presented at last meeting with an additional 300 (total of about 900) examples were received since. The conclusion is that not every application can be covered by this P37.06.1 proposed document. Some impedances of some transformers allow transformer let-through current that is outside the ability of standard circuit breakers to interrupt.
6. Fault currents and capacitance are different on the HV and the LV for the same transformer.
7. The existing C37.06.1-2000 defines parameters for “fast TRV circuit breakers” at 30% and 7% using calculations of E2 from the standard. T2 is similarly calculated using information from Figure B.1 from C37.011. Higher transformer interrupted currents result in a lower TRV with a higher rate of rise (it is somewhat easier for the circuit breaker to interrupt a higher transformer fault current). However, manufacturers have stated that a circuit breaker that can interrupt a fast transient capability of ex. 16 kA can also interrupt all currents below 16 kA.
8. Need to change from 1-cos to two parameter presentation of TRV envelopes.
9. Need to change current ratings. A circuit breaker would either interrupt a C37.06.1 current or it would revert to a C37.06 standard circuit breaker.
10. Proposal is agree with Denis Dufournet and George Montillet proposed Annex from PC37.06draft 10. Calculate T2 values using Figure B.1. Convert 1-cos to two-parameter format. As an example, manufacturers of a circuit breaker rated for fast transient ability up to 12.5 kA, would also meet all the values for rated currents below 12.5 kA (4, 5, 6.3, 8, and 10 kA).
11. A proposal was also made that testing would be done at two test points from the R10 series of preferred values (4, 5, 6.3, 8, 10, 12.5, 16, 20 and 25 kA). Would a circuit breaker rated at 4 kA have capability to interrupt all currents below 4 kA?
12. The intent of the WG is to have the finalized PC37.06.1 to be incorporated into the revised PC37.04 as special fast TRV requirements.
13. Circuit breaker would have two ratings on nameplate; C37.04 rating and fast transient capability of C37.06.1.
14. Chair will issue a draft D0.1 to all WG members with a request to all (especially utilities) to determine if the proposal covers most applications. Draft will have explanation of how to use the document.