

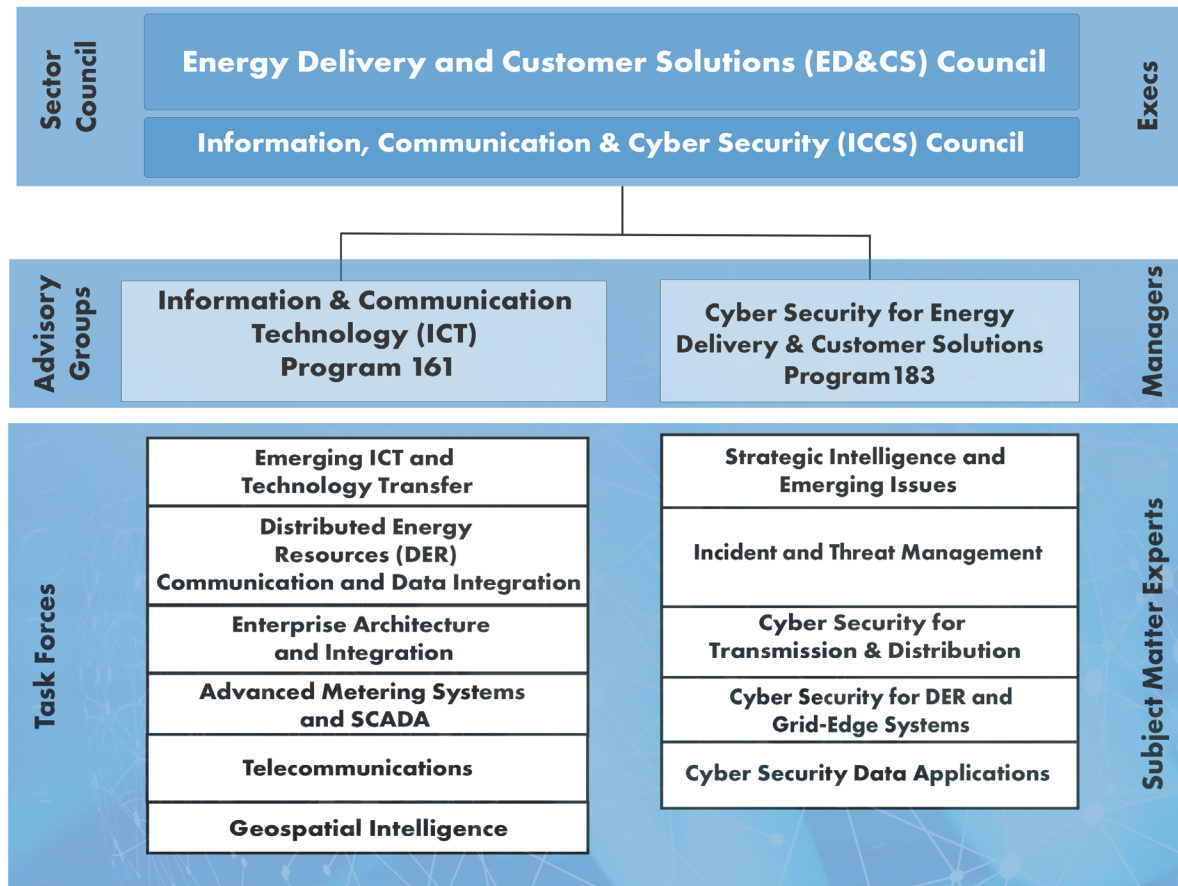


# Information, Communication and Cyber Security (ICCS) Quick Reference Guide

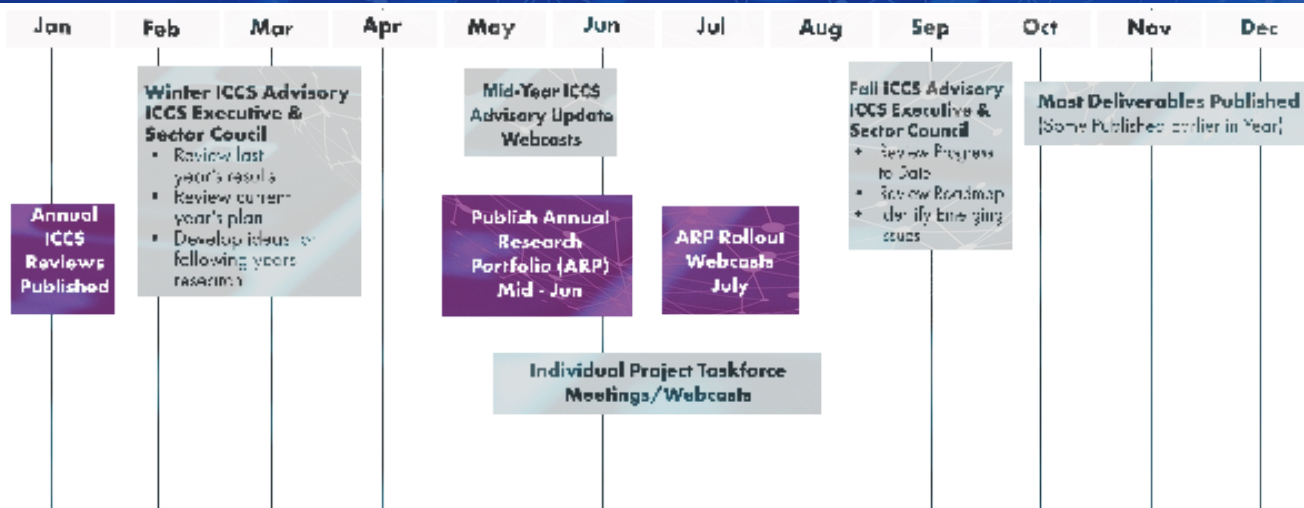
[Information and Communication Technology \(ICT\) Program 161](#): Promote innovation by identifying, evaluating, and applying emerging Information and Communication Technologies for grid modernization and digital transformation efforts.

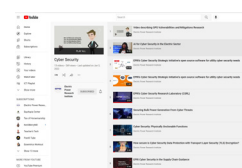
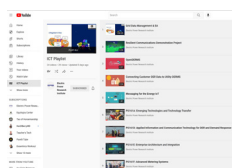
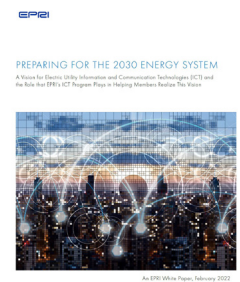
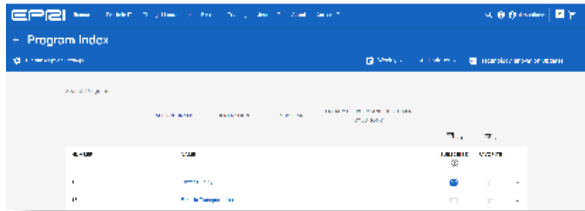
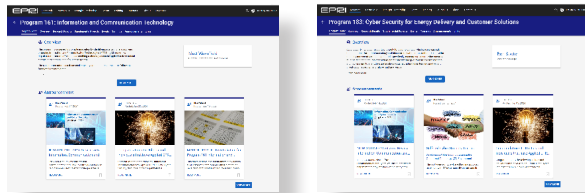
[Cyber Security for Energy Delivery & Customer Solutions Program 183](#): Focus on addressing the emerging threats to an interconnected electric sector through multidisciplinary, collaborative research on cyber security technologies, standards, and business processes.

## Advisory Structure 2025



## Timeline





## Information, Communication and Cyber Security for Energy Delivery & Customer Solutions Program Pages

After [epri.com](http://epri.com) log in, access to the Member Program Home Pages provide:

**Research Results:** A list of our downloadable publications, software, and other deliverables, with abstracts.

**Supplemental Projects:** A description of upcoming and on-going supplemental projects.

**Meetings & Webcasts:** Calendar of important upcoming meetings and webcasts, materials, and recordings of past meetings and webcasts are available here: [ICT Program \(161\) Events](#), [Cyber Security Program \(183\) Events](#).

