Minutes
TECHNICAL COUNCIL MEETING NO. 102
Portland, OR USA
Room: OC-B113
Wednesday, 08 August 2018, 11:30 AM – 6:00 PM

<table>
<thead>
<tr>
<th>TOPIC</th>
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<tr>
<td>11:30 – 12:00 LUNCH (PROVIDED)</td>
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<tr>
<td>12:00 – 12:15 TECHNICAL COUNCIL AWARDS</td>
<td>M. Sanders</td>
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<td>• Miriam presented the following Technical Council awards:</td>
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<td>o Young professional award: Nathan Wallace</td>
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<td>o Two distinguished services awards: William Cantor and Leonardo Lima</td>
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<td>o Technical Committee of the year: PSOPE</td>
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<td>12:15 – 12:30 ADMINISTRATIVE TOPICS</td>
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<td>Safety and Housekeeping</td>
<td>F. Rahmatian</td>
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<td>• Safety instruction was provided by Farnoosh Rahmatian</td>
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<td>Introduction of members and guests and Agenda</td>
<td>F. Rahmatian</td>
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<td>• See attachment A for attendance sheet.</td>
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<td>Approval of PES JTCM Minutes</td>
<td>H. Chen</td>
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<td>• Minutes were approved unanimously as submitted.</td>
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<td>Review of any Action Items</td>
<td>F. Rahmatian / H. Chen</td>
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<td>Standing Action Items</td>
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<td>1. Updates for Technical Committee Rosters</td>
<td>H. Chen</td>
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<td>• Major update was at the beginning of this year, when some committees transitioned to the new leadership; minor update was in late July and early August, when some committees are transitioning to the new TCPCs</td>
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<td>2. Technical Committee Meetings Calendar for posting on PES web site</td>
<td>H. Chen/ A. Rajski</td>
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<td>• All 2018 and 2019 meetings are posted on PES website.</td>
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<td>3. Annual Reports due by Jan. 31, 2018 to Tech Council Chair</td>
<td>F. Rahmatian</td>
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<td>• Annual reports are considered for the Technical Committee of the Year Award.</td>
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<td>4. Each technical committee will develop a flyer</td>
<td>H. Chen / A. Rajski</td>
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<td>• Early this year, we received flyers from 14 committees. Thanks to Angie, she led the further improvement of these flyers, so that they share the similar looks and style. These flyers were printed and brought to Monday poster sessions. PES Technical Activity palm card was also developed and distributed at this GM.</td>
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TOPICS FROM THE OFFICERS

Chair Comments

- Farnoosh mentioned the following:
  - 123signup is a participants management system to help with the coordination of committees. We need to transition to this system faster.
  - Technical Council Planning Retreat has typically happened every two years. It will be in late November this year. The Planning Retreat will focus on strategies and brainstorming on how to do better. There were previous items from 2016 and 2014 planning retreats. Technical Committee restructuring was from 2012 planning retreat to respond to members’ concerns and needs. Please block the time for Nov retreat at Scottsdale AZ. Committee chairs should attend. PES covers the expenses: one person for each committee.
  - To support the overall PES initiatives: we need to streamline standards and reports development and use resource center as the unified place, for guides, webinar, tutorial, etc.
  - VP of Education is in charge of new products development with contribution from Technical Committees

GM 2018 & 2019 Planning Status

- Vijay said that the initial planning meeting for GM 19 was held yesterday afternoon: highlighted important deadlines, quotas, especially for panel sessions. Maria will provide deadlines next week. Some information will be provided close to JTCM. The planning process is under control.

Update on PES standards tutorials

12:45 – 1:00 PES Industry Technical Support Task Force UPDATES

Standards and Interoperability

- Damir had presentation slides. See attachment B for details.

Technology

Education and Meetings & Conferences

1:00 – 1:30 TOPICS FROM THE PES PRESIDENT & EXECUTIVE DIRECTOR

Open for topics from PES President

- Saifur mentioned the following three challenges faced by PES.
  - Let people know PES
  - Be relevant outside of North America too, e.g. some committees have Asia Pacific group.
  - Engage young engineers, by showing them value of joining PES

Open for topics from PES Executive Director

- Pat mentioned that three PES presidents signed endorsement letter to approve the position (left by Angie) immediately to find a replacement for program manager.
- Pat also emphasized value proposition for PES: education, webinar, tutorials; build portfolio to serve
Open Topics from PES President Elect

F. Lambert

1:30 – 2:00  STANDING/COORDINATING COMMITTEES

TC Awards Update

M. Sanders

Standards Coordination Committee

T. Burse / T. Irwin

- How to manage GDPR process for standards
- Entity process: more activity on that aspect

Organization & Procedures Committee

H. Chen

- O&P committee meeting was held on Tuesday morning. Updated TC O&P, PSDP O&P, SPD O&P were approved at the meeting.
- Each committee should review, comment, and vote on all the O&P manuals, especially check scopes for ambiguity and overlaps.

Technical Sessions Committee

V. Vittal

- Vijay: Just sent out quota for panel sessions during this meeting
- Farnoosh: it would not be fair to paper submitters if not being reviewed timely.
- Vijay: Maria will send out new deadlines within a week.
- Farnoosh: for now, refer to last year’s deadlines. Sent email out on tutorials. Tutorials need technical committee sponsors.

Intelligent Grid & Emerging Technologies Coordinating Committee

D. Houseman

- Doug was not present at the meeting.
- Farnoosh: There was an Emerging Technology white paper developed. Expect/Need one member from each technical committee to participate as liaison. If you find missing areas of growth, please provide feedback

Marine Systems Coordinating Committee

D. Anderson

- Not present at the meeting
Wind and Solar Power Coordinating Committee  

D. Lew

- Bob: continuing membership, recruit young engineers. Had meeting on Monday to identify area of active interests. High renewable, low synchronous inertia session was well attended. Problem is that things were all over the place. Need to formulate a plan to scoop the information.
- SCC21

2:00 – 2:20  123-Signup UPDATE & tutorial  

A. Rajski/Jessica

- Jessica presented the demo for 123-Signup, for both participant management features and event management features.
- Each technical committee needs to send information in excel format to Dean, Jessica will upload for committees.
- Farnoosh: Participant management has multiple functions. No 1 function is the unified classification for all committees. Each individual can set up his/her own profile. Admin manages the roles. Dean will work with Jessica to set up Admin roles.
- Dean will follow up with Maureen Daulton, expert on GDPR.
- Jessica: there is consent option for IEEE privacy policy
- Farnoosh: Based on current 123-Signup feature, same person involving in multiple committees need to have separate profiles for each involved committee. This limitation was not expected and doesn’t serve the TC needs. TC, Dean and Jessica need to address this problem.
- Erin: for the committees which have information in myProject, there is a way to export information out of myProject and send to 123-Signup.
- Farnoosh: there will be training session during November’s Technical Council Planning Retreat.
- Diane/Joe: substation has expertise and willing to share their experiences.

2:20 – 2:35  IEEE Smart Cities  

P. Graves / F. Rahmatian

- Pat had presentation slides. See attachment C for details.
- Action item: Farnoosh needs to share the slides with technical committees.

2:35 – 3:00  TOPICS FROM TECHNICAL COMMITTEE CHAIRS by Invitation, Request or Exception

Issues of note or requiring a vote of Technical Council  
Technical Comm. Chairs

Brief update of new work by subject  
Technical Comm. Chairs

Analytic Methods for Power Systems  
Alex Schneider

- Developed two standards, updated P&P manual.
- Sponsored panel sessions, paper sessions at the GM.
- 6 subcommittees
- Had PMAPS conference in Boise.

Electric Machinery  
Kay Chen

- EMC had 14 active working groups and worked on broad range of standards and other topics in 2018.
- For the 2018 PES GM we had in total 8 panel sessions and two tutorials and all went very successful with high attendance.
EMC had been actively involved in the energy transition topic. Our subcommittees had been working actively in the topics related to the changes in the electrical grid and impact to the conventional and future grid infrastructure. Our generator subcommittee and renewable sub-committee were involved in development of IEEE 1547 and will further support EDPG as a co-sponsor for two more standards related to inverter-based resources.

**Energy Development & Power Generation**

*Ward T Jewell*

- Total 7 subcommittees
- 3 subcommittees mainly for standards

**Energy Storage & Stationary Battery**

*Chris Searles*

Chris has presentation slides. See attachment D for details.

- The Energy Storage and Stationary Battery Committee met in June at IEEE HQ in Piscataway. Over 100 people attended the General Meeting and 16 active Working Group sessions.

- The ESSB Committee was selected by IEEE PES to conduct a full-day Energy Storage tutorial at NextEra HQ in October. This will be provided as a corporate wide event. This follows providing successful ESS tutorials at FERC and the PES T&D Conference earlier this year.

- The ESSB Safety Codes Working Group has become heavily involved with the Draft NFPA 855 code that will govern the installation and maintenance of all battery technologies involved with energy storage.

