

| Designation:<br>PSCCC-F0   | Name:<br>IEEE Fiber             | Name:<br>IEEE Fiber Optics Subcommittee |   |  |   |  |       |
|--|---------------------------------|---|---|--|---|--|-------|
|  | Meeting Time Skype 11 AM-1:00 F |   | Meeting Date: Minutes Revised 2020/06/17 2020/06/26 |  |   | Minutes Approved: 2020/11/06                     |       |
| Presiding Officer:<br>Chair: Delavar Khomarlou, Vice Chair: Corrine<br>Dimnik, Secretary: Vacant |                                 |   | Recorded by:<br>Delavar Khomarlou                   |  |   |  |       |
| Attendance: Tota   | al attendees = 2                |   | filiation   |  |   | ending via Phone<br>P) / Web (W) or<br>Local (L) | M/CM, |
| Austin Farmer  |                                 | Al                                      |   |  | W | Local (L)  | Τ     |
| Jaclyn Whitehea  | d                               | Al                                      |   |  | 1 |  |       |
| Mark Naylor  | -                               | Al                                      |   |  | W |  |       |
| Robert (Bob) Klı   | ıge                             |   | ΓC - Retired  |  | + |  |       |
| Mike Warntjes  | <u> </u>                        |   | ATC ATC   |  | W |  |       |
| Mathew Lohry   |                                 |   | ATC   |  |   |  |       |
| Corrine Dimnik   |                                 |   | Kinectrics  |  | W |  |       |
| John Jones   |                                 | PI                                      | PLP   |  | W |  |       |
| Josep Martin Regalado  |                                 |   | Prysmian  |  | W |  |       |
| Jim Ryan   |                                 |   | Prysmian  |  |   |  |       |
| Felix Chen   |                                 |   | ZTT China   |  |   |  |       |
| Jack Roughan   |                                 |   | ZTT China   |  |   |  |       |
| Linda Cai  |                                 | Z                                       | ZTT China   |  |   |  |       |
| Lemon Lu   |                                 | Z                                       | ZTT China   |  |   |  |       |
| Christopher E. Royer   |                                 |   | AEP   |  |   |  |       |
| Rabih Ghossein   |                                 |   | HPS   |  |   |  |       |
| Amnah Al-Jallad  |                                 | H                                       | HPS   |  |   |  |       |
| Gabriel Okafor   |                                 | H                                       | HPS   |  |   |  |       |
| Tewfik Schehade  |                                 | In                                      | ndependent Consultant                               |  | W |  |       |
| Delavar Khomar   | lou                             | Hy                                      | Hydro One Networks                                  |  | W |  |       |
| Brett Boles  |                                 | Sc                                      | Southern Company                                    |  | W |  |       |
| Bruce Freimark   | Bruce Freimark                  |   | AEP   |  | W |  |       |
| Jordan Ellis   |                                 | Al                                      | AEP   |  | W |  |       |
| Henson Toland  |                                 | 01                                      | OFS Optics  |  | W |  |       |
| Mike Riddle  |                                 | In                                      | ncab  |  | W |  |       |
| Monty Tuominen   |                                 |   | Bonneville Power - Retired                          |  | W |  |       |
| Mike Kipness   |                                 |   | EEE   |  |   |  |       |
| Denise Frey F  |                                 |   | iber Planners                                       |  |   |  |       |

