

NERC News

June 2021

Inside This Issue

Compliance

[Compliance Guidance Update](#)

[Newly Effective Standard Requirements](#)

Reliability Risk Management

[Registration Open for Human Performance in Electric Power Virtual Session](#)

Standards

[2021 Registered Ballot Body Self-Select Attestation Process Begins](#)

[Nomination Period Open for Project 2021-04 – Modifications to PRC-002-2 Drafting Team Members](#)

[Nomination Period Open for Project 2021-05 – Modifications to PRC-023](#)

Member News

[GET READY: NERC Membership Renewal Coming Summer 2021](#)

Regional Entity Events

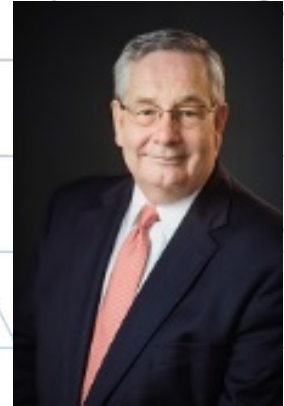
[Upcoming Events](#)

[Filings | Careers](#)

ERO Executive Spotlight – Mark Lauby Senior Vice President and Chief Engineer

FERC Examines Climate Change, Extreme Weather, and Electric System Reliability

At [FERC's two-day technical conference](#) on June 12, participants examined the reliability effects of extreme weather and climate change in depth. It was my privilege to represent NERC in the discussions, serving on a panel focused on best practices for long-term planning and mitigating the risk of extreme weather events. The timely conference took place just a week after NERC published the [2021 Summer Reliability Assessment](#), which found parts of the United States are at risk of energy shortfalls this season.



Extreme weather is a well-documented and growing risk to reliability. The meaning of “extreme events” is expanding. Firstly, extreme does not mean rare. Secondly, extreme, long-duration and widespread temperatures, which have not been as much of an issue in the past, have become a common condition that require more protection for the transformed resource mix. The effects of extreme temperatures or solar/wind/moisture droughts are exacerbated by a bulk power system that has rapidly transforming generation resource mix, which is more sensitive to these extreme conditions. With these issues as the backdrop, my panel examined whether existing resource adequacy planning processes are adequate to address risks from extreme weather events. Panelists agreed that existing processes need to improve. [Continued on page 2](#)

Headlines

[Dragos and the E-ISAC Announce Initiative to Bring ICS/OT Collective Defense to the Electricity Sector](#)

[NERC Develops Practice Guide to Provide Clarity When Evaluating Network Monitoring Technology](#)

[NERC Releases Second Episode of Quarterly Compliance Podcast](#)

FERC Examines Climate Change (cont'd)

To appreciate where we are today, it is important to understand where we started. In the past, planners looked across a historic period — about 30 years — to establish expected conditions from a one-in-ten-year event. The analysis calculated resource adequacy based on capacity. The basic assumption is that this capacity provided or included energy, reliability services and ramping capability. To determine adequacy needs, planners applied these calculations to scenarios involving independent forced outages due to random failures, not including the impacts from extreme, widespread and long-duration conditions.

Changes in extreme weather patterns and a more complex system now require new planning processes to account for increased reliability risk. We must start thinking in new ways, focusing not just on capacity, but also on energy needs. While extreme weather once included just hurricanes, derechos, summer storms, severe blizzards and the like, planners must now incorporate additional events such as increased incidence of extended cold and hot weather, wildfires and widespread solar/wind/moisture droughts.

Today's bulk power system is growing more reliant on variable resources and natural gas. While this transformation can enhance resilience, it also exposes new sensitivities to weather extremes. New resources — whether natural gas or inverter-based — are more susceptible to common mode contingencies, such as extreme natural events that disrupt fuel supply.

NERC's seasonal assessments and the annual *Long-Term Reliability Assessment* have documented this risk extensively. Our Reliability Issues Steering Committee — an advisory committee to NERC's Board of Trustees — ranks extreme natural events among the [top four emerging risks to reliability](#). While the damage from the usual extreme events tend to impact distribution system more than bulk power systems, extended cold and hot weather, wildfires and widespread solar/wind/moisture droughts impact large amounts of energy resources. One need only look at the past year for examples. In February, an extended period of historic cold weather in Texas and

the Central United States forced outages across virtually all generation resources. The ongoing joint inquiry with FERC and the Regional Entities will tell us more, but it is clear that extreme weather wreaked havoc on the system throughout the Central United States. In California, extreme heat last August prompted load shedding as a last resort option to preserve system stability. NERC's [2021 Summer Reliability Assessment](#) cautions that California is again at high risk this summer even during *normal* high temperatures. The analysis cautions that numerous other regions of the United States, including in the West, MISO, ERCOT, and New England, are at elevated risk of energy shortages this summer.

