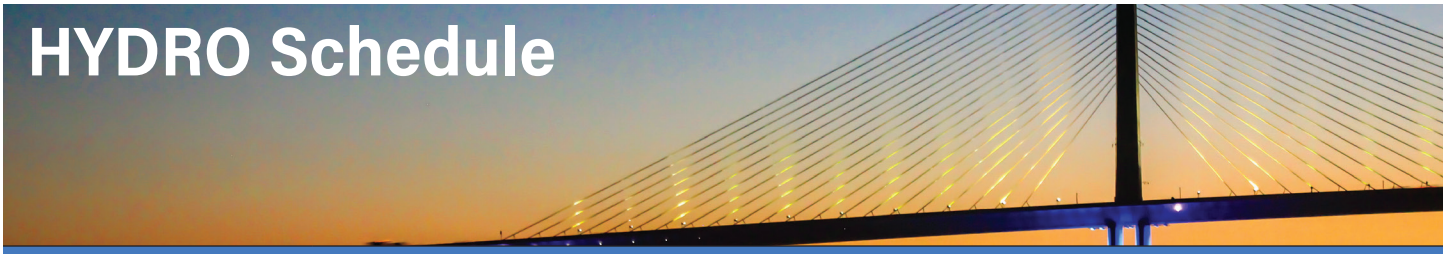

EUCG
SPRING 2024
WORKSHOP
APRIL 14 – 17
ST. PETERSBURG, FL

# HYDRO Schedule



**NOTE: All session times are indicated in EASTERN time**

## MONDAY, APRIL 15

| | |
|---|---|
| 8:00 am – 9:00 am | **BREAKFAST** | St. Petersburg I |
| 9:00 am – 10:30 am | St. Petersburg I |
| | **EUCG General Session**<br>**Welcome & Introductory Remarks**<br>**Andrew Campbell**, TVA, EUCG President<br>*Keynote Speakers:* **Peter Hoeflich**, Principal Engineer—Generation and Transmission Strategy at Duke Energy will a keynote address on low-carbon generation and storage technologies. He will provide insights on the Debary Florida hydrogen demonstration which is the first system in the U.S. capable of producing, storing, and combusting 100% green hydrogen in a combustion turbine.<br>**Brad Chadwell**, Director of Enterprise Research and Innovation at Tennessee Valley Authority (TVA) will also deliver a Keynote Address at the workshop opening General Session. Mr. Chadwell will discuss "Driving Future Performance with Innovation." His talk will focus on TVA's Innovation and Research team's development of new technologies and capabilities needed to plan, build, and operate the Energy System of the Future. Mr. Chadwell will provide an overview of TVA's innovation initiatives and discuss how, when deployed at scale, they will meet emerging challenges and drive performance well into the future. |
| 10:30 am – 11:00 am | **BREAK** | St. Petersburg Foyer |
| 11:00 am – 12:00 pm | St. Petersburg II |
| **HP 01** | **Introductions and Business Updates/Remarks from Hydro Productivity Committee (HPC) Chairman**<br>**David Sanna**, United States Army Corps of Engineers (USACE), HPC Chair<br>The introductory session will give all members the opportunity to introduce themselves and their companies. |
| 12:00 pm – 1:00 pm | St. Petersburg II |
| **HP 02** | **Dashboard Reporting Tools – Ontario Power Generation**<br>**Mary Poulter** and **Jawad Hussain**, Ontario Power Generation (OPG)<br>OPG's committee representatives will describe the business objectives and development methodology employed to implement a new set of reporting tools within their company. |
| 1:00 pm – 2:00 pm | **LUNCH** | St. Petersburg I |

| | |
|---|---|
| 2:00 pm – 2:30 pm | St. Petersburg II |
| **HP 03** | **Utilization of EUCG Hydropower Cost and Performance Data**<br>**Dan Hammerquist**, Bureau of Reclamation (BoR)<br>The Bureau of Reclamation has been conducting focus groups with internal users to determine how to make the EUCG hydro cost and performance data more accessible and useful to various user groups. Focus group results and several tools being piloted will be shared. |
| 2:30 pm – 3:00 pm | St. Petersburg II |
| **HP 04** | **Utility Portfolio Analysis for EUCG Analytics Solutions**<br>**Rob Mager**, OPG<br>An overview of how differences in Utility economies of scale factors impacts the ability to compare Utility performance using a simple indexing approach. Recommendations will be provided on a simplified approach to normalize analysis and improve the comparability of Utility results. |
| 3:00 pm – 3:30 pm | **BREAK** \| St. Petersburg Foyer |
| 3:30 pm – 4:45 pm | St. Petersburg II |
| **HP 05** | **HPC Data Reporting Team Update & Discussion**<br>**Clark Bishop**, BoR, Team Lead<br>A status update of the team's activities, recommendations and proposed next steps will be provided. |
| 4:45 pm – 5:00 pm | St. Petersburg II |
| **HP 06** | **Day Wrap Up & Identification of Topics for Future Workshops**<br>**David Sanna**, USACE, HPC Chair<br>In this time, a review of the day's presentations will be made and noting any ideas for a future workshop. |
| 6:00 pm – 9:00 pm | Off-Site |
| | **Networking Event** |
| | Please meet in the **HOTEL LOBBY** for the shuttle to Park & Rec for a festive dinner. |

