

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

GridSecCon 2016

October 18 - 21, 2016 | Quebec City, Canada

"Northern Lights"

RELIABILITY | ACCOUNTABILITY



3353 Peachtree Road NE Suite 600, North Tower Atlanta, GA 30326 404-446-2560 | www.nerc.com



Bonjour and welcome to GridSecCon 2016!

The sixth annual GridSecCon builds upon long-standing industry and government partnerships toward enhancing grid security. GridSecCon is a unique collaboration of stakeholders from across North America who are dedicated to protecting our shared critical infrastructure

GridSecCon is a critical part of NERC's comprehensive approach to addressing cyber and physical threats facing the electricity industry. Cyber threats are constantly emerging and changing, therefore we must remain vigilant in our information sharing and continued educational efforts.

This year's location and theme reflect the interconnected nature of the North American grid, highlighting the importance of our Canadian partnership. Titled "Northern Lights," GridSecCon brings together foremost security experts in industry and government from a wealth of organizations, including the FBI, the U.S. Department of Energy, Public Safety Canada, Natural Resources Canada and the U.S. National Security Agency. Together, collaborative discussions among these experts will review current and emerging security issues.

Other topics during this three-day event include a detailed discussion of the 2015 Ukraine event, which continues to garner worldwide attention; multiple training sessions that provide actionable knowledge for security professionals; and planning for the electricity sector's premiere grid security exercise hosted by NERC – GridEx IV.

Cyber and physical security are integral to NERC's mission. The industry is dynamic and constantly evolving, and so are the threats. GridSecCon is one key way NERC fosters a learning environment among key stakeholders to promote the security and resiliency of the bulk power system.

I look forward to the discussion and to another successful conference.

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Gerry Cauley



Gerry Cauley, President and CEO, NERC

AGENDA GridSecCon 2016 | "Northern Lights" October 17 – 21, 2016 | Hilton Quebec | Quebec City, Canada

Monday, October 17, 2016

6:00 p.m – 8:00 p.m.	EVENING REGISTRATION
	(no reception)

Grande Place

CONFERENCE SLIDES

Please note that electronic copies of session slides will be posted after the conference, based upon individual speaker permissions. Question cards will be distributed during panel discussions, please hand them to a NERC staff member to carry to the moderator.

CONTINUING EDUCATION CREDITS

To claim continuing education hours (CEH), you should visit the NERC registration desk daily to sign a roster.

PHOTOS & VIDEO RECORDING

Please remember that GridSecCon attendess are not permitted to take photos or videos for the duration of the conference. Please be advised that photographs will be taken at GridSecCon by NERC staff for use on the NERC website and in the press, NERC marketing materials, and other NERC publications. By entering GridSecCon you consent to NERC photographing and using your image and likeness.

CONFERENCE SESSIONS

All conference sessions will take place in the Ballroom of the Hilton Quebec City unless otherwise noted on the agenda.

SPEAKER BIOGRAPHIES:

Learn more about our GridSecCon 2016 Speakers starting on page 9.

HOTEL FLOOR PLAN:

We have provided a hotel floor plan for your reference on page 10.

Exhibitor Floor Plan:

The exhibitor floor plan can be found on page 26.

Tuesday, October 17, 2016 | Training Day

TIME	EVENT	LOCATION
7:00 a.m — 8:00 a.m.	REGISTRATION & CONTINENTAL BREAKFAST	Grande Place Palais (1st Floor)
8:00 a.m. — 12:00 p.m.	TRAINING TRACKS "A"	
	1A "Ukraine Workshop" Trainers: E-ISAC, US Department of Energy, Idaho National Laboratory, SANS Insitute	Kent (1 st Floor)
	2A "Physical Security Workshop" Trainer: Ballistic Fire Barrier Inc.	Saint Louis (1 st Floor)
	3A "Securing the Grid" Trainers: Norwich University Applied Research Institutes, Utilitiy Services Inc.	Villeray/ DeTourny (Main Floor)
	4A "NIST Workshop" Trainers: National Institute of Standards and Technology, National Cybersecurity Center of Excellence	Beauport (2 nd Floor)
	5A "CyDECS: Cyber Attack Defense Training Exercise for the Grid" <i>Trainer: Iowa State University</i>	Beaumont/ Belair (2 nd Floor)
12:00 p.m. — 1:00 p.m.	LUNCH (PROVIDED)	Palais (1st Floor)

GridSecCon 2016

Training Session Locations

TIME	KENT (1 st Floor)	SAINT LOUIS (1 st Floor)	VILLERAY/DETOURNEY (Main Floor)	BEAUPORT (2 nd Floor)	BEAUMONT/BELAIR (2 nd Floor)
7:00 a.m.	BREAK	FAST P	ALAIS	(1 ^s ™ F	loor)
8:00 a.m.	1A	2A	3A	4A	5A
12:00 p.m. — 1:00 p.m.	LUN	CH PAL	A I S (1	^s ⊺ Floor)
-	1B	2B	3B	4B	5B
5:00 p.m.		BR	ЕАК		
6:00 p.m.	WELCOME	RECEPTIO	N GRAND	DE PLACE (1 ^{s⊤} Floor)

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Tuesday, October 17, 2016 | Training Day | Continued

TIME	EVENT	LOCATION
1:00 p.m. — 5:00 p.m.	TRAINING TRACKS "B"	
	1B "Ukraine Workshop Continued" Trainers: E-ISAC, US Department of Energy, Idaho National Laboratory, SANS Institute	Kent (1 st Floor)
	2B "Grid Transmission Security Expert Workshop" <i>Trainer: Physical Security Advisory Group</i> (facilitated by the E-ISAC)	Saint Louis (1 st Floor)
	3B "NP – View" Trainer: Network Perception	Villeray/De Tourny (Main Floor)
	4B "Grassmarlin Workshop" Trainer: National Security Agency	Beauport (2 nd Floor)
	5B "CyDECS: Cyber Attack Defense Training Exercise for the Grid"	Beaumont/ Belair

Belair (2nd Floor)

6:00 p.m. - 9:00 p.m. WELCOME RECEPTION

Wednesday, October 18, 2016 | Strategy & Threat Day |

Trainer: Iowa State University

TIME	EVENT	LOCATION
7:00 a.m. — 8:15 a.m.	REGISTRATION & CONTINENTAL BREAKFAST	Villeray/De Tourny (Main Floor)
8:15 a.m. — 8:30 a.m.	Introductions & Logistics Bill Lawrence, Director of Programs and Engagement, E -ISAC	Hilton Quebec Ballroom
8:30 a.m. — 9:00 a.m	Welcome Address & Opening Keynote Gerry Cauley, President and CEO, NERC	Hilton Quebec Ballroom
9:00 a.m. — 9:30 a.m.	Host Utility Keynote Marc Boucher, President of Hydro –Québec TransÉnergie	Hilton Quebec Ballroom
9:30 a.m.– 10:00 a.m.	Energy Keynote <i>Terry Hubbard, A/Assistant Deputy Minister, Major</i> <i>Projects Management Office,</i> <i>Natural Resources Canada</i>	Hilton Quebec Ballroom