- Work with SCC 21 and the SCC 21/PES/ESSB Task Force continues. We are looking at conducting a symposium/workshop to invite all Societies/Committees who have efforts going on in ESS to meet and map out a strategic plan that identifies gaps, recommendations and coordinated effort to ensure continuity and consistency within the IEEE space with respect to ESS, BESS, and standards.

This is the last TC meeting that Chris Searles will be attending as the Committee Officer rotation will take place in December. Curtis Ashton, current ESSB Vice-Chair and TCPC lead will officially join the TC Committee at the JTCM meeting in Southern California next January.

**Power System Communications and Cybersecurity**

*Mike Dood*

PSCCC Main Committee membership has been established with 35 members across 5 active subcommittees. Those members along with subcommittee members and working group members are busy working on approximately 45 standards and reports. The Fiber Optic Subcommittee is working on the following:

2. IEEE 525 Cable Systems in Substations, reviewing the draft being created in the Substations Committee in collaboration with the PSCCC’s Wireline Sub committee
3. IEEE 1138 Standard for Testing and Performance for Optical Ground Wire (OPGW) for Use on Electric Utility Power Lines, working on a draft that may be published in 2020
4. IEEE 1595 Standard for Testing and Performance for Optical Phase Conductor (OPPC) for Use on Electrical Utility Power Lines, working on a draft
5. IEEE 1594 Standard for Helically Applied Fiber Optic Cable Systems (Wrap Cable) for Use on Overhead Utility Lines, final draft approved, going to ballot soon
(OPGW), working on submitting a PAR to revise that last published version

7. IEEE 1591.3 WRAP Hardware, final draft approved, going to ballot soon

Following work in the PSCC P0 and S0 subcommittees:

1. P1 Working Group (WG), revision of C37.238, Standard Profile for Use of IEEE 1588 Precision Time Protocol in Power System Applications. After presenting a paper a GA Tech and submitting a paper for WPRC, their work is complete and the group has been disbanded. The PSCC recalls when the SUBS committee approached the PSRC in September 2008 to join the H7 working group and expand its scope to more completely cover substation IEDs. Congratulations to Galina for leading this work for 10 years.

2. P3 WG, Exchanging Information Between Networks Implementing IEC 61850 and IEEE Std. 1815 (DNP3). The standard has been published and the group is currently looking for feedback from users on their experience in implementing the mapping between these protocols. Contact any of the PSCC officers, Marc Benou the subcommittee chair, or Ron Farquharson, the WG chair at r.farquharson@ieee.org.

3. P10, IEEE Standard for Streaming Telemetry Transport Protocol (STTP). The group is currently working on submitting a PAR for a new protocol that is being developed by the DOE. The protocol is being designed to be used within a control center and between control centers of large amounts of data quickly and without data loss. It also allows the data to be broken down easily into data types. They are looking for people that are experts in computer based systems and database systems to become members of the group.

4. P12 Task Force (TF), Analog Leased Line End of Life and Migration Report. This is a report for users of existing leased line circuits and discusses the existing state of leased lines along with options going forward. Many utilities are migrating or considering the migration of their protection and SCADA communication circuits from leased lines to other technologies.

5. S1, IEEE 1686 Standard for Intelligent Electronic Devices Cyber Security Capabilities is working on revising the standard. It is presently developing use cases to ensure proper coverage of all IED capabilities related to cybersecurity.

6. S7. Electrical Power System Cyber Device Function Numbers, Acronyms, and Designations. This work will be similar in concept to C37.2 and its functions and acronyms for electrical schematics to cyber security design. This new work will focus on identifying/documenting what cyber-related features are enabled and what protective cyber controls are set. Work will be coordinated with work already ongoing in the PSRC to update C37.2.

7. S8. Testing Power System Cybersecurity Controls. This work will be similar in concept to C37.233-2009 “Guide for Power System Protection Testing”, but with a focus on the testing/commissioning/check-out procedures of protective cyber controls and measures.

8. S9 TF. Assess the IT-OT challenge in Utility Cybersecurity roles. Determine if a Task Force is required to create a report to assist in building organizational understanding and collaboration.

9. S10 Study Group (SG). Utility & Municipality Challenges on Understanding Cybersecurity Standards. Investigate the challenges utilities and municipalities are having keeping up with, interpreting, and implementing all the different cybersecurity standards and best practices.

10. S11 SG. Explore the standardization of MIBS, SNMP, syslog, etc. to prioritize what the PSCCC needs to start working on next. This task force S11 (steering committee) is to look at prioritizing profiles to support cyber related services and cyber security controls to be completed one year of assignment (September 2019 – January 2020).

The E0 subcommittee currently manages twelve IEEE standards, including 367- Recommended Practice for Determining the Electric Power Station Ground Potential Rise and Induced Voltage from a Power Fault, the 487 series- Electrical Protection of Communication Facilities Serving Electric Supply Locations, 776- Recommended Practice for Inductive Coordination of Electric Supply and Communications Lines, 1137- Recommended Practice for the Implementation of Inductive Coordination Mitigation Techniques and Application, 1692- Guide for the
Protection of Communication Installations from Lightning Effects, 820- Standard Telephone Loop Performance Characteristics, and 789- Standard Performance Requirements for Communications and Control Cables for Application in High Voltage Environments. Liaison/coordination includes PSCCC F0 and NFPA 70 (NEC) Code Making Panel representatives. EO upcoming activities in the near-term include a review of IEEE 820 (possible reaffirmation) and a review of power ground potential rise and zone of influence calculation methodologies to assess the viability of a companion tool to IEEE 367.

Power System Dynamic Performance  
Claudio Cañizares

- 2 SCs, 5 WGs, and 9 TFs active.
- Co-chaired IEEE-NERC TF on Impact of Inverter Based Generation on Bulk Power System Dynamics and Short Circuit Performance, with a follow up being considered through a Committee TF to look at some of the dynamic issues identified in the report.
- 2018 GM: 214 submitted and 78 accepted papers, 6 panels.
- TF on Microgrid Stability Definitions, Analysis and Modeling published its report PES-TR66 (153 downloads already) and submitted a PWRs summary paper in April 2018, which are expected to become highly cited/used documents like the 2014 TSG TF paper in Microgrid Control Trends (820 citations), the 2002 Voltage Stability report PES-TR9 (Resource Center top download for several years with 113 downloads in 2017-2018), and the 2004 IEEE-CIGRE Stability Definitions PWRs paper (2370 citations).
- There is a Committee TF working on a review of stability definitions and classification for systems with power electronic converters; report and paper should be ready by end of 2019.

Power System Instrumentation and Measurement  
Jim McBride

- **Standards Development**
  - Working Group for Revision of IEEE 1122 Standard for Digital Recorders for Measurements in High-Voltage and High-Current Impulse Tests (Development Underway)
  - Working Group for P2426 Guide for Field Measurement of Fast-Front and Very Fast-Front Overvoltages in Electric Power System. This is a development with State Grid China. (Development Underway)
  - Task Force for Guide on Medium Voltage Smart Grid Sensor System Accuracy (Development Underway PAR has been issued)
  - Task Force for IEEE Guide on Performing and Interpretation of Partial Discharge Tests (Developing PAR)

- **Meeting/Paper Activities**
  - 33 Conference Papers Reviewed
Committee Organization

- PSIM Committee is working to improve organization and awareness of our committee. We have met jointly with the following committees to interface on revision to IEEE Std. 4 and related documents on Uncertainty. These meetings have been jointly held with Transformers, Insulated Conductors, Switchgear, and Surge Protective Devices. The PSIM Main Committee meetings are now held at the JTCM Meetings.

Power System Operations, Planning and Economics  
Luiz Barroso

- PSOPE became fully operational in 2017 and has been sharing information on techniques and methodologies covered by its scope
- PSOPE Committee includes 5 SCs, 16 WGs, 20 TFs
- In the 2018 GM PSOPE had 436 papers submitted, with 201 accepted. PSOPE organized 28 panel sessions, 8 tutorials and 36 committee meetings
- Has carried out PES webinars in 2017 on industry-leading topics

Power System Relaying and Control  
Pratap Mysore

- 6 SCs, 17 WG, 25 standards
- Joint work with PSDP on the impact of inverter-based generation: report published in July, NERC joint activity

Smart Buildings, Loads and Customer Systems  
Shawn Chandler

- Committee Website Rebuild
  - PES SBLC has rebuilt its website. The new website can be found at:
    - http://sites.ieee.org/pes-sblc/

- Committee Officer Refresh
  - PES SBLC has refreshed the officer team, welcoming a new Vice-Chair, Secretary and TCPC. The updated roster can be found on the website.

- Architecture Subcommittee
  - Activities: Meetings address ongoing development of methods and techniques appropriate to high-level design and architecture of systems-of-systems. At the GM, new officers were appointed.

- Loads Subcommittee
  - Activities: The subcommittee was responsible for the (recently approved) P2781 Load Modeling and Simulation PAR, which has been established as an “entity type” effort working towards an IEEE standards oriented Guide.
- **Smart Buildings & Customer Systems Subcommittee**
  - Activities: Approvals at the GM addressed merging two subcommittees, Smart Buildings and 2) Customer Systems, into a single committee. The new committee addresses development of methods and techniques appropriate to smart buildings, microgrids, and IoT. At the GM, new officers were appointed.