**List of Deliverables:** Current year deliverables as they become available.

To obtain a member id go to [EPRI.com](http://EPRI.com) and click on Member Center. The log on process will automatically walk you through the required information or contact the EPRI Customer Assistance Center 650.855.2121, 800.313.3774 (option 4), [askepri@epri.com](mailto:askepri@epri.com).

## Technical Information Profile (TIP) Subscription

After member log in to [epri.com](http://epri.com), select Research, Program Index, and subscribe to receive product announcements and alerts for new content in any EPRI program regardless of membership. Specific deliverable details might be restricted in accordance to program buy in. Click on the thumb nail image to access the location.

## Information, Communication and Cyber Security Area Review

Annual Program Reviews are intended to help members stay informed of the past year's research activities and identify valuable results that can be applied to impact day-to-day operations. This public document represents a view of the previous years' research results and the current year R&D plans for both ICCS programs. Click on the thumb nail image to access and download the document PDF.

Click on the thumb nail image to access and download the document PDF

## 2030 ICT and CS Roadmaps

[Preparing for the 2030 Energy System: A Vision for Electric Utility Information and Communication Technologies \(ICT\)](#) paper provides a summary of the drivers, three ICT future states necessary for utilities to address the drivers, the EPRI ICT Program strategy for helping to advance members towards the future states, and key past deliverables and accomplishments.

The [2030 Cyber Security Roadmap](#) identifies the critical future states for Cyber Security in the electricity subsector and the action plans that must be adopted to achieve intrinsic Cyber Security. There are barriers to enacting the changes identified in this roadmap, but utilities have successfully embedded cultures of safety within their organizations and these actions help address those barriers.

## ICT and CS Success Stories and Member Applications

EPRI member application success stories showcase research insights addressing specific issues, offering potential solutions, and delivering valuable knowledge transfer, thereby adding significant value to member organizations. ICCS Success Stories are two-page documents that highlight insights of research results that identified specific issues, potential solutions and included knowledge transfer that have added value to EPRI member organizations. Click on the thumb nail image to access the success stories summaries pages.

## Program Newsletters

Newsletters provide up-to-date information about research, projects, and events that are impacting the electric sector. The newsletters are either distributed on a monthly or bi-monthly basis and include valuable summaries of project updates throughout the year. Click on either the ICT or Cyber Security newsletter image thumb nails to connect directly to the LINKS tab on the program landing page.

## Program Videos

Program Videos range from deliverable summaries available via [epri.com](http://epri.com) to project updates throughout the year. New videos are announced through the TIP system (see above how to subscribe). Public videos can be accessed on YouTube [ICT Playlist](#) or [CS Playlist](#). Click on the thumb nail image to connect directly to the specific play list.

## Programs, Projects, and Funding

### EPRI Research Funding Model

There are three components to EPRI research:

1. Annual Research Portfolio (ARP),
2. Supplemental Projects (SP)
3. Technology Innovation (TI).

Each component is funded differently. Membership funding, also known as Base Funding, supports the Annual Research Portfolio (ARP). Total program funds are based on member ARP commitments. A portion of the ARP funding is set aside into a Self Directed Funds (SDF) pool. Another portion is set aside to fund Technology Innovation (TI).

EPRI members choose which ARP programs and supplemental projects they wish to fund. Supplemental projects “supplement” Annual Research Portfolio activities at any time of the year and any utility can participate and may be funded through SDF or set-asides, or directly in cash (called Co-Funding or CF).

### Programs and Annual Research Portfolio (ARP)

<b>What</b>	EPRI's ICT Program (161) and Cyber Security for Energy Delivery & Customer Solutions (183) program along with numerous other EPRI programs are groups of projects addressing classes of research topics offered to members on an annual basis. The ICCS projects generally address issues that are of interest to many utilities encompassing significant aspects of data communications, integration, standards, flexible architectures, cyber security, and technology innovation.
<b>Who</b>	EPRI's subject matter experts (SMEs), and leadership team collaborate with advisors and members to chart the direction of the ARP by considering real world conditions, existing roadmaps, and other ancillary information (see cover for the advisory structure).
<b>How</b>	The following year ARP offering is published in June. Companies join the entire program or, in some cases, individual projects or project sets. During the year, research is performed and deliverables are created for members which have funded the research without further charge. Typically, EPRI owns the research results and provides an internal use license for the deliverables to funders. In the ICCS area, the funding required to join ARP projects is based on its research, development, and demonstration programs by EPRI's Research Advisory Council (RAC), comprised of a group of senior management of EPRI members.
<b>When</b>	Members can join an ARP offering anytime during the year up until December 31. Deliverables, and other forms of technology transfer, are provided throughout the year, but most are delivered near the end of the year.