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Wednesday, October 18, 2016 | Strategy & Threat Day | Continued

TIME	EVENT	LOCATION
10:00 a.m. — 10:30 a.m.	BREAK	
10:30 a.m. — 11:15 a.m.	Industry's Work with Government Partners Francis Bradley, Chief Operating Officer, Canadian Electricity Association, Scott Aaronson, Executive Director, Security and Business Continuity, Edison Electric Institute	Hilton Quebec Ballroom
11:15 a.m. — 11:45 a.m.	National Cyber and Security Branch Cyber Policies and Programs Rene Mulder, Manager Cyber Engagement, Critical Infrastructure and Strategic Coordination Directorate, Public Safety Canada	Hilton Quebec Ballroom
11:45 a.m. — 1:00 p.m.	OFF SITE LUNCH (PROVIDED)	Le Capitole Theatre (972 Rue Saint Jean)
1:00 p.m. — 1:45 p.m.	Law Enforcement and the Electricity Subsector Bruce Barron, Supervisory Special Agent, Cyber Division, US Federal Bureau of Investigation	Hilton Quebec Ballroom
1:45 p.m. – 2:45 p.m.	Canadian Asset–Owner Security Discussion Panel Panelists: Francis Bradley, Chief Operating Officer, Canadian Electricity Association Rob Marshall, Senior Manager, Corporate Security, BC Hydro Rick Haier, Chief Security Officer, Hydro One Yan-Hugues Boily, Director, Physical Security, Hydro Quebec Maureen Higgins, Vice President, Information Technology, Altalink Michael Thebault, Senior Manager, Corporate Security, Nova Scotia Power / Emera	Hilton Quebec Ballroom
2:45 p.m. – 3:15 p.m.	BREAK	
3:15 p.m. – 4:00 p.m.	Space Weather/GMD/EMP Outlook and Solutions – Panel Discussion Panelists: Carl Eng, Project Manager III Electric Transmission System Operations Center, Dominion Virginia Power Brian Butler, Project Executive, Hourigan Construction Bob Rutledge, Lead, Space Weather Forecast Office, National Oceanic and Atmospheric Administration Space Weather Prediction Center Richard Lordan, Senior Technical Executive at Electric Power Research Institute	Hilton Quebec Ballroom
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Wednesday, October 18, 2016 | Strategy & Threat Day | Continued

TIME	EVENT	LOCATION
4:00 p.m. — 5:15 p.m.	Evil Bit = One – Panel Discussion Panelists:Tim Roxey, Vice President and Chief Operations Officer, E-ISAC Rob Lee, Founder and CEO, Dragos Security Michael Toecker, Owner/Engineer, Context Industrial Security Bill Gross, Senior Project Manager of Cyber, Nuclear Energy Institute	Hilton Quebec Ballroom
5:15 p.m.	Closing Remarks Bill Lawrence, Director of Programs and Engagement, E -ISAC	Hilton Quebec Ballroom
6:00 p.m. — 9:00 p.m.	EVENING RECEPTION	

Thursday, October 19, 2016 | Solutions Day

TIME	EVENT	LOCATION
7:30 a.m. – 8:30 a.m.	CONTINENTAL BREAKFAST	Villeray/ DeTourney
8:30 a.m. – 9:00 a.m.	E-ISAC Strategic View Marc Sachs, Senior Vice President and Chief Security Officer, NERC	Hilton Quebec Ballroom
9:00 a.m. – 9:45 a.m.	Hunting and Killing on Networks <i>Mike Brown, Senior IT Manager, Southern Company</i> <i>Hank Bond, SVP Global Engagement, Root9b</i> <i>Walt Sikora, ICS SME, Lockheed Martin</i>	Villeray/ DeTourney
9:45 a.m. – 10:15 a.m.	Advanced Research and Development in Energy Sector Issues Dr. Carol Hawk, Cybersecurity for Energy Delivery Systems (CEDS) R&D Program Manager, U.S. Department of Energy	Hilton Quebec Ballroom
10:45 a.m. – 11:45 a.m.	GridEx IV – Panel Discussion Panelists: Tim Conway, Technical Director, SANS Institute Dustin Cornelius, EMS Security Lead, Southern Company Steven McElwee, Director, Enterprise Information Security, PJM Interconnection Greg Goodrich, Principal, Security and Compliance Coordination, New York ISO	Hilton Quebec Ballroom
11:45 a.m. – 12:45 p.m.	LUNCH	Villeray/ DeTourney Beauport/ Beaumont/ Belair

Thursday, October 19, 2016 | Solutions Day | Continued

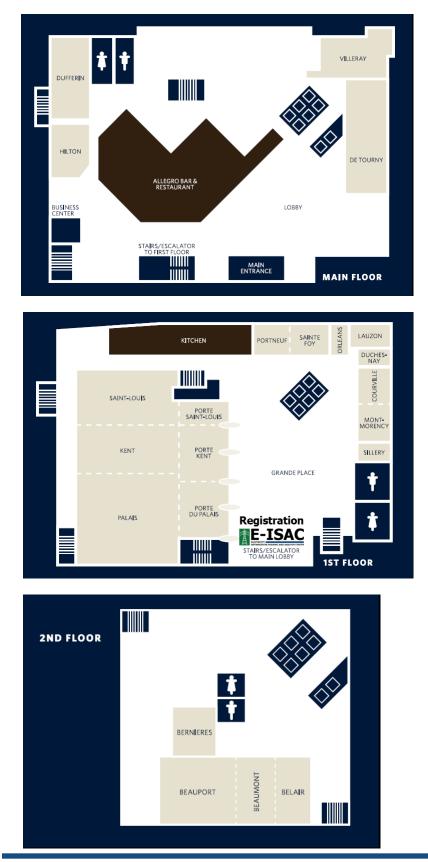
TIME	EVENT	LOCATION
12:45 p.m - 2:00 p.m.	Security Technology Solutions – Panel DiscussionPanelists: Tom Hofstetter, CIP Compliance Auditor, NERC (moderator)Andy Bochman, Senior Energy & Security Strategist, National & Homeland Security, Idaho National Laboratory Ken Modeste, Ĝlobal Principal Engineer, Underwriter LaboratoriesMonta Elkins, Security Architect, FoxGuard Solutions Craig Burrows, Senior Net Engineer, Lockheed Martin CorporationRob Roel, Cybersecurity Specialist, Southern California Edison	Hilton Quebec Ballroom
2:00 p.m. – 3:00 p.m.	Unmanned Aircraft Systems – Panel Discussion Panelists: Deborah Watts, Enterprise Continuity, Program Manager, Xcel Energy Harford Field, Manager, Consulting Services, Corporate Risk Solutions William "Tom" Hewitt, Deputy Team Chief, Technical Capabilities Assessment Team, US Department of Homeland Security	Hilton Quebec Ballroom
3:00 p.m. – 3:30 p.m.	BREAK	
3:30 p.m. — 4:15 p.m.	Cyber Mutual Assistance — Panel Discussion Carter Manucy, Cyber Security Manager, FMPA David Batz, Senior Director, Cyber & Infrastructure Security, Edison Electric Institute Kurt Hoffmann, Corporate Security Risk Analyst, MidAmerican Energy Company Mike Kraft, Senior Engineer, Basin Electric Power Cooperative	Hilton Quebec Ballroom
4:15 p.m. — 5:00 p.m.	The Ukraine attack – the Utility Perspective Mark Binkelman, [†] Team Leader - Cyber Security, American Transmission Company	Hilton Quebec Ballroom
5:00 p.m.	Closing Remarks Bill Lawrence, Director of Programs and Engagement, E-ISAC	Hilton Quebec Ballroom

