Annex C Distribution Subcommittee – Chair: Stephen Shull

October 17, 2018
Jacksonville, FL, USA

Chair: Stephen Shull
Vice-Chair: Jerry Murphy
Secretary: Josh Verdell

C.1 General Opening

Steve opened the meeting welcoming everyone to the meeting. Jerry circulated the rosters. To establish a quorum, a list of members was displayed and a count of was made. We did have a quorum with 41 of the 71 members in attendance by count of those identified on a slide presented in the meeting. Recorded attendance gave 115 in attendance and 41 members.

The agenda was reviewed, motion made, seconded, and approved by unanimous acclamation of the members in attendance.

The Spring 2018 meeting minutes were reviewed, and a motion was made, seconded, and approved by unanimous acclamation of the members in attendance.

C.2 Working Group and Task Force Reports

[redacted]C57.12.20 – Overhead Distribution Transformers – Al Traut

Al presented the following minutes from the working group meeting on October 15, 2018 at 11:00 a.m. with 65 in attendance.

> The meeting was called to order by the Chair (Al Traut) at 11:06AM on Monday October 15th 2018. The roster was circulated followed by the introduction of attendees stating their name and company affiliation.
>
> Quorum Verification
>
> A members list was displayed and members were asked to raise their hands. 26 members were present. A Quorum was declared.
>
> Confirmation of the essential patent statement and responses
>
> There was a call for essential patent by the Chair. There were none brought forward. The Chair announced if there was on to let the Chair or Vice Chair know.
>
> Approval of minutes of the previous meeting
>
> The Chair sent out the minutes prior to the meeting for review. He requested approval of the Minutes for the Spring 2018 meeting in Pittsburgh, PA. A motion was made and seconded for approval. The minutes for the Spring 2018 meeting in Pittsburgh was approved with no negative votes
>
> Approval of agenda for this meeting.
>
> The Chair sent out the Agenda prior to the meeting for review. He requested approval of the Fall 2018 Agenda. A motion was made by: Said Hachichi and seconded by: Paul Chisholm for approval. The minutes for the Spring 2018 meeting in Pittsburgh was approved with no negative votes

Chair Report

The Chair discussed that during publication of C57.12.20 an error was made to the labeling of terminals on Figure 6 an errata has been published to correct the mistake.

Al review the PAR for Revision for C57.12.20. The Title, Scope and Purpose for PAR submittal was reviewed. A question was brought up about increasing the upper kVA to 1000 and including platform mounting. Considerable discussion centered around this topic but it was decided to move forward without it. A Motion was made to leave the Title, Scope and Purpose as is in the present document. Motion made by: Alan Wilks and Seconded by: Mike Faulkenberry to keep the scope as is. Motion passes unanimously.

The Chair asked for a volunteer to pick up the secretary position. The Chair also asked for volunteers to assist with document editing and proof reading.

The Chair noted the possibility of relinquishing our meeting slot to allow for another WG at the next meeting to accommodate other documents that are close to expiring.

Old Business

Carlos Gaytan presented information on the newly published C57.12.39 2017 document that will be incorporated into 12.20. Carlos review the changes in the document with the group. A Motion was made by: Igor Siminov and Seconded by: Said Hachichi to include the changes in our document. There was no opposition MOTION PASSED

Giuseppe Termini led discussion to include T connected Transformers. If it is adopted it would be included in table 11. A motion was made to include the T connected transformers. Motion made by: Giuseppe Termini and Seconded by: Brian Klaponski. There was no opposition MOTION PASSED

The Chair discussed the possibility of rearranging some of the sub classes under the construction clause 7. Al reviewed an outline of the proposed changes. Al will move forward to prepare a draft of Clause 7 for review at the next meeting.

Mike Thibault discussed tank finish and corrosion as referenced in C57.12.30. Mike presented some specifics on the .30 document and the lack of costal application guidelines. When SS is specified it should follow C57.12.30 document. This will be added to the clause on tank and finish.