- **P825 Working Group**
  - Activities: Meetings addressed ongoing development of the PAR. Currently, the WG has developed the sections of the Guide and assigned sections for a draft to members of the WG.

- **Asia-Pacific Working Group**
  - Activities: Meetings have resulted in ongoing development of 3 PARs, with 2 approved PARs from SBLC-APWG efforts addressing matters of interest to the Loads subcommittee for Quick Response of Customer Loads (submitted to SA in September 2018), and P2781 - Load Modeling and Simulation. An additional PAR concerning integration of loads from Electric Rail are being developed (currently underway) in coordination with IEEE VTS.

- **Blockchain Working Group**
  - Activities: This is a new WG established at the PES General Meeting. Activities will address scope and report out to the Committee for consideration of placement of matters of interest within other SBLC subcommittees, PAR development, and coordinating with other IEEE entities on this important topic. Meetings are held electronically. For interest and participation, please see the new SBLC website and contact the Chair of the Working Group.

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**Substations**  
Diane Watkins

- We recently published a new standard on AC/DC Auxiliary Systems (P1818)

- We reorganized our four subcommittees into five. This change will better facilitate discussions around the areas of lightning protection and grounding. Previously, working groups in these areas were divided between two different subcommittees. Now they are combined into one, new subcommittee. The subcommittee structure is now as follows:
  1. Gas-Insulated Substations
  2. FACTS/HVDC Substations
  3. Substation Grounding and Lightning
  4. Substation Physical/Electrical Design
  5. Substation Physical/Civil Design

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**Surge Protective Devices**  
Ron Hotchkiss

Composed of 4 main groups:

- High Voltage Surge Protective Devices
Continuous Revision of HV Arrester Test Standard
- Continuous Revision of HV Arrester Application Guide
- Surge Protection of AC Rotating Machines

**Low Voltage Surge Protective Devices**
- Gap Type Surge Protective Components
- Solid State Surge Protective Components
- Surge Protective Components Application Guide
- Surge Characterization on Low Voltage Circuits
- AC Power System SPDs
- Surge Protection Used in Information & Communications Technology (ICT) & Smart Grid Data Circuits
- Surge Protection of Equipment Connected to Both Low Voltage AC Power and Communication Circuits
- Smart Grid Protection Guide
- EVSE Protection Guide

**Insulation Coordination**

**Neutral Grounding**
- Introduction
- Synchronous Machines
- Auxiliary Systems
- Distribution
- Transmission & Subtransmission
- Current Regulated Sources

*Switchgear*

**Todd Irwin**
- 9 SCs, increased from 8
- Technical report published in Resource center
- 22 active PARs, 6 newly submitted, some PAR expires at the end of 2018
- New P&P: submitted and accepted in June, will update O&P
- Spring 2021 for meeting

*Transformers*

**Susan McNelly**
- 61 active PARs in various stages of progress
- Two Entity Ballot PARs: PC57.32.10 & PC57.12.200, which is the new process for the Committee and we are still working through the oversight process for these two documents.

*Transmission & Distribution*

**Dan Sabin**
- Most of the subcommittees and working groups of the IEEE PES Transmission and Distribution Committee (also known as the T&D Committee) met at the 2018 IEEE PES General Meeting in Portland, Oregon, USA.
- The T&D Committee has the following subcommittees: Administrative Subcommittee, Capacitor Subcommittee (8 WGs), Distribution Subcommittee (8 WGs), Engineering in the Safety, Maintenance and Operation of Lines (ESMOL) Subcommittee (15 WGs), HVDC & FACTS Subcommittee (10 WGs), Overhead Lines Subcommittee (25 WGs), and Power Quality Subcommittee (10 WGs)
• The T&D Committee has seventeen standards projects in comment pre-ballot, resolution, or recirculation.

• A new working group was added to the T&D Committee which is using entity process. It is focuses on Universal Power Flow Controller (UPFC) functions, terminology, and thyristor bypass switching.

• The T&D Committee sponsored seventeen panel sessions in 2017 and a similar number in 2018.

• The ESMOL Subcommittee is organizing the ESMO Conference in June 2019 in Columbus, which will be hosted by American Electric Power.

• The T&D Committee will next meet at the 2019 IEEE Joint Technical Committee Meeting in Orange County, California, USA.

3:00 - 3:15 BREAK

3:15 – 3:30 PES AWARDS UPDATE Vahid Madani

• Vahid had presentation slides. See attachment E for details.

3:30 – 3:45 IEEE SCC21 Update Mark Siira

• Mark had presentation slides. See attachment F for details.

3:45 – 4:10 TOPICS FROM TECHNICAL COMMITTEE CHAIRS by Invitation, continued

4:10 – 4:25 TECH COUNCIL STRATEGIC PLANNING (RETREAT) ACTION ITEMS
- Review of previous Tech Council Retreat notes and action items (see Appendix A)
- 2018 Strategic Planning (Retreat) Session:
  • November 29-30, 2018 (8:00 AM Thursday through 2:00 PM Friday)
    Most people arriving on Nov 28th.
  • Scottsdale, AZ
  • Hotel contract being finalized (most likely Doubletree or Valley Ho)

4:25 – 5:00 Technical Activities Plan / Education F. Rahmatian / A. Rajski
Technical Activities Plan

- Farnoosh had presentation slides. See attachment G for details.

IEEE PES New Product Development

- Edvina had presentation slides. See attachment H for details.
- Claudio: Webmaster or PR person from each technical committee serves as liaison, to help come up ideas for webinars; benchmark systems for PES membership

Resource Center

- Dean had presentation slides. See attachment I for details. His contact information is d.fiorino@ieee.org

5:00 – 5:10  FELLOW NOMINATIONS UPDATE  M. Kezunovic

- Mladen continues as Chair for the last cycle, a two-year term.
  - 72 nominations in last cycle.
  - There are 6 documents in the fellow website with major changes.
  - Big issue: Nominations are poorly written, which is disadvantage to the nominees.
  - Resource committee: selected based on region, gender, technical background and expertise;
    very knowledgeable about fellow process, help write nominations; but not being used. Contact information is available from website.
  - PES fellow nomination needs 5 references.
  - Ranking is based on nomination. Endorsement is optional, used to add information for the work which is not public and confidential.
  - Need to update PES document on the sections related to Fellow, to reflect the key issues.
- Farnoosh: committee award representatives’ task is not to rank, but to help with the fellow nomination (per IEEE procedures).

5:10 – 5:40  LIAISON REPORTS  E. Spiewak

- Erin had presentation slides. See attachment J for details.

News/Info from IEEE Standards Association  E. Spiewak

SA has MOU with CIGRE, as a communication tool.

NASPI  A. Silverstein
CIGRE (General Session & IEEE PES)  F. Rahmatian
CIGRE (US National Committee)  J. McDonald
None
SCC21  D. Lew/C. Searles
Sensors Council  H. Kirkham / F. Rahmatian
• Farnoosh: PES has representation, need to find a volunteer; two meetings per year, could be anywhere in the world. The last meeting was in North America.

Other liaison reports not given at the meeting will be made part of the minutes

5:40 – 6:00 OTHER BUSINESS/FUTURE MEETINGS F. Rahmatian

Old Business
New Business

Next Meetings
2018 – PES Tech Council Strategic Planning Meeting November 29-30, 2018
2019 – JTCM – Orange County, CA January 13 - 17, 2019
2019 – GM, Atlanta, GA August 04 - 08, 2019

6:00 ADJOURN

• Meeting adjourned at 6pm.