Friday, October 20, 2016 | Threat Brief & Utility Tours |

TIME	EVENT	LOCATION
7:00 a.m. – 8:00 a.m	BREAKFAST	Villeray/ DeTourney
	UTILITY TOURS HYDRO QUEBEC	
8:30 a.m. – 10:00 a.m.	TOUR A	Hydro Quebec
10:00 a.m. –11:30 a.m.	TOUR B	Hydro Quebec
1:00 p.m 2:30 p.m.	TOUR C	Hydro Quebec
2:30 p.m 4:00 p.m.	TOUR D	Hydro Quebec
	CLASSIFIED THREAT BRIEFINGS	
8:00 a.m 12:00 p.m.	CLASSIFIED CLEARANCE PASSAGE REQUIRED NO ELECTRONIC DEVICES ALLOWED	St. Louis (1st Floor)
8:00 a.m 12:00 p.m.	FOR OFFICIAL USE ONLY (F.O.U.O)	Palais (1st Floor)

Hilton Quebec City - Hotel Floor Plan

Here is a map of the Hilton Quebec City where GridSecCon 2016 events take place.



GridSecCon 2016 Speaker Biographies:

Scott Aaronson Executive Director, Security and Business Continuity, Edison Electric Institute (EEI)

Scott has been with EEI since 2009 when he joined the government relations department focusing on security and several emerging technology issues, including electric grid modernization, cybersecurity policy, and telecommunications priorities. He now leads EEI's security and business continuity team where he focuses on industry and national security policy, as well as establishing partnerships and fostering collaboration between the government and the electric utilities, and across critical infrastructure sectors.

In addition to his role at EEI, Scott also serves as the Secretary for the Electricity Subsector Coordinating Council (ESCC). The ESCC serves as the primary liaison between senior government officials and industry leaders representing all segments of the electric power sector. This partnership is held up as a model for how critical infrastructure sectors can work with government, yielding dramatic improvements in security and preparedness for the industry and the nation.

Bruce Barron Supervisory Special Agent, Cyber Division, US Federal Bureau of Investigation

Bruce Barron is a Supervisory Special Agent in the FBI's Cyber Division/Operational Engagement Section, where he is addresses the energy and elections infrastructures. He previously was the Unit Chief for the Cyber Division's Cyberterrorism Unit combatting terrorist attacks on technology systems. He and his unit received the ODNI award in 2015 for the fusion of resources for effective outcomes against cyberterrorism. Previously Bruce served as the Unit Chief for the Cyber Enterprise Technology Unit, during which he led efforts to build infrastructure to share technical information with the private sector. Bruce is a member of the State Bar of California and received his BA and JD degrees from the University of Texas. He has received GIAC-GISP and GIAC-GPEN certifications for computer security. Bruce's experience in the energy sector includes working as a legislative aide in the Texas House of Representatives and at a petroleum engineering firm.

David Batz Senior Director, Cyber & Infrastructure Security, Edison Electric Institute (EEI)

David Batz has over 30 years of experience both providing professional technology and security services and working with owners and operators within the energy sector. Mr. Batz brings significant industry knowledge in understanding and applying appropriate security solutions to address emerging threats and issues.

In addition to providing in-depth technical knowledge of security and network issues, Mr. Batz leverages a decade of energy regulatory compliance as well as physical and cyber security policy experience and engagement with federal agencies including Department of Energy (DoE), and the Department of Homeland Security (DHS). Scott has been with EEI since 2009 when he joined the government relations department focusing on security and several emerging technology issues, including electric grid modernization, cybersecurity policy, and telecommunications priorities. He now leads EEI's security and business continuity team where he focuses on industry and national security policy, as well as establishing partnerships and fostering collaboration between the government and the electric utilities, and across critical infrastructure sectors.

GridSecCon 2016 Speaker Biographies Continued:

Mark Boucher President, Hydro-Quebec

Marc Boucher joined Hydro-Québec in June 2016 as President of Hydro-Québec TransÉnergie. This division operates and develops North America's most extensive power transmission system, which includes some 34,000 kilometres of lines. It also markets system capacity and manages power flows across Québec. Its assets total more than \$20 billion and its annual revenue exceeds \$3 billion.

A mechanical engineer, Mr. Boucher has over 25 years of experience in transportation and aeronautics. After a few years of service in the Royal Canadian Air Force as the officer responsible for the maintenance of CF-18 aircraft, he moved on to Bombardier, where he held a number of strategic management positions. As Vice President, Operations, he was instrumental in establishing a presence in Mexico, where he managed 2,500 employees. From 2014 to 2016, he worked in Germany as the senior manager in charge of improving the project management and quality assurance functions for Bombardier Transportation. Over the course of his career, Mr. Boucher acquired solid experience in operations and organizational performance as well as the execution of complex, large-scale international projects.

Marc Boucher holds a Bachelor's degree in mechanical engineering from Université Laval (Québec, 1991) and a postgraduate diploma in aerospace engineering from the Canadian Forces School of Aerospace Technology and Engineering (1992).

