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Course Catalog

EnergyIP Platform & Smart Grid Applications Training

February 2019

Siemens provides training through its Smart Grid EnergyIP Platform & Applications Training department, which develops and delivers core, self-paced and custom training courses to support the operation, maintenance and expansion of Smart Grid products.

Regular Updates

Get the latest information about our new products and platform technologies; and learn both intro and in-depth skills and knowledge for completing work tasks in a production environment.

Custom Development

Tell us how we can help by extending existing courses or developing new ones.

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On the web: [siemens.com/learningcloud](https://www.siemens.com/learningcloud)

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Types of Courses:

- Self-Paced – student completes using materials provided on the Siemens Learning Cloud website
- Instructor – a traditional instructor-led course taught on location by a qualified instructor
- Blended – web-based sessions with a qualified instructor combined with self-paced study
- WBT – web-based training. Interactive module with text, graphics and audio

Course File Formats:

- WBT – web-based training. Interactive module with text, graphics and audio
- PDF – document
- Video – video with a presenter, slides and demos
- Cam – video with a presenter and a demo
- ILT – instructor-led training
- vILT – virtual instructor-led training. Web-based sessions with a live instructor.
- EPSS – electronic performance support system. Tools and guidelines for completing on-the-job tasks.
- ZIP – archive. Tools that can be used on the job.

Title	Duration	Description
Advanced Device Management		
Advanced Device Management Self-paced (Video) <i>ADMintro</i>	30 min	Smart Grid devices with communication capabilities are proliferating on the distribution network increasing the number of devices that need to be managed by two or three times the number of meters. The Advanced Device Management (ADM) EnergyIP® 8 platform application automates many of the previously tedious manual tasks required to maintain operational stability. ADM fills gaps in the headend systems by performing automated communications network management, device provisioning, device configuration, and device topology. It is designed as the system of record for all device knowledge available through the communications network.
Analytics		
Elastic Stack Installation Self-paced (Video) <i>Elast50</i>	45 min	This video walks through the steps to installing Elastic Stack's main components, Elasticsearch and Kibana. It also shows you how to configure authentication and role-based access controls using X-Pack.
ETL Process Overview Self-paced (Video) <i>ETL_Process</i>	12 min	As the name suggests, ETL or Extract, Transform, and Load performs the following three operations: <ul style="list-style-type: none"> • Extracts the data from EnergyIP • Transforms the data by performing data cleansing operations, and • Loads the data for the Analytics application
EnergyIP® Analytics Suite and Analytics Foundation Self-paced (Video) <i>AnFound</i>	30 min	This product introduction course provides an overview of the EnergyIP® Analytics Suite and Foundation. EnergyIP Analytics Suite is a solution that encompasses Analytics Foundation with add-on applications for specific uses cases such as Load Forecasting, Equipment Load Management, Power Quality, and Revenue Protection. EnergyIP Analytics Foundation enables utilities to gain insight into customers and their usage patterns, and the infrastructure that provides this information.
Kibana Visualization Tool - Install and Config Self-paced (Video) <i>Kibana_demo</i>	25 min	Raymund Pimentel provides an overview of the installation and configuration steps, plus a software demonstration of Kibana, a visualization tool for Elasticsearch used in EnergyIP® Analytics Foundation.
Elastic Stack - Interactive Visualization Tool Self-paced (Video) <i>IVT_Analytics</i>	5 min	Analytics Foundation 3.2 includes Elastic Stack as the interactive visualization tool. It has been incorporated in order to help in the search and analysis of a number of events from the utilities' end points and perform highly interactive analysis on event data including outage event data. This video includes a demonstration of the Dashboard, a collection of one or more visualizations.
Service Point Data Visualizer Self-paced (Video) <i>SPDV_Analytics</i>	5 min	This video provides a product introduction to the Service Point Data Visualizer, a key component of Analytics Foundation for EnergyIP. The Data Visualizer allows you to select a Service Point, a date and time range and then visualize any time series data for that Service Point.