NOTICE: E-mail Supporting Documentation (e.g. presentations, reports) to: Hong.Chen@pjm.com
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<th>Position</th>
<th>Name</th>
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<tbody>
<tr>
<td>TC</td>
<td>Chair</td>
<td>Farnoosh Rahmatian</td>
<td>i <a href="mailto:rahmatian@ieee.org">rahmatian@ieee.org</a></td>
<td>FR</td>
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<tr>
<td>TC</td>
<td>Vice Chair</td>
<td>Vijay Vittal</td>
<td><a href="mailto:vijay.vittal@asu.edu">vijay.vittal@asu.edu</a></td>
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<tr>
<td>TC</td>
<td>Secretary</td>
<td>Hong Chen</td>
<td><a href="mailto:hong.chen@pjm.com">hong.chen@pjm.com</a></td>
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<tr>
<td>TC</td>
<td>Past Chair</td>
<td>Miriam Sanders</td>
<td><a href="mailto:m.p.sanders@ieee.org">m.p.sanders@ieee.org</a></td>
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<tr>
<td>TC</td>
<td>Awards Chair</td>
<td>Miriam Sanders</td>
<td><a href="mailto:m.p.sanders@ieee.org">m.p.sanders@ieee.org</a></td>
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<tr>
<td>TC</td>
<td>Stds Coord Chair</td>
<td>Ted Burse</td>
<td><a href="mailto:Ted.Burse@powellind.com">Ted.Burse@powellind.com</a></td>
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<tr>
<td>TC</td>
<td>Webmaster</td>
<td>Dan Toland</td>
<td><a href="mailto:d.toland@ieee.org">d.toland@ieee.org</a></td>
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<td>TC</td>
<td>Best Paper Coord</td>
<td>Bill Cassel</td>
<td><a href="mailto:wcassell@yahoo.com">wcassell@yahoo.com</a></td>
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<td>IGETCC</td>
<td>Chair</td>
<td>Doug Houseman</td>
<td><a href="mailto:dhouseman@burnsmcd.com">dhouseman@burnsmcd.com</a></td>
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<td>IGETCC</td>
<td>Vice Chair</td>
<td>Dwight Alexander</td>
<td><a href="mailto:d.wright.alexander@ncb.com">d.wright.alexander@ncb.com</a></td>
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<td>MSCE</td>
<td>Chair</td>
<td>Dwight Alexander</td>
<td><a href="mailto:d.wright.alexander@ncb.com">d.wright.alexander@ncb.com</a></td>
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<td>WSPCC</td>
<td>Chair</td>
<td>Debra Lew</td>
<td><a href="mailto:dbra.law@ge.com">dbra.law@ge.com</a></td>
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<tr>
<td>WSPCC</td>
<td>Vice Chair</td>
<td>Bob Zavala</td>
<td><a href="mailto:bob@enerex.com">bob@enerex.com</a></td>
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<tr>
<td>PECC</td>
<td>Chair</td>
<td>Siddharth Suryanarayanan</td>
<td><a href="mailto:sids@ucdavis.edu">sids@ucdavis.edu</a></td>
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<tr>
<td>PECC</td>
<td>Vice Chair</td>
<td>Anurag K Srivastava</td>
<td><a href="mailto:anurag.k.srivastava@wusu.edu">anurag.k.srivastava@wusu.edu</a></td>
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<tr>
<td>EM</td>
<td>Chair</td>
<td>Kay Chen</td>
<td><a href="mailto:ke.chen@siemens.com">ke.chen@siemens.com</a></td>
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<td>EM</td>
<td>Vice Chair</td>
<td>John Yagielski</td>
<td><a href="mailto:john.yagielski@nrg.com">john.yagielski@nrg.com</a></td>
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<td>ED&amp;PG</td>
<td>Chair</td>
<td>Ward T Jewell</td>
<td><a href="mailto:ward.jewell@wicha.edu">ward.jewell@wicha.edu</a></td>
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<tr>
<td>ED&amp;PG</td>
<td>Vice Chair</td>
<td>John B. Yale</td>
<td><a href="mailto:john.yale@chelanpud.org">john.yale@chelanpud.org</a></td>
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<tr>
<td>ESSB</td>
<td>Chair</td>
<td>Chris Searles</td>
<td><a href="mailto:chris.searles@baebatteriesusa.com">chris.searles@baebatteriesusa.com</a></td>
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<td>ESSB</td>
<td>Vice Chair</td>
<td>Curtis Ashton</td>
<td><a href="mailto:Curtis.Ashton@CenturyLink.com">Curtis.Ashton@CenturyLink.com</a></td>
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<td>IC</td>
<td>Chair</td>
<td>Earle C. Bascom III</td>
<td><a href="mailto:r.bascom@cc-engineers.com">r.bascom@cc-engineers.com</a></td>
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<td>IC</td>
<td>Vice Chair</td>
<td>Henk Geene</td>
<td><a href="mailto:henk.geene@prysmiaengineering.com">henk.geene@prysmiaengineering.com</a></td>
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<td>NPE</td>
<td>Chair</td>
<td>Thomas Koshy</td>
<td><a href="mailto:thomas.koshy@nrg.com">thomas.koshy@nrg.com</a></td>
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<tr>
<td>NPE</td>
<td>Vice Chair</td>
<td>Daryl Harmon</td>
<td><a href="mailto:daryls@westinghouse.com">daryls@westinghouse.com</a></td>
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<td>AMPS</td>
<td>Chair</td>
<td>Alex Schneider</td>
<td><a href="mailto:aschneider@bceglobal.net">aschneider@bceglobal.net</a></td>
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<td>Vice Chair</td>
<td>Kevin Schneider</td>
<td><a href="mailto:kevin.schneider@pnl.gov">kevin.schneider@pnl.gov</a></td>
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<td>PSCC</td>
<td>Chair</td>
<td>Mike Doed</td>
<td><a href="mailto:miche.doed@selinc.com">miche.doed@selinc.com</a></td>
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<td>Ken Fodero</td>
<td><a href="mailto:ken.fodero@selinc.com">ken.fodero@selinc.com</a></td>
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<td>PSDD</td>
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<td>Claudio Cañizares</td>
<td>cañ<a href="mailto:izares@uwaterloo.ca">izares@uwaterloo.ca</a></td>
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<td>Costas Vournas</td>
<td><a href="mailto:vournas@power.ece.ntu.ac">vournas@power.ece.ntu.ac</a></td>
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<td>PSSM</td>
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<td>Jim McBride</td>
<td><a href="mailto:jim@jimxservices.com">jim@jimxservices.com</a></td>
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<td>Ernst Hanique</td>
<td><a href="mailto:ernst.hanique@avrl.com">ernst.hanique@avrl.com</a></td>
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<td><a href="mailto:luisbarroso.web@gmail.com">luisbarroso.web@gmail.com</a></td>
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<td>Vice Chair</td>
<td>Russ Patterson</td>
<td><a href="mailto:rpp@patronmotionengineers.com">rpp@patronmotionengineers.com</a></td>
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<td>Chair</td>
<td>Shawn Chandler</td>
<td><a href="mailto:shawn.chandler@navigant.com">shawn.chandler@navigant.com</a></td>
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<td><a href="mailto:annabelle.pratt@ntel.gov">annabelle.pratt@ntel.gov</a></td>
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<td>Sub</td>
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<td>Diane Watkins</td>
<td><a href="mailto:diane.watkins@xeelenergy.com">diane.watkins@xeelenergy.com</a></td>
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<td>Sub</td>
<td>Vice Chair</td>
<td>Joe Gravelle</td>
<td><a href="mailto:joseph.j.gravelle@xeelenergy.com">joseph.j.gravelle@xeelenergy.com</a></td>
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<td>Ron Hothkiss</td>
<td><a href="mailto:ronhottkiess@ieee.org">ronhottkiess@ieee.org</a></td>
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<td><a href="mailto:thomas.tran@bourns.com">thomas.tran@bourns.com</a></td>
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<td>Swgr</td>
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<td>Todd Irwin</td>
<td><a href="mailto:todd.irwin@ieee.org">todd.irwin@ieee.org</a></td>
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<td>Swgr</td>
<td>Vice Chair</td>
<td>Keith Flowers</td>
<td><a href="mailto:keith.flowers@ieee.org">keith.flowers@ieee.org</a></td>
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<td>Trans</td>
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<td>Susan J. McNelly</td>
<td><a href="mailto:susanmcnelly@ieee.org">susanmcnelly@ieee.org</a></td>
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<td>Trans</td>
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<td>Bruce Forsyth</td>
<td><a href="mailto:b.forsyth@ieee.org">b.forsyth@ieee.org</a></td>
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<td>T&amp;D</td>
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<td>D. D. Sabin</td>
<td><a href="mailto:dd.sabin@ieee.org">dd.sabin@ieee.org</a></td>
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<td>T&amp;D</td>
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<td>Gary Chang</td>
<td><a href="mailto:garywchang@gmail.com">garywchang@gmail.com</a></td>
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<td>SOS Coordinator</td>
<td>James Graham</td>
<td><a href="mailto:Jimgraham@ieee.org">Jimgraham@ieee.org</a></td>
<td>JWG</td>
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<td>AMPS</td>
<td>VP Chair</td>
<td>Kevin Schroder</td>
<td><a href="mailto:Kevin.Schroder@pnnl.gov">Kevin.Schroder@pnnl.gov</a></td>
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<tr>
<td>SA</td>
<td>President</td>
<td>Dan Weight</td>
<td><a href="mailto:D.Wright@ieee.org">D.Wright@ieee.org</a></td>
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<td>STAFF</td>
<td>Staff</td>
<td>Evin Spaewalk</td>
<td><a href="mailto:Evin.Spaewalk@ieee.org">Evin.Spaewalk@ieee.org</a></td>
<td>ES</td>
</tr>
<tr>
<td>STAFF</td>
<td>PES ED</td>
<td>P. Ryan</td>
<td><a href="mailto:P.Ryan@ieee.org">P.Ryan@ieee.org</a></td>
<td>PR</td>
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<td>Vice Chair</td>
<td>Gary Chang</td>
<td><a href="mailto:garywikchang@gmail.com">garywikchang@gmail.com</a></td>
<td>GCC</td>
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<tr>
<td>PES GB</td>
<td>VP Education</td>
<td>Edvin Gudovic</td>
<td><a href="mailto:Edvin.Gudovic@wpi.edu">Edvin.Gudovic@wpi.edu</a></td>
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More Power to the Future
Industry Technical Support Task Force

Damir Novosel
IEEE PES Industry Technical Support Task Force Chair
August 2018

Industry Technical Support Task Force (ITS TF)

- Facilitates global collaboration between the IEEE and governments, regulatory, and other industry organizations on important technical issues
- Provides independent and unbiased viewpoints from IEEE membership
- Leverages IEEE membership and various organizations (e.g. Technical Committees, Smart Grid and Smart Cities, chapters) by coordinating efforts with the organizations mentioned above
- Works closely with IEEE Standards Association (SA), IEEE USA, and other societies
- The term of office for all members is one year. Having served one term, he/she shall be eligible to be re-appointed for up to four additional one-year terms, not to exceed five years of total service.