Frances Bradley Chief Operating Officer, Canadian Electricty Association

Francis Bradley is the Chief Operating Officer of the Canadian Electricity Association (CEA). A frequent speaker on security issues, public opinion towards electric utilities, and restructuring of the electricity industry, he was a co-author for 5 years of the annual North American Electric Industry Outlook published jointly by the Washington International Energy Group and CEA. Mr. Bradley is the Energy and Utilities Sector representative on the National Cross Sector Forum overseeing Canada's Action Plan for Critical Infrastructure, a member of the National Advisory Committee of Canada's Platform for Disaster Risk Reduction, and co-chairs, along with the Standards Council of Canada, the Smart Grid Standards Advisory Committee.

Mike Brown Senior IT Manager, Southern Company

Mike Brown is the Security Operations Center (SOC) manager at Southern Company. Mike has 20 years of enterprise IT experience across many of the major technical disciplines. Mike currently leads Southern's threat analysis, incident response, cyber threat intelligence and content development teams.

Before joining Southern Company 3 years ago, Mike spent 9 years leading a global team of SOC analyst and engineers at Internet Security Systems / IBM.

Craig Burrows Senior Net Engineer, Lockheed Martin Corporation

Craig Burrows has more than 30 years networking experience in a variety of roles at Lockheed Martin Corporation. He describes himself as a regular guy, who spent most of his time behind closed doors. As a result of his experience, he has a unique perspective on security issues.

12

GridSecCon 2016 Speaker Biographies Continued:

Mark Binkleman Team Lead CyberSecurity , American Transmission Company

Mark Binkelman has more than fifteen years of information technology and security experience across many disciplines, including WAN/LAN design and support, virtualization, IT Management, IT Audit, and Cybersecurity. At American Transmission Company, Mark is responsible for a team of cybersecurity engineers and has a significant role in the NERC CIP compliance area within the Information Technology department.

Andy Bochman Senior Cyber and Energy Security Strategist, Idaho National Laboratory

Previously Energy & Utilities Security Lead at IBM and Senior Advisor at the Chertoff Group in Washington, DC, Andy is a frequent speaker, standards developer and adviser on topics at the intersection of grid modernization and security. He has provided analysis on energy sector security standards and gaps to DOE, DOD, NIST, NARUC, and state utility commissions, most recently testifying to FERC on energy sector supply chain issues.

Yan-Hugues Boily Director, Physical Security, Hydro Quebec

Holder of BA in Business administration from Sherbrooke University and a Masters degree in Public administration at ÉNAP (École nationale d'administration publique), Mr Boily had also completed a law enforcement course at Québec's National Police Institute. At Hydro-Québec since 1998, he developed an extensive experience in threat assessment and analysis, strategic security planning and management, emergency crisis planning, investigation and nuclear physical security (Gentilly 2), security standards compliance with the CNSC. To this day, Mr. Boily has over 300 employees under his responsibility.

Over the years, Mr. Boily has had the opportunity to work for different departments or divisions within Hydro-Québec: Corporate Security, Power generation, Distribution provider and Communications/Public Relations as well.

He has always been involved in critical infrastructure protection. More specifically as a member of the Critical Infrastructure Protection committee of the Canadian Electric Association from 2001 to 2008 and Vice-Chairman of the Dams Sector Coordinating Council (Department of Homeland Security) for two years. He is also an active member of ASIS International since 2002. He is now the Physical Security representative for the NPCC at CIPC.

Hank Bond Senior Vice President of Global Engagement

Rear Admiral Hank Bond, US Navy (Retired), is root9B's Senior Vice President for Global Engagement. He transitioned from the Navy following more than 31 years on active duty, most recently serving as the Director of Cyberspace Operations and Chief Information Officer at the North American Aerospace Defense Command (NORAD) and United States Northern Command (USNORTHCOM). Prior to that assignment he served as Director of Communications and Information Systems as well as Chief Information Officer for United States Forces - Iraq. He began his Navy career serving in nuclear submarines later shifting to duties operating Navy information technology systems. He has extensive experience in operating and defending both Navy and joint service command & control and information networks at sea and on land. Admiral Bond is a graduate of the United States Naval Academy and earned graduate degrees from The George Washington University and National Defense University.

GridSecCon 2016 Speaker Biographies Continued:

Brian Butler Project Executive, Hourigan Construction

Brian Butler graduated from Rochester Institute of Technology in 1980 with a Bachelors of Science in Mechanical Engineering. At Texas Instruments, he designed micro-electronics, and cleanrooms. He also holds a Master's Degree in Business Administration.

Mr. Butler currently works for Hourigan Construction building unique buildings including a systems operations center. In his role at Hourigan, he is working on Dominion Power's Systems Operation Center. He has been able to get detailed background in the methods of protection against EMP. During his presentation, he will provide some of the lessons learned from his work on this project.

Mike Brown Senior IT Manager, Southern Company

Mike Brown is the Security Operations Center (SOC) manager at Southern Company. Mike has 20 years of enterprise IT experience across many of the major technical disciplines. Mike currently leads Southern's threat analysis, incident response, cyber threat intelligence and content development teams.

Before joining Southern Company 3 years ago, Mike spent 9 years leading a global team of SOC analyst and engineers at Internet Security Systems / IBM.

Francis Bradley Chief Operating Officer, Canadian Electricity Association

Francis Bradley is the Chief Operating Officer of the Canadian Electricity Association (CEA). A frequent speaker on security issues, public opinion towards electric utilities, and restructuring of the electricity industry, he was a co-author for 5 years of the annual North American Electric Industry Outlook published jointly by the Washington International Energy Group and CEA. Mr. Bradley is the Energy and Utilities Sector representative on the National Cross Sector Forum overseeing Canada's Action Plan for Critical Infrastructure, a member of the National Advisory Committee of Canada's Platform for Disaster Risk Reduction, and co-chairs, along with the Standards Council of Canada, the Smart Grid Standards Advisory Committee.

GridSecCon 2016 Speaker Biographies Continued:

Gerry Cauley President and Chief Executive Officer, NERC

Gerry W. Cauley assumed the role President and chief executive officer of on January 1, 2010. Mr. Cauley president and chief executive officer of the SERC Reliability Corporation from 2007-2009, one of the reliability regions covering 16 southeastern and central states. Previously, Mr. Cauley worked at NERC for ten years in positions of increasing responsibility, ultimately as vice president and director of Standards. He was instrumental in preparing NERC's application to become the Electric Reliability Organization and spearheaded NERC's development of an initial set of standards to assure the reliability of the bulk power system in North America. Mr. Cauley was also a lead investigator of the August 2003 Northeast blackout and coordinated all aspects of the NERC Y2K program, supervising the reporting and readiness of 3,100 electric organizations in the United States and Canada.

