



## IEEE PES Industry Technical Support Leadership Committee Summary of Activities 2019

The IEEE Power & Energy Society Industry Technical Support Leadership Committee (ITSLC) was formed to provide support to and cooperate with governments and regulatory organizations globally on technical issues related to power and energy topics. The IEEE PES ITSLC works closely with IEEE Standards Association (SA), IEEE USA, and other societies on a needed basis. The objective is to tap on IEEE membership and various organizations (e.g. Technical Committees, Smart Grid and Smart Cities, chapters) to provide support, including tutorials, workshops, developing documents on the fast-track, etc.

Reports and testimony documents under ITSLC have been developed on the fast-track to satisfy industry needs. Some of those documents developed became the top most widely viewed IEEE PES reports.

On the Top-Ten list of the PES Resource Center downloads, 4 documents that ITSLC initiated are ranked:

- #1, #2, and #3 in 2017-2019
- #2, #3, #5, and #7 in 2019

Joint IEEE efforts have resulted in cooperative relationships with the regulatory and industry organizations noted below through each signing of a Memorandum of Understanding (MoU) with IEEE, which includes specific implementation plans.

- [US Federal Energy Regulatory Commission](#) (FERC)
- [North American Electric Reliability Corporation](#) (NERC)
- [US Department of Energy](#) (DOE)
- [North American Transmission Forum](#) (NATF)

In addition, the following corporations have signed Corporate Engagement Memorandum of Understanding (MoU) with IEEE:

- [Commonwealth Edison](#) (ComEd)
- [ISO New England](#) (ISO-NE)
- [Vermont Electric Power Company](#) (VELCO)
- [Quanta Technology](#)

### 2019 Highlights

#### Industry Technical Support Status and Plans

The team consisted of members from regions 1-7 have been very active, producing some of the most popular documents on the resource center. Additional volunteers from region 8, 9, and 10 have been identified to globalize the initiative. A more detailed implementation plan and structure can be found on the following page:

<https://www.ieee-pes.org/ieee-cooperation-structure-on-policy-support>



## IEEE PES Industry Technical Support Leadership Committee Summary of Activities 2019

### US Federal Energy Regulatory Commission (FERC)

- Based on the ITS FERC written testimony on Managing the New Grid (ranked #4 in PES Resource Center 2019), an expanded paper with the same title has been published by IEEE PES Power & Energy Magazine in July.
- A tutorial based on the paper Impact of Inverter Based Generation on Bulk Power System Dynamics and Short-Circuit Performance (ranked 9 in PES Resource Center 2019), was organized by IEEE.
- Provided comments to FERC Docket AD19-15-000 on Ambient Adjusted Ratings by IEEE Overhead Lines Subcommittee in October 2019. IEEE PES e-filing to this docket can be found online in the FERC e-library here: [https://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20191101-5009](https://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20191101-5009)
- Meetings were held in March, August (in conjunction with PES General Meeting) & October with FERC representatives - led by Bill Chiu and Emanuel Bernabeu, ITS FERC liaisons

Above documents are stored on the IEEE PES Resource Center. <http://resourcecenter.ieee-pes.org/>

### North American Electric Reliability Corporation (NERC)

- The report on Impact of Inverter Based Generation on Bulk Power System Dynamics and Short-Circuit Performance, received the 2019 IEEE PES Working Group Recognition Award – Technical Report.
- Panel Sessions were held at IEEE GM 2019 on Fault Current Contribution from Inverter Based Resources and on Impacts of Inverter Based Resources Connected to the Bulk Power System
- Meetings were held in February (in conjunction with ISGT-NA), August (in conjunction with PES General Meeting) and November - led by Jay Liu and Ravi Subramanian, ITS and SA NERC liaisons, respectively.

### US Department of Energy (DOE)

- DOE priorities are:
  - Energy Storage white paper(s)/report(s) – ITS has begun drafting two separate white papers to be delivered to the DOE by end of March 2020
  - Participation in IEEE PES conference (including but, not limited to T&D, ISGT-NA, eGrid)
- Meetings were held in February (in conjunction with ISGT-NA), August (in conjunction with PES General Meeting) and October – led by Doug Houseman, Chan Wong, and Veronika Rabl – ITS DOE liaisons

### North American Transmission Forum (NATF)

- Web-based meeting with NATF on 2/4/19 to discuss potential areas of collaboration between IEEE PES and NATF and introduce Corporate Engagement Program.  
Presentation file: "IEEE PES-NATF\_20190204.ppt"
- Update for NATF on ITS LC activities; web-based meeting on 5/15/19.  
Presentation file: "IEEE PES-NATF\_20190515.ppt"
- NATF might be potentially interested to promote/disseminate information about Corporate Engagement to their members. We will approach NATF in 2020 after the Corporate Engagement Program and Base Package are finalized.