## TUESDAY, APRIL 16

| | |
|---|---|
| 8:00 am – 9:00 am | **BREAKFAST** | St. Petersburg I |
| 9:00 am – 10:00 am | St. Petersburg II |
| **HP 07** | **Staffing Survey Form Revision Discussion and Proposed Schedule**<br>**David Sanna**, USACE, HPC Chair<br>**Jim Miller**, Signal Hydropower Consultants (SHC)<br>In this session, the existing staffing survey form used to collect responses from committee utilities will be presented. Committee members will have the opportunity to offer revisions to ease the submission process. |
| 10:00 am – 11:00 am | St. Petersburg II |
| **HP 08** | **EUCG – Hydroelectric Productivity Committee (HPC) Annual Report**<br>**Gbadebo Oladosu, PhD** and **Jim Mille**r Oak, Ridge National Laboratory<br>In this session, the comments received to the draft version of the HPC 2023 Annual Cost & Performance Report will be reviewed and discussed with some items identified for further action. |
| 11:00 am – 11:30 am | **BREAK** | St. Petersburg Foyer |
| 11:30 am – 12:30 pm | St. Petersburg II |
| **HP 09** | **Valuation of Pumped Storage Hydropower Projects**<br>**Vladimir Koritarov**, Department of Energy, Argonne National Laboratory<br>The talk will present the methodology for valuation of pumped storage hydropower (PSH) projects that was developed by a team consisting of five national laboratories led by Argonne National Laboratory. The major outcome of this project, which was funded by the DOE's Water Power Technologies Office, is the publication of PSH Valuation Guidebook and two accompanying test case studies. The Guidebook provides the cost – benefit and decision analysis framework that can be used for the valuation of existing or proposed new PSH projects or project upgrades. In addition to the PSH Valuation Guidebook, the project team also developed an online publicly available PSH Valuation Tool, which allows PSH developers and stakeholders to apply the methodology described in the Guidebook for valuation of their PSH projects. |
| 12:30 pm – 1:00 pm | St. Petersburg II |
| **HP 10** | **Hydropower Staffing Resource Challenges**<br>**Aaron Dale**, Duke Energy<br>Staffing is often the largest challenge for many industries and hydropower is no different. Staff that work at these facilities are required to have a large breadth of knowledge and skills but attracting talent can be difficult given the location of facilities and competition for qualified candidates. Hydropower organizations must employ a host of tactics to overcome the global staffing challenge and ensure the future success of our teams. In this session we will discuss the approach Duke Energy is implementing to address staffing issues within its hydropower organization. |
| 1:00 pm – 2:00 pm | **LUNCH** – St. Petersburg |

| | |
|---|---|
| 2:00 pm – 3:00 pm | St. Petersburg II |
| **HP 11** | **Preventative Maintenance Program Overview – Pacific Gas & Electric & US Army Corps of Engineers**<br>**Dave Bland**, PG&E<br>**TBD**, USACE Employee<br>Mr. Bland will describe the methodology PG&E's Power Gen organization is leveraging in an enterprise-wide effort to migrate to the latest cloud-based version of SAP (S4/HANA) for enterprise resource planning, bounding all Power Gen business processes. The effort will include standardization of data and work models guided by the principle of elimination of customizations in software. During this session, we're excited to share the work we've done to define our future state requirements and outline the roadmap for next steps.<br>The USACE will offer an overview of its preventative maintenance program and future enhancements. |
| 3:00 pm – 3:30 pm | **BREAK** \| St. Petersburg Foyer |
| 3:30 pm – 4:30 pm | St. Petersburg II |
| **HP 12** | **HPC Membership Recruitment/Marketing Discussion**<br>**David Sanna**, USACE, HPC Chair<br>The HPC leadership will facilitate a discussion on approaches to promote participation, increase value, benefits, and satisfaction with existing committee members. The leadership seeks ideas to promote the value and benefits of committee membership to prospective utilities. |
| 4:30 pm – 4:45 pm | St. Petersburg II |
| **HP 13** | **Day Wrap Up & Identification of Topics for Future Workshops**<br>**David Sanna**, USACE, HPC Chair<br>In this time, a review of the day's presentations will be made and noting any ideas for a future workshop. |

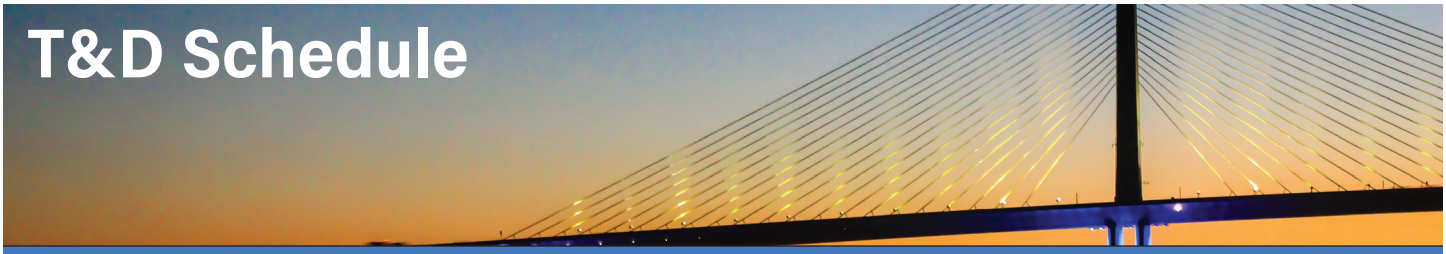
## WEDNESDAY, APRIL 17

| | |
|---|---|
| 8:00 am – 9:00 am | **BREAKFAST** \| St. Petersburg |
| 9:00 am – 9:30 am | St. Petersburg II |
| **HP 14** | **2024 Hydro Business Unit Safety Survey Results**<br>**Jim Miller**, SHC<br>Since 2007, EUCG's Hydroelectric Productivity Committee and the National Hydropower Association Hydraulic Power Committee have been jointly conducting an annual Safety Survey of the hydro industry. The results of the 2024 (2023 data) survey will be provided. |
| 9:30 am – 10:00 am | St. Petersburg II |
| **HP 15** | **HPC Data Guide 2024 Revisions and Questions & Answers on Data Issues**<br>**Cristóbal González**, Pacific Hydro Chile (PHC), HPC Vice-Chair<br>The revisions made this year to the committee's data collection guide will be highlighted. This session is a great opportunity to ask questions about the data gathering process. |

| | |
|---|---|
| 10:00 am – 10:45 am | St. Petersburg II |
| **HP 16** | **2024 Data Review Meeting Plans**<br>**Cristóbal González**, Pacific Hydro Chile (PHC), HPC Vice-Chair<br>HPC leadership will provide the arrangements for the current year data review meeting which is scheduled for July. This overview will include the supporting material needed for the meeting and logistics. Time has been allocated for questions about the data review meetings. |
| 10:45 am – 11:00 am | St. Petersburg II |
| **HP 17** | **2023 Fall Workshop Agenda Planning**<br>**David Sanna**, USACE, HPC Chair<br>During this session we will develop the initial agenda for the fall 2023 HPC meeting. Please come prepared to suggest topics that you would like discussed or something to share with the rest of the committee. |
| 11:00 am – 11:30 am | **BREAK** \| St. Petersburg Foyer |
| 11:30 am – 11:45 am | St. Petersburg II |
| **HP 18** | **HPC Roundtable & Action Item Review**<br>**David Sanna**, USACE, HPC Chair<br>In this session, HPC members will be afforded the opportunity to share their feedback on the workshop. Also, any action items taken during the workshop will be reviewed with the responsible committee member noted and due dates given. |
| 11:45 am – 12:15 pm | St. Petersburg II |
| **HP 19** | **HPC Leadership Meeting**<br>**David Sanna**, USACE, HPC Chair<br>The HPC leadership utilizes this opportunity to discuss HPC business matters and is open to all committee members. |
| 12:15 pm | **WORKSHOP ADJOURNS** |

**The BESS (Battery Energy Storage System) Working Group** meeting will be held on **Wednesday, April 17** from **9:00 am – 5:00 pm**.
We invite you to join in and listen for the remainder of the day.