### Technology Innovation (TI) Projects

<b>What</b>	TI projects generally have longer-term goals (greater than five to ten years out) and have higher research risks. Learnings from TI projects can inform and inspire future ARP projects and provide thought leadership for EPRI, its members, and other relevant stakeholders.
<b>Who</b>	Allocation of funding and the associated process for TI projects is managed by EPRI's TI group. EPRI technical staff executes TI projects. The TI program is advised on key aspects of its research, development, and demonstration programs by EPRI's Research Advisory Council (RAC), comprised of a group of senior management of EPRI members.
<b>How</b>	Twelve percent (12%) of ARP funding is used for the TI program. An internal proposal system is used to allocate funding. All TI deliverables in a given year are available to all EPRI members investing in an EPRI research program in that year.
<b>When</b>	Funding is allocated on an annual basis.

### Supplemental Projects

Includes Self-directed Funding (SDF), and Co-Funding Projects

<b>What</b>	Supplemental projects address specific issues that may only be of interest to a smaller group of members, or a single member, and often involve research, the implementation or demonstration of advanced technology or technology transfer. If a supplemental project has multiple funders, the scope and funding is identical for all participants. Typically, EPRI owns the research results and provides funders an internal use license for the project deliverables. The research results can be further developed by EPRI in other projects.
<b>Who</b>	An EPRI technical staff member is designated as the project manager to lead each project. Each participating member usually designates a technical advisor to lead the utility's collaboration in the project, including serving as a host site and/or providing real world examples, experience, and data.
<b>How</b>	The EPRI project manager and the project funders agree upon a statement of work (SOW) defining the scope, schedule, and deliverables. Companies join the supplemental by signing a revenue agreement, which usually adopts pre-determined terms and conditions in a master agreement between EPRI and the funder. ARP Funders can join using SDF or co-funding (see below). Project funders receive the project deliverable(s) at no additional charge. Others who did not fund the project, but desire access to the deliverables, must purchase or license the priced deliverable(s).
<b>When</b>	Supplemental projects can be initiated any time during the year and can be initiated quickly. Deliverables are generally delivered on the schedule identified in the SOW. Supplemental projects may be multi-year.

### Self-Directed Funding (SDF) and Co-funding of Supplemental Projects

<b>What</b>	When participants join an ARP project, 25% of funding is placed into SDF “account” or “pool” that can be used by the funder to join supplemental projects. Projects must meet criteria defined in the <a href="#">Supplemental Funding Policy</a> document found on the epri.com member website. <b>Self Directed Funding (SDF):</b> Pooled SDF funds can be used entirely to participate in a supplemental project or joined with co-funding (see below). <b>Co-funding</b> is funding provided directly from a utility through an invoicing process. Members may join supplemental projects using entirely co-funding, or using a combination of co-funding and SDF funding.
<b>Who</b>	The SDF account is usually managed by the member's Manager of EPRI Technology Transfer (METT) - designated by the participant. Participating companies decide whether to have SDF funding when they submit their ARP selections each year.
<b>How</b>	Funding is transferred from the SDF “pool” to a supplemental project using a revenue agreement, including a statement of work (SOW). Where co-funding is involved the revenue agreement includes invoicing terms. The revenue agreement usually incorporates terms and conditions pre-established by a master agreement between the funder and EPRI.
<b>Existing Product Credits</b>	
<b>What</b>	In exchange for a minimum, multi-year commitment at a mutually agreed level and type, EPRI provides credits for members to use towards the purchase or license of existing EPRI deliverables for which a member would otherwise not be eligible (for example, where a member did not fund the work producing the deliverable).
<b>Who</b>	The Product Credit Pool is usually managed by the METT at each utility.
<b>How</b>	Participant SMEs engage their company's METT to request that Product Credits are used to gain access to a specific EPRI deliverable.
<b>When</b>	Starting in 2024, in response to member feedback, EPRI is shifting to launching marketable collaborative supplementals (those applicable to a large number of members) to a twice-a-year rhythm, in the April and October time-frames. This does not affect already launched projects, one-off supplementals or projects with a predetermined set of a few members.