Prior to joining NERC in 1996, Mr. Cauley served for six years as the program manager of grid operations and planning at Electric Power Research Institute. He was also a training consultant for 10 years in the area of electric system operations, nuclear and fossil plant operations, substations and distribution. He served five years as an officer in the U.S Army Corps of Engineers. Mr. Cauley earned holds a Bachelor of Science degree from the U.S. Military Academy at West Point, a Masters of Science degree from the University of Maryland in Nuclear Energy, and an Masters of Business Administration from Loyola College – Baltimore. Mr. Cauley is a registered Professional Engineer in the Commonwealth of Virginia.

Dustin Cornelius EMS Security Lead, Southern Company

Dustin Cornelius is the Security Lead for Southern Company Transmission Energy Management System. Dustin has 20 year experience in Information Technologies and Network Security, with the last 9 years focused on network and host based security for Industrial Control Systems.

Dustin was the Southern Company Lead Planner for GridEx III, and is the current Lead Planner for GridEx IV. Dustin holds a Master's degree in Engineering from the University of Alabama at Birmingham and a CISSP.

Monta Elkins Security Architect, FoxGuard Solutions

Monta Elkins is currently Security Architect for FoxGuard Solutions, an ICS patch provider. A security researcher and consultant; he was formerly Security Architect for Rackspace, and the first ISO for Radford University. He has been a speaker at DEFCON, Homeland Security's ICSJWG (Industrial Control Systems Joint Working Group), EnergySec's Security Summit, VASCAN, GE Digital Energy's Annual Software Summit, Educause Security Professionals Conference, Toshiba's Industrial Control Systems Conference, NERC's GridSecCon and other security conferences. Monta is the author and instructor of the "Defense against the Dark Arts" hands-on, hacker tools and techniques classes. He is also a guest lecturer for Virginia Tech and teaches rapid prototyping and Arduino classes with Let's Code Blacksburg.

GridSecCon 2016 Speaker Biographies Continued:

Carl Eng Project Manager III | Electric Transmission - Systems Operation Center, Dominion Virginia Power

Carl Eng is a Project Manager with Dominion Virginia Power assigned to be the business unit representative for construction of a new control center. Mr. Eng has been with Dominion Virginia Power for 38-years and has served in various capacities from engineering responsibilities to management roles. He has been in the system operations department for 28-years, most recently as Manager – Engineering. Mr. Eng has served as the vice-chair and chair of SERC's Critical Infrastructure Protection Committee (CIPC). As one of SERC's voting representatives on NERC CIPC, Mr. Eng was elected to the CIPC Executive Committee as an at-large representative. Prior to CIPC, Mr. Eng participated on the NERC Telecommunications Working Group (TWG) and led efforts to implement the original NERCnet in 1998. Mr. Eng holds a Bachelor of Science degree in Electrical Engineering from Virginia Tech.

Harford Field Manager, Consulting Services, Corporate Risk Solutions

Harford Field has more than seventeen years of security-related experience including military intelligence and consultative offerings of security solutions to critical infrastructure entities which include nuclear and conventional power-generating and transmission facilities. Mr. Field has closely worked with utilities, regional authorities, and NERC to understand and implement cost-effective protective solutions and robust compliance for cyber and physical security. Also specializes in Chemical Facility Anti-Terrorism Security (CFATS) under DHS. Identified and developed solutions for protection of critical assets for airports, seaports, petrochemical plants, water treatment facilities, and military installations.

Greg Goodrich Principal, Security and Compliance Coordination, New York ISO

Greg Goodrich is the New York Independent System Operator (NYISO) Principal, Security and Compliance Coordination. Greg has participated in the GridEx Workgroup since 2015 and is currently coordinating the New York State Cybersecurity Exercise 2016. He has more than 20 years experience working with industrial control systems (ICS), supervisory control systems and data acquisition systems (SCADA), energy management systems (EMS), cyber and physical security, and information technology. He has chaired the NPCC Task Force on Information Security and Technology (TFIST) and serves as a NERC Critical Infrastructure Protection Committee (CIPC) representative. He holds several industry and security certifications including the Certified Information System Security Profession (CISSP).

Bill Gross Senior Project Manager, Cyber Security, Nuclear Energy Institute

Bill Gross supports NEI's efforts related to physical security, and directly manages NEI's cyber security projects. In his current role he engages industry and the Nuclear Regulatory Commission (NRC) on the implementation cyber security programs. Bill also engages with other agencies, including the Department of Homeland Security (DHS) regarding cyber security. Bill coordinates several task forces including, the NEI Cyber Security Task Force, and is co-chair on the DHS join Nuclear Cyber Security Subcouncil.

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GridSecCon 2016 Speaker Biographies Continued:

Dr. Carol Hawk Cybersecurity for Energy Delivery Systems (CEDS) R&D Program, US Department of Energy

Dr. Hawk conducted her Ph.D. research in High-Energy Physics at Rutgers University as a member of the Collider Detector at Fermi National Accelerator Laboratory Collaboration. The CEDS R&D program is working to advance the energy sector's Roadmap vision of resilient energy delivery systems designed, installed, operated, and maintained to survive a cyber-incident while sustaining critical functions. In addition, she brings a variety of work experiences to DOE including telecommunications (at Bell Communications Research) as well as fuel cell electrochemistry (at United Technologies Research Center and later at the University of Connecticut). Prior to joining the DOE, Dr. Hawk performed operations research with the Center for Naval Analysesaster Risk Reduction, and co-chairs, along with the Standards Council of Canada, the Smart Grid Standards Advisory Committee.

William "Tom" Hewitt Deputy Team Chief, Technical Capabilities Assessment Team, US Department of Homeland Security

William Thomas Hewitt joined the Department of Homeland Security, Office of Intelligence and Analysis in May 2011 as a Senior Analyst and is currently Deputy Team Chief of the Technical Capabilities Analysis Team. He has written or contributed to numerous intelligence products, conducted principal-level briefings for national, State, local and private sector security partner.

Kurt Hoffman Corporate Security Risk Analyst, Cyber Security, MidAmerican Energy Company

Kurt Hoffmann presently serves as a security risk analyst with MidAmerican Energy. His present focus is on the nexus of physical and cyber security threats to electric and natural gas infrastructure. Kurt's past experience includes managing disaster recovery projects and coordinating federal disaster assistance f including significant recovery and mitigation work following Iowa 2008 floods, the sixth largest disaster in the United States at the time.