New Business

No new business brought forward

Next meeting--date and location

The Next meeting will the 2019 Spring: March 24-28; Anaheim, California USA

The meeting was adjourned at 12:05PM

Meeting adjourned 11:40

Submitted by: Ed Smith

[redacted]C57.12.28, .29, .30, .31 & C57.12.32 – Enclosure Integrity – Dan Mulkey

Dan Mulkey presented the following minutes from the working group meeting on October 16, 2018 at 8:00 a.m. in with 58 in attendance.

Before the meeting:

1. An email vote was called on 6/20/2018 by Dan Mulkey in response to the open motion made by Mike Thibault in the 03/27/2018 meeting in Pittsburgh which was tabled. The vote closed on 6/29/2018.
   The motion was to include a vacuum test along with the pressure test with the following parameters:
   - Apply 10 feet of pressure (4.5 psi)
   - 1 foot of water submersion
   - 7 days of vacuum, 7 days of pressure
   - Pass criteria: the final gauge reading is the same as the initial (within 0.1 psig) and no observable water leaks

   The motion failed with 20 opposed, 15 in favor and 1 abstention. 36 of 48 members voted.

2. An email motion was made by Igor Simonov and seconded by Guiseppe Termini to accept the addition of 3.2.1 Design Submersibility Test:

   An email vote was called on 6/30/2018 by Dan Mulkey on the motion. The vote closed on 7/13/2018.

   The motion failed with 29 opposed, 12 in favor and no abstentions. 41 of 48 members voted.

3. ENCLOSURE·DESIGN¶

3.2 Submersibility·Testing¶

3.2.1 Design·Submersibility·Test¶

The·assembled·piece·of·equipment·shall·be·pressurized·to·49·kPa·(gauge)·(7·psig)[‡‡]·and·then·submerged·so·that·the·topmost·portion·of·the·equipment·is·30·cm·(12")·underwater[‡‡].·Once·the·initial·bubbles·from·trapped·exterior·air·have·dispersed,·the·submerged·equipment·shall·be·observed·for·pressure·loss·and·bubble·formation·for·a·minimum·of·10·minutes.··Pass·criteria·is·no·bubble·formation·and·with·no·loss·of·internal·air·pressure·greater·than·0.7·kPa·(gauge)·(0.1·psig).·Pressure·monitoring·shall·be·with·a·gauge·accuracy·of·± 0.1%·or·better.¶

NOTE—Since·the·equipment·is·internally·pressurized,·increasing·the·submersion·depth·would·reduce·the·stress·on·the·equipment·unless·the·water·depth·exceeded·10·m·(33·ft).¶

3.2.2 Production·Submersibility·Test¶

Each·piece·of·assembled·equipment·shall·pass·a·suitably·designed·leak·test.¶

1)→ Pressurized·and·then·submerged·in·water·without·air·bubbles·streaming,·or¶

2)→ Pressurized·and·tested·with·chalk·dust,·or¶

3)→ Pressurized·and·held·for·suitable·time·without·any·loss·of·pressure¶

¶

[‡‡]·Based·on·withstand·without·permanent·distortion·pressure·in·IEEE·C57.12.39,·Standard·for·Distribution·Transformer·Tank·Pressure·Coordination¶

[‡‡]·Based·on·Accelerated·sealing·life·test·in·IEEE·386,·Standard·for·Separable·Insulated·Connector·Systems·for·Power·Distribution·Systems·Rated·2.5·kV·through·35·kV¶

Meeting Minutes / Significant Issues / Comments:

1. Dan Mulkey called the meeting to order at 8:03 AM.
2. Introductions were performed.
3. Membership changes were noted:
   a. Removed: Sanjib Som
   b. Added: David Blew, Justin Minikle, Michael Morgan, Babanna Suresh, Ben Garcia