## Advisory

### Information, Communication and Cyber Security (ICCS) Council

<b>What</b>	The ICCS Council provides executive level advice to the ICT and CS programs and is regularly briefed on ongoing research and development progress. This council provides guidance on a broad range of technical research areas and helps EPRI identify operational areas for improvement. The ICCS Council is a subset of the Energy Delivery and Customer Solutions (ED&CS) Sector Council which also includes Transmission, Distribution, and Energy Utilization Councils.
<b>Who</b>	The ED&CS Sector Council positions are generally filled by executives from EPRI's members. The ICCS Council members are generally CIOs and CSOs from utilities that are members of the ICT and/or CS Programs. EPRI's ICCS Director leads this executive committee with a utility Chairperson and Vice Chairperson.
<b>How</b>	During ED&CS and ICCS Sector Council meetings, EPRI staff and members make presentations and roundtable discussions
<b>When</b>	Sector Council meets twice each year (winter and fall), on the Wednesday and Thursday following the ICT and CS advisory.

### ICT and CS Advisory Groups

<b>What</b>	The ICT and CS Advisory Groups provide guidance to the respective ICT (161) and Cyber Security (183) programs and are 1) made aware of R&D progress; 2) share member practices including use of EPRI research results; 3) share utility operational experience that can help inform EPRI's research programs; 4) develop and maintain an ICT and CS roadmap for R&D needs; and 5) help identify EPRI operational areas for improvement.
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<b>Who</b>	Utility funders of the respective ICT and CS programs, typically directors and managers, led by EPRI program managers and utility program chairs.
<b>How</b>	Presentations are made by EPRI staff and member utilities with roundtable discussions following.
<b>When</b>	ICT and CS advisory groups meet with other ED&CS Advisory Groups twice each year (winter and fall). These groups meet Monday through Wednesday (midday).

### ICCS Task Forces (TF)

<b>What</b>	ICT and CS Task Forces guide ARP projects or groups of ARP projects based on technical area. The TFs are made aware of R&D progress and results in their areas of funding, collaborate on ongoing research, identify new areas of research, share how other members are using EPRI results, share utility operational experiences, and visit test sites or related technical sites.
<b>Who</b>	Task Forces are generally staffed by SMEs from member utilities. To be a member of a TF, utilities must fund at least one ARP project that the TF covers. TFs are led by a member of EPRI technical staff together with a utility SME chairperson.
<b>How</b>	Presentations are made by EPRI staff, subcontractors, vendors, and member utilities with roundtable discussions as part of the collaborative process. Vendors, and often subcontractors, are present by specific invitation only and are only allowed to participate in the section in which they present.
<b>When</b>	The TFs meet at least twice a year in person or via webcast and timing depends on the specific project set or project. A webcast is held in the middle of the year to update the TF on progress.