ITS TF Initiatives

- **NERC**
  - Identified a list of priority topics and made a plan to address them
  - Workshop on IEEE 1547 DER Interconnection standard
  - Guide on Impact of Inverter-Based Generation on Bulk Power System Dynamics and Short-Circuit Performance – June '18

- **FERC**
  - Workshop on IEEE 1547 DER Interconnection standard
  - Tutorial on Energy Storage by the BESS Committee
  - Feasibility of “universal” transformer specs
  - Response to the resiliency docket
  - Testimony for 2018 Reliability Technical Conf. (Docket No. AD18-11)

- **DOE**
  - White paper on the impact of IEEE 1547 on smart inverters – May '18
  - Supporting Grid Modernization Laboratory Consortium on interoperability, metrics and other key topics, Next Generation Distribution System Platform (DGPs) and Grid Digitization (by 2 committees)

Other ITS TF Activities

- Engage regulators and other industry organization (e.g., DOE, NERC, FERC, NATF, CIPAC, ENTSO-E) in IEEE conferences and workshops
  - IEEE PES San Francisco Chapter has organized two workshop on DER Integration at California Public Utility Commission
  - PES ISGT 2018: Chair - M. Pesin (DOE Deputy Assistant Secretary); TC Chair - S. FitzPatrick (NIST); Org. Comm. - M. Tabia (FERC), B. Cummings (NERC)
  - Participation at panel sessions: 2017 PES GM and 2018 ISGT, T&D, GM

- PES participation in regulatory and government initiatives
  - Attending FERC Technical Conference and State Regulator Conferences, e.g. Ohio’s Grid Modernization Initiative (DER panel)
  - DOE-GE Smart Grid Communications R&D Roadmap Workshop, etc.

- Input to the IEEE European Public Policy Initiative Position Statements on: Electrification of Transportation; Energy Storage for Renewable Integration; Renewable Energy; Heating and Cooling Future of Europe and Interactions with Electricity; DC Electricity Distribution

Supporting Global Agencies – IEEE MOUs

- **U.S. DOE** - Address grid modernization challenges
- **U.S. FERC** - Address energy infrastructure & market challenges
- **U.S. NERC** - Perform and promote regional and international standardization
- **North American Transmission Forum** - To facilitate interactions on issues pertaining to the electric transmission
- **Ministerio de Electricidad Ecuador** - Address reliability and resiliency challenges due to changes in the energy industry
- **ESIG** - Collaborate on energy systems infrastructure & associated technological, economic, market, and institutional challenges
- **EU Commission, California PUC, etc.**
Attachment C

Map of the Smart Cities Landscape

**Proposed Actions**

1. **Borrow on the smart cities application domain and functional framework.** Leverage the work of related stakeholders and initiatives.
2. **Develop a dynamic repository of smart city-related stakeholders and initiatives.** Include summary information for each entry, with indicators denoting where each entry fits into the common smart cities framework.
   - Stakeholders and initiatives to be captured in the common Entry Template format
   - Entries to be cataloged in the Database Repository
   - A Summary Report will be published periodically for the benefit of our broad technical community.

**Intended Impact**

1. **Identify and foster areas of collaboration across stakeholders’ efforts.**
2. **Promote best practices and emerging or developing standards.**
3. **Align resources to advance the state of the art in areas of greatest need.**
4. **Sustain models for technical advancement of the smart cities field.**

**Critical Note:** Failing to acknowledge the works of others in this field and not taking contributions in context would diminish the potential to build consensus and serve as a unifying force in smart cities.

MSCL Entry Template

**SUMMARY OF INITIATIVE**

1. Initiative Name:
2. Initiative Short Description (250 characters max)
3. Initiative Summary Description (250 words max)
4. Initiative Full Description (10 pages max)
5. Initiative URL:

**META DATA**

6. Entry Type:  Dedicated organization or defined project
7. Entry Sub-Type:
   a. For Organizations: Commercial Organization, Research and Technical Organization, Government Entity, Other
   b. For Initiatives: Research Project, Standard Development Project, Pilot Demonstration Project, Full-Scale Deployment
8. Initiative Start Date:
9. Initiative End Date:
10. Lead Organization Name:
11. Lead Organization Type: Commercial Organization, Research and Technical Organization, Government Entity, Other
12. Lead Organization Sub-Type: Local government, national government, etc.
13. Support Organization(s): Supporting Organization(s) A1, Supporting Organization(s) A2, Supporting Organization(s) A3, Supporting Organization(s) A4
14. Geographic Location: For the applicable city, county, state, region, country, continent, or globe
15. Initiative Annual Budget (Optional):
16. Application Unrestricted Covered
17. Functional Category(s) Covered
18. Standards(s) Uncovered

IEEE creates the platform to share knowledge globally

Building capabilities within functional domains supports the development of technical best practices and enables use cases across the application domains.
IEEE Smart Cities provides unbiased smart cities expertise for the benefit of humanity

Vision: IEEE Smart Cities will bring together IEEE's broad array of technical societies and organizations to (1) advance the state of the art for smart city technologies for the benefit of society and (2) set the global standard in this regard by serving as a neutral broker of information amongst industry, academic, and government stakeholders.

Growing List of Core Members:
IEEE Communications Society
IEEE Control Systems Society
IEEE Council on Electronic Design Automation
IEEE Industry Applications Society
IEEE Power & Energy Society
IEEE Systems, Man and Cybernetics Society

Thank you
Attachment D

BRIEF REPORT
ESSB COMMITTEE

1. Tutorials
2. ESTF

ADDITIONAL POINTS

- SBEE – 17 WG’s
- DCRI – 6 WG’s
- ESSB – 3 WG’s
  - Safety Codes WG
  - Nuclear WG
  - Glossary WG
- ‘13 Active PARS
  - 3 New Ones
    1. Engine Start Batteries used in ESS
    2. Flow Batteries
    3. Battery Management Systems
Attachment E

Timeline - On-Line System, Nomination Review Starts Feb. 2

Awards - Nominee Categories (PES)

- **Application Engineer/Practitioner** – Responsible for product development, advancement in application or operation, process development, manufacturing innovation, codes or standards development, or other PES related application of technology.

- **Technical Leader** – Responsible for broad or company-wide effort using technical innovation, and resulting in outstanding performance, economic enhancements, or other advantages to benefit society.

- **Educator** – Responsible to advance electrical engineering and scientific technology through education by the developing curricula and/or courses that are innovative and unique to PES.

- **Research Engineer/Scientist** – Responsible for inventions, discoveries or advances in the state of the art technological advances applicable to PES.

  Includes Advanced Automation, Integration and related IT.

Nominations - Society Level Awards 2017 and 2018

IEEE Regions – 2018 Nominations

- Total 86
- R1-6: 51
- R7: 9
- R8: 11
- R9: 7
- R10: 8

IEEE PES Awards 2017 and 2018 Nomination
PES Awards – Summary

- On-line evaluation process completed, increased nominations by 35% over previous years
- Feedback collected from committee chairs and members related to the on-line evaluation tutorials and process
- Working on a guideline in response to the various PES Award Committee Questions – The idea is to help with a more uniform and equitable evaluation process across Society Awards.

Feedback Received - Positive Features

- Users have outlined the benefits deriving from the adoption of the new on-line system for nomination/evaluation, which has been considered much better and easier than the manual submission
- A good streamlined process, and the availability of each nomination as one consolidated package significantly reduced the effort required in downloading the documents
- On-line submission system provides sufficient space (much more than before) to describe the details of the nominator
- The four categories used to classify the nominees during committee review have been considered coherent and useful
- Users found Workshops (on-line nomination & on-line evaluation) helpful in understanding the process, especially for new committee members, reducing burden on respective committee chairs
- On-line Awards workshop attendees consider the web-based a great opportunity to share their observations or offer suggestions to improve the system

Improvements – Identified by Some Award Review Committees

- “Carry Over” - The main concern is how will the on-line system allows carry-overs
  - Is there a need for a whole new submission, OR, will the prior year submission (and references) carry-over?
  - Yes for 2019 recipients
  - Stay tuned for nomination for 2020 and beyond
- Is there a process to transfer a nomination to another Award Committee?
  - At times nomination is submitted for an Award, the received Committee feels another committee may be better place for the nominee
  - Receiving Committee Chair notifies IEEE PES
  - Awards Chair will be notified
  - It is possible nominator may have to become engaged (Award templates, eligibility, form of recognition may vary)