4. Quorum was verified. The working group consisted of 49 members, requiring 25 for quorum. 31 members were confirmed at the time of counting. 33 members were confirmed afterwards through the roster.
5. Steve Shull made a motion, seconded by Igor Simonov for approval of the minutes. No opposition was raised so the minutes were unanimously approved.
6. Dan Mulkey made a call for any essential patent statements and responses. None were raised.
7. Steve Shull made a motion, seconded by Mike Thibault for approval of the agenda. No opposition was raised so the agenda was unanimously approved.
8. Status of Standards:
    a. C57.12.28 Standard for Pad-Mounted Equipment – Enclosure Integrity, Published July15, 2014, Revision Due: 12/31/2024
    b. C57.12.29 Standard for Pad-Mounted Equipment – Enclosure Integrity for Coastal Environments, Published August 8, 2014, Revision Due date 12/31/2024
    c. C57.12.30 Standard for Pole-Mounted Equipment – Enclosure Integrity for Coastal Environments, Published September 20, 2010, Revision Due: 6/17/2020
    d. C57.12.31 Standard for Pole Mounted Equipment – Enclosure Integrity, Published September 20, 2010, Revision Due: 6/17/2020, Corrigenda approved May16, 2014
    e. C57.12.32 Standard for Submersible Equipment – Enclosure Integrity, Reaffirmed 3/7/2008, Revision Due: 12/31/2018, PAR expiration: 12/31/2019
9. Old business:
    a. Dan Mulkey informed the group that the motion to add a design submersibility test had failed through an email vote. The vote had occurred between the Spring 2018 meeting in Pittsburgh and this Fall 2018 meeting in Jacksonville.
10. New business:
    a. Dan Mulkey informed the group that the draft standard of C57.12.32 had been sent for MEC review. The review had been delayed due to a lost email, but has now been completed with some comments for the group to review.
    b. A motion was made by Ed Smith and seconded by Babanna Suresh to approve Draft 2.6 for ballot and form a comment resolution group to make the resulting changes, including the MEC comments, prior to the Spring meeting. The motion passed unanimously with 32 in favor and none opposed.
    The following members agreed to join the comment resolution task force: Dan Mulkey, Justin Minikel, Jerry Murphy, Jeremy Van Horn, and Ben Garcia.
    c. Dan Mulkey asked the working group if it would be better to combine the C57.12.30 and C57.12.31 documents into one standard for the next revision, or if they should be kept separate. Justin Minikel offered to help combine the documents if the group decided to do that. A few points for consideration were raised in the ensuing discussion:

i. The documents are currently referenced in other standards such as C57.12.20; if the documents change those references may be out of date. Combining into one document will require that a new standard number be generated and assigned to the new document.
ii. Users often specify which standard they want when purchasing transformers; if the standards are combined it will introduce ambiguity as to what the user is looking for.

A straw poll vote was taken amongst the working group about whether to combine the standards into one document on the next revision cycle or to keep them separate. The majority of the group voted in favor of keeping them separate, with 3 members voting to combine.

The scope and purpose of C57.12.30 and C57.12.31 were reviewed:

iii. It was discussed whether or not to include control cabinets into the scope of the C57.12.30 revision. The scope currently has the words 'not limited to' which may mean it's already covered. Control cabinets are typically not in excess of 600V.
iv. Justin Minikel informed the working group that the Switchgear subcommittee is working on a PAR to include Enclosure Integrity into Switchgear.
v. It was confirmed that the scope of the pole-mounted Enclosure Integrity standards includes platform mounted transformers as well.

A motion was made by Mike Thibault and seconded by Igor Simonov to submit a PAR for both C57.12.30 and C57.12.31 separately without changing the scope of the documents. The motion passed with unanimous approval.

A task force was formed to take the C57.12.32 standard once it has been balloted and apply the changes to the C57.12.30 and C57.12.31 documents. The task force included the following members: Justin Minikel, Babanna Suresh, Jeremy Van Horn, Jerry Murphy, and Dan Mulkey.

11. The meeting was adjourned at 8:39 am.
12. The next meeting will be held on March 26, 2019 in Anaheim, CA, USA

Copies of any handouts and/or subgroup reports will be made available as separate items but referenced by these minutes.