Prior to the conference, NERC submitted [comments](#) outlining how the ERO proactively addresses extreme weather reliability risk. The comments review the role of reliability assessments in identifying regions of particular risk, how reliability standards mitigate extreme weather risk and ongoing standards modifications to strengthen cold weather resilience. FERC convenes technical conferences to help inform potential FERC action on complex subjects. While there are no easy answers, NERC remains fully committed to working with FERC and all stakeholders to study, understand and mitigate extreme weather risk. ■■■

Headlines

Dragos and the E-ISAC Announce Initiative to Bring ICS/OT Collective Defense to the Electricity Sector

Dragos Inc., a provider of cyber security for industrial controls systems (ICS)/operational technology (OT) environments, and NERC's Electricity Information Sharing and Analysis Center (E-ISAC) have announced a joint initiative to strengthen collective defense and community-wide visibility for industrial cyber security in the North American electricity industry.

The joint initiative enables E-ISAC analysts to gain greater visibility into ICS cyber threats facing the electric sector through Dragos's Neighborhood Keeper technology. E-ISAC analysts will have the ability to view aggregate information about threat analytics and Indicators of

Compromise (IOC) as they are detected within Neighborhood Keeper and then share insights and trends gleaned from this information more broadly with all E-ISAC members, thus enabling the community to collectively defend itself against cyber adversaries.

Originally developed with the support of an award from the U.S. Department of Energy (DOE), Neighborhood Keeper is a free, opt-in and anonymized information-sharing network available to all Dragos Platform customers. Dragos customers in the electricity sector will benefit from access to a larger pool of E-ISAC cyber security experts trained to analyze and provide feedback on threats and vulnerabilities and collectively influence detection capabilities.

“The electric community is keenly aware of the kind of cyber threats they face but to date has had to defend against those threats in isolation,” said Robert M. Lee, chief executive officer and cofounder, Dragos, Inc. “Defending against state and criminal actors is entirely doable when the community operates as a collective and ensures that an attack on one member is seen by all of us. This new capability for the E-ISAC will amplify their important role and responsibility in helping our electric sector customers and members of the E-ISAC.”

Cyber threats targeting ICS/OT networks continue to increase in frequency and sophistication, but data collection and analysis is extremely limited for industrial defenders. Because adversaries can move through ICS/OT networks undetected, they are able to continually train and prepare for the next cyber attack. Neighborhood Keeper is a fundamentally new approach to information sharing that drastically diminishes risk to organizations by reducing the sensitivities around sharing and performing this task at machine-speed.

“The E-ISAC remains focused on threats to ICS/OT networks across the entire North American electricity industry. Staying ahead of our adversaries is vital, and our collaboration with Dragos on programs like Neighborhood Keeper underscores the importance we place on collective defense and threat intelligence sharing,” said Manny Cancel, senior vice president of NERC and CEO of

the E-ISAC. “One of our goals is to establish near real-time situational awareness, indications, warnings and response capabilities in ICS/OT networks across the electricity sector. Our E-ISAC members want timely, relevant and actionable insight to allow them to prioritize their efforts and secure their networks.”

NERC Develops Practice Guide to Provide Clarity When Evaluating Network Monitoring Technology

NERC developed a practice guide to facilitate the deployment of network monitoring solutions in response to the DOE 100-day plan. The guide addresses the application of NERC’s Critical Infrastructure Protection (CIP) Reliability Standards during such deployments. [DOE’s initiative](#), which launched on April 20, advances technologies that provide increased and/or enhanced cyber visibility, detection and response capabilities for utilities’ ICS and OT networks to better protect the nation’s grid.