Title	Duration	Description
Prepare for and Install Hadoop Common Self-paced (Video) <i>HdpInstall</i>	39 min	This covers the steps needed to meet the prerequisites for, and then to install, Hadoop Common for use with an EnergyIP Analytics application. These steps need to be completed before an Analytics application such as Analytics Foundation is installed.
Hadoop Common Configuration Self-paced (Video) <i>HdpConfig</i>	17 min	This video shows how to verify the Hadoop cluster is in a functional state and will work properly with the Analytics application. These steps need to be completed before an Analytics application such as Analytics Foundation is installed.
Power Quality 1.1 Product Overview Self-paced (Video) <i>PQ_1.1_ProdOvr</i>	45 min	This video introduces you to Power Quality 1.1, an application that provides insights about critical power quality metrics that help utilities address power quality issues within their distribution network. Presented by Dr. Patricia Seifert, PhD.
Load Forecasting 1.1 Product Introduction Self-paced (Video) <i>Load_Forecasting_1.1</i>	30 min	This Product Introduction course provides you with an overview of the EnergyIP Analytics Load Forecasting application. Sections include Product Overview, Markets, Features & Benefits, and Use Cases. Whereas traditional Load Forecasting is focused on forecast at the system or grid area level, this Load Forecasting application will forecast load at the low-voltage distribution grid. This is enabled primarily by two key inputs, the individual SDP-level metered load and the distribution grid hierarchy. The application combines these inputs along with weather and calendar information to provide granular low-voltage distribution level forecasts.

Asset Topology Mapping

Asset Topology Mapping 1.0 Product Overview Self-paced (Video) <i>ATM1.0_KT</i>	55 min	This product introduction provides an overview of Asset Topology Mapping 1.0. Asset Topology Mapping (ATM) is an application that uses advanced analytics technology to validate the accuracy of distribution network topology. The Asset Topology Mapping application runs analytics algorithms and applies an expression-based scorer on the algorithm results to generate investigations that can be accessed through the user interface. It applies algorithms on AMI data, spatial data from the GIS, and the existing distribution network topology to detect and report inaccurate meter-to-transformer connections.
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DEMS

DEMS – Product Overview Self-paced (Video) <i>DEMS_4</i>	45 min	This product introduction course introduces you to the Siemens Distributed Energy Management System (DEMS), a software application that allows utilities to manage all aspects of their distributed energy resources programs through a single integrated system. Distributed energy resource management is a key tool that addresses growing trends such as modernization, responsible energy consumption, and greening the grid.
DEMS Portal 1.0 Product Overview Self-paced (Video) <i>DEMSPort1Over</i>	15 min	The primary goal of DEMS Customer Portal is to engage owners and aggregators in Demand Response (DR) programs by providing access to account and asset information related to devices, DR programs, and DR events.

Title	Duration	Description
<p>DEMS 4.2 – What's New</p> <p>Self-paced (Video) <i>DEMS_42_KT</i></p>	1:45	<p>Presented by the DEMS Product Manager, this video discusses new or enhanced features in DEMS 4.2. Topics from the recorded Knowledge Transfer session include:</p> <ul style="list-style-type: none"> • EnergyIP 8.5 support • Cost segmented offers and updates • Cost-based dispatch • Asset data model updates • DR scale testing • OpenADR release restructuring • Primary regulation support in VPP function • DSO integration • ICCP protocol support
<p>DEMS 4.2 – On Site Training</p> <p>Instructor (ILT) <i>DEMS_42_ILT</i></p>	2 to 5 days	This custom training is available to utilities and systems integrators who need to implement, integrate, administer and operate DEMS 4.2 Please contact Training to discuss your requirements and schedule this class.
<p>DEMS DR - Configuration Basics</p> <p>Self-paced (Video) <i>DEMS4_DR_KT</i></p>	2:00	From a series of Knowledge Transfer recordings for DEMS VPP and DR, this course includes two videos which discuss and demonstrate the basics of configuring DR (Demand Response) including: SDP setup, accounts in DEMS, Service Point Groups, Programs, Enrollments, Forecasts, and others. The other two videos discuss the basics of VPP (Virtual Power Plant) and can be found in the course titled, DEMS - Introduction to VPP.
<p>DEMS VPP - Configuration Basics</p> <p>Self-paced (Video) <i>DEMS4_VPP_KT</i></p>	2:00	Two part recording that demonstrates the basics of configuring VPP (Virtual Power Plant) including: asset creation, forecasting, programs & markets, enrollments, offer generation, control areas, asset simulator, and protocol adapters.