The following attendees requested membership and will be added to membership for the Fall 2018 meeting:

- Martin Bachand
- David Blew
- Douglas Craig
- William Elliot
- Matthew Enders
- Kenneth Hampton
- Juan Ramirez
- James Ratty
- Pedro Salgardo
- Robert Tinsley

Submitted by:Jeremy Van Horn

[redacted]C57.12.34 – Three Phase Pad-Mount Transformers – Ron Stahara

Ron Stahara presented the following minutes from the working group meeting on October 15, 2017 at 3:15 p.m. with 82 in attendance.

Steve Shull called the meeting to order and introductions were made. The rosters were circulated. The names of those in attendance are recorded in the AM system. To establish a quorum, a members list was displayed on the screen and those who saw their names were asked to stand. From the people standing, it was determined a quorum was established. Patent requesting slides were displayed and Steve Shull asked for any known patents to which no one responded. The agenda was presented and a motion to accept it was made by Gael Kennedy and seconded by Ed Smith. The motion was approved unanimously. The Spring 2018 minutes were presented and a motion was made to accept them by Gael Kennedy and seconded by Paul (John) Chisholm. The group approved the motion unanimously.

Steve Shull asked Carlos Gaytan to speak about the work in C57.12.39 and how it relates to this standard's Section 9.4.1. Carlos made several comments concerning the verbiage but acknowledged that the current C57.12.39 doesn't address negative pressures. He recommended that we leave this section as written, replacing only the word "distortion" with "deformation". Dan Mulkey made a motion, seconded by Jerry Murphy, to replace the word "distortion" in the text with the word "deformation". The motion was approved unanimously.

Steve Shull asked for comments on Section A.1 and none were offered by the Working Group.

Steve Shull asked for comments on Section A.2 and none were offered by the Working Group.

Steve Shull asked for comments on Section A.3. It was pointed out that there was an editorial issue. Steve Shull changed the word "show" to "shown". Steve Shull asked Jim Antweiler to explain his submitted comment: "…How was the selection of the accessories gathered for this Annex." He felt that there might be some missing accessories. The one for this section might include Vacuum Fault or Molded Vacuum Interrupter (VFI). Jim stated that VFIs are typically used when the current becomes too large for a fuse to be used. Dwight Parkinson commented that VFIs were not included in the Annex because the Annex was designed to list the more common components which have availability from multiple manufacturers. This last point was made as in-tank VFIs are currently available only from one manufacturer. Mike Thibault made a motion to include a new section in Annex for "VFI Protection" which was seconded by Gael Kennedy. Rhett Chrysler asked for a clarification concerning if the VFI section would be describing external or internal VFIs. Steve Shull clarified that the VFIs we were discussing would be internal. Rhett Chrysler made a friendly amendment to the motion to add "Internal" before "VFI Protection". Mike Thibault accepted the friendly amendment. The motion failed with 17 votes in opposition and 3 in favor. All of the other members abstained.

One of the working group asked if the Overcurrent Protection table in A.3 should be shown in order of commonality of use. Steve Shull proposed a statement at end of Section A.3 to state that there would not be any preference in their listing. After seeing

this statement, Tom Callsen made a motion to accept it as written. This was seconded by Gael Kennedy. Jerry Murphy proposed a friendly amendment to modify wording to "The order of listing in Table A.1 does not represent any preference nor is this a complete list." Tom Callsen accepted the friendly amendment to the original wording. The motion was approved unanimously. Carlos Gaytan made a motion, seconded by Jerry Murphy, to change wording from "…transformer cabinet…" to "…transformer compartment…". The motion passed unanimously. Gary King made a motion to change wording from "External accessible fuse points *will*…" to "External accessible fuse points *may*…" which was seconded by Jeremy Van Horn. During the discussion of this motion, one of the working group commented on the placement of the "F1, F2, and F3" labels. This was discussed based on nameplate marking as well as customer requirements. One user stated that his company would require the labels for "F1, F2, and F3" as marked on the nameplate. A manufacturer stated that most of transformers supplied by his company are not required by the users to provide with these. There was some discussion for and again these marking labels using these arguments. The motion was called to question and the motion failed.