Reference Manual for Reviewers: Table of Contents

1. Purpose of Reference Document
   a) A supplement to the IEEE Policy 4.4-H
   b) Intended to provide a consistent and equitable governance for various Awards
   c) Topics covered are the questions presented by PES Awards review committee members to achieve uniform evaluations across all society and chapter Awards
2. The information is based on collective-wits of information that IEEE has been practicing
3. Efforts are made to prevent duplications with IEEE Policy 4.4H to the extent possible
   a) In case of conflict, IEEE 4.4H prevails
4. Listing of Awards covered by this Reference Document
   https://www.ieee-pes.org/pes-communities/awards
5. Policies and Practices for the PES Governing Board
6. Code of Ethics and Review Committee Member Conflict of Interest, “recusal of members”
7. Process When Only One Nomination is Received
8. Additional Nominee Eligibility Requirement
9. Requirements for Review Committee Membership Participation
10. Transparent Ranking
11. Delay in Submitting Review Reports
12. Candidate Scoring
13. Minimum Score Required to Receive an Award
14. ………
IEEE SCC21 Update
August 8, 2018
Mark Sila

SCC 21 Active Projects
Status as of March 2018

1. Entity Project — “Test procedures and evaluation for large-scale PV plants interconnection to the transmission electric power systems”
   - Solar PV Standards
2. IEEE P1547.2 “Recommended Practice for Storing Lead-Acid Batteries in Stand-Alone Photovoltaic (PV) Systems”
   - IEEE P1562 “Guide for Array and Battery Sizing in Stand-Alone Photovoltaic (PV) Systems”

1. Recommended sponsorship by IEEE PES EDPG Committee
   - See slides 14-16 in Backup Material
2. Ballot Closed May 15, met minimum requirements (>75% Response Rate)
   - 94% Approval
   - Comment Resolution Underway
3. Will ballot August 2018

IEEE SCC 21 - Other Standards Development

IEEE P2030-4 - Guide for Control and Automation Installations Applied to the Electric Power Infrastructure
- Evaluating Sponsorship and collaborating with Computer Society
- Reinforce the Use of IEEE 2030-2011 Smart Grid Interoperability Reference Model

IEEE P2030-5 — Smart Grid Profile Application Protocol
- Co-Sponsor with IEEE COM SOC

IEEE P2030-9 — Recommended Practice for the Planning and Design of the Microgrid
- Entity Standard


SCC21 Initiatives — 2018-2019

- Communication Initiatives Related to IEEE 1547
  - UTM/EMEA: In January 2018, June 2018, September via IEEE SmartGrid
  - Conference Presentations
    - Smart Grid Symposium 2018, April 10, 2018
    - IEEE Power and Energy International — September 24, 2018
    - IEEE EPRI — Toronto, ON — October 11, 2018
- Education Outreach
- External collaboration and outreach
  - ABB/GE: Guidelines for the Admission of Data Centers
  - EPRI — SRC: Guidelines for Commissioning Energy Storage Systems
  - Interoperability and Smart Grid Interoperability Reference Model (SGIRM)
- Definition of Key Terms used in Defining Scope
  - Transmission, Access Transmission, Distribution
  - May extend to Energy Storage System Terminology
- Outreach to IEEE Societies
  - Industrial Applications, Power Electronics, Communication Society, Computer Society

IEEE Energy Storage / Solar PV Standards Activity
SCC21 Solar PV Standards:

- SCC21 has maintained 8 Solar Photovoltaic—Lead-Acid battery standards
- 5 of these expiring in 2018 standards are expiring in 2019
- Submitted PAR’s in July and IEEE-SA Approved the projects for Accelerated review of these energy storage standards —
  - No changes will be made to the approved document prior to this ballot.
  - The ballot process will eliminate confusion among stakeholder and
  - Comments will provide valuable feedback on the validity of these documents and identify types.
- Currently in Comment Resolution:
  - IEEE 1913 — Recommended Practice for Storing Lead-Acid Batteries for Standalone PV Systems
  - IEEE 1960 — Guide for Array and Battery Sizing in Standalone PV Systems
- Ballot in August 2018
  - IEEE 107 — Recommended Practice for Installation and Maintenance of Lead-Acid Batteries for PV Systems
  - IEEE 1641 — Guide for Optimizing the Performance and Life of Lead-Acid Batteries in Remote/Hybrid Systems
  - IEEE 1941 — Guide for Test and Evaluation of Lead-Acid Batteries Used in PV Hybrid Power Systems

IEEE P1547.1 Schedule

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</table>

Thank You
Mark Sila
Chair — Standards Coordinating Committee 21
mmsiira@comrent.com
(920) 980-8426
1547.2 - Application Guide for IEEE Std 1547

Scope: Provide the technical background, rationale and guidance to support the application of IEEE Std 1547-2018.
- Performance categories and their assignment to specific DER by an Authority Governing Interconnection Requirements
- The requirements for response to abnormal conditions including ride-through; the flexibility provided by the ranges of adjustability for control settings as well as for voltage and frequency trip settings to fully exploit the revised IEEE 1547's potential and to account for specific system enhancements.
- The interoperability and communication/interface requirements
- The test and verification practices, including design and as-built installation evaluations for utility-scale DER, that have not been included in the previous versions of the standard.
- Meetings Held in March 2018 and June 2018

1547.9 - Guide for Interconnection of Energy Storage Distributed Energy Resources with Power Systems

Scope: Includes DER ES connected to area Electric Power Systems (local EPs) that are capable of
- Bi-directional real and reactive power flow, and are capable of real power export to the EPS.
- Non-exporting DER ES, such as Uninterruptible Power Supply (UPS) type systems that support on-site loads, or Electric Vehicle (EV) chargers, with charging attributes that could have power system impacts.
- Initial Meeting in October 2018
Background on Large Scale PV Plant Interconnection PAR

Test procedures and evaluation for large-scale PV plants interconnection to the transmission electric power systems.

New IEEE Project Authorization Requests

**IEEE P3800: Recommended Practice for Interconnection and Interoperability of Inverter-Based Resources Interconnecting with Associated Transmission Electric Power Systems**

- **Sponsor/type:** EP&DG, jointly with EM and T&D, supported by PSDF / (Individual Project)
- **Timeline:** Start asap (tbd), Initial Ballot 06/2021, Submission to RevCom 10/2022
- **Scope:** This recommended practice establishes the recommended interconnection capability and performance criteria for inverter-based resources interconnecting with transmission and distribution bulk transmission systems, including the recommended interconnection and performance requirements for inverters and inverters associated with PV systems. The interconnection and performance requirements are for systems directly connected to the bulk power system, including, but not limited to, voltage and frequency rate-through, active power control, reactive power control, power quality, dynamic active power support under abnormal frequency conditions, and dynamic voltage support under abnormal voltage conditions.
- **Related activities:** IEC initiative to develop a single framework for connecting and controlling renewables. Contact: Charlie Smith, charlie@isie-energy, U.S. TA for SC 8A.
- **Chair & Vice-Chair:** Interim (tbd), Dr. Jens Boemer, +1.206.471.1180, jboemer@epri.com, Vice-Chair: tbd

**IEEE P2800:**

- **Sponsor/type:** EP&DG, jointly with EN and T&D, supported by PSDF / (Individual Project)
- **Timeline:** Start asap (tbd), Initial Ballot 06/2021, Submission to RevCom 10/2022
- **Scope:** This recommended practice establishes the recommended interconnection capability and performance criteria for inverter-based resources interconnecting with transmission and distribution bulk transmission systems, including the recommended interconnection and performance requirements for inverters and inverters associated with PV systems. The interconnection and performance requirements are for systems directly connected to the bulk power system, including, but not limited to, voltage and frequency rate-through, active power control, reactive power control, power quality, dynamic active power support under abnormal frequency conditions, and dynamic voltage support under abnormal voltage conditions. System protection, negative-sequence fault current contribution with possible performance requirements to ensure reliable bulk system operation.
- **Related activities:** IEC initiative to develop a single framework for connecting and controlling renewables. Contact: Charlie Smith, charlie@isie-energy, U.S. TA for SC 8A.
- **Chair & Vice-Chair:** Interim (tbd), Dr. Jens Boemer, +1.206.471.1180, jboemer@epri.com, Vice-Chair: tbd

**IEEE P3800:**

- **Sponsor/type:** EP&DG, jointly with EM and T&D, supported by PSDF / (Individual Project)
- **Timeline:** Start asap (tbd), Initial Ballot 06/2021, Submission to RevCom 10/2022
- **Scope:** This recommended practice establishes the recommended interconnection capability and performance criteria for inverter-based resources interconnecting with transmission and distribution bulk transmission systems, including the recommended interconnection and performance requirements for inverters and inverters associated with PV systems. The interconnection and performance requirements are for systems directly connected to the bulk power system, including, but not limited to, voltage and frequency rate-through, active power control, reactive power control, power quality, dynamic active power support under abnormal frequency conditions, and dynamic voltage support under abnormal voltage conditions. System protection, negative-sequence fault current contribution with possible performance requirements to ensure reliable bulk system operation.
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- **Chair & Vice-Chair:** Interim (tbd), Dr. Jens Boemer, +1.206.471.1180, jboemer@epri.com, Vice-Chair: tbd
Attachment G

Goals of this Meeting

1. Introduce new PES Staff Support and Liaison to the IEEE PES Technical Council and Committees – Angeline “Angie” Rajski Parashis
2. Highlight the major goals of this relationship
3. Receive feedback from the Council leadership on the goals and priorities in this presentation
4. Identify members who are motivated and willing to work on different aspects of the plan, to serve as our go-to liaisons between their Committee, PES and the Education Committee. The members would work directly with Angie.