Energy Engage

<p>Energy Engage for CSRs</p> <p>Instructor (ILT) <i>E3csr</i></p>	2 days	The Energy Engage for Customer Service Representative (CSR) is a one day, instructor-led course that provides utility CSRs with an understanding of the Energy Engage features used by their customers. Using case studies, CSRs will learn to support customer inquiries and troubleshoot user issues using the Energy Engage portal.
<p>Energy Engage for System Administrators</p> <p>Instructor (ILT) <i>E3SysAd</i></p>	2 days	<p>This course provides system administrators with the skills necessary to set-up and manage Energy Engage in a production environment. The topics of the course include:</p> <ol style="list-style-type: none"> 1. Web Administration Tool 2. Carbon Stories and Rate Structures 3. Energy Engage Architecture 4. Integration and Administration.
<p>Energy Engage Mobile</p> <p>Self-paced (Video) <i>E3mobVid</i></p>	20 min	This webinar introduces the features, benefits and user interface of Energy Engage Mobile.

Title	Duration	Description
Energy Engage Overview Self-paced (Video) <i>E3wbt</i>	20 min	This webinar provides an overview of the Energy Engage Application and the user interface. The Energy Engage Product Manager discusses the following topics: <ol style="list-style-type: none"> 1. Energy Engage Overview 2. The customer portal 3. Service Invocation Patterns 4. The User Interface

Equipment Load Management

Equipment Load Management (ELM) 3.2 Self-paced (Video) <i>ELM_3.2_Ovr</i>	45 min	This course will help you understand the features and benefits, markets, and use cases for Equipment Load Management. You will also see a short product demonstration of ELM presented by Dr. Patricia Seifert, Product Manager - EnergyIP Analytics. Lesson 2 shows you how to install and configure ELM. Equipment Load Management (ELM) is an application within the EnergyIP® Analytics Suite. ELM leverages data from the utility's existing AMI infrastructure and provides an interactive user interface that enables utilities to quickly see equipment utilization trends in their service territory, identify equipment that is overloaded, and quickly drill down into detailed analysis for each piece of equipment and its underlying service point.
ELM 3.3 Installation and Configuration Self-paced (Video) <i>ELM33_Config</i>	25 min	Equipment Load Management is an application within the EnergyIP® Analytics Suite. The application leverages data from the utility's existing AMI infrastructure. In this video you will learn the architecture and installation prerequisites for ELM 3.3.

Title	Duration	Description
EnergyIP 8x		
GDPR - General Data Protection Regulation Self-paced (Video) <i>GDPROver</i>	8 min	The General Data Protection Regulation (GDPR) is regulation that intends to strengthen and unify data protection for all individuals within the European Union (EU). In this video you will learn more about GDPR and how EnergyIP intends to be compliant with the rules mandated by this new regulation. The video is presented by Amit Prakaash, Product Manager at Siemens.
GDPR EnergyIP® Implementation Overview Self-paced (Video) <i>GDPRTech</i>	47 min	In this video you will learn the new jobs, tables and settings in EnergyIP designed for compliance with the rules mandated by this new regulation. The video is presented by Amit Prakaash, Product Manager at Siemens.
Basics - EnergyIP® 8 Self-paced (Video) <i>EIP8Bas</i>	60 min	This web-based training series provides an overview of major features of EnergyIP 8. The topics included are: <ul style="list-style-type: none"> • Introduction to EnergyIP 8 • EnergyIP 8 High Level Data Model • EnergyIP 8 User Interface and Navigation • EnergyIP 8 Meter Reads • EnergyIP 8 Services • EnergyIP 8 Security Framework • EnergyIP 8 In-Memory Data Grid (EIDG) • Siemens SmartGrid Application Suite
Foundations for End Users - EnergyIP® 8.6 Instructor (ILT) <i>EIP85Found</i>	3 days	EnergyIP Foundations is an instructor-led course that provides Utility users with core EnergyIP concepts and hands-on practice, including the: <ul style="list-style-type: none"> • Preface to Smart Grids • The EnergyIP Solution • High Level Overview of EnergyIP components. • Data Synchronization • Data Collection • Data Delivery • Configuration Tools • Reporting • High Level Overview - Other Apps
Billing CSR - EnergyIP® 8.6 Instructor (ILT) <i>BillCSR</i>	2 days	This course is designed for Utility Billing customer service representatives who need to use EnergyIP meter data management The course provides: <ul style="list-style-type: none"> • overview of the billing process and functionality • Logging in, basic navigation, and search • Reviewing meter data • Validation, validation errors and verify/edit service requests • Editing meter data • Analyze and resolved billing exceptions • Cancel single and multiple months • Device control transactions