Rhett Chrysler made a motion, seconded by Alex Macias, to separate the labels area of the current Section A.3.1 into a different section and call this section "LABELING". One user shared what IEC stated about labeling. The motion passed with 3 abstentions. Steve Shull separated Section A.3.1 and renamed it, "Labeling" in the draft.

Following this same example, he separated the later part of Section A.3.1 to "Accessibility and Operational Considerations" as agreed to by the working group.

As we were running out of time, Steve Shull asked for general comments on any hot issues in the Annex. One person offered a comment concerning the content in Annex A as it seemed to be too specific and maybe it should be more general.

The next meeting of the Working Group will be in the Spring 2019 Anaheim meeting.

Being out of time, Steve Shull adjourned the meeting at approximately 4:30 pm.

Submitted by: Scott Dahlke

[redacted]C57.12.36 – Distribution Substation Transformers – Jerry Murphy

This working group did not meet.

[redacted]C57.12.38 – Single-Phase Pad-Mounted Transformers – Ali Ghafourian

Ali Ghafourian presented the following minutes from the working group meeting on October 15, 2018 at 1:45 p.m. with 72 in attendance.

The meeting was called to order at 1:45 p.m. by Ali Ghafourian.

A quorum was established with 25 of 39 working group members present.

The agenda for the meeting was presented, a motion from Fred Friend and seconded by Jerry Murphy to approve the agenda and it was unanimously approved.

The minutes of the Spring 2018 meeting in Pittsburgh was presented by Carlos Gaytan and seconded by Ed Smith to approve the minutes and it was unanimously approved.

It was stated that our PAR expires in 2022.

Old Business:

1. TF on adding Internal Components to an Informative Annex

   Giuseppe Termini gave a report and showed a list of components that were being proposed for the 3PH standard (12.34) be considered for inclusion in this 1PH standard. A suggestion was made to include pictures of the components for clarity, but it was decided to delay this recommendation to see what was going to be added to the 3PH standard. There was a motion made by Carlos Gaytan and seconded by Steve Shull to use the 3PH list in the 1PH standard. After some discussion it was decided to add "as applicable to 1PH transformers" in the motion because things like auxiliary contacts should not be used on 1PH. The amended motion was unanimously approved.

2. TF on updating the drawings that seemed to be "not to scale". The new drawings will be posted on the website for review.

New Business:

Ali requested as Task Force be developed of three persons to clean up the document and perhaps reorganize the document in view of the new 12.39 Standard for Distribution Transformer Tank Pressure Coordination.

The volunteers were: Jeremy VanHorn, Carlos Gaytan and Jerrod Prince

A total of 14 persons requested membership.

The Chair adjourned the meeting at approximately 2:45 pm.

Submitted by: Alan Wilks

[redacted]C57.12.39 – Tank Pressure Coordination – Carlos Gaytan

Carlos Gaytan presented the following minutes from the working group meeting on October 15, 2018 at 4:45 p.m. with 31 in attendance.

The meeting was called to order at 4:46 PM. Introductions were made. Carlos Gaytan called the question for essential patent statements and responses, none were raised.

Quorum was checked. The working group consisted of 26 members, requiring 13 for quorum. 7 members were confirmed at the time of counting, so quorum was not established. 11 members were confirmed afterwards through the roster.

Neither the agenda, nor the minutes from the previous meeting could be approved since quorum had not been established.

Old business: Carlos presented the chair report. The C57.12.39-2017 standard was published on May 4, 2018. The 10-year cycle ends on Dec. 31, 2027; the latest start year for a revision to meet this deadline is 2022.