# T&D Schedule



**NOTE: All session times are indicated in EASTERN time**

## MONDAY, APRIL 15

| | |
|---|---|
| 8:00 am – 9:00 am | **BREAKFAST** | St. Petersburg |
| 9:00 am – 10:30 am | St. Petersburg I |
| | **EUCG General Session**<br>**Welcome & Introductory Remarks**<br>**Andrew Campbell**, TVA, EUCG President<br>*Keynote Speakers:* **Peter Hoeflich**, Principal Engineer—Generation and Transmission Strategy at Duke Energy will a keynote address on low-carbon generation and storage technologies. He will provide insights on the Debary Florida hydrogen demonstration which is the first system in the U.S. capable of producing, storing, and combusting 100% green hydrogen in a combustion turbine.<br>**Brad Chadwell**, Director of Enterprise Research and Innovation at Tennessee Valley Authority (TVA) will also deliver a Keynote Address at the workshop opening General Session. Mr. Chadwell will discuss "Driving Future Performance with Innovation." His talk will focus on TVA's Innovation and Research team's development of new technologies and capabilities needed to plan, build, and operate the Energy System of the Future. Mr. Chadwell will provide an overview of TVA's innovation initiatives and discuss how, when deployed at scale, they will meet emerging challenges and drive performance well into the future. |
| 10:30 am – 11:00 am | **BREAK** | St. Petersburg Foyer |
| 11:00 am – 11:45 am | Hilton Training Center 4 |
| | **T&D Committee Business Meeting**<br>**Welcome & Introductions**<br>**Jeannine Beran**, Exelon, Chair T&D Committee<br>This session will include introductions of attending utilities and a discussion of their expectations for the week. Other items included in this session will be updates on T&D Committee business and laying the groundwork for future T&D Sessions.<br>► Welcome and Introductions<br>► Survey Results<br>► Employee Development and Mentoring Opportunities |

| | |
|---|---|
| 12:00 pm – 1:00 pm | Hilton Training Center 4<br>(CLOSED SESSION) |
| **TD 2** | **Community of Practice – Data Literacy and Maturity**<br>**Brian Taubeneck**, Benchmarking Program Manager, Seattle City Light<br>***SYNOPSIS:*** Intro to Organizational Community Programs (ERGs, SIGs, CoPs, CoEs)<br>► Evolving Scope of the CoP and Embracing Flexibility<br>► Group Formation and Sponsorship<br>► Meeting Structure and Planning<br>► Success Stories: Small Wins to Organizational Alignment<br>► Looking Forward: Moving from Baseline to Filling Gaps |
| 1:00 pm – 2:00 pm | **LUNCH** \| St. Petersburg I |
| 2:00 pm – 3:00 pm | Hilton Training Center 4<br>(CLOSED SESSION) |
| **TD 3** | **Operations & Safety – Root Cause Analysis Program**<br>**Eric Easton**, Vice President<br>Grid Transformation and Investment CenterPoint Energy<br>**Shariana Cordero**, CAP Specialist Sr (OpEx), Entergy<br>**Chris Chaney**, Safety Manager, PSE&G<br>***SYNOPSIS:***<br>► Governance – Where does this Live in the organization?<br>► Who defines need for formal investigations?<br>► What is the reporting process?<br>► How are improvements communicated? |
| | ***Please encourage your Subject Matter Experts' participation to promote a robust discussion!*** |
| 3:00 pm – 3:30 pm | **BREAK** \| St. Petersburg Foyer |

| | |
|---|---|
| 3:30 pm – 4:30 pm | Hilton Training Center 4<br>(CLOSED SESSION) |
| **TD 4** | **Operations – Quantification Methods for System Resilience**<br>**Paul Mathew**, Director Strategic Coordination and Analysis, CenterPoint Energy<br>***SYNOPSIS:*** As our electric infrastructure and operations has been increasingly impacted by low frequency high impact events such as microbursts, tornados, hurricanes, winter storms, etc. the need to have a higher resilience to withstand such events is also becoming increasingly prudent. While the concept of resilience is not new, and many utilities have been investing more to improve system resilience there is a lack of consistent definition and an industry accepted metric for resilience. CenterPoint began researching and developing a methodology for determining resilience metrics that can be utilized to benchmark and compare system resilience performances. Even in the initial stages, the team reached several conclusions highlighting the complexity of defining a unified metric and the need to apply normalizations for several factors including type of event, scale of event, available personnel resources, etc. Currently the team is working on comparing two methodologies: one utilizing the concept of modulus of resilience in material science, and another based on rate of restoration and rebuild. In addition, CenterPoint is working on developing several analytical tools that will help determine resilience of assets at a granular level using LIDAR, satellite imagery, weather data and asset information. These tools will help quantify risk and drive future asset investment and optimization strategies. |
| | ***Please encourage your Subject Matter Experts' participation to promote a robust discussion!*** |
| 4:30 pm – 5:30 pm | Hilton Training Center 4<br>(CLOSED SESSION) |
| **TD 5** | **Operations: Data Driven Tools Impacting Field Productivity (Hours Per Unit, Vehicle Telematics & Anatomy of an Outage)**<br>**Ron Carstens**, Director of Utility Performance Assessment, Exelon<br>**Adam St Pierre**, Sr. Manager, Exelon<br>***SYNOPSIS:*** Using analytics to support best practice opportunities with field forces:<br>► Focus Areas to drive productivity improvements<br>► Crew size impact to efficiency<br>► Removing barriers to "get the morning right"<br>► Analytics to support crew/dispatcher impact to the lifecycle of an outage |
| | ***Please encourage your Subject Matter Experts' participation to promote a robust discussion!*** |
| 6:00 pm – 9:30 pm | Off-Site |
| | **Networking Event** |
| | Please meet in the **HOTEL LOBBY** for a shuttle to Park & Rec for a festive dinner. |