# Minutes of meeting (continued) Page 2 of 8

| Item no.                     | Notes   | Action by    |
|------------------------------|---|--------------|
| CALL TO ORDER                | June 17, 2020: 11:00 AM   | D. Khomarlou |
| INTRODUCTIONS                | Quorum With 23 members on Skype, not including IEEE representative, Mike  |              |
| AND QUORUM                   | Kipness   |              |
| CHAIR'S REMARKS              | Skype Meeting Welcome, COVID-19 situation, the need to have virtual meetings in place of the September face-to-face meeting given the situation.  | D. Khomarlou |
|                              | IEEE SA Copyright policy for WG/subcommittee members was presented briefly. The Copyright presentation will be attached to these minutes for future reference.                                |              |
|                              | Continue to use iMeetCentral as repository for our documents, BCC to all members acceptable for now in lieu of 123Signup setup.   |              |
|                              | Corrine and I will maintain mailing list for all members and can send documents/info if members need to send to the group. For privacy, group emails will be sent as Blind Carbon Copy (BCC). |              |
| AGENDA APPROVAL              | Agenda for the June 17 virtual meeting was sent to all members prior to the call. The agenda was approved by members on the call.   | D. Khomarlou |
| APPROVAL OF PREVIOUS MINUTES | Draft Minutes of the April 1-2 virtual meeting had been sent to all members. Draft minutes were approved and will be posted on iMeetCentral as Final.   | D. Khomarlou |

| Item no.                              | Notes   | Action by       |
|---------------------------------------|---|-----------------|
| IEEE 1138 on-going                    | Summary of Discussions on June 17,2020 conference call:   | Corrine         |
| work on the draft                     | IEEE 1138 new PAR has been approved with publication date in 2024.  | Dimnik/         |
|                                       |   | IEEE 1138 WG    |
|                                       | Final revisions of IEEE 1138 and its edits brought on by Mandatory Editorial  | IEEE 1138 WG    |
|                                       | Review (MER) to vote in September 2020 virtual meeting. Based on  |                 |
|                                       | recommendation by A0, roll-call and a 2/3 approval of at least half of the  |                 |
|                                       | members of subcommittee will be required.   |                 |
|                                       | members of subcommittee will be required.   |                 |
|                                       | Once IEEE 1138 voted out of the committee and gone through mandatory  |                 |
|                                       | editorial review, the process of creating a ballot pool in IEEE MyProjects would  |                 |
|                                       | be required and the MyProject Ballot submittal process starts.  |                 |
|                                       | be required and the MJ110 jeet Banot bubinetal process starter  |                 |
|                                       | Discussion and resolution of new comments on IEEE 1138 final draft:   |                 |
|                                       | B. Freimark: Typo corrected in "National Electrical Code (NESC).  |                 |
|                                       | 4.2.2 Buffer tube construction: last sentence removed.  |                 |
|                                       | 6.4.1.5 DC resistance: set-up and procedure may be too restrictive. Action:   |                 |
|                                       | Joseph Martin to suggest alternate phrasing.  |                 |
|                                       | 6.4.3.5 Water ingress: FOTP-82 which is referenced has been updated. Test   |                 |
|                                       | lengths are no longer 1 m, they are allowed 2 or 3 m and test duration is 1 hr.   |                 |
|                                       | Action: Corrine to review differences between 1138 and FOTP-82.   |                 |
|                                       | 6.4.3.6 Seepage: clarified that sample ends shall not be blocked or sealed <u>to</u> <u>restrict fluid flow</u> .               |                 |
|                                       | 6.4.3.8 Salt-spray: Typo corrected in Acceptance Criteria.  |                 |
|                                       | Word "supplier" or "manufacturer" throughout the document used interchangeably. A definition to be added.                       |                 |
|                                       | The following definitions are proposed and to be discussed:   |                 |
|                                       | Manufacturer: The entity that produces the product in question and produces   |                 |
|                                       | specifications guarantees the life performance thereof. Manufacturer should be  |                 |
|                                       | considered as the ultimate authority when specifying parameters affecting the   |                 |
|                                       | product they produce.   |                 |
|                                       |   |                 |
|                                       | Supplier: Supplier is the contractual entity authorized by the manufacturer to  |                 |
|                                       | distribute and sell their product or represent them. A Manufacturer "is" a  |                 |
|                                       | supplier directly or through a distribution/agency representation chain while a   |                 |
|                                       | supplier "may be" a manufacturer or its commercial representative under an  |                 |
|                                       | agreement term subject to time renewal. When questions on the specification of  |                 |
|                                       | the product arise, the Supplier is expected to seek answers/clarifications from the manufacturer who is the ultimate authority. |                 |
|                                       | Action: Corrine will circulate the latest copy after comment in this meeting. Will  |                 |
|                                       | vote out of the committee in September 2020 virtual meeting using roll-call if  |                 |
|                                       | we have at least half of membership. Will be sent for Mandatory editorial review and balloting afterwards.                      |                 |
| IEEE 1591.3 and                       | Not discussed due to time constraints.  | Mark Naylor     |
| 1594 Wrap Cable                       | In IEEE process for review/publication.   | 1 14111 114 101 |
| · · · · · · · · · · · · · · · · · · · | Will need Mark's newly found experience with IEEE in pushing 1138 through.  |                 |