Title	Duration	Description
Validation Analyst - EnergyIP® 8.6 Instructor (ILT) <i>ValAnalyst</i>	2 days	This course is designed for Utility validation analysts who need to use EnergyIP meter data management. The course includes: <ul style="list-style-type: none"> • Describe how validation workflow works in EnergyIP • Understand the role of Device Reads Processor in the validation process. • Understand validation in EnergyIP • Understand estimation in EnergyIP • Understand the framing in EnergyIP • Understand and Use EnergyIP Graphical Editing Features • Use EnergyIP to Complete Core validation-Related Tasks
EnergyIP® 7.6 - 8.1 Delta Self-paced (WBT) <i>EIP8Delta</i>	30 min	This web-based training explores the delta between EnergyIP® 7.6 and EnergyIP® 8. Each topic focuses on what's new and what's changed in each module.
EnergyIP® 8 - Data Synchronization Self-paced (Video) <i>CoreSync</i>	2 hours	Chris Dant, Technical Training Manger for Siemens, discusses EnergyIP® synchronization and how data flows from customer information systems to EnergyIP®. He then reviews the configuration properties and examines FlexSync. Next, he shows how to create rules and use rule sheets for synchronizing your data. Finally, he discusses core derive actions and effective dates and explains the rules processing context and data objects that enable synchronization.
EnergyIP® 8 - Introduction and Overview Self-paced (WBT) <i>EIP8IntroWBT</i>	30 min	This web-based training introduces the EnergyIP® 8 features and functionality. The topics included are: <ol style="list-style-type: none"> 1. EnergyIP® 8 overview 2. Core functionality 3. Smart grid application suite 4. High-level data model 5. Security architecture overview
EnergyIP® 8 - Navigation Self-paced (WBT) <i>EIP8UINav</i>	20 min	This course provides an overview of the user interface and standard navigation features of EnergyIP® 8. The topics include demonstrations of the following UI features: <ol style="list-style-type: none"> 1. Dashboard Tab 2. SDP Manager Tab 3. Administration Tab 4. Reports Tab
EnergyIP® 8 A2F Architecture Self-paced (WBT) <i>EIP8A2F</i>	10 min	This web-based training explores the Agile Application Framework (A2F) used in EnergyIP® 8. The topics included are: <ol style="list-style-type: none"> 1. Message Bus and A2F 2. A2F Processing Model 3. Service Invocation Patterns 4. Routing Approach