Kurt's physical and cyber security engagement concentrates on global events and the preventative measures that can be taken at the local level to reduce and mitigate impacts. He has assisted in the development and execution of multiple sector-specific exercises at both the local and national level, including GridEx III, Iowa's 2016 public-private Coordinated Electric Exercise and other industry-specific simulation. Most recently, Kurt served in a planning and player role in the first Cyber Mutual Aid Program tabletop exercise.

Tom Hofstetter Senior Critical Infrastructure Protection (CIP), NERC

Tom Hofstetter is a Senior Critical Infrastructure Protection (CIP) Compliance Auditor in the Compliance Assurance Department of the North American Electric Reliability Corporation (NERC), a not-for-profit regulatory authority whose mission is to assure the reliability of the bulk power system in North America. He supports NERC's role in developing and enforcing Reliability Standards and in the education and training of industry personnelin the continental United States, Canada, and the northern portion of Baja California, Mexico. NERC is the electric reliability organization for North America, subject to oversight by the Federal Energy Regulatory Commission and governmental authorities in Canada. NERC's jurisdiction includes users, owners, and operators of the bulk power system. NERC NORTH AMERICAN ELECTRI RELIABILITY CORPORATION

GridSecCon 2016 Speaker Biographies Continued:

Terry Hubbard A/Assistant Deputy Minister, Major Projects Management Office, Natural Resources Canada

Terrence Hubbard is a graduate of the University of Saskatchewan where he obtained both his Bachelor and Master of Arts degrees in economics.

Mr. Hubbard began his public service career in 2001 as an economist in the Oil Division of Natural Resources Canada (NRCan) where he was responsible for providing market analysis and policy advice on oil production, transportation, refining and marketing in Canada and abroad. In 2007, he joined NRCan's Strategic Policy Sector where he worked on legislative and regulatory issues affecting Canada's natural resource industries, including the creation of the Government of Canada's Major Projects Management Office to establish new governance mechanisms and improve horizontal coordination across federal regulators with responsibilities for major energy and mining projects.

In 2008, he joined the Major Projects Management Office as Director, Policy Leadership andlater as Director General, Strategic Policy and Planning. In these roles, he led the development and implementation of the Government of Canada's plan for Responsible Resource Development which has modernized the federal regulatory framework for natural resource projects to provide greater predictability and timeliness for investors while strengthening environmental protection.

Since November 2013, Terry has been Director General of the Petroleum Resources Branch with Natural Resources Canada. In this role, he is responsible for Canada's oil and gas policy, including leading analysis of international and global market trends, policies respecting the development of Canada's oil sands, shale gas, LNG, pipelines and offshore oil and gas resources and overseeing the development.

Mike Kraft Senior Engineer, Basin Electric Power Cooperative

Mike is a registered Professional Engineer in ND. He has spent the majority of his 20+ year career with Basin Electric Power Cooperative with experience in IT, OT and project management. As the CIP Program Manager, he is leading a cross departmental team including transmission, generation and control center staff addressing physical and cyber security.

Mike is an active member of the MCCF and WICF CIP Working Groups, the NATF Security Practices Group, the NAGF Security Practices Working Group and the NRECA Cyber Security Task Force. He is an MRO NERC CIPC Alternate Representative and a member of the WECC CIIMS and PSWG.

GridSecCon 2016 Speaker Biographies Continued:

Bill Lawrence Director of Programs and Engagement, E-ISAC

Bill is the Director of Programs and Engagement at the North American Electric Reliability Corporation (NERC) in the Electricity Information Sharing and Analysis Center (E-ISAC.) He leads the Grid Security Conference and GridEx programs as well as several internal department programs. Prior to joining NERC, he flew F-14 Tomcats and F/A-18F Super Hornets for the Navy, and most recently was the Deputy Director, Character Development & Training Division, at the United States Naval Academy, where he also taught courses in Ethics and Cyber Security. Bill has a Bachelor's degree in Computer Science from the US Naval Academy, a Master in International Relations from Auburn Montgomery, and a Master of Military Operational Art and Science from the Air Command and Staff College. He holds a Project Management Professional certification.

Rob Lee Founder & CEO, Dragos Security

Robert M. Lee is the CEO and Founder of the critical infrastructure cyber security company Dragos, Inc., which specializes in ICS/SCADA technologies and services. Specifically, the company is responsible for the Dragos Data Pipeline which is an ICS tailored approach to gathering, indexing, storing and searching host, network, and ICS related data into a lightweight industrial SIEM and the Dragos Threat Operations Center which maintains a threat hunting, incident response, and threat analysis team. He is also a non-resident National Cybersecurity Fellow at the DC based think tank New America focusing on policy issues relating to the cyber security of critical infrastructure. For his research and focus areas, Robert was named one of Passcode's Influencers, awarded EnergySec's Cyber Security Professional of the Year (2015), and inducted into Forbes' 30 under 30 for Enterprise Technology (2016) as one of "the brightest entrepreneurs, breakout talents, and change agents" in the sector.

A passionate educator, Robert is the course author of SANS ICS515 – "ICS/SCADA Active Defense and Incident Response" which is the only ICS specific incident response course in the world and he is also the lead author of SANS FOR578 – "Cyber Threat Intelligence". Robert obtained his start in cyber security in the U.S. Air Force where he served as a CyberWarfare Operations Officer in the National Security Agency. He has performed defense, intelligence, and attack missions in various government organizations including the establishment of a first-of-its-kind ICS/SCADA cyber threat intelligence and intrusion analysis mission focused on identifying and remediating hostile nation-state adversary operations.

Robert may be found on Twitter @RobertMLee

GridSecCon 2016 Speaker Biographies Continued:

Richard Lordan Senior Technical Executive at Electric Power Research Institute

Richard Lordan is currently Senior Technical Executive, in the Power Delivery & Utilization Sector of the Electric Power Research Institute (EPRI). His current research activities include:

- High Impact, Low Frequency Threats
- Resiliency
- Geomagnetic Disturbance, and Intentional Electromagnetic Interference

At EPRI, Lordan has managed numerous programs including Overhead and Underground Transmission, Substations, and Grid Operations and Planning.

Carter Manucy Cyber Security Manager, FMPA

Carter Manucy is the Cyber Security Manager for Florida Municipal Power Agency, a joint-action agency in Orlando, Florida. His focus is on OT security and CIP compliance. While working at FMPA, Carter has held numerous roles in the IT domain, and has maintained a passion for cyber security.

Carter designs and implements network and physical security systems, and applies that knowledge to the NERC CIP standards to come up with practical solutions that work both in a OT environment as well as meet the needs of compliance obligations. He also spends time as a translator for non-technical people in order to help them understand what kinds of solutions can provide both security and compliance.

