

WHAT IS CONNECT

And how you will benefit

At Hubbell Power Systems, Inc. we are dedicated to sharing our ideas, knowledge and resources. RFL® products have proudly served the power utility industry since 1922. Today, we are inviting you to CONNECT™. Take advantage of the expertise and industry knowledge in a powerful learning center that was created just for you – our valued customer.

All CONNECT seminars and training topics are designed for power utilities and focus on material and issues relevant to you. Featured topics include networking, communications, protection and security.

CONNECT is free to our customers. To see our latest training schedule, view a course syllabus or register, visit: rfelect.com/training.

Course Modules:

Each module will require 30-40 minutes to complete. The modules are designed for presentation via on-line audio/video conference. Due to the time constraint, they are not designed to be interactive. They will be recorded and used for on-demand viewing from the RFL® brand website.

FUNDAMENTALS FOR THE ELECTRIC POWER INDUSTRY: ANTI-ISLANDING

Two modules that Introduce power system islands and the use of communications for islanding prevention. The first module covers methods such as breaker initiated Direct Transfer Trip, Permissive Power Line Carrier and Phase Comparison. Provide comparison of these methods against local active and passive methods including advantages and disadvantages. Discuss commonly used communications methods for each.

The second module is a continuation of the “Communications Assisted Anti-Islanding” module. It will provide more-detailed information regarding the application of Phase Comparison for power system islanding detection and prevention. Explore the added benefits of phase comparison over other communication assisted methods as well as local methods.

TRAINING MODULE	OVERVIEW	DATE	PRESENTER	WHO SHOULD ATTEND	BENEFITS
Communications Assisted Anti-Islanding	This module will focus on power system islands and the use of communications methods for islanding prevention. A comparison of these methods and advantages and disadvantages will be provided.	04/05/17	Brian Dob	Individuals with a role in anti-islanding and the interconnection of generation into the power grid. This course is geared towards those who are new to anti-islanding as well as those who want to learn more about how communications can be used for islanding protection.	You will learn what a power system island is and the major resulting concerns. Understanding the communications methods that may be used to prevent such islanding and the associated benefits. Gain practical knowledge beneficial to related job roles.
Phase Comparison Islanding Detection	This module will focus specifically on using phase comparison for power system islanding prevention. More detailed information of the critical aspects of phase comparison and its unique advantages will be addressed.	04/20/17	Brian Dob	Individuals with a role in anti-islanding and the interconnection of generation into the power grid. This course is geared towards those who are new to anti-islanding as well as those who want to learn more about how phase comparison can be used for islanding protection.	You will learn how phase comparison is used for islanding protection and its benefits. Understanding the critical components of phase comparison and how it relates to different communication systems. Gain practical knowledge beneficial to related job roles.

FUNDAMENTALS FOR THE ELECTRIC POWER INDUSTRY: PILOT PROTECTION

This course will provide the basic fundamentals and concepts for those new to Pilot Protection. Introduce common Pilot Protection schemes, cover critical concepts, and introduce various common communication methods for Pilot Protection including pros and cons.

TRAINING MODULE	OVERVIEW	DATE	PRESENTER	WHO SHOULD ATTEND	BENEFITS
Pilot Protection Scheme Introduction	This course will provide the basic fundamentals and concepts for those new to Pilot Protection. Introduce common Pilot Protection schemes, cover critical concepts, and introduce various common communication methods for Pilot Protection including pros and cons.	Fall 2017 TBD	Brian Dob	Individuals with a role in communications of pilot protection signals from either the system protection and communications side of the business. This course is geared towards those who are new to pilot protection.	You will learn common industry terms related to pilot protection and basic concepts which are critical to design and implementation. Understanding the basic principles of pilot protection will provide beneficial related job knowledge.

CYBER SECURITY AND NERC CIP TRAINING FOR THE ELECTRIC POWER INDUSTRY

The RFL Cyber Security Training Series provides a closer look at the hot topics around NERC CIP Compliance. The courses were designed to help you understand basic Cyber Security concepts used in the electric power industry.