Program/Project Set		Program/Project Title for Portfolio 2025	Lead	Email
		<b>ICCS Director</b>	Matt Wakefield	<a href="mailto:mwakefield@epri.com">mwakefield@epri.com</a>
<b>P161</b>	<b>2024</b>	<b>Information and Communication Technology Program (ICT)</b>	Sean Crimmins	<a href="mailto:scrimmins@epri.com">scrimmins@epri.com</a>
<b>161A</b>		<b>Emerging ICT and Technology Transfer</b>	Sean Crimmins	<a href="mailto:scrimmins@epri.com">scrimmins@epri.com</a>
	P161.058	Emerging ICT and Technology Transfer		
<b>161D</b>		<b>DER Communication and Data Integration</b>	Ben Ealey	<a href="mailto:bealey@epri.com">bealey@epri.com</a>
	P161.049	DER Standards – Interoperability, Information, Protocol, and Connectivity Standards		
	P161.051	Emerging Topics, Technologies, and Techniques		
	P161.052	Integration Experiences and Practices		
<b>161E</b>		<b>Enterprise Architecture and Systems Integration</b>	Sean Crimmins	<a href="mailto:scrimmins@epri.com">scrimmins@epri.com</a>
	P161.029	Enterprise Architecture (EA)		
	P161.041	Enterprise Systems Integration		
	P161.062	Organizational Alignment		
	P161.063	Data Management		
<b>161F</b>		<b>Advanced Metering Systems and SCADA</b>	Ed Beroset	<a href="mailto:eberoset@epri.com">eberoset@epri.com</a>
	P161.032	Achieving Open, Interoperable Advanced Metering Systems		
	P161.043	Advanced Metering Systems Operations and Management		
	P161.044	Optimizing Advanced Metering System Value and Utilization		
	P161.045	SCADA Protocols		
<b>161G</b>		<b>Telecommunications</b>	Tim Godfrey	<a href="mailto:tgodfrey@epri.com">tgodfrey@epri.com</a>
	P161.053	Wide Area Networks		
	P161.054	Field / Neighborhood Area Networks		
	P161.055	Telecommunications Planning & Management		
	P161.056	Telecommunication Standards Engagement		
<b>161H</b>		<b>GeoGeospatial Intelligence</b>	Kevin Gorham	<a href="mailto:kgorham@epri.com">kgorham@epri.com</a>
	P161.059	Geospatial Informatics Data Practices		
	P161.060	Geospatial Informatics Innovation Engine		
	P161.061	Geospatial Informatics Analytics and Visualization		
<b>P183</b>		<b>Cyber Security for Energy Delivery and Customer Solutions</b>	Ben Sooter	<a href="mailto:bsooter@epri.com">bsooter@epri.com</a>
<b>183A</b>		<b>Strategic Intelligence and Emerging Issues</b>		
	P183.021	Strategic Intelligence and Emerging Issues	Ben Sooter	<a href="mailto:bsooter@epri.com">bsooter@epri.com</a>
	P183.022	Security Newsletters	Ben Sooter	<a href="mailto:bsooter@epri.com">bsooter@epri.com</a>
<b>183B</b>		<b>Incident and Threat Management</b>		
	P183.005	Incident Management	Chuck Moran	<a href="mailto:cmoran@epri.com">cmoran@epri.com</a>
	P183.006	Threat Management	Chuck Moran	<a href="mailto:cmoran@epri.com">cmoran@epri.com</a>
	P183.017	Cyber Security Forensics	Chuck Moran	<a href="mailto:cmoran@epri.com">cmoran@epri.com</a>
<b>183C</b>		<b>Cyber Security for Transmission and Distribution</b>		
	P183.008	Cyber Security for Substations and Field Devices	John Stewart	<a href="mailto:jstewart@epri.com">jstewart@epri.com</a>
	P183.019	Cyber Security for Control Centers	John Stewart	<a href="mailto:jstewart@epri.com">jstewart@epri.com</a>
<b>183D</b>		<b>Cyber Security for DER and Grid-Edge Systems</b>		
	P183.012	Cyber Security for DER Integration and Management (CSDIM)	Xavier Francia	<a href="mailto:xfrancia@epri.com">xfrancia@epri.com</a>
	P183.018	Cyber Security for DER Technologies (CSDT)	Sai Ram Ganti	<a href="mailto:sganti@epri.com">sganti@epri.com</a>
<b>183E</b>		<b>Cyber Security Data Applications</b>		
	P183.014	Cyber Security Data Applications	Esther Amullen	<a href="mailto:eamullen@epri.com">eamullen@epri.com</a>
<b>ICCS</b>		<b>Technical Advisors</b>		
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<b>West</b>		Brian Dupin	650.906.2936	<a href="mailto:bdupin@epri.com">bdupin@epri.com</a>
<b>International</b>		Thomas TerBush	202.293.6344	<a href="mailto:tterbush@epri.com">tterbush@epri.com</a>

This document is intended to be a “quick reference” and does not provide a complete description of the background policies and contractual terms. If you have any questions or require more details, please ask an EPRI staff member and we will provide you with the appropriate resources.