Carter is a voting member for NERC CIPC as well as a member/participant/contributor for numerous other committees/groups in the cyber and compliance arenas.

Rob Marshall Senior Manager, Corporate Security, BC Hydro

Mr. Marshall works as the Chief of Operations and Security for BC Hydro.

NERC NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

GridSecCon 2016 Speaker Biographies Continued:

Steve McElwee Director of Enterprise Information Security, PJM Interconnection.

Mr. McElwee oversees a variety of cyber security functions at PJM and is responsible for a variety of industry, government, and academic collaborative partnerships. His leadership includes security governance, cyber threat and risk analysis, security policy, vulnerability management, security monitoring and response, cyber forensics, and security assessments. Mr. McElwee has been working in various information technology and cyber security roles over the past 25 years. In his eight years at PJM, he has held positions in application security, NERC CIP compliance, and cyber security. Mr. McElwee earned a Bachelor of Arts degree in Computer Science from Thomas Edison, a Masters of Business Administration from Alvernia University, and a Master of Science in Computer Information Systems from Boston University.

Rene Muldner Manager Cyber Engagement, Critical Infrastructure and Strategic Coordination Directorate, Public Safety Canada

Rene Mulder is a senior incident handler at the Canadian Cyber Incident Response Centre (CCIRC) at Public Safety Canada. Since joining CCIRC in December 2013, his primary responsibility has been to assist the provincial, municipal and territorial governments as well at the health sector as their lead incident handler. He is also a lead member of the automated threat information sharing project, he represents Canada with the international CSIRT community and runs two weekly cyber calls to share pertinent threat info and situational awareness to Canadian partners. Currently he's on assignment with the Critical Infrastructure and Strategic Coordination directorate as the acting manager of cyber engagement. Prior to joining CCIRC, Rene spent over twenty years in various IM/IT roles but lastly running cyber security operations at Public Safety Canada.

Ken Modeste Global Principal Engineer, Underwriter Laboratories

Ken Modeste has global responsibilities for Cybersecurity, Interoperability and Protocol compliance for UL LLC. He is responsible for technically developing and maintaining programs within UL's Commercial & Industrial business to provide security services to their clients. As part of the cyber security strategy for UL, Ken is responsible for strategically identifying long term growth opportunities that align with UL's mission to address public safety and trustworthiness in life, energy and industrial, IT and health sciences equipment.

Ken has a proven track record in leading large diverse teams delivering commercial enterprise software and security services in rapid environments with major business financial commitments. Excellent leadership and analytical skills with the ability to develop long software and hardware strategies and execute successfully.

GridSecCon 2016 Speaker Biographies Continued:

Rob Roel Cyber Security Specialist, Southern California Edison

Rob is one of the technical leads participating in the California Energy Systems for the 21st Century (CES21) research and development of machine to machine automated threat response.

With 18 years of cybersecurity industry experience, Rob has spent the last ten (10) years working for a utility company focusing on regulatory and cybersecurity initiatives for critical infrastructure energy and nuclear sectors. Rob holds the following cybersecurity certifications: CISSP, CISM, CRISC and GICSP

David Roop Senior Manager, Corporate Security, BC Hydro

Mr. Roop has a 40-year career in the electric utility industry focused on electric transmission and substation operation and management and culminating in his present position, as he has developed innovative approaches to improving operating procedures, resulting in cost savings to the company. Chair of Dominion Virginia Power's resiliency strategy team resulting in industry leading initiatives.

Mr. Roop became the Director of Electric Transmission Operations in 2001. He is responsible for the operation of Dominion's transmission assets, including substations, of Dominion Virginia Power / North Carolina Power.

Tim Roxey Vice President and Chief Operations Officer, E-ISAC

Tim Roxey is responsible for development and execution of key critical infrastructure protection initiatives, such as NERC's cybersecurity risk preparedness assessment and other continuous risk assessment efforts.

Mr. Roxey has 30 years of experience in the nuclear utility industry serving in organizations such as Operations, Information Technology, Licensing, Security and others. He brings 40 years of collective computer related experience working in a variety of environments including: mainframes, minis, micros, and hand wired systems. He has developed and delivered numerous programs in many different languages. Tim is a widely recognized leader in the fields of security and infrastructure protection. Formerly he served as the Deputy Chair in of the Nuclear Sector Coordinating Council. He spent more than 17 years with Constellation Energy in a variety or roles including Technical Assistant to the Vice Chairman for security related matters.

GridSecCon 2016 Speaker Biographies Continued:

Bob Rutledge Lead, Space Weather Forecast Office, National Oceanic and Atmospheric Administration Space Weather Prediction Center

Bob Rutledge is the Lead of the Space Weather Forecast Office at NOAA's Space Weather Prediction Center (SWPC). SWPC is the United States' official source for space weather watches, warnings, and alerts. Prior to joining SWPC, Bob worked at NASA's Johnson Space Center as the International Space Station (ISS) Radiation System Manager, responsible for oversight of the development and sustaining engineering of NASA's operational radiation measurement hardware onboard ISS. Bob began his career at NASA with the Space Radiation Analysis Group with responsibilities spanning planning, modeling, measurement, and operational management of astronaut radiation exposures. Bob received his degree in Electrical Engineering from Iowa State University, and prior to that, was a technician for communication and navigation hardware in the United States military.

Marc Sachs Senior Vice President and Chief Technology Officer, NERC

As NERC's senior vice president and chief security officer, Marcus Sachs is responsible for the oversight of the Electricity Information Sharing and Analysis Center (E-ISAC) and for directing security risk assessment and mitigation initiatives to protect critical electricity infrastructure across North America. He leads day-to-day coordination with governmental agencies and stakeholders for analysis, response, and dissemination of critical information regarding security threats and events.

Mr. Sachs' professional experience includes a distinguished 20-year military career in the U.S. Army, two years of federal civilian service at the White House and the Department of Homeland Security, and more than 13 years as an executive in the private sector. He has appeared on several domestic and foreign television and radio networks as a computer security expert, has testified before the U.S. Congress, and is frequently quoted by online and print media.

Prior to joining NERC, Sachs served as vice president of National Security Policy for more than seven years at Verizon Communications, inc where he was responsible for the national and homeland security public policy efforts. He has served on the National Coordinating Center for Telecommunications.

Walt Sikora ICS, SME Lockheed Martin

Walt has more than 30 years of experience in automation systems management and has been evangelizing cyber security for SCADA, DCS and Industrial Control Systems (ICS) for the past decade. In his current role, as OT Subject Matter Expert at Leidos, he works with end users to understand their challenges and pain points. He is also a member of ISA-99, DHS-ICSJWG, NERC CIPC, and many other security groups. Walt previously spent 21 years with Invensys, Inc. as Director of Service Engineering and Development, where he was responsible for developing services and security solutions for the Foxboro IA platform. He holds an Associate Degree in Engineering and, a B.S. degree in Electrical Engineering from Northeastern University.