New business: Carlos presented a list of possible items for consideration into the next revision of the standard:

1. Add requirements for negative pressures
2. Clarify applicability of standard for submersible transformers

3. Changes on requirements for Design Tests for Fault current capability
4. Temperature requirements

Carlos presented a new potential scope and asked the group when the next revision process should be started. A discussion followed:
Multiple other standards such as C57.12.20 are currently working to align with C57.12.39 in their active revisions. Since the 2017 publication of C57.12.39 doesn't cover negative pressure requirements, those other documents are considering their adoption.

Steve Shull commented that it would be beneficial for the other standards if C57.12.39 could be accelerated and published before the other standards were updated, but that it would not be possible due to the time required for the PAR approval process. The consensus was to gather comments while updating the other documents and postpone a new C57.12.39 PAR for 3-4 years. No formal decision was made to postpone the PAR, since quorum had not been established.

Jerry Murphy also commented about the definitions of the terms "nominal" and "rapid transient". Carlos commented that they were defined in the document. Jerry mentioned that nominal pressures should include both high and low ambient pressures since transformers can deform due to negative pressures as well as positive. This would be one of the items considered for the next revision of the standard.

The WG will not meet in the Spring 2019 meeting in Anaheim. The meeting was adjourned at 5:15 PM.

Submitted by: C. Gaytan/J. Van Horn

[redacted]Task Force on Transformer Efficiency and Loss Evaluation – Phil Hopkinson

Phil presented the following minutes from the task force meeting on October 15, 2018 at 9:30 a.m. with 97 in attendance.

The minutes shall record the essential business of the Working Group, including the following items at a minimum:

1. Call to order and any Chair's remarks

   9:37am meeting was called to order

2. Quorum Verification

   Not a working group; Quorum is not necessary

3. Confirmation of the essential patent statement and responses

   Not a working group, no patents were discussed.

4. Approval of minutes of the previous meeting

   First – Steve Shull

   Second – Alan Wilkes

   Minutes approved.

5. Approval of agenda for this meeting.

   Agenda was posted and followed for this meeting.

6. Technical topics

   Dan Mulkey presented loading Data submitted by Toronto Hydro and Duke Energy. Shown below are some of the highlights:

   Toronto Hydro
   3,254 single-phase transformers, all serving residential load
   100kVA was their most common transformer size (1,236 of 3,254)
   # of customers/transformer – Most common is 12 cust/transformer (range 1-30)
   Annual Load Factor – 0.29 average was the mode (most common)
   Peak Load (Mode): 3.8kW/customer
   Average Load (Mode): 1.1kW/customer
   kW/Nameplate kVA (Mode): 0.9 – Range is 0-5.8

   Duke Energy:
   12 transformers – 10 OH and 2 UG serving residential and commercial load
   25kVA was their most common transformer size (7 of 12)
   # of customers/transformer – Most common is 3 cust/transformer (range 1-8)
   Annual Load Factor – 0.20 average (0.30 RMS) was the mode (most common)
   kW/Nameplate kVA (Mode): 0.7 – Range is 0-2.0pu

   Dan's analysis goes into much more detail. For a detailed look into these values, this presentation is posted on the IEEE website.

   Tom Callsen stated to the task force that utilities submitting data need to alert Dan if there is a situation where their company doesn't install a certain size transformer and automatically default to something bigger (i.e. bypassing a 37.5KVA and installing a 50kVA transformer). Tom's concern is that this will skew the data down to a lower load factor since the transformer would be oversized. Dan said that this may be the case already since utilities are required to install equipment to meet voltage drop requirements, which in a lot of cases make the transformer larger than what would be required to simply serve the actual kVA demand.

   A comment was made that the data being present is only a snap shot of data in time and that transformer loading may change in years to come due to things like distributed generation and EV charging.

7. Next meeting--date and location

No additional comments before adjournment. Next meeting is in Anaheim in Spring 2019.

Submitted by: Phil Hopkinson

[redacted]Task Force on Distribution Transformer Monitoring – Gary Hoffman

Gary presented the following minutes from the task force meeting on October 16, 2018 at 4:45 p.m. with 95 in attendance.