## TUESDAY, APRIL 16

| | |
|---|---|
| 8:00 am – 9:00 am | **BREAKFAST** | St. Petersburg I |
| 9:00 am – 10:00 am | Hilton Training Center 4<br>(CLOSED SESSION) |
| **TD 6** | **Innovation – Innovation Journey Panel**<br>**Michael Haydel**, Director, Innovation Portfolio and Partnership Mgmt., Entergy<br>**Heather Czernicki**, Manager of Project Execution-Innovation and R&D, Exelon<br>**Lou Guerrero**, Director, Center for Excellence and Innovation, Oncor<br>***SYNOPSIS:***<br>► How did your program start?<br>► Where does it live in your organization?<br>► Resources allocation for projects<br>► How do you submit ideas for consideration?<br>► Ideation to commercialization process overview<br>► Funding – Regulated or Unregulated<br>► Focus areas<br>► Future Projects |
| 10:00 am – 11:00 am | Hilton Training Center 4<br>(CLOSED SESSION) |
| **TD 7** | **Innovation – Resiliency and Reliability Related Customer Solutions**<br>**Adam Preveau**, Manager, Innovation Partnership, Entergy<br>***SYNOPSIS:*** Severe weather is impacting our region with increased strength and frequency, at the same time that our customers electric needs are increasing. At Entergy, we are focused on making customers successful as we seek to identify how we can accelerate proposed investments while balancing affordability.<br>Building a resilient grid is what we do. We've steadily made significant investments in upgrading and strengthening our power generation, transmission and distribution systems for years. Our dedication to making our customers successful extends beyond our continued investments in the grid. Through customer research and outreach, we are improving our understanding of our customer's reliability and resiliency needs and delivering on unique solutions for residential, commercial and industrial customer segments. This session will explore how Entergy is innovating in this space. |
| 11:00 am – 11:30 am | **BREAK** | St. Petersburg Foyer |

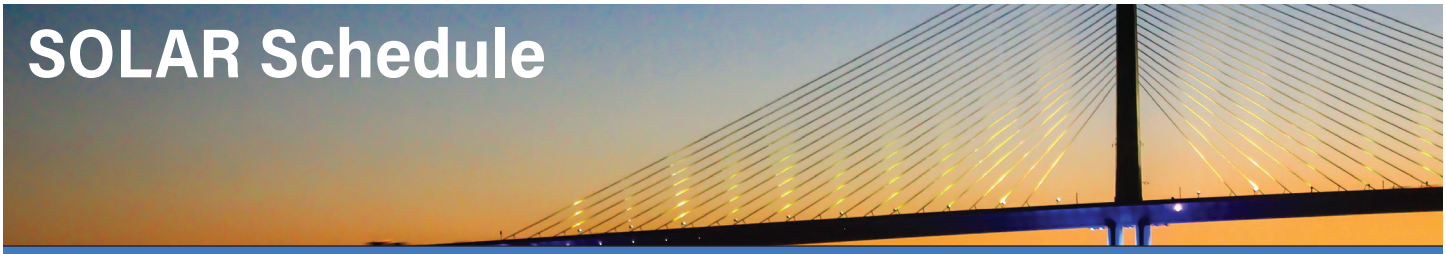
| | |
|---|---|
| 11:30 am – 12:30 pm | Hilton Training Center 4<br>(CLOSED SESSION) |
| **TD 8** | **Innovation – TransBanker Use in Training Centers for Field Employees**<br>**Chris Reilly**, Training Supervisor, Atlantic City Electric, Exelon<br>**Nicolas Taylor**, Training Supervisor, Atlantic City Electric, Exelon<br>***SYNOPSIS:*** TransBanker is a trademarked innovation designed to improve the process of training field workers, giving them the flexibility to conveniently train in a safe low-voltage environment. The TransBanker units were acquired from Northwest Lineman College and installed at PHI facilities to enhance procedures, improve safety and provide field workers with hands-on experience and knowledge through training. These units allow trainees to get their hands on real transformers without the associated risks from performing operation in the training yard performed in the past, putting a greater emphasis on solidifying safety measures among employees involved.<br>Efficiency is another core component that was significantly increased; what originally was a two-day extensive training operation can now be successfully completed in approximately 90 minutes.<br>The newly adopted system also opened the door to several other key advantages, including:<br>► Weather constraints are no longer impacting training schedules<br>► Trainees are given more flexibility to directly perform hands-on work<br>► More time is allocated to perform pertinent operations outside of training<br>► Any mistakes made during training will not impact customers or cause outages<br>► Line workers can put their skills to the test during trial runs with no risk to customers |
| 12:30 pm – 1:00 pm | Hilton Training Center 4<br>(CLOSED SESSION) |
| **TD 9** | **Innovation Session Feedback**<br>Open Discussion on Topics and Future Planning |
| 1:00 pm – 2:00 pm | **LUNCH** \| St. Petersburg I |
| 2:00 pm – 3:00 pm | Hilton Training Center 4<br>(CLOSED SESSION) |
| **TD 10** | **Innovation – Tennessee Valley Authority Innovation Programs**<br>**James Linder**, Technology Scouting, TVA<br>***SYNOPSIS:*** TVA will discuss the relationship with Energy Labs and the products and services that are currently in use or being piloted. Some these products and technologies to be discussed are:<br>► 3D Cameras being used for survey work<br>► Robotic Drones that attach to 3 phase lines to inspect conductors<br>► Substation Thermal Imaging Tools and it's uses |
| 3:00 pm – 3:30 pm | **BREAK** \| St. Petersburg Foyer |