While many entities have already deployed these types of technologies within their OT environments, NERC anticipates an increase in deployments across industry to enhance threat detection and response capabilities, in light of the 100-day plan. To provide additional transparency on how CIP standards apply in connection with these deployments, NERC developed the practice guide — formally titled the [ERO Enterprise CMEP Practice Guide: Network Monitoring Sensors, Centralized Collectors and Information Sharing](#). The guide outlines a framework for a common approach to auditing compliance with the CIP Reliability Standards when a registered entity deploys detection and monitoring technologies that include network monitoring sensors and centralized data collectors and may involve the sharing of data collected with third parties.

NERC is supportive of the DOE’s initiative encouraging the deployment of network monitoring solutions to enhance the overall cyber defenses of the electricity industry and promote increased information sharing.

“This guide adds clarity to the ERO Enterprise’s framework on our auditing approach regarding our CIP

standards and network monitoring solutions,” said Jim Robb, NERC president and CEO. “The ultimate goal is to drive consistency across the ERO Enterprise and provide a level of certainty for registered entities on how they will be evaluated should they choose to adopt these technologies. DOE’s 100-day plan is a critically important initiative in bolstering our protections for critical electric infrastructure.”

In addition to the practice guide, NERC’s E-ISAC is working with industry members and partners to support the implementation of measures or technologies that enhance detection, mitigation and forensic capabilities, particularly those focused on critical ICS and OT networks.

The E-ISAC and its partners will analyze and share across industry the information these monitoring technologies generate, enhancing industry’s situational awareness and cyber security posture. The Cybersecurity Risk Information Sharing Program (CRISP), administered by the E-ISAC, will also play a role in the initiative, as DOE and utilities look to leverage existing sensor in the information technology environment as part of a defense-in-depth approach.

CRISP technology, data movement, reporting and notification processes — which are well established and understood by the participants, the E-ISAC and the government — will complement the understanding of the threat landscape. Finally, NERC and E-ISAC continue to work with the Electricity Subsector Coordinating Council and government agencies on information sharing practices and facilities to counter the growing threat.

“We appreciate the increased focus on cyber security in DOE’s 100-day plan, in particular the emphasis on information sharing and the adoption of measures and technologies to enhance the cyber defense of ICS and OT networks,” said Manny Cancel, NERC senior vice president and CEO of the E-ISAC. “The E-ISAC relies heavily on intelligence provided by government agencies and industry partners as well as the insight gained through voluntary information sharing from our asset owners and operators. Cooperation and collaboration are fundamental aspects of our ability to share timely and

actionable information with members and partners required to mitigate their exposure to these threats.”

NERC and the E-ISAC look forward to working with our partners to address the marked increase in cyber and physical security threats. As reducing cyber and physical security risk across North America continues to be a priority, NERC shares a commitment to reinforcing the reliability and security of the bulk power system by creating a strong, knowledge-based defense built on sharing and collaboration.

NERC Releases Second Episode of Quarterly Compliance Podcast

NERC is pleased to announce the release of the second installment of its quarterly compliance podcast, “Currently Compliant.” Hosted by ERO Enterprise subject matter experts (SMEs), “Currently Compliant” is intended to be a quick way to bring attention to frequently asked questions on which the SMEs have some clear insights to share.

[Currently Compliant: Episode 2](#) covers PRC-027-1 R2 and the related evidence and timelines as well as Supply Chain Risk Management.

The PRC-027 discussion features the following regional SMEs:

- **Mike Hughes**, Principal Technical Auditor, Operations and Planning Monitoring, ReliabilityFirst
- **Serge Beauzile**, P.E. Senior Auditor, Compliance, SERC
- **Phil O'Donnell**, Senior Auditor, Operations and Planning, WECC
- **Ryan Mauldin**, Senior Engineer Compliance Assurance, NERC

The Supply Chain Risk Management discussion, which begins around the 14-minute mark, features the following regional SMEs:

- **Shon Austin**, Principal Technical Auditor, ReliabilityFirst
- **Brian Allen**, CIP Assurance Advisor, NERC

For any questions or suggestions for future topics, please contact compliancequestions@nerc.net with “Currently Compliant” in the subject line.

Additional Resources:

[Talk with Texas RE: PRC-027](#) | Texas RE recently did a related PRC-027-1 presentation on their “Talk with Texas RE” series, introducing the standard and including examples.