Title	Duration	Description
EnergyIP® 8 In-Memory Data Grid Self-paced (WBT) <i>EIP8eidg</i>	10 min	This introductory web-based training explores EnergyIP® 8 In Memory Data Grid (EIDG). The EIDG topics included are: <ol style="list-style-type: none"> 1. Overview of EIDG 2. EIDG Functionality 3. EIDG Reliability 4. EIDG Variations
EnergyIP® 8 Security Framework Self-paced (WBT) <i>EIP8Secr</i>	10 min	This course explores the EnergyIP® 8 Security Framework. The topics included are: <ol style="list-style-type: none"> 1. Security Features 2. Security Architecture 3. Security methods 4. Organization-based approach
EnergyIP® 8 Webinar Series Self-paced (Video and PDF) <i>EIP8Webs</i>	30 min to 8 hours	This EnergyIP® 8 webinar package includes technical presentations from eMeter product management and engineering experts. These technical webinars provide detailed information about the most important new and changed features of EnergyIP 8. To get the most out of these presentations, you should be familiar with EnergyIP 7.
EnergyIP® 8 Data Collection Self-paced (Video) <i>CoreDC</i>	75 min	Shelly Antony, Director of Application Development, provides an in-depth discussion of EnergyIP® 8 enablement for Meter Reads and Event Processing. The topics included in this video include technical briefings on key differences between EnergyIP 7.x and 8.x. Shelly also discusses the overview and architecture of Meter Reads and Meter Events, including a detailed account of the components and configurations required to make VEE applications work. Various scenarios of Reads and VEE subsystem are also explained towards the end of the video.
EnergyIP® 8 Data Delivery Self-paced (Video) <i>CoreDDS</i>	60 min	Shelly Antony, Director of Application Development, provides an in-depth discussion of EnergyIP® Data Delivery Services, which represents the delivery of metering data to an external system. The topics included in this video include an overview and architecture of DDS, key DDS differences from EnergyIP® 7.x and 8.x., and an in-depth discussion of DDS components and configuration.
EnergyIP® 8 Data Migration Self-paced (Video) <i>EIP82Migrate</i>	27 min	Ling Chien-Sha, Director of Engineering, walks through the process of migrating data to EnergyIP® 8. In this video, Ling outlines the high level approach to data migration, including database preparation. She then dives into the technical details and procedures for data migration and configuration for structural and transactional data. The video concludes with a short case study of a data migration project.

Title	Duration	Description
EnergyIP® 8.2 - Introduction Self-paced (Video) <i>EIP8IntroVid</i>	3 min	Jeff Rank, Director of Product Management for Siemens, discusses the new features and enhancements of the EnergyIP® 8.2 platform. He begins by discussing the upgrade support from EnergyIP 7 and the target engagements for legacy features including the FlexSync adapter, upgrade scripts, extensive documentation and data migration tools. Next, he reviews the user interface enhancements to service requests, reports and meter data editing designed for EnergyIP meter data analysts. He then discusses the targeted enhancements to EnergyIP 8.2 for data transfer service, device control transactions and integration of weather data and mapping.
EnergyIP® 8.2 - Navigation Self-paced (Video) <i>EIP82UINav</i>	20 min	Ming Ho, Director of User Experience and Data Science for Siemens, discusses the new features of the EnergyIP® 8.2 interface followed by a demonstration of the Main Console and the System Console.
EnergyIP® 8.2 System Console Self-paced (Video) <i>EIP82SysCons</i>	72 min	In this session, Saurabh Saxena and Pushpa Penukonda from the Platform Development Team will review new features and changed aspects of the EnergyIP® 8.2 System Console. Topics include: <ol style="list-style-type: none"> 1. Dynamic Log Management 2. Log Viewer 3. System information 4. Authorization in System Console 5. Enhanced monitoring dashboard
EnergyIP® 8.2 User Interface Changes Self-paced (Video) <i>EIP82Uivid</i>	1 hour 22 min	In this recorded session, the new user interface changes in EnergyIP® 8.2 are discussed and shown.
EnergyIP® 8.2-8.4 Installation Self-paced (Video) <i>EIP8Install</i>	2 hours	This course provides learners with an overview of the installation steps used for EnergyIP® 8.2 (also applicable to EnergyIP 8.3, 8.4 and 8.5)
EnergyIP® 8.x App Installation Self-paced (Video) <i>EIPAppInstall</i>	13 min	Video showing installing an OPT app for the EnergyIP 8.x platform.
EnergyIP® 8.5 Release Overview Self-paced (Video) <i>EIP85_KT</i>	60 min	The EnergyIP® 8.5 release includes many new capabilities on the EnergyIP® user interface and also enhancements and improvements to enhance user experience and improve operational task efficiency. EnergyIP® product experts discuss and demonstrate these new features in this Knowledge Transfer session.