Overall Efforts for the Technical Council

1. Technical Council and Technical Committees
   • Connect with Technical Council leadership and facilitate a relationship with the Technical Committees
   • Improve collaboration among technical committees
   • Improve transparency and responsiveness to industry needs
   • Improve communications and awareness between PES Governing Board and Technical Committees
   • Highlight the great work of the technical committees to a wider audience
2. IEEE PES Topics Calendar
   • Develop a Calendar that will encourage the curation of new content from the Technical Committees
3. 123Signup Transition Plan
   • Integrate a directory and registration system for the Technical Committees
4. IEEE PES Technical Committee Websites
   • Create an inventory of all final and completed content on IEEE PES Technical Committee websites, peer review and post on the IEEE PES Resource Center
   • Recreate the look and feel of individual Technical Committee websites and make them consistent with each other

Technical Council and Technical Committees

Connect with Technical Council leadership and facilitate a relationship with the Technical Committees
- Will be done via:
  - Following up with Technical Committees on a 1:1 basis via telephone
  - Attending and presenting at Technical Committee meetings at the General Meeting
  - Assisting in the logistics and planning of the next Technical Council retreat to be held November 29-30, 2018 in Scottsdale, AZ
  - Providing ongoing support to all Technical Committees

IEEE PES TOPICS CALENDAR
IEEE PES Topics Calendar

Issue:
IEEE PES currently does not have a calendar for pursuing the development of new content.

Goal:
Develop a Calendar that will encourage the curation of new content from the Technical Committees

Need:
An organized topics calendar that will allow for the solicitation of new presenters and authors across all product areas of PES, including, but not limited to reports, guides, standards, webinars, tutorials, articles, workshops, etc.

Proactive > Development of new content > Additional visibility to a broader audience

NOTES:
- A topics calendar does not preclude us from receiving self-initiated products from volunteers, it would just open a structured stream of products.
- Will work in a coordinated approach with the IEEE PES VP of Education on related topics.

Process for creating the Topics Calendar

In an effort to create an IEEE PES Topics Calendar, we will need to collaborate with all parties that can or might be able to contribute new content, including, but not limited to the following groups:
- IEEE PES Technical Council
- IEEE PES Technical Committees, Sub-Committees, Working Groups
- IEEE PES Marketing (Stats for most visited pages and content on PES website, e-bulletin)
- IEEE PES Education (New Product Development Committee & Outreach Committee)
- IEEE PES Publications (Hot topics)
- IEEE PES Resource Center (Stats for top downloaded/viewed content)
- Other IEEE PES Volunteers
- IEEE Standards Association

We are a TEAM!

Types of Content that can be created by IEEE PES Technical Activities

- Webinars
- Tutorials
- Technical reports
- Guides
- Standards
- Interviews
- Newsletter articles
- Industry surveys

Example of IEEE Smart Grid 2017 Topics Calendar

January – April

123Signup Transition Plan Update

What is 123Signup?
123Signup is meant to serve a two-fold goal:
(1) Create a directory of all PES Members involved in the Technical Committees, Subcommittees, and Working Groups and
(2) Serve as an event management system for registration of Technical Committee meetings.

Transition Plan
Committees will be provided with onboarding directions and contact information within the next couple of weeks. Committees will be supported by:
(1) Jessica Blevins of 123Signup
(2) IEEE Finance
(3) Angelique "Angie" Rajski Parashis of IEEE PES Technical Activities
IEEE PES Technical Committee Websites

- Create an inventory of all final and completed content on IEEE PES Technical Committee websites, peer review and post on the IEEE PES Resource Center
- Recreate the look and feel of three of the individual Technical Committee websites and make them consistent with each other
  - The goal is to recreate the look and feel of individual Technical Committee websites so they are branded properly and portray similar type of information, yet specific to each committee
  - Will require some more staff/volunteer capacity and support to get the work done – need assistance of volunteers to get started
  - This effort has been ongoing and will be provided more support

IEEE PES Technical Committee Website(s)

IEEE Smart Grid Example

Next steps

- Angie is reaching out to each Technical Committee 1:1
  - Technical Committees to add Angie (a.rajski@ieee.org) to respective Technical Committee email listservs
  - IEEE PES Monthly Committee Spotlights on IEEE PES website
  - Technical Committee flyers and palm card
  - Share with Angie any items you would like promoted/ marketed via IEEE PES e-Bulletin, e-News, social media, on PES website, IEEE PES Resource Center, etc.
  - Following up with Technical Committees at the PES GM
  - Letting committees know of the additional visibility of the products that is available to them and sharing with them the opportunity to create new webinars and tutorials around their projects

Goals of this Meeting

1. Introduce new PES Staff Support and Liaison to the IEEE PES Technical Council and Committees – Angeline “Angie” Rajsik Parashis
2. Highlight the major goals of this relationship
3. Receive feedback from the Council leadership on the goals and priorities in this presentation
4. Identify members who are motivated and willing to work on different aspects of the plan, to serve as our go-to liaisons between their Committee, PES and the Education Committee. The members would work directly with Angie.

Who’s in?

Questions?
Attachment H

Agenda

- New Product Development (NPD) Committee
- Selection and Quality Control Committee
- Plans for the future

IEEE POWER & ENERGY SOCIETY
Educational Activities Plan
Presented by Edvina Ubunovic
PES VP of Education
7 August 2018

IEEE PES New Product Development (NPD) Committee
- The objective is to manage and be responsible for the policies, operations, development, and marketing of PES educational products (i.e. webinars, tutorials, plain talks) and professional continuous education certificate services.
  - Formed in November 2016
  - Reports to VP Education and PES University Chair
  - WebEx meetings once a month to discuss current and future tasks
- The Committee is populated with PES members from industry and academia.
- Continuous education products (professional development hours – PDHs and continuing education units – CEUs) are available to those who seek to maintain their PE license and improve their engineering skills.

IEEE PES Selection and Quality Control Committee
- Need to add a description of the committee here

IEEE PES Staff Roles
- The NPD Committee and PES continuing education has been expertly supported by PES Executive Director Patrick Ryan.
- Sue Koval and LaToya Gourdine will continue supporting PES Education (i.e. webinars, tutorials and all other content production) streaming from the NPD Committee
- Angelique “Angie” Rasis and Dean Fiorino are the direct connection between NPD Committee and the PES Technical Council. Angie will be supporting technical webinars, tutorials and all other content production coming directly from the PES Technical Council, whereas Dean is assisting with posting products on the IEEE PES Resource Center.

IEEE PES Education Volunteer Structure
Webinars
- Offer a high level overview of a certain topic
- Presented live online (via WebEx), recorded and then offered online at the PES Resource Center
- Consist of 60 minutes with 45 minutes for the presentation and 15 minutes for the Q&A
- The educational credits associated with webinars are 1 Professional Development Hour (PDH) per hour of webinar time
- Live webinars are free to attend
- Archived webinars are free to PES members, with a graduated fee schedule for IEEE vs. non-IEEE members

Tutorials
- Offer in depth information and are comprised of a series of sessions (2-4)
- Presented live online (via WebEx) or can be prerecorded, recorded and then offered online at PES Resource Center
- Consist of 80 minutes with 60 minutes for the presentation and 20 minutes for the Q&A
- Live Tutorials have a cost associated with them
- Archived Tutorials have a graduated fee schedule associated with them for PES vs. IEEE vs. non-IEEE members

PES Continuing Education
- Changes in the industry create challenges for power education.
- In addition to traditional power system courses, colleges and universities now need interdisciplinary courses while still ensuring students graduate within the traditional four-year timeframe.
- Numerous courses that were once only available in the face-to-face environment are now being offered online, allowing for a more flexible, self-paced learning experience.
- The IEEE PES is actively engaged in continuing education by offering numerous and timely technical documents, white papers, webinars and tutorials accessible online to PES members via the PES Resource Center [http://resourcecenter.ieee-pes.org/]
- Many of PES online webinars and tutorials come with Education Credits (CEUs/PDHs) for those who need to maintain Professional Engineering (PE) license requirements.
- PES organizes "Plain talk" workshops where technical aspects of the Electric Power System have been explained in easy-to-understand terms.
- All these activities are branded within the PES community as a PES University.

