

## INFORMATION, COMMUNICATION AND CYBER SECURITY

Dear ICCS Members and Stakeholders,

I have been pleasantly surprised how effective all of you and the EPRI team have been able to adapt in this new work remote environment and be able to continue effective engagement. Before we get to the meat of this update, I want to share a few “nuggets” of R&D highlights and activities that I think would be of interest.

- **6 GHz FCC Ruling** makes this spectrum available to unlicensed users while there are conflicting studies on potential interference with utility licensed 6 GHz microwave links. As part of our telecom program (161G), later this month we are planning a field test to evaluate susceptibility of microwave equipment used in the 6 GHz band to interference from unlicensed systems such as Wi-Fi and Carrier LAA / MuLTEfire (thanks to Ameren for providing the infrastructure for the field testing).
- **900 MHz FCC Ruling** – The re-alignment of this band of licensed spectrum is very significant – especially for utilities interested in deploying private LTE. The ICT Telecom program (161G) recently published the [Private Long-Term Evolution Guidebook](#) which contains in-depth technical insights on the 900 MHz band and other spectrum options for Private LTE.
- **The Executive Order – Securing the Bulk Power System** – We continue to monitor this order and the role for EPRI. We believe the EPRI Technology Assessment Methodology (TAM) and development of Cyber Security Data Sheets (CSDS) to evaluate risks and mitigations of equipment may be a good tool to help utilities assess equipment and the CSDSs are a good mechanism for industry sharing of assessments. The new [TAM interest group](#) that cuts across all EPRI sectors will help evaluate these opportunities.
- **EPRI’s OT cyber security metrics** research has been highlighted in a [new publication developed by the United States Agency for International Development \(USAID\) and NARUC](#). Referred to as “the most comprehensive and mature approach to assess general cybersecurity performance.” We continue to work on improving the Operationalization and Implementation of the [OT Security Metrics in our pilot demonstrations](#).

## Virtual Power Delivery & Utilization Council (PDU) Advisory Meetings September 14 - 25, 2020

In the interest of keeping our members and staff safe and healthy during the COVID-19 pandemic, EPRI is going virtual for our Fall 2020 Power Delivery & Utilization Council Advisory Meetings.

Advisory meetings will be held between September 14 and 23, and the Sector Council meetings will follow on September 24 and 25. Please mark these dates on your calendars. The PDU leadership team and our program managers are determining the best methods to deliver the same valuable updates you are used to, and we will communicate those details in early July. We look forward to continuing our engagement with you in this new format for our September meetings.

Sincerely,

Matt Wakefield  
Director, ICCS



## Information and Communication Technology (ICT) P161



### EPRI Task Forces: Identifying, Creating and Transferring Value

The Information and Communication Technology program (P161) has launched a new advisory structure going into 2020. In addition to the ICCS Sector council and ICT Advisors group the program is adding project set Task Forces to the advisory structure.

[Learn more](#)



### Recent ICT Videos on R&D and Result Summaries

- [AMI tools and DLMS/COSEM \(Device Language Message Specs/Companion Specs for Energy Metering\) to IEC 6 1968-09 Mapping 3002015769](#)
- [DNP3 Integration with DER](#)
- [Energy IoT \(Internet of Things\) Integration with Distributed Energy Resources \(DER\) overview](#)

- [Evaluation and Demonstration Machine Learning for Asset Recognition: Utility Feature Extraction Using Terrestrial Photogrammetry 3002016148](#)
- [Field Demo Direct Load NYSERDA using CTA-2045](#)
- [Geospatial Data Integration in Augmented Reality Solutions for Electric Utilities 3002016147](#)
- [Introduction to the Private Long Term Evolution \(LTE\) Guidebook 3002015943](#)
- [OpenDERMS](#)
- [Power System Model Transport: A Standardized Approach to Sending Network Model Data \(Technology Innovations: CIM-Based Power System Model Transport, 3002014648\)](#)
- [Remote Device Management System \(RDM\) \(EPRI report 3002015875\)](#)
- [Robust Web Services: Technologies that Build an Agile Data Integration Ecosystem \(Web Services Robustness: An Agile Integration Ecosystem, 3002017495\)](#)
- [Technology Innovation: Narrowband Internet of Things \(NBloT\) Research and Opportunities](#)
- [Technology Innovations: Extending IEC 61968-8 Customer Support for Provisioning a DER Device, First Edition Report 3002016045](#)