Title	Duration	Description
QuickStart Essentials for EnergyIP® 8.4 MDM Self-paced (WBT) <i>QSEEIP84</i>	60 min	This course is designed for anyone new to the EnergyIP® meter data platform, and will provide you with a basic understanding of the core fundamentals and technologies of EnergyIP®. There are four parts to this course: <ol style="list-style-type: none"> 1. Introduction and Overview to EnergyIP® 2. Synchronization 3. Data Collection 4. Data Delivery
Reports Using BIRT Self-paced (Video) <i>EIPBIRT</i>	2 hours	This technical webinar is presented by an eMeter custom report expert. He focuses on reporting basics and then demonstrates how to create custom reports using BIRT.
Report Development Instructor Led <i>EIPREPORT</i>	2 Days	Hands-on workshop to give students the skills they need to write custom reports on EnergyIP 8. The focus of the session will be on EnergyIP database schemas, SQL queries, and the top significant / representative reports. The instructor will focus on the schemas, queries and report design, and students will use the open source BIRT Designer as the environment for creating custom reports.
SQL Queries Toolbox Self-paced (ZIP) <i>SQLqtools</i>	10 min	This offering consists of a ZIP file that contains a number of useful queries that one of our instructors has used in classes and with customers. We've added it to the catalog at students' request, but please note that it this is NOT a course and does NOT include instructions for its use.

Title	Duration	Description
<p>Technical Certification - EnergyIP® 8.6</p> <p>Blended (vILT) <i>EIP86Cert</i></p>	4 weeks	<p>The EnergyIP Certification Program is a hybrid training course and includes on-line, instructor-led and self paced learning. Students will attend eight, three hour virtual instructor-led sessions that meet twice a week. Students also complete assignments on their own and with peers. Assignments will require extensive practice and exercises in the Learning Cloud via each student's own sign-on to a supplied EnergyIP instance. At the end of the month, students will take the certification exam that enables them to implement EnergyIP.</p> <p>Goals: This comprehensive program provides a scenario-based, hands experience to guide participants through the major processes they will complete while installing and implementing EnergyIP. The topics included are.</p> <ol style="list-style-type: none"> 1. Introduction to the Course, Implementation Scenario, and Synchronization 2. Interpreting and applying the Project Functional Specifications (PFS) to configure and validate Meter Reads, Universal AMI Adapter, Device Reads Processor 3. Configuration Management, Using the System Console and Reference Data Utility 4. Using the PFS to configure and validate Validation, Estimation and Editing (VEE), Framing 5. Graphical Editing, Data Delivery, Using the PFS to configure and validate Billing 6. Using the PFS to configure and validate Billing, continued 7. Troubleshooting, Provisioning, Commissioning, Device Control Transactions 8. Reports, Course Review, Certification Exam <p>Certification Exams:</p> <ol style="list-style-type: none"> 1. In class, computer administered exam 2. Hands-On exam, completed using the Training Cloud EnergyIP instance
<p>Technical Certification - EnergyIP® 8.6 CONDENSED</p> <p>Blended (vILT) <i>EIP86Cert</i></p>	2 weeks	<p>The condensed-schedule EnergyIP Certification Program is a hybrid training course and includes on-line, instructor-led and self paced learning. Students will attend eight, three hour virtual instructor-led sessions on subsequent days in two weeks.</p> <p>The goals, content, and exams of the condensed-schedule Certification are the same as the regular Certification.</p> <p>Indications – this version of the Certification is best for:</p> <ul style="list-style-type: none"> • A single partner or utility organization • Students experienced with MDM and EnergyIP, or a mix of experience as long as some are quite experienced • Students can attend webinars in one or two common locations such as conference rooms