Call to Action
- NPD is seeking potential presenters for webinars and tutorials to be offered to PES members at the PES Resource Center
- Presentations must be education focused, without promotion of products or services.
- Possible webinars and tutorials can consist of different categories to cover a wide variety of interests and technical levels, such as:
  - Technical
  - Membership
  - Publications
  - Chapters
  - Women in Power
  - Young Professionals
  - Students

How do I get involved?
- Get in touch with any of the following IEEE PES staff:
  - Technical Content – Angeline “Angie” Rajski Parabis at a.rajski@ieee.org
  - Anything related to Membership, Publications, Chapters, Women in Power, Young Professionals and/or Students – Sue Koval at s.koval@ieee.org
  - The staff will then have a discussion with you and figure out the best topic and timeframe to get you scheduled

Technical Council-Education Committee Liaison
- After discussions with Technical Council and Education Committee leadership and PES staff, it was decided to appoint a Technical Council-Education Committee liaison, Claudio Canizares, who will help with:
  - Compiling and facilitating access to Technical Committee reports and white papers
  - Creating and maintaining a calendar of Technical Council events and initiatives
  - Coordination of Technical Council and Education Committee initiatives, such as relevant technical webinars and activities.
  - Working with Technical Committees and PES staff to facilitate access to IEEE benchmark system reports and data on the IEEE PES Resource Center
Attachment I

IEEE PES Resource Center:
What is it? What is New?
How Can it Benefit You?

Presented by Dean Fiorino
7 August 2018

What is the IEEE PES Resource Center?
The IEEE PES Resource Center is the most extensive library in the world devoted exclusively to the power and energy industry; showcasing videos, technical publications and presentation slides from our PES conferences as well as webinars, technical reports, tutorials, and more.

These materials:
- Have been prepared and peer reviewed by professionals in the field.
- Do not compete with Xplore
- Are available for download to IEEE members and the public, with a majority free for PES members!

Benefits to IEEE/PES Members
- Need to update your license?
  — Continuing Education Credits Available
- Would like to train yourself in a specific area?
  — Video Tutorials and Webinars available
- Want to read the latest Technical Reports?
  — Complete reports available
- Cannot attend a PES conference?
  — Videos and presentations available ...

PES RC Content Overview
- Content depth
  — Over 1,400 files with new content added regularly.
- Content Variety
  — Products range from:
    • Conference presentations
    • Technical Publications
    • Online Live & Recorded Tutorials and Webinars (with educational credits)
  — New Products Coming Soon:
    • PES Magazine Archives (for IEEE & PES members only)
Attachment J

IEEE-SA Staff Update

PES General Meeting - 2018

Erin Spiewak
Manager, Operational Program Management
August 8, 2018

Agenda

- IEC Update
- Asia PARs status
- Terminology Update
- GDPR Training

IEEE/IEC Joint Development

- Currently PES has 9 Joint Development Standards in progress
  - 8 are individual based PARs
  - 1 is an entity PAR
- IEEE/IEC Guide to Cooperation
  - IEEE/IEC Staff working together to review the Guide and look for opportunities to improve

PES/Asia Approved PARs

<table>
<thead>
<tr>
<th>PAR</th>
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<tbody>
<tr>
<td>P2775</td>
<td>ED/SPG</td>
</tr>
<tr>
<td>P2426</td>
<td>PSIM</td>
</tr>
<tr>
<td>P2771</td>
<td>SPD</td>
</tr>
<tr>
<td>P2745 (Series, 3 PARs)</td>
<td>T&amp;D</td>
</tr>
<tr>
<td>P2781</td>
<td>SBLC</td>
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<tr>
<td>P1870</td>
<td>T&amp;D</td>
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PES/Asia Pending PARs

The below PARs are on the September 6th NesCom agenda

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<tr>
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<td>T&amp;D</td>
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<td>P2800</td>
<td>ED/SPG, EH</td>
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<td>ED/SPG, EH</td>
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PES/Asia PARs under review

<table>
<thead>
<tr>
<th>PAR</th>
<th>Sponsor</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Practice for Evaluation of Power Quality Impact by Electrified Railway</td>
<td>SBLC</td>
<td>Sponsor working w/submitter to modify PAR</td>
</tr>
<tr>
<td>Recommended Practice on the Application of Quick Response System for Customer-Side Load in Modern Power Grids</td>
<td>SBLC</td>
<td>Sponsor working w/submitter to modify PAR</td>
</tr>
<tr>
<td>Guide for the Selection of Neutral-point Isolation Grade and Grounding Reactor of Converter Transformers in HVDC Transmission</td>
<td>TR</td>
<td>Fails under review</td>
</tr>
<tr>
<td>Testing Guide for Automatic Voltage Control Systems in Regional Power Grids</td>
<td>PSRC</td>
<td>Task force created, Asia participants to attend Sept meeting and present</td>
</tr>
<tr>
<td>Guide for frequency-phase controlled AC voltage withstand tests of gas-insulated metal-enclosed switchgear</td>
<td>SUB</td>
<td>Asia participants invited to ITC, setting up conference call prior to start dialogue</td>
</tr>
</tbody>
</table>
**PES/Asia PARs**

- Since the JTCM two PARs have been declined
  - Out of PES Scope
  - Overlap with existing PES standard

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**IEEE-SA Terminology Update**

- The IEEE BOD and SASB have both approved the following Terminology updates:
  - ‘Sponsor’ will be updated to ‘Standards Committee’
  - ‘Sponsor ballot’ will be updated to ‘Standards Association ballot (SA ballot)’
- Changing to the Governing documents will be coming...

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**GDPR Training Update**

- IEEE-SA Staff will be providing more indepth training at the next Committee meetings
  - Highlights include:
    - Rosters
    - Attendance sign-in sheets
    - Meeting Registration

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**Other Items of Interest**

- IEEE-SA & CIGRE
  - Educational opportunity
    - IEEE-SA and CIGRE have a signed MOU
    - General terms to open communication channels
    - If there is interest to collaborate with CIGRE can contact IEEE-SA Program Manager

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**Thank you!**

Erin Spiewak  
Manager, Operational Program Management  
**e.spiewak@ieee.org**  
**+ 1 732 465 7806**
APPENDIX K
TECH COUNCIL STRATEGIC PLANNING (RETREAT) ACTION ITEMS

For reference – Previous Tech Council Retreat Discussions and Action Items

2016

1. **Strengthening PES Awareness** – Hong Chen

   - Student Outreach
   - Young Professional
   - Executive Outreach (especially Utilities)
   - Value to Industry (all venues)
   - Advertisement of Specific areas (segments)
   - What things are still relevant? (How do we identify what’s not)
   - Presentation to the world
   - Attracting practical industry paper submissions
   - Organizing practical panel sessions w/Industry Panelists
   - Blog on Panel sessions soon after the session

   **Action Items:**
   a. Each committee to develop a flyer
   b. Bring flyer to GM, Monday poster, student/facility lunch and young professional event, international meetings
   c. IEEE PES – existing flyers updated and student membership flyer needs updating
   d. Each Technical Committee to develop webinar on committee structure/history (30 to 45 minutes) during 2017– July 1, 2017
   e. Each technical committee to give webinar (45 min) on one or more specific tech subjects (paper/standards)
   f. Prior to 2017 JTCM send email to TCPCs to give strong preference for practical industry papers. (TCPC may have to make an executive decision to include)
   g. Panels – at tech sessions give preference to industry focused panels for 2017 panels, and for 2018 panels request each tech committee to propose more industry focused panels.
   h. Get Technical Committees engaged in Scholarship Plus (looking at applications) and mentoring program.
   i. PES to socialize (blog etc.) panel sessions, do it for super session as a pilot next GM.

2. **Committee Coordination** – Claudio Canizares

   - Joint WG
   - Co-sponsorship standards/Guides
   - Joint Papers
   - Co-sponsored Technical Reports
   - Joint Panel Sessions

   **Action Items:**
   a. VC of TC – look at activities of the technical committees (WG, TF), to suggest merging or joining the working groups. Start ASAP
   b. TCPCs to look at what other committees are doing and coordinate. Email prior to JTCM. Do this for the GM2017. Another meeting post GM2017 prior to Nov. paper sub deadline, to discuss proposals to coordinate before final submission of sessions.
Co-sponsored standards and guides
c. At the Standards Coordination Committee during GM or online to engage the committees’ standards liaisons. Make it important. (Ted Burse)

3. **Participant Mgt System** – Shawn Chandler
   Tracking WG activity by subjects
   tracking by Category
   Tracking by participant location
   Mailing lists
   Sortable
   **Action items:**
   a. Needs assessment
   b. Investigate if 123signup can be used across the technical committees
   c. Talk with Greg Anderson with Trans. Committee to give presentation at JTCM. Investigate the pricing/customization benefits.
   d. Other options: Regonline.

4. **Sharing Best Practices**
   Meetings
   System/Tools
   Method for sharing
   Standard O&P Template – deferred for now.
   Involving Young Professionals
   Mentorship
   Knowledge Retention
   Knowledge Transfer
   Longer Officer Terms
   Redistribution of Responsibility
   **Action Items:**
   a. Develop a series of surveys (first one before JTCM) to collect data on what everyone’s doing. (Erin to help develop it)
   b. What do we do with that? Training and posting of information.
   c. Have an agenda item at JTCM.

**2014 Remaining:**
1. External Coordination IGETCC
2. Leadership/Member training R. Hotchkiss
3. Best practices for standards development Ted Burse