GridSecCon 2016 Speaker Biographies Continued:

Mike Thebault Senior Manager, Corporate Security, Nova Scotia Power / Emera

Mike has overall accountability for establishing programs that promote the security of Emera physical assets, including any regulatory and compliance obligations across the Emera group of companies. Working closely with the Affiliates and key business stakeholders, he works to better structure our security prevention programs.

He is the vice chair on the Canadian Electricity Association's (www.electricity.ca) Security and Infrastructure Protection Committee, as well Conference Board of Canada's (www.conferenceboard.ca) Council for Security Executives and has been consulted by the Nova Scotia Department of Justice on Scrap Metal Legislation.

Having spent almost 9 years in the Canadian Armed Forces, completing his terms of service at the rank of Captain in Construction Engineering, and joining Nova Scotia Power in early 2009.

As a native Nova Scotian, he returned home to study, and has a BSc in Earth Science from Dalhousie University and is a qualified Transport Canada Marine Security Auditor.

With a military background, combined with his 7 years with Emera, he has gained extensive operational, administrative and project management experience.

Mike is married with two small children and in his very limited spare time he enjoys being outdoors boating and fishing and has been known to play some late night hockey with the guys.

Michael Toeker Owner/Engineer, Context Industrial Security

Michael Toecker is a Professional Engineer in Missouri, and a graduate of the Missouri University of Science and Technology's accredited Computer Engineering program. He has worked for Top 5 Power Engineering firm Burns and McDonnell, focusing on cyber security and compliance for utilities and power entities all over North America. He has also worked for NextEra Energy Resources, a wholesale/retail generation company focused on the compliance and security of generating facilities in Texas and Maine. Most recently, Toecker worked for premier industrial cyber security consulting firm Digital Bond conducting research and engaging critical infrastructure clients on control system security projects, nationally and internationally.

Deborah Watts Enterprise Continuity Program Manager, Xcel Energy

Deb Watts has worked at Xcel Energy for 29 years, with the last 7 as an Enterprise Continuity Program Manager. She has a Bachelor of Science in Environmental Management from Columbia Southern University. In 2015, Deb was named to the Xcel Energy Unmanned Aerial System (UAS) team where she led numerous UAS missions over critical infrastructure, and a team in 2016 that secured grant funding for critical infrastructure storm assessments. Ms. Watts has a background in emergency management serving on an Incident Management Team as a Safety Officer and has utilized her experience and relationships to benefit Xcel Energy's programs.

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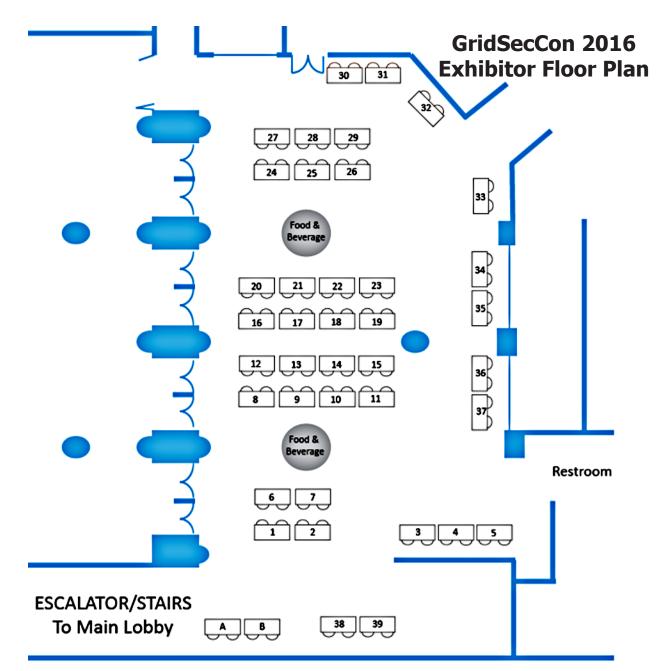
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GridSecCon 2016 Exhibitor Floor plan



All the refreshment breaks take place in the exhibit hall area. The numbers on the next page correspond to the booth location in the exhibit hall.

#	Exhibitor	
01	Tripwire	
02	SigmaFlow	
03	Utility Services, Inc.	
04	Ameristar Perimeter Security, USA	
05	VIDEOTEC	
06	Siemplify	
07	Check Point Solutions	
08	Waterfall	
09	Portnox	
10	Cyberbit	
11	Radiflow	
12	Beyond Security	
13	Vaultra	
14	Siga	
15	Sans	
16	AlertEnterprise	
17	CyberX	
18	cmplid	
19	TDI Technologies	
20	WizNucleus, Inc.	
20	Corporate Risk Solutions, Inc.	
22	Navigant	
23	Quantum Secure, part of HID Global	
24	FFT Security	
25	FoxGuardSolutions	
	Owl Computing Technologies	
20	Southwest Microwave, Inc.	
	ABB	
20	Ballstic Fire Barrier	
29		
30	Confluence Security Group	
31	FLIR Systems, Inc.	
32	PROTECH	
33	MetaMythic	
34	Burns & McDonnell Engineering	
35	Curricula	
36	AESI	
26 27 28 29 30 31 31 32 33 33 34 35 36 35 36 37 38 39 A&B	Exhibitor Tripwire SigmaFlow Utility Services, Inc. Ameristar Perimeter Security, USA VIDEOTEC Siemplify Check Point Solutions Waterfall Portnox Cyberbit Radiflow Beyond Security Vaultra Siga Sans AlertEnterprise CyberX cmplid TDI Technologies WizNucleus, Inc. Corporate Risk Solutions, Inc. Navigant Quantum Secure, part of HID Global FFT Security FoxGuardSolutions Owl Computing Technologies Southwest Microwave, Inc. ABB Ballstic Fire Barrier Confluence Security Group FLIR Systems, Inc. PROTECH MetaMythic Burns & McDonnell Engineering Curricula AESI Network Integrity Systems / Strategic Communications NIST NCCOE Network Perception	
38	NIST NCCoE	
	Network Perception	





2016 - 2017 Upcoming E-ISAC Events

Date

November 14, 2016

December 6, 2016

October 2017 November 15-16, 2017

Event

GridEx IV Initial Planning Meeting E-ISAC Threat Workshop GridSecCon 2017 GridEx IV

Location McLean, VA or Virtual

Washington, DC

TBD Your Organization