Title	Duration	Description
<p>System Administration - EnergyIP® 8.6</p> <p>Instructor (ILT) <i>SysAdmin</i></p>	3 days	<p>The goal of the System Administration course is to provide basic knowledge of EnergyIP System Admin functions and ensure smooth operations.</p> <p>Day 1</p> <ul style="list-style-type: none"> • Welcome • Product Overview • Introduction - System Admin Role • System Requirements and Security <p>Day 2</p> <ul style="list-style-type: none"> • EnergyIP Files and Properties • Performance Monitoring • Performance Issues • Starting and Stopping EnergyIP • Application Management <p>Day 3</p> <ul style="list-style-type: none"> • EnergyIP User Management • Adapters • Exception Processing • Timelines and Checklist
<p>EnergyIP 8 – Custom Application Development</p> <p>Instructor (ILT) <i>EIP8AppDev</i></p>	10 Days	<p>Training goals:</p> <ul style="list-style-type: none"> • The goal of this training is to make you capable of developing application that can sit besides these applications or replace/ enhance the existing applications. • This training will tell you the hooks for altering the existing behavior of EnergyIP applications. <p>Training Components:</p> <ul style="list-style-type: none"> • Classroom Instruction - instructor teaches and provides live demos via the web (vILT) or in person • Lab Work - Hands On labs with each student having their own cloud instance of EnergyIP with an applicaiton and database server. • Course materials include Lab Guide, Samples, Student Guide
<p>Upgrade EnergyIP 8.x to EnergyIP 8.6</p> <p>Self-paced (Video) <i>Upgrade-to-EIP86</i></p>	1 hour	<p>The basics of installing and upgrading EnergyIP are covered in this video prepared by Thaddeus Jimenez, Technical Director in eMeter Engineering. Note that EnergyIP 8.6 supports a new data storage paradigm that permits the data in the MUDR schema to be stored on Cassandra technology.</p>
<p>Cassandra Considerations for EnergyIP</p> <p>Self-paced (Video) <i>Cass4EIP86</i></p>	59 min	<p>In this video Shelly Antony reviews the purpose of Cassandra in EnergyIP - to provide new installations the option of storing the time-series data in MUDR on the Apache Cassandra database, and best practices for configuring and managing it.</p>

Title	Duration	Description
Kafka Considerations for EnergyIP Self-paced (Video) <i>Kafka4EIP86</i>	24 min	In this video Andrew Stefanick reviews the purpose of Kafka in EnergyIP, and considerations for managing and monitoring it.

Title	Duration	Description
Energy Solutions		
A Rising Tide (Tidal Power) Self-paced (PDF) <i>OceanDoc</i>	10 min	The UK has a technological lead in both the development and the operation of tidal power. The Narec renewable test center is now expanding its services for tidal applications. Siemens, together with its Marine Current Turbines subsidiary, is using this service for testing of its new power train. This article is from Living Energy, May 2014.
Case Study: Burbank Water and Power Self-paced (PDF) <i>CaseBurb</i>	4 min	Southern California public utility addresses current and future requirements with advanced meter data management system capabilities
Case Study: DRMS at Wabash Valley Power Self-paced (PDF) <i>IDCDRMSDoc</i>	10 min	The case study covered in this document presents Wabash Valley Power Association's (WVPA's) decision and actions taken to implement a demand response management system (DRMS).
Case Study: Energy Engage Pepco/PowerCentsDC Self-paced (PDF) <i>EEpepco</i>	10 min	An award-winning pilot validates fast implementation, dynamic pricing and web-based consumer engagement result in load reduction and high customer satisfaction.
Case Study: EnergyIP® at Burbank Water & Power Self-paced (PDF) <i>EIP8Burb</i>	10 min	Southern California public utility addresses current and future requirements with advanced meter data management system capabilities
Case Study: Outage Management Self-paced (PDF) <i>OutManDoc</i>	10 min	How three utilities are enhancing their ability to detect and respond to outages using EnergyIP®.
Communities Self-paced (Video) <i>ITOTComm</i>	3 min	In this video Chris King explains how energy policy makers are looking to customers for input during the development of Smart Grid projects, while Michael Strebl examines how Kostendorf became the first smart grid project in Austria due to the planning and support received by the local community and Siemens.
Decentralized Energy Management System Self-paced (PDF) <i>DEMSDoc</i>	10 min	This article is about Smart Markets, Virtual Power Plants (VPPs) and the new software version DEMS 3.0 and DEMS Designer.
DRMS at Wabash Self-paced (PDF) <i>DRMSWab</i>	10 min	The case study covered in this document presents Wabash Valley Power Association's (WVPA's) decision and actions taken to implement a demand response management system (DRMS). Wabash Valley Power Association provides electric generation and transmission (G&T) services for 26 member cooperative utilities operating in Illinois, Indiana, and Missouri that services over 320,000 homes, businesses, farms, and industrial sites. To meet