| | |
|---|---|
| 3:30 pm – 4:15 pm | Hilton Training Center 4<br>(CLOSED SESSION) |
| **TD 11** | **Innovation – Economic Impact and Affordability**<br>**Kristine Kent**, Principal Integration & Bundling, PG&E<br>***SYNOPSIS:*** PG&E embarked on a journey from strategy to execution to reduce work backlogs, bundle work, lower overall O&M related costs and improve customer satisfaction related to planned outages. Where feasible, bundling work minimizes impact on our customers from planned outages. Execution of PG&E's Electric Distribution Work Bundling Program required identification and implementation of work bundling methodologies, data enhancements, and geospatial visualization technical tools such as ArcGIS prototype functions. As a result, PG&E has experienced both resource and unit cost efficiencies, and reduced the number of different times customers experience planned outages. |
| 4:15 pm – 5:15 pm | Hilton Training Center 4<br>(CLOSED SESSION) |
| **TD 12** | **Innovation – Affordability Related Customer Solutions**<br>**Michael Haydel**, Director, Innovation Portfolio and Partnership Mgmt., Entergy<br>***SYNOPSIS:*** Our focus on affordability is rooted in the economic reality of the communities we serve, which include some of highest poverty regions in the country. Approximately 25% of Entergy's 3 million customers live below the poverty line. We have an obligation and a business imperative to help find lasting solutions for our customers in need. Entergy works hard to connect potentially eligible customers to internal and external programs to ensure they receive the maximum possible benefit. By diving deep into our understanding of the challenges many of our customers face, we have identified unique solutions that improve the assistance our customers receive. This session will explore how Entergy is innovating in this space. |
| **WEDNESDAY, APRIL 17** | |
| 8:00 am – 9:00 am | **BREAKFAST** \| St. Petersburg I |
| 9:00 am – 10:00 am | (CLOSED SESSION) |
| **TD 13** | **Safety – Leading Indicators/Maturing Scorecard Metrics**<br>**Nina Gattuso**, Director, Safety and Human Performance, Exelon<br>***SYNOPSIS:*** Safety performance has traditionally been measured using OSHA Recordable Rate. Exelon has changed the conversation of safety to focus on serious injury and fatality prevention. |
| 10:00 am – 11:00 am | (CLOSED SESSION) |
| **TD 14** | **Safety – Wildfire Mitigation**<br>**Andrea Brown**, Manager Wildfire Data Science, PG&E<br>***SYNOPSIS:*** Understanding Electric Risk Management & Analytics and using Electric System Predictive Analytics to support wildfire mitigation strategies. |
| 11:00 am – 11:30 am | **BREAK** \| St. Petersburg Foyer |

| | |
|---|---|
| 11:30 am – 1:00 pm | Hilton Training Center 4 |
| **TD 15** | **T&D Committee Business**<br>**Jeannine Beran**, Exelon, Chair T&D Committee<br>Time will be taken to discuss the week's activities:<br>► Were expectations met?<br>► What additional information might be of help?<br>► What new topics have come up because of these discussions? |
| | **Fall 2024 Agenda Build**<br>Planning for the Fall Workshop. Topic discussions and ideas will be gathered. |
| 1:00 pm | **WORKSHOP ADJOURNS** |

**The BESS (Battery Energy Storage System) Working Group** meeting will be held on **Wednesday, April 17** from **9:00 am – 5:00 pm**.
We invite you to join in and listen for the remainder of the day.

# SOLAR Schedule



**NOTE: All session times are indicated in EASTERN time**

## MONDAY, APRIL 15

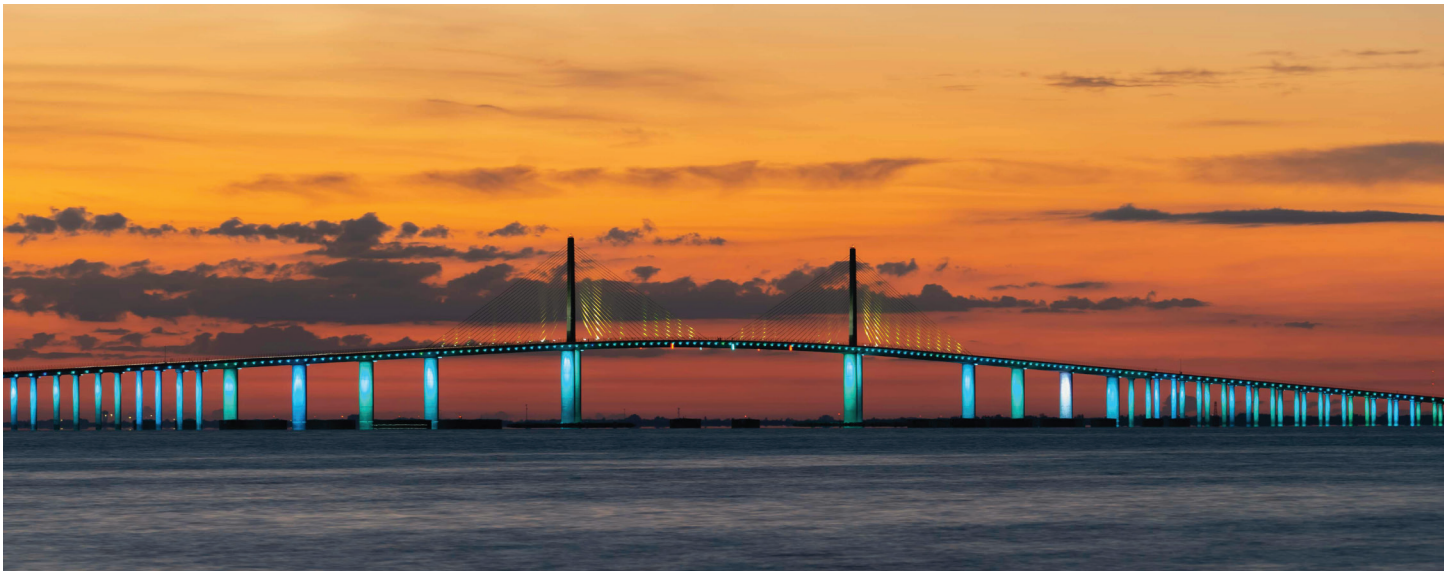
| | |
|---|---|
| 8:00 am – 9:00 am | **BREAKFAST** | St. Petersburg I |
| 9:00 am – 10:30 am | St. Petersburg I |
| | **EUCG General Session**<br>**Welcome & Introductory Remarks**<br>**Andrew Campbell**, TVA, EUCG President<br>***KEYNOTE SPEAKERS:*** Peter Hoeflich, Principal Engineer – Generation and Transmission Strategy at Duke Energy will a keynote address on low-carbon generation and storage technologies. He will provide insights on the Debary Florida hydrogen demonstration which is the first system in the U.S. capable of producing, storing, and combusting 100% green hydrogen in a combustion turbine.<br>**Brad Chadwell**, Director of Enterprise Research and Innovation at Tennessee Valley Authority (TVA) will also deliver a Keynote Address at the workshop opening General Session. Mr. Chadwell will discuss "Driving Future Performance with Innovation." His talk will focus on TVA's Innovation and Research team's development of new technologies and capabilities needed to plan, build, and operate the Energy System of the Future. Mr. Chadwell will provide an overview of TVA's innovation initiatives and discuss how, when deployed at scale, they will meet emerging challenges and drive performance well into the future. |
| 10:30 am – 11:00 am | **BREAK** | St. Petersburg Foyer |
| 11:00 am – 11:45 am | St. Petersburg III |
| | (CLOSED SESSION) |
| **SC 01** | **SOLAR Committee Business Meeting**<br>**Welcome, Introductions, and Safety Moment**<br>**Jeremy Garcia**, APS and **Scott Trombley**, Duke Energy<br>This session will include introductions of attending utilities and a discussion of their expectations for the week. Other items included in this session will be: Updates on Solar Committee business and laying the groundwork for future Solar Sessions.<br>► Welcome and Introductions<br>► Current Solar vs. Future Installations<br>► Success Stories |