TRAINING MODULE	OVERVIEW	DATE	PRESENTER	WHO SHOULD ATTEND	BENEFITS
Supply Chain Management Part 1	Overview of discussions and proposed new supply chain security requirements for regulated entities and the impact on vendors involved in the supply chain.	03/15/17	Karl Perman	Individuals with a role in NERC CIP such as compliance, security, engineers and supply chain professionals.	You will learn about the proposed new requirements for those involved in the supply chain of critical systems to the electric power industry.
Supply Chain Management Part 2	This module will focus on terms and conditions and training for vendors involved in the supply chain.	03/29/17	Karl Perman	Individuals with a role in NERC CIP such as compliance, security and engineers and supply chain professionals	You will learn about terms and conditions and training as part of supply chain security.
Information Protection "201" Part 1	This module will focus on the NERC CIP-011 including the definition of BES Cyber System Information and the contents of an Information Protection Program.	04/12/17	Karl Perman	Individuals with a role in NERC CIP such as compliance, security and engineers. This course is also for individuals who would like an understanding of information protection.	You will learn about NERC CIP-011 and how to develop an Information Protection Program.
Information Protection "201" Part 2	This module will focus on how CIP-011 and information protection affects vendors performing work for regulated entities.	04/26/17	Karl Perman	Individuals with a role in NERC CIP such as compliance, security and engineers. This course is also for individuals who would like an understanding of information protection.	You will learn what constitutes BES Cyber System Information and how the protection of this information will affect those working for a regulated entity as well as vendors.
Compliance Management	This module will focus on compliance management and the implementation of a process driven compliance program.	05/03/17	Karl Perman	Individuals with a cybersecurity role such as security analysts, systems analysts, engineers and NERC CIP compliance practitioners.	You will learn what constitutes compliance management from a NERC CIP perspective and how to develop a process centric approach.

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SUBSTATION COMMUNICATIONS: IP MIGRATION SCHEME SOLUTIONS

As substation communication networks migrate away from the traditional Time Division Multiplexing (TDM) technology to packet-based technology, many engineers and technicians do not have a good understanding of what is involved when it comes to substation communications IP Migration. Understanding the IP Migration Roadmap is essential to a successful transition and making sure that all your substation services continue to operate safely, reliably and securely, both during, and after migration. This course provides an overview of the IP migration roadmap for substation communications. It addresses the need to understand the challenges, the advantages and the benefits. It also addresses the two most-important concerns when it comes to IP migration: reliability and security. The course also presents two successful case studies of substation communications IP migration.

TRAINING MODULE	OVERVIEW	DATE	PRESENTER	WHO SHOULD ATTEND	BENEFITS
IP Migration Roadmap: Understanding the challenges and benefits.	This module will focus on helping to understand the overall landscape of the IP Migration Roadmap. The legacy applications that need to migrate over to the new communications infrastructure. The industry drivers behind the migration. The challenges that need to be addressed, and the benefits of migrating to a packet-based communications infrastructure.	06/06/17	Manny Duvelson	Individuals with a role in IT and/or OT, particularly those involved directly with system protection and substation	You will learn and get an overall understanding of substation communications IP Migration. The lessons learned will benefit in putting together a successful IP Migration and help build confidence since several power utilities have already migrated successfully.
IP Migration Roadmap: Addressing Reliability and Security.	This module will focus on the two most-important concerns when it comes to IP Migration. Making sure the new communications infrastructure meets the reliability standard for mission-critical applications. Addressing security including NERC-CIP requirements.	6/13/17	Manny Duvelson		
Case Study 1: SCADA & Teleprotection over Leased Ethernet Services.	This module will focus on an actual case study where the power utility has been able to migrate successfully from a 4-Wire Leased Line to Leased Ethernet services and improved their performance and reliability.	06/20/17	Manny Duvelson		
Case Study 2: Current Differential Relay over Packet-based communications infrastructure.	This module will focus on an actual case study where the power utility has been able to migrate their system protection application from SONET/T1 to a packet-based system. This system protection has the most-stringent requirement for the communications system, but the new packet-based communications has been able to meet and exceed those requirements and provide a successful migration.	06/27/17	Manny Duvelson		

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