| Item no.                         | Notes  | Action by      |
|----------------------------------|--|----------------|
| IEEE 1595 Standard -             | OPPC Standard: Went through the Draft D5 document which was worked on by   | Joseph Martin  |
| 1595D3 OPPC                      | ZTT and Prysmian (Joseph). Some of the discussion highlights are as follows:   | Linda Cai/     |
|                                  | A generic statement regarding DC line application would be needed in the   | Felix Chan/    |
|                                  | introduction. A statement to the effect that this standard is mostly geared  | Lemon Lu/      |
|                                  | towards distribution lines would be needed in the introduction section.  | Jack Roughan   |
|                                  |  | & other ZTT    |
|                                  | Section 6.4: Qualification test table is a very useful reference.  | representative |
|                                  | 6.4.3.10 Gel Fiber composition and optical unit component compatibility. Test needs to be reviewed and updated as per discussion.  |                |
|                                  | Section 4.0: Can this section be removed and referenced to 1138 or should it be kept. It is very similar to 1138.  |                |
|                                  | Table 1: Purchaser provided information: Type of conductor (e.g. Dove,) should be removed.   |                |
|                                  | Discussions parked from previous meeting:  |                |
|                                  | 6.4.3.9 Current carrying test for characteristic lab testing.  Emergency Condition test – aging test and limits established between manufacturer and customer. Remove limitation of 85 °C – To a maximum acceptable value between customer and supplier.  OPPC group to work off line. |                |
|                                  | Normative references to match IEC 60794-4-30. List will be short   |                |
|                                  | Action: The 1595 group to work offline on the draft and provide an updated version to chair/co-chair for dissemination to the group before September meeting so that it can be reviewed in that virtual meeting.   |                |
|                                  | General Comment: End user and utilities should be more involved in the OPPC 1595 standard development in order to review the applicability of the standard, OPPC cable tests and whether they meet utility requirements.   |                |
| OPPC Hardware<br>1591.4 (Jack    | 1591.4 OPPC Hardware Draft was not discussed due to time constraints.  | L. Cai/        |
| Roughan (ZTT))                   | Very similar to 1591.1 with the addition of isolators.   | J. Roughan/    |
|                                  | Jack Roughan to send a draft version to chair/co-chair for dissemination to the group. We will be able to comment on the document back to Linda/Jack.  |                |
|                                  | New version to be discussed in September meeting.  |                |
| IEEE 524 liaison                 | Not covered due to short time virtual meeting  | NA             |
|                                  | Sheave size recommendation presented by Denise Fry and discussed within the group. AFL, OFS and Incab have commented. The recommendation document will be placed in iMeet Central.   |                |
|                                  | Sheave size recommendation will be presented to IEEE 524 via Bob Kluge (our IEEE 524 liaison who couldn't be in this meeting).   |                |
| IEEE 525 and PSCCC<br>E0 Liaison | Not covered due to short time virtual meeting  | NA             |
| IEC Liaison<br>ITU Liaison       | Not covered due to short time virtual meeting  | NA             |