[PRC-027 Project Page](#) | The SMEs also recommend reviewing the supplemental material found in PRC-027 standard itself. ■■■

Compliance

Compliance Guidance Update

A key factor in the success of compliance monitoring and enforcement of mandatory standards rests on a common understanding among industry and ERO Enterprise CMEP staff of how they can achieve and demonstrate compliance. For many standards, this is straightforward. For others, a variety of approaches may achieve the same objective. Industry develops Implementation Guidance, for industry, and the guidance requires ERO Enterprise endorsement. This guidance provides examples for implementing a standard.

NERC has posted two new proposed Implementation Guidance documents to the Proposed Implementation Guidance section of the [NERC Compliance Guidance web page](#):

- [CIP-007-6 R1 Software Defined Networking - Logical Network Accessible Ports \(EnergySec\)](#)
- [CIP-004-6 and CIP-011-2 Cloud Solutions and Encrypting BCSI \(RSTC\)](#)

Newly Effective Standard Requirements

On July 1, Requirements R12 and R13 of [TPL-007-4 – Transmission System Planned Performance for Geomagnetic Disturbance Events](#) became effective. TPL-007-4 establishes requirements for transmission system planned performance during geomagnetic disturbance events. ■■■

Reliability Risk Management

Registration Open for Human Performance in Electric Power Virtual Session

Please join us on July 15, 2021 at 1:00 p.m. Eastern for the [second session](#) of the Human Performance in Electric Power virtual sessions. The ERO Enterprise, the Human Performance Community of Practice (KnowledgeVine and ResilientGrid) and our mutual partners are exploring the vital importance that human and organizational performance play in the reliability and security of the North American power grid. We have an exciting afternoon planned to keep the momentum going on our journey of continuous improvement together.

Our speakers will touch upon a [variety of topics](#) to reduce error and risk through human performance application. We invite you to join us as we continue our work to improve the reliability and security of our power grid. The agenda for Session 2 will be available shortly. Stick around for the post-meeting Q&A and networking session, which will begin immediately after the last session. We will turn the recording off and the group will talk about their experiences and share stories.

We are planning two additional sessions tentatively scheduled for October 21 and December 2, 2021 from 1:00–5:00 p.m. Eastern. Pencil those dates into your calendar and plan to join us as we cover a variety of exciting topics by the community’s top subject matter experts. It is a great opportunity to learn and share ideas! ■■■

Standards

With the implementation of the [Align Project](#) in 2021, there will be changes to the [Reliability Standards web page](#) and associated reports, including the One-Stop Shop, U.S. Effective Date Status/Functional Applicability spreadsheet and VRF and VSL matrices. More details will be provided in the coming months.

2021 Registered Ballot Body Self-Select Attestation Process Begins

[Appendix 3D Registered Ballot Body \(RBB\) Criteria](#) of the NERC Rules of Procedure states:

“Each participant, when initially registering to join the Registered Ballot Body, and annually thereafter, shall self-select to belong to one of the Segments...”

Therefore, NERC Standards staff initiated the **2021 Annual RBB Self-Select Process** on June 7. Each RBB voting member should log into [Standards Balloting and Commenting System \(SBS\)](#) and ensure the role listed is “Voter.” Then click this [link](#) to access the attestation page and complete the steps to confirm there have been no material changes in the last 12 months that affect the entity’s current Segment selection(s), thus the entity continues to meet the Segment qualifications (as outlined in the qualifications in *Appendix 3D: RBB Criteria* referenced above). Proxies **are not** required to attest. NERC must receive a response for all segments represented in the RBB by **8:00 p.m. Eastern, Monday, August 9, 2021**. Entities with segment(s) not attested for will be removed from the system. Anyone removed (unvetted) can re-apply at any time. For more information or assistance, please contact [Wendy Muller](#).

Nomination Period Open for Project 2021-04 – Modifications to PRC-002-2 Drafting Team Members

NERC is seeking nominations for Standard Authorization Requests (SARs) drafting team members for Project 2021-04 – Modifications to PRC-002-2 through **8 p.m. Eastern, Tuesday, July 13, 2021**. The time commitment for this project is expected to be one meeting per quarter (on

average two and a half full working days each meeting) with calls scheduled as needed to meet the agreed-upon timeline the review or drafting team sets forth. Team members may also have side projects, either individually or by subgroup, to present to the larger team for discussion and review. Lastly, an important component of the review and drafting team effort is outreach. Members of the team will be expected to conduct industry outreach during the development process to support a successful project outcome. NERC is seeking individuals who have subject matter expertise with Protection & Controls and are familiar with NERC Standard PRC-002. Previous drafting or review team experience is beneficial, but not required. See the project page and nomination form for additional information.