## IEEE PES Industry Technical Support Leadership Committee Summary of Activities 2019

### Cooperation Task Areas

#### 1. Standards and Interoperability

- Continue supporting IEEE 1547 related initiatives
- IEEE P2800 interest by FERC

#### 2. Technology

- A white paper Success Factors for Sustainable Electrical Energy Delivery was developed on a fast-track with a goal to provide an objective perspective for media outreach. It was written by Shay Bahramirad, Jef Beerten (IEEE European Public Policy Group on Energy), Damir Novosel, and Farnoosh Rahmatian. The paper was reviewed by the ITS team.
- In May, the following members of the ITS LC presented at the United Nations STI Forum on the basis of the Success Factors for Sustainable Electrical Energy Delivery. Panelists included: Shay Bahramirad, Bill Chiu, Chris Root, Babak Enayati, and Damir Novosel.
- Comments were provided to the technology chapter of the World Bank energy report on Mini Grid Technology and Costs. Carla Frieh, ITS Technology Lead, led the effort.
- Comments were provided to an IEEE-USA a position paper on Energy Sector Research and Development. Veronika Rabl, ITS IEEE-USA representative, led the effort.
- Roadmap to 2050, A Manual for Nations to Decarbonize by 2050 – Comments were provided to the “power” section of this roadmap created and published by the United Nations Sustainable Development Solutions Network (UNSDSN) in September. Dagmar Neibur & Carla Frieh, ITS Technology liaisons, led the effort. Full report can be found online here: <https://roadmap2050.report/power/>
- IEEE European Public Policy Committee (EPPC) - Comments were provided to a position statement on e-mobility / smart charging with a view to informing EU energy, mobility and sustainability policies in October. Veronika Rabl, ITS IEEE-USA representative, led the effort.
- Responses to questions from the “House Select Committee on the Climate Crisis” were provided from members of the ITS LC in December 2019. The responses will become part of the permanent committee record in the National Archives. Carla Frieh & Veronika Rabl, ITS liaisons, led this effort. Questions and request for information can be found online: <https://climatecrisis.house.gov/inforequest>

#### 3. Conferences and Meetings

- Panel session on Planning and Operating a Flexible and Resilient Grid: Vision for the Future, with leaders from DOE, NERC, FERC, NATF, IEEE PES, was organized at the ISGT-NA, chaired by Marianna Vaiman, ITS Education Lead.
- Panel session on Planning and Operating a Flexible and Resilient Grid: Insights of Recent ITS TF Technical Reports was organized by Jay Liu, IRS NERC liaison.
- ITS LC delivered a panel session as part of the Late Breaking News Session during the IEEE PES General Meeting in August 2019. The presentation can be downloaded from the PES Resource Center here: [https://resourcecenter.ieee-pes.org/conference-videos-and-slides/general-meeting/PES\\_CVS\\_GM19\\_0806\\_GBEB.html](https://resourcecenter.ieee-pes.org/conference-videos-and-slides/general-meeting/PES_CVS_GM19_0806_GBEB.html)



## IEEE PES Industry Technical Support Leadership Committee Summary of Activities 2019

### 4. Education

- Emphasis on Corporate Engagement educational support

#### Industry Technical Support Corporate Engagement Initiatives

- ComEd, ISO-NE, VELCO, and Quanta Technology have signed the corporate engagement MOU. The following IEEE leads are identified:
  - ComEd: Marianna Vaiman (PES)
  - VELCO: Babak Enayati (PES)
  - Quanta Technology: Sharma Kolluri (PES)
  - ISO-NE: Edvina Uzunovic (PES)
- A draft document on Implementation Plan and Corporate Engagement Benefits has been developed, including:
  - Defining the package
  - Image and Promotion
  - Communication between the Corporate Members and IEEE PES
  - Performance Measurements
- A meeting was held on November 8, 2019 to plan for the 2020 activities.
- Each corporate engagement participant company wrapped up the year with a kick-off planning call with their liaisons for 2020

#### Officers and Points of Contact

- IEEE PES Governing Board VP of New Initiatives: Shay Bahramirad (ComEd)
- IEEE ITS LC Lead Officer: Damir Novosel (Quanta Technology)
- IEEE PES Program Manager: Shana Pepin
- IEEE Standards Association: Erin Spiewak and Ravi Subramaniam IEEE-SA
- IEEE USA Point-of-Contact: Shay Bahramirad (ComEd) and Veronika Rabl (Vision and Results), IEEE-USA
- NIST Liaison: Jerry Fitzpatrick

#### IEEE ITS LC Team Members

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| <ul style="list-style-type: none"><li>• Jef Beerten - Region 8 lead</li><li>• Emanuel Bernabeu (PJM Interconnection) - FERC Representative</li><li>• Juan Celis – Region 9 representative</li><li>• Bill Chiu (Southern California Edison) – FERC Representative</li><li>• Babak Enayati (National Grid) –VELCO liaison</li><li>• Carla Frieh (ComEd) – Technology</li><li>• Don Hall (Quanta Technology) - Conferences and Meetings</li><li>• William Hederman (University of Pennsylvania) – DOE Representative</li><li>• Doug Houseman (Burns &amp; McDonnell)- Standards and Interoperability &amp; DOE Representative</li><li>• Sharma Kolluri (Entergy) – Education and QTech liaison</li></ul> | <ul style="list-style-type: none"><li>• Jay Liu (PJM Interconnection) – NERC support Bruno Meyer - Region 8 lead</li><li>• Nirmal Nair - Region 10 lead (acting)</li><li>• Dagmar Niebur (Drexel University) - Technology</li><li>• Tom Pierpoint (Consultant) - Conferences and Meetings</li><li>• Edvina Uzunovic (WPI) – liaison to ISO-NE</li><li>• Chris Root (VELCO) – NATF representative</li><li>• Marianna Vaiman (V&amp;R Energy) - Education &amp; NATF representative, and ComEd liaison</li><li>• Chan Wong (Entergy) - Standards and Interoperability &amp; DOE Rep.</li><li>• Murty Yalla (Beckwith Electric Co. Inc.) - NERC Representative</li></ul> |
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