## **New Supplemental Project Announcements**

- [Business Capability Model Development for IT/OT Investment Alignment](#)
- [Automating GIS Data Quality Improvement](#)



## **Research Results: January – May 2020**

- 3002017908 — [Resilient Communication Demonstration Project: Draft Demonstration Evaluation Report](#)
- 3002017902 — [Extended Reality System Design for Interacting with Distribution Sensors](#)
- 3002017954 — [Outage Data Initiative Test Script](#)

- 3002017905 — [Knowledge Transfer Using Extended Reality](#)
- 3002016230 — [Information Communication Technology \(ICT\) Security Architecture for DER Guidebook](#)
- 3002015770 — [Metering and the Common Information Model \(CIM\): A Practical Approach](#)



## ICT Webcast Dates

Follow link to view a list of all currently planned ICT [webcast events](#).

Access ICT webcast presentations and recordings through the EPRI [member center](#).



## Cyber Security (P183)



## New Supplemental Project Announcements

- [Unmanned Aircraft System \(UAS\) for Utility Operations: Cybersecurity and Hardware Performance Assessment](#)
- [Timing Security Assessment and Solutions: Phase II](#)
- [Cloud Security Reference Architecture for Real-Time Utility-Based Applications](#)
- [Insider Threat Management](#)
- [Technical Assessment Methodology \(TAM\) Interest Group](#)
- [Hardware-based Secure Remote Access Pilot Demonstrations](#)



## Research Results: January – May 2020

- 3002009878 — [Integrated Threat Analysis Framework Project: Ameren Testing Report](#)

- 3002009880 — [Integrated Threat Analysis Framework: Tri-State Generation and Transmission Association Inc. Testing Report](#)



## Cyber Security Webcast Dates: January – December 2020

Follow link to view a list of all currently planned [webcast events](#).

Access webcast presentations and recordings through the EPRI [P183 member center](#).



## Program 183: Cyber Security for Power Delivery and Utilization Program Videos

- [Cyber Security Analysis of Electric Vehicle Extreme Fast Charging Infrastructure](#)
- [Grid Flexibility using OpenADR](#)

## Cyber Security Strategic Initiative (CSSI)

Below are links to executive level white papers that identify data foundations and promising technologies that can help utilities be aware of emerging cyber security issues and potential solutions.

- 3002017417 — [Deception Technology – Emerging Cyber Security Technology for Utilities](#)
- 3002017455 — [Data Foundations for Operations Technology Cyber Security Analytics, Artificial Intelligence and Other Data-Intensive Applications](#)
- 3002017835 — [5G and Cyber Security for Utility Operational Technology Environments: Initial Assessment and Potential Outcomes](#)
- 3002017864 — [2020 OT Cyber Security Trends for Electric Utilities](#)

## Check It Out

- [The Internet of Things \(IoT\) can be used to boost energy efficiency and facilitate load management](#), according to **IOT World Today**. For the past three years, Cleveland Ohio's Case Western University has sought the answer with the help of the U.S. Department of Energy and EPRI. [Energy Central](#) also carried this article.

- [2020 Quick Reference Guide](#) posted to Cockpits.
- **The Industry Daily Observer:** [Augmented Reality in Energy and Utilities Market – Growing Number of Application to Bode Well for Growth.](#)  
The article cited the EPRI and Duke Energy program, installing Atheer's AR platform "to demonstrate the benefits of AR application in terms of enhanced productivity and safety led by hands-free data access."
- [2020 Information and Communication Technology Roadmap.](#)
- **E&E News:** [Could smart meters, rooftop solar, backup batteries and automated grid controls in California become a technology foundation for future wildfire defenses?](#)
- **Report: Business Blockchain HQ:** [Blockchain Not Suited to Transactive Energy.](#)
- **EPRI Journal:** [Block Chain: Sorting Out the Hype and Reality of Distributed Ledger Technology in the Utility Industry.](#)
- **Utility Dive:** [IEEE standards are critical to grid modernization and other utility priorities.](#)
- [March 2020 Cyber Security Newsletter](#)
- [2020 Updated Cyber Security for Power Delivery and Utilization Roadmap](#)

**For more information about this newsletter, contact:**

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