| | |
|---|---|
| 12:00 pm – 1:00 pm | St. Petersburg III |
| | (CLOSED SESSION) |
| **SC 02** | **PPA vs. Owned Solar**<br>**Richard Reich**, CenterPoint Energy<br>This session will focus on the pros and cons including reasoning behind PPA solar installations vs. utility owned. |
| 1:00 pm – 2:00 pm | **LUNCH** | St. Petersburg I |
| 2:00 pm – 3:00 pm | St. Petersburg III |
| | (CLOSED SESSION) |
| **SC 03** | **String vs. Central Inverters**<br>**Jeremy Garcia**, APS<br>This will be a presentation and discussion on the benefits and requirements for using string inverters or central inverters for large utility scale solar sites. |
| 3:00 pm – 3:30 pm | **BREAK** | St. Petersburg Foyer |
| 3:30 pm – 4:30 pm | St. Petersburg III |
| | (CLOSED SESSION) |
| **SC 04** | **Component Obsolescence**<br>**Duke Energy**<br>This session will focus on aging equipment and component replacement and strategies. |
| 6:00 pm – 9:00 pm | Off-Site |
| | **Networking Event** |
| | Please meet in the **HOTEL LOBBY** for a shuttle to Park & Rec for a festive dinner. |

| TUESDAY, APRIL 16 | |
|---|---|
| 8:00 am – 9:00 am | **BREAKFAST** | St. Petersburg I |
| 9:00 am – 9:45 am | St. Petersburg III |
| **SC 05** | **Solar Reliability Program**<br>**David Watler**, Teco Energy<br>This session will focus on the solar reliability program that Teco Energy has created for their fleet. |
| 9:45 am – 10:30 am | St. Petersburg III |
| **SC 06** | **Inverter Support**<br>**Kendell Edwards**, Ameren<br>**Eid Dahdal**, Teco Energy<br>How are others using OEM's and remote control. |
| 10:30 am – 11:00 am | St. Petersburg III |
| | (CLOSED SESSION) |
| **SC 07** | **Containment Areas for Inverter Skids**<br>**Kendell Edwards**, Ameren<br>**Eid Dahdal**, Teco Energy<br>The session will focus on strategies for containment areas under inverter skids and potential maintenance and environmental concerns. |
| 11:00 – 11:30 | **BREAK** | St. Petersburg Foyer |
| 11:30 pm – 12:30 pm | St. Petersburg III |
| | (CLOSED SESSION) |
| **SC 08** | **NERC GADS Discussion**<br>**William Martin**, NERC<br>This will be a session focus on NERC GADS reporting for Utility Scale Solar sites and the requirements. NERC representative will be presenting and addressing questions from our Utility Partners. |
| 12:30 pm – 1:00 pm | St. Petersburg III |
| | **Solar Reporting Tool**<br>**Chris Messer**, Programming Plus<br>This will be a session that will focus on the functionality for the Solar Reporting Tool. |
| 1:00 pm – 2:00 pm | **LUNCH** | St. Petersburg I |

| | |
|---|---|
| 2:00 pm – 3:00 pm | St. Petersburg III |
| | (CLOSED SESSION) |
| **SC 09** | **Inverter Life/replacement**<br>**Kendell Edwards**, Ameren<br>This session will discuss anticipated end of life for inverters at Utility Scale Solar sites and strategies for repowering. |
| 3:00 pm – 3:30 pm | **BREAK** | St. Petersburg Foyer |
| 3:30 pm – 4:30 pm | St. Petersburg III |
| | (CLOSED SESSION) |
| **SC 10** | **Component Obsolescence**<br>**Duke Energy**<br>This session will focus on aging equipment and component replacement and strategies. |
| 4:30 pm – 5:00 pm | St. Petersburg III |
| **SC 11** | **Roundtable – De-Brief/Future Agenda**<br>This discussion will cover topics that were discussed and future topics for Monthly and Workshop agenda items. |
| **WEDNESDAY, APRIL 17** | |
| 8:00 am – 9:00 am | **BREAKFAST** | St. Petersburg I |

**The BESS (Battery Energy Storage System) Working Group** meeting will be held on **Wednesday, April 17** from **9:00 am – 5:00 pm**.
We invite you to join in and listen for the remainder of the day.



# NUCLEAR Schedule

**NOTE: All session times are indicated in EASTERN time**

## MONDAY, APRIL 15

| | |
|---|---|
| 8:00 am – 9:00 am | **BREAKFAST** | St. Petersburg I |
| 9:00 am – 10:30 am | St. Petersburg I |
| | **EUCG General Session**<br>**Welcome & Introductory Remarks**<br>**Andrew Campbell**, TVA, EUCG President<br>*Keynote Speakers:* **Peter Hoeflich**, Principal Engineer—Generation and Transmission Strategy at Duke Energy will a keynote address on low-carbon generation and storage technologies. He will provide insights on the Debary Florida hydrogen demonstration which is the first system in the U.S. capable of producing, storing, and combusting 100% green hydrogen in a combustion turbine.<br>**Brad Chadwell**, Director of Enterprise Research and Innovation at Tennessee Valley Authority (TVA) will also deliver a Keynote Address at the workshop opening General Session. Mr. Chadwell will discuss "Driving Future Performance with Innovation." His talk will focus on TVA's Innovation and Research team's development of new technologies and capabilities needed to plan, build, and operate the Energy System of the Future. Mr. Chadwell will provide an overview of TVA's innovation initiatives and discuss how, when deployed at scale, they will meet emerging challenges and drive performance well into the future. |
| 10:30 am – 11:00 am | **BREAK** | St. Petersburg Foyer |
| 11:00 am – 12:00 pm | Williams/Demens Room |
| **NC 1** | **Introductions, General Business & 2024 Strategic Plan Update**<br>**Jeff Davis**, DTE, Nuclear Committee Chair<br>The EUCG Nuclear Committee is the industry source for member companies to exchange cost and staffing data; the Nuclear Committee is a key resource for nuclear business and finance professionals to network, share best practices and address key opportunities facing the nuclear industry. The EUCG Nuclear Committee Chair will update members with a current perspective of the EUCG Nuclear Committee, introduce the committee's Nuclear Leadership Team and outline provide updates for the 2024 year. |