By submitting a nomination form, you are indicating your willingness and agreement to participate actively in face-to-face meetings and conference calls. Use the [electronic form](#) to submit a nomination. Contact [Linda Jenkins](#) regarding issues using the electronic form. An unofficial Word version of the nomination form is posted on the [Standard Drafting Team Vacancies](#) page and the [project page](#). The Standards Committee is expected to appoint members to the SAR drafting team in August 2021. Nominees will be notified shortly after they have been appointed.

Nomination Period Open for Project 2021-05 – Modifications to PRC-023

NERC is seeking nominations for **Project 2021-05 – Modifications to PRC-023** drafting team members through **8 p.m. Eastern, Wednesday, July 28, 2021**. Previous drafting or review team experience is beneficial, but not required. A brief description of the desired qualifications, expected commitment, and other pertinent information is included below. By submitting a nomination form, you are indicating your willingness and agreement to participate actively in face-to-face meetings and conference calls.

The time commitment for this project is expected to be one meeting per quarter (on average two and a half full working days each meeting) with calls scheduled as needed to meet the agreed-upon timeline the review or drafting team sets forth. Team members may also have

side projects, either individually or by subgroup, to present to the larger team for discussion and review. Lastly, an important component of the review and drafting team effort is outreach. Members of the team will be expected to conduct industry outreach during the development process to support a successful project outcome. NERC is seeking individuals who have subject matter expertise with Protection & Controls and are familiar with NERC Standard PRC-023.

Use the [electronic form](#) to submit a nomination and contact [Wendy Muller](#) regarding issues with the system. An unofficial Word version of the nomination form is posted on the [Standard Drafting Team Vacancies](#) page and the [project page](#). The Standards Committee is expected to appoint members to the drafting team in August 2021. Nominees will be notified shortly after they have been appointed. ■■■

Member News

GET READY: NERC Membership Renewal Coming Summer 2021

Beginning July 7, 2021, NERC will send electronic notices to all NERC members asking them to complete the membership renewal process. All members must complete this process to remain members of NERC. Members that do not complete the required renewal by the deadline will be removed from the NERC membership roster, although they may submit a request to re-join at any time.

This is the first membership renewal process since 2018. Since that time, the NERC Board of Trustees and FERC have approved revisions to the criteria for the NERC membership sectors. The revisions included:

- Specifying that, for Sectors 1–9 and 12, in addition to those entities meeting the stated criteria, not-for-profit associations that coordinate and help represent the interests of the members of the sector may also be members of the sector, unless the majority of the sector members object. Previously, consultants, vendors, agents, attorneys and the like were permitted to join the sector if they provided services to or otherwise

represented the interests of the Sector. This language has been removed.

- Refining the criteria for Sector 9 – Small End-Use Electricity Customer to help ensure the sector better represents the particular interests of small end-users. Members of this sector now include persons or entities such as associations, state consumer advocates or other advocacy organizations that represent the collective interests of groups of electricity end users.
- The creation of a new **Sector 13 – Associate** to accommodate candidates for membership that do not meet the definition of another sector.

To get ready for the renewal process, NERC asks each of its members to:

- Review the revised NERC membership [criteria](#) to determine if their current membership assignment remains appropriate, or if they will need to request to be reassigned to a different sector;
- Ensure their membership contact information is up to date in the [ERO Portal](#); and
- Identify the proper primary and secondary contacts for their NERC membership registration.

Note: If a NERC member has merged with, acquired, or otherwise become affiliated with another NERC member, the member should determine which of its membership registrations beyond the single membership allowed under NERC's rules will be maintained and which will need to be deactivated.

The Standards Registered Ballot Body is not affected by these sector changes or the renewal process described above.

Please refer to the [NERC Members](#) page for more information. This page will be updated in the coming weeks with training opportunities and Frequently Asked Questions. Any questions may be directed to [NERC Membership](#).