| Item no.                                      | Notes  | Action by             |
|---|--|-----------------------|
| IEEE 1222                                     | Publication through IEEE. Members are allowed a complimentary copy.<br>No New update.  | J. Ryan               |
| 1591.1 OPGW<br>hardware                       | Not covered due to short time virtual meeting<br>Will be covered in detail in September meeting  | J. Jones/ B.<br>Kluge |
| New /Other Business                           | Presentation by Monty Tuominen on transmission line fault current characteristics as related to OPGW (can also apply to OPPC). This presentation would include a descriptions of fault current offset (due to X/R ratio) and associated kA^2 values. |                       |
|   | Standard for splice Box - Still not sure how to approach this and whether a whole standard would be needed or it could be an addendum to an existing standard. Will discuss further in September meeting.  |                       |
|   | 20202 Power Engineering Society general meeting ( <a href="https://pes-gm.org/2020/">https://pes-gm.org/2020/</a> ) in Montreal Aug 3-6, 2020 has gone virtual due to COVID-19.  |                       |
| ITEMS REPORTED<br>OUT OF EXECUTIVE<br>SESSION | NA   |                       |
| CLOSING                                       | VOTE 1138 scheduled to vote in September meeting using roll-call. IEEE membership is required for PSCCC-F0. IEEE SA membership is encouraged but required only if voting in ballots.   |                       |
| TIME OF FINAL ADJOURNMENT                     | June 17, 2020: 13:00 EDT   |                       |
| NEXT MEETINGS                                 | Next Meeting will be virtual based on IEEE A0 recommendation:  Skype/WebEx: September 23, 2020 @ 09:00 AM – 12:00 AM EDT 3 hours September 24, 2020 @ 09:00 AM – 12:00 AM EDT 3 hours  |                       |
| MATERIAL TO BE<br>INCLUDED                    | <ol> <li>IEEE Copyright policy presentation</li> <li>IEEE Patent and duty to inform clause</li> <li>Sheave size Recommendation for ADSS and OPGW</li> <li>IEEE 1138 (marked up and clean versions)</li> </ol>  |                       |

# MAINTENANCE SCHEDULE FOR STANDARDS UNDER PSCCC-F0

| PRIORITY | DUE<br>DATE                       | STANDARD<br>NUMBER    | STANDARD TITLE  | LAST PUBLISHED DATE         | ACTION  (DEV / REVISION /  COMMENTS ONLY                  | COMMENTS   |
|----------|-----------------------------------|-----------------------|---|-----------------------------|---|--|
| 1        | New PAR<br>submitted<br>June 2024 | IEEE-1138-<br>2009    | IEEE Standard for Testing<br>and Performance for Optical<br>Ground Wire (OPGW) for<br>Use on Electric Utility Power<br>Lines                                  | 2009                        | Ready to be voted<br>out in June 2020<br>conference call. | PAR had expired in<br>December 2019.<br>New PAR with<br>publication date in<br>2024 is approved<br>Vote out of September<br>2020 Meeting |
|          | Active<br>PAR                     | IEEE 1222-<br>2011    | IEEE Standard for Testing<br>and Performance for All-<br>Dielectric Self-Supporting<br>(ADSS) Fiber Optic Cable for<br>Use on Electric Utility Power<br>Lines | 2011<br>New Version<br>2020 | Published 2020  | Published 2020   |
|          | Active<br>PAR?                    | IEEE 1594-<br>2008    | IEEE Standard for Helically<br>Applied Fiber Optic Cable<br>Systems (Wrap Cable) for<br>Use on Overhead Utility<br>Lines                                      | 2008                        |   | April 2020: Voted out of committee and to IEEE editors   |
|          | Active PAR?                       | IEEE 1595-<br>DRAFT   | Draft Standard for Testing<br>and Performance for Optical<br>Phase Conductor (OPPC) for<br>Use on Electrical Utility<br>Power Lines                           |                             |   | Standard under development   |
|          | Active PAR?                       | IEEE 1591.1-<br>2012  | IEEE Standard for Testing<br>and Performance of Hardware<br>for Optical Ground Wire<br>(OPGW)   | 2012                        |   |  |
|          | Active PAR?                       | IEEE 1591.3-<br>2011  | IEEE Standard for Qualifying<br>Hardware for Helically-<br>Applied Fiber Optic Cable<br>Systems (WRAP Cable)  | 2011                        |   | April 2020: Voted out<br>of committee and to<br>IEEE editors   |
|          | PAR<br>Approval<br>May 2019       | IEEE 1591.4-<br>DRAFT | Standard for Testing and<br>Performance of Hardware for<br>Optical Fiber Composite<br>Overhead Phase Conductor<br>(OPPC)                                      |                             |   | Standard under development   |
|          |                                   | IEEE 1591.2-<br>2017  | IEEE Standard for Testing<br>and Performance of Hardware<br>for All-Dielectric Self-<br>Supporting (ADSS) Fiber<br>Optic Cable                                |                             |   |  |
|          | Published<br>Date: Apr.<br>2017   | IEEE 524-<br>2016     | IEEE Guide for the<br>Installation of Overhead<br>Transmission Line<br>Conductors   |                             | For comment only  | Liaison Report   |
|          |                                   | IEEE 525-<br>2016     | IEEE Guide for the Design<br>and Installation of Cable<br>Systems in Substations  |                             | For comment only  | Liaison Report   |