| | |
|---|---|
| 12:00 pm – 12:45 pm | Williams/Demens Room |
| **NC 7** | **Duke Energy Nuclear: Today, Tomorrow and the Future**<br>**Heather Danenhower**, Duke Energy<br>Duke Energy is embarking on the largest energy transition in U.S. history-and achieving net-zero carbon emissions is only possible with nuclear generation, the lone clean energy source that is always on, reliable and available 24-hours a day regardless of weather conditions. In this session, find out how Duke Energy will operate its nuclear fleet and pursue advanced nuclear technologies today, tomorrow and for the future. |
| 12:45 pm – 1:00 pm | Williams/Demens Room |
| | **Nuclear Networking Opportunity** |
| 1:00 pm – 2:00 pm | **LUNCH** \| St. Petersburg I |
| 2:00 pm – 2:45 pm | Williams/Demens Room |
| **NC 3** | **Nuclear Energy Institute (NEI) Industry Outlook**<br>**Julianne McCallum** and **Matt Croz**at, Nuclear Energy Institute<br>Nuclear Energy Institute's Julie McCallum and Matt Crozat will present NEI's 2024 industry outlook. This session will focus on what's new for the industry in 2024 including the start of the Inflation Reduction Act's nuclear production tax credits and next phase of the Department of Energy's Civil Nuclear Credit Program. |
| 2:45 pm – 3:00 pm | Williams/Demens Room |
| | **Nuclear Networking Opportunity** |
| 3:00 pm – 3:15 pm | **BREAK** \| St. Petersburg Foyer |
| 3:15 pm – 4:00 pm | Williams/Demens Room |
| **NC 4** | **EIA Industry Outlook**<br>**Slade Johnson**, Energy Information Agency (EIA)<br>Energy Information Agency's Slade Johnson will present EIA's Capital Cost and Performance Characteristics for Utility – Scale Electric Power Generating Technologies report. This session will focus on the report's projections for new nuclear's overnight capital costs and how EIA intends to use the report in its models. |
| 4:00 pm – 4:15 pm | Williams/Demens Room |
| | **Nuclear Networking Opportunity** |
| 4:15 pm – 5:00 pm | Williams/Demens Room |
| **NC 5** | **Presentation of Nuclear Member Issues**<br>**Jeff Davis**, DTE, Nuclear Committee Chair<br>Jeff Davis will present the nuclear discussion topics submitted by members prior to the workshop. The request for topics was sent to each member company's Primary Representative and Management Sponsor. This is to present items only, with more detailed discussion to occur in further sessions. The process to collect, disseminate and resolve the major nuclear topics will be included in the NC13 and NC15 sessions. |

| | |
|---|---|
| 5:00 pm – 5:15 pm | Williams/Demens Room |
| **NC 6** | **Day One Wrap-Up and Next Day Plan**<br>**Ives Zaldumbide**, PG&E, Nuclear Committee Vice-Chair<br>Close the day's sessions with a wrap-up and next day highlights. |
| 6:00 pm – 9:00 pm | Off-Site |
| | **Networking Event** |
| | Please meet in the **HOTEL LOBBY** for a shuttle to Park & Rec for a festive dinner. |

## TUESDAY, APRIL 16

| | |
|---|---|
| 8:00 am – 9:00 am | **BREAKFAST** | St. Petersburg I |
| 9:00 am – 9:45 am | Williams/Demens Room |
| **NC 7** | **Comprehensive Data Update, NIID Updates, Data Review Team**<br>**Christine Messer**, Nuclear Committee Database Manager<br>Christine Messer will provide an update on the 2024 comprehensive data. |
| 9:45 am – 10:00 am | Williams/Demens Room |
| | **Nuclear Networking Opportunity** |
| 10:00 am – 10:45 am | Williams/Demens Room |
| **NC 8** | **Small Modular Reactor (SMR) Database Considerations**<br>**Jeff Davis**, DTE, Nuclear Committee Chair<br>Adoption of new nuclear technology, specifically small modular reactors (SMRs), is gaining industry momentum as our members seek to lower generation emissions and meet growing demand for electricity. This session will discuss potential avenues for EUCG Nuclear Committee to support potential SMR construction and eventually SMR operations with a focus on existing EUCG database capabilities and potential future database changes that would be required for SMR inclusion. |
| 10:45 am – 11:00 am | Williams/Demens Room |
| | **Nuclear Networking Opportunity** |
| 11:00 am – 11:15 am | **BREAK** | St. Petersburg Foyer |
| 11:15 am – 12:00 pm | Williams/Demens Room |
| **NC 9** | **Nuclear Document Library (NDL) Update**<br>**Jeff Davis**, DTE, Nuclear Committee Chair<br>Following up from our 2023 EUCG Fall Workshop discussion, this session will discuss proposed additions to the EUCG Document Library. Proposed additions will include historical publically available information such as press releases or new articles concerning member's major projects as well as publically available regulatory filings. The proposed additions are to support members in efficiently locating reliable information about our industry's initiatives. |

| | |
|---|---|
| 12:00 pm – 12:15 pm | Williams/Demens Room |
| | **Nuclear Networking Opportunity** |
| 12:15 pm – 1:00 pm | Williams/Demens Room |
| **NC 10** | **Diablo Canyon – The Continued Journey and DOE Civil Nuclear Credit Program and NRC License Renewal Update**<br>**Ives Zaldumbide**, PG&E, Nuclear Committee Vice-Chair<br>As a follow-up to PG&E's 2023 fall workshop presentation of Facilitative Leadership and changing culture through process, Ives Zaldumbide will update the membership on Diablo Canyon's journey on integrating faciliative leadership throughout their organization. The session will also include updates on Diablo Canyon's application for license renewal and Diablo Canyon's application for the Department of Energy (DOE) Civil Nuclear Credit Program. |
| 1:00 pm – 2:00 pm | **LUNCH** \| St. Petersburg I |
| 2:00 pm – 3:00 pm | Williams/Demens Room |
| **NC 11** | **Nuclear Electric Insurance Limited (NEIL) Operations**<br>**Bill Rousseau**, NEIL<br>NEIL (Nuclear Electric Insurance Limited) is a mutual insurance company supporting US and international nuclear operators. This session focuses towards the history and regulatory background of NEIL and its operations and includes a discussion of how NEIL projects and mitigates liability risks. |
| 3:00 pm – 3:45 pm | Williams/Demens Room |
| **NC 12** | **TIP Award Winners Xcel Energy**<br>**Dylan Wojchouski** and **Jeff Dehn**, Xcel Energy<br>Xcel Energy earned two separate TIP awards from NEI in 2023 for its work in using machine models to assist in the identification, screening and remediation of incoming potential Corrective Action Program (CAP) entries as well as for its efforts to create a publicly-available virtual model Prairie Island Nuclear Plant. This session will discussion how Xcel's successful efforts in these two areas support safe and efficient operations and improve public support for Xcel's nuclear operations. |
| 3:45 pm – 4:00 pm | **BREAK** \| St. Petersburg Foyer |
| 4:00 pm – 4:30 pm | Williams/Demens Room |
| **NC 13** | **Major Nuclear Issues and Recent Surveys**<br>**Jeff Davis**, DTE, Nuclear Committee Chair<br>This follow-up session to NC5 allows members to deep dive member issues and support resolving matters through use round-table discussions and possibly break out teams. This sessions also provides an opportunity to review recent survey results and add additional responses. |