1. Call to order and any Chair's remarks – Called to Order at 4:45PM by Gary Hoffman
2. Quorum Verification – All participants we informed of the option to request membership of the Task Force by indicating in the Rosters being circulated.

3. Confirmation of the essential patent statement and responses – No patents were discussed or disclosed to the Chain or the Vice as of the submittal of these minutes
4. Approval of agenda for this meeting. No Objections Motion by Jerry Murphy, Second by Al Traut– Unanimously Approved
5. Call for WG Secretary: Post meeting, Gustavo Leal volunteered appointed by the Chair
6. Technical topics introduced by Chair followed by discussion of each
   a. Review of WG's Scope/PAR
   b. (Introduction of Suggested Clauses to the Guide – Not in order of Guide to be developed)
      i. Justification for monitoring – Discussion centered on Safety, Resiliency, Reliability
      ii. Key monitoring parameters and their tolerances
      iii. Method of alert – Audible and/or visible local alarming
      iv. Telemetry – Transmission of information to those which should then take action.
      v. Monitor enclosure integrity and user access – How the Monitoring Device Enclosure should be constructed
      vi. Installation – How the Monitoring Devices should be installed – Discussion concerning some Utility Regulatory Commissions accepting monitor Reporting in lieu of on-site inspections (Rick Cantrell).
      vii. Obligatory - Overview/Normative Reference/Definitions Clauses
7. New business
   a. Motions for establishing Task Forces for Suggested Clauses
   b. Motion to form Task Force (TF) for 6.b.i (Justification for Monitoring) development of Clause – Dan Mulkey – Made Motion – Seconded by Steve Shull Motion Passed unanimously. Dan Mulkey to Chair TF. Call for Member participants in TF.
   c. Motion to form Task Force (TF) for 6.b.ii (Key Monitoring parameters and tolerances) development of Clause – Jerry Murphy – Made Motion – Seconded by Steve Shull Motion Passed unanimously. Jerry Murphy to Chair - Call for Member participants in TF Ditto above
   d. Motion to form Task Force (TF) for 6.b.iii and iv (Method of Alert and Telemetry) development of Clause – Mike Thibault – Made Motion – Seconded by Said Hachichi Motion Passed unanimously. Mike Thibault to Chair - Call for Member participants in TF
   e. It was agreed to Table action on clause for enclosure integrity and access along with the clause on installation
   f. General – Between Fall 2018 Jacksonville and 2019 Anaheim Meeting the expectation is that these TFs formed in 7.b thru d will schedule via a "Doodle Poll" and meet via "Web-Conference Call) and develop a draft proposal for the working group to review and discuss at the Anaheim Meeting.
   g. Discussion of the followed concerning Utilities and Manufacturing members of the Working Group to provide short presentations at the next meeting in

Anaheim on what "State of the Art" Monitoring for Distribution Class Transformers. Volunteers for this were:

i. PSE&G – David Blew
ii. ConEdison – Bradley Kittell/Jason Attard
iii. Qualitrol – Hakim Dulac
iv. Pacific Gas and Electric –Mike Thibault
v. Dupont – Mark Scarborough

A doodle poll will be issued to decide on meeting dates prior to and just after Thanksgiving and perhaps after the New Year

8. Next face to face meeting – Anaheim, California March 24 thru 28 – 2019. A Web meeting may be called if needed
9. Adjournment

There were no Handouts for this Meeting – Attached Power Point for Meeting Agenda

Submitted by: Mike Thibault

C.3 Old Business

- None

C.4 New Business

- Steve Shull is stepping down from the position of Chair of this subcommittee. Ed Smith will be taking over as Chair. Many members of the subcommittee voiced their appreciation to Steve for his years of dedication to the Distribution Subcommittee.

C.5 Chairman's Closing Remarks and Announcements

Steve had no closing comments to the SC except to note that the next meeting would be in Anaheim in the Spring of 2019.

C.6 Adjournment

Steve adjourned the meeting as provided in the meeting agenda at 10:15am.