\* \* \*

## Participants, Patents, and Duty to Inform

All participants in this meeting have certain obligations under the IEEE-SA Patent Policy.

- Participants [Note: Quoted text excerpted from IEEE-SA Standards Board Bylaws subclause 6.2]: o "Shall inform the IEEE (or cause the IEEE to be informed)" of the identity of each "holder of any potential Essential Patent Claims of which they are personally aware" if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
- o "Should inform the IEEE (or cause the IEEE to be informed)" of the identity of "any other holders of potential Essential Patent Claims" (that is, third parties that are not affiliated with the participant, with the participant's employer, or with anyone else that the participant is from or otherwise represents)
- The above does not apply if the patent claim is already the subject of an Accepted Letter of Assurance that applies to the proposed standard(s) under consideration by this group
  - Early identification of holders of potential Essential Patent Claims is strongly encouraged
  - No duty to perform a patent search

#### **Patent Related Links**

All participants should be familiar with their obligations under the IEEE-SA Policies & Procedures for standards development. Patent Policy is stated in these sources:

- IEEE-SA Standards Boards Bylaws (Clause 6) http://standards.ieee.org/develop/policies/bylaws/sect6-7.html
- IEEE-SA Standards Board Operations Manual (Clause 6.3) http://standards.ieee.org/develop/policies/opman/sect6.html
- Material about the patent policy is available at http://standards.ieee.org/about/sasb/patcom/materials.html

If you have questions, contact the IEEE-SA Standards Board Patent Committee Administrator at patcom@ieee.org or visit" http://standards.ieee.org/about/sasb/patcom/index.html

This patent information (slide set) is available at: https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.ppt

## **Call for Potentially Essential Patents**

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance (LOA): • Either speak up now, or

Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible, or Cause an LOA to be submitted

Don't discuss the interpretation, validity, or essentiality of patents/patent claims.

Don't discuss specific license rates, terms, or conditions. • Relative costs, including licensing costs of essential patent claims, of different technical approaches may be discussed in standards development meetings. • Technical considerations remain primary focus

Don't discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.

Don't discuss the status or substance of ongoing or threatened litigation.

Don't be silent if inappropriate topics are discussed ... do formally object.

#### Other Guidelines for IEEE Meetings

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See *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and "Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association's Antitrust and Competition Policy" for more details.

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