| | |
|---|---|
| 4:30 pm – 4:45 pm | Williams/Demens Room |
| **NC 14** | **Day Two Wrap-Up and Next Day Plan**<br>**Ives Zaldumbide**, PG&E, Nuclear Committee Vice-Chair |
| 4:45 pm – 5:45 pm | Williams/Demens Room |
| | **Nuclear Leadership Team Meeting**<br>*Nuclear Leadership Team members (only)* |

## WEDNESDAY, APRIL 17

| | |
|---|---|
| 8:00 am – 9:00 am | **BREAKFAST** \| St. Petersburg I |
| 9:00 am – 10:00 am | Williams/Demens Room |
| **NC 15** | **Major Nuclear Issues/Next Steps Presentations by Breakout Teams**<br>**Jeff Davis**, DTE, Nuclear Committee Chair<br>The Breakout Team Leads will present the findings and potential next steps for their respective issue. The attendees provide feedback on the presentations. The draft charters, if applicable, are provided to the Nuclear Chair for discussion with the Nuclear Leadership Team regarding disposition (resources, timelines etc.) at the Nuclear Leadership Team meeting. |
| 10:00 am – 11:00 am | Williams/Demens Room |
| **NC 16** | **Fall Workshop Wrap-Up & Roundtable**<br>**Ives Zaldumbide**, PG&E, Nuclear Committee Vice-Chair<br>Solicit member feedback on the workshop content and facilities; and officially close the workshop. |
| 11:00 am | **WORKSHOP ADJOURNS** |

| | |
|---|---|
| 12:00 pm – 1:00 pm | Hilton Training Center 2 |
| | **EUCG Board Meeting** |

**The BESS (Battery Energy Storage System) Working Group** meeting will be held on **Wednesday, April 17** from **9:00 am – 5:00 pm**.
We invite you to join in and listen for the remainder of the day.

# EUCG Battery Energy Storage System (BESS) Working Group Schedule

**NOTE: All session times are indicated in EASTERN time**

## WEDNESDAY, APRIL 17

| | |
|---|---|
| 8:00 am – 9:00 am | **BREAKFAST** \| St. Petersburg I |
| 9:00 am – 10:00 am | St. Petersburg III |
| **BESS 05** | **Site Development and Construction Lessons Learned**<br>***EXCERPT:*** **Presentation on the journey and lessons learned from development to construction of a new BESS site.**<br>***PRESENTER:*** **Scott Trombley**, Duke Energy |
| 10:00 am – 10:45 am | St. Petersburg III |
| **BESS 06** | **BESS Responsibility T&D vs. GEN**<br>***EXCERPT:*** Presentation and discussion on theory of where BESS assets should reside. Is it based on geography, skills set, and answer how will these assets be maintained by T&D vs. GEN (shared resourcing, org structure, dedicated staff, etc.)<br>***PRESENTER/FACILITATOR:*** **Billy Sabin**, TVA |
| 10:45 am – 11:15 am | **BREAK** \| St. Petersburg Foyer |
| 11:15 am – 12:00 pm | St. Petersburg III |
| **BESS 07** | **Battery Capabilities and Application**<br>***EXCERPT:*** Presentation on utilities business drivers for installing your battery assets, benefits of the application chosen, asset capabilities, and value modeling stream considerations.<br>***PRESENTER:*** **Matt Morgan**, APS |
| 12:00 pm – 1:00 pm | **LUNCH** \| St. Petersburg III |
| | We will have lunch brought in and have an open forum discussion on BESS issues that we are seeing in the industry.<br>***FACILITATED BY:*** **Scott Trombley**, Duke Energy |
| 1:00 pm – 1:45 pm | St. Petersburg III |
| **BESS 08** | **Energy Storage Safety & Fire Detection and Protection**<br>***EXCERPT:*** Discussion on energy storage safety and fire detection and protection.<br>***PRESENTER/FACILITATOR:*** **Kasdan Hall**, APS |

| | |
|---|---|
| 1:45 pm – 2:15 pm | St. Petersburg III |
| **BESS 09** | **Review of Database Profile Section**<br>***EXCERPT:*** Presentation, review, and discussion on each utilities "Profile" section of the database.<br>***PRESENTER/FACILITATOR:*** **Chris Messer**, Database Manager |
| 2:15 pm – 3:30 pm | St. Petersburg III |
| **BESS 10** | **Roundtable Discussion on Software for Monitoring BESS: Battery Management Systems & System Control Including Operations and Configuration of Your Control System**<br>***EXCERPT:*** Roundtable discussion on software for monitoring battery management systems and systems control including operations and configuration of your control system.<br>***PRESENTERS/FACILITATORS:*** **Scott Trombley**, Duke Energy<br>**Ruben Soto**, SCE<br>**Jeremy Garcia**, APS |
| 3:30 pm – 3:45 pm | **BREAK** \| St. Petersburg Foyer |
| 3:45 pm – 4:30 pm | St. Petersburg III |
| **BESS 11** | **Battery Chemistry & Technologies**<br>***EXCERPT:*** Roundtable discussion on battery chemistry and technologies.<br>***FACILITATORS:*** **Scott Trombley**, Duke Energy<br>**Doug Detterman**, CMS Energy |
| 4:30 pm – 5:00 pm | St. Petersburg III |
| **BESS 12** | **Open Forum Roundtable Discussion**<br>***EXCERPT:*** Open Forum roundtable discussion.<br>***FACILITATORS:*** **Ruben Soto**, SCE<br>**Scott Trombley**, Duke Energy |
| 5:00 pm | **WORKSHOP ADJOURNS** |

4800 Hampden Lane, Suite 200
Bethesda, Maryland 20814
https://www.eucg.org
1+240-482-3739