Regional Entity Events

Midwest Reliability Organization (MRO)

- [MRO 2021 Regional Summer Assessment Webinar](#), July 14
- [MRO Annual CMEP Conference](#), July 27
- [Protective Relay Subgroup Q3 Meeting](#), August 17
- [MRO Annual Reliability Conference](#), August 24
- [MRO Reliability Advisory Council Q3 Meeting](#), August 25
- [Organizational Group Oversight Committee Meeting](#), September 29
- [MRO CMEP Advisory Council Q3 Meeting](#), September 29
- [MRO Board of Directors Meeting](#), September 30

ReliabilityFirst (RF)

- [Technical Talk with RF](#), July 19

SERC Reliability Corporation

- [Summer Regional Meetings](#), July 20–22
- [SERC and RF Cold Weather Preparedness Webinar](#), August 24
- [System Operator Conference #3](#), September 14–16
- [Fall Reliability and Security Seminar](#), October 5–6
- [System Operator Conference #4](#), November 9–11

Texas RE

- [Talk with Texas RE: Cold Weather Standard Changes](#), July 8
- [Reliability 101 Webinar Series](#), July 13–August 13
- [Align Periodic Data Submittal Training](#), July 14
- [Align Periodic Data Submittal Training](#), July 16

WECC

- Align Release 2 Training, [July 8](#), [July 13](#), and [July 21](#). ■■■

Upcoming Events

For a full accounting of NERC events, such as meetings and conference calls for standard drafting teams, other standing committees, subcommittees, task forces, and working groups, please refer to the [NERC calendar](#).

- **Member Representatives Committee Pre-Meeting Conference Call and Informational Webinar** – 11:00 a.m.–12:00 p.m. Eastern, July 14, 2021 | [Register](#)
- **Human Performance in Electric Power Virtual Sessions: Session 2** – 1:00–5:00 p.m. Eastern, July 15, 2021 | [Register](#)
- **BPS-Connected Battery Energy Storage Systems and Hybrid Power Plants Webinar** – 1:00–3:30 p.m. Eastern, July 15, 2021 | [Register](#)
- **Standards Committee Teleconference** – 1:00–3:00 p.m. Eastern, July 21, 2021 | [Register](#)
- **2021 Probabilistic Analysis Forum** – October 5–7, 2021 | **SAVE THE DATE** ■■■

Filings

NERC Filings to FERC in June

June 1, 2021

[2020 Budget Trueup Report](#) | NERC submits its Report of Comparisons of Budgeted to Actual Costs for 2020 for NERC and the Regional Entities.

June 15, 2021

[CIP SDT Schedule June Update Informational Filing](#) | NERC submits to FERC an information compliance filing as directed by FERC in its February 20, 2020 Order. This filing contains a status update on two standards development projects relating to CIP Reliability Standards.

June 17, 2021

[Petition for Approval of Proposed Cold Weather Reliability Standards and Request for Expedited Action](#) | NERC submits a petition for approval of proposed Reliability Standards EOP-011-2, IRO-010-4 and TOP-003-5 and request for expedited action.

June 28, 2021

[Petition for Approval of SOL Standards](#) | NERC submits to FERC a petition for approval of proposed Reliability Standards developed under Project 2015-09 – Establish and Communicate System Operating Limits. This file is very large, a smaller file without the complete record of development is available [here](#).

June 30, 2021

[CIP-003-8 Electronic Access Controls Study](#) | NERC submits to FERC the CIP-003-8 Electronic Access Controls Study Report as directed by FERC Order No. 843.

NERC Canadian Filings to FERC in June

June 1, 2021

[WECC RSDP Attachments 1-2](#)

June 2, 2021

[Notice of Filing of NERC of Amendments to the WECC Regional RSDP](#)

June 23, 2021

[Cold Weather Exhibits](#)

June 25, 2021

[Alberta Proposed Cold Weather Standards Filing](#) ■ ■ ■

Careers at NERC

Associate Counsel, Enforcement

Location: Washington, D.C.

[Details](#)

BPS Cyber Security Specialist

Location: Atlanta

[Details](#)

Bulk Power System Awareness Analyst

Location: Atlanta

[Details](#)

CIP Assurance Advisor

Location: Atlanta

[Details](#)

Senior Engineer or Advisor, Performance Analysis

Location: Atlanta

[Details](#)

Senior Data Analyst, Performance Analysis

Location: Atlanta

[Details](#)

Senior Manager, Watch Operations

Location: Washington, D.C.

[Details](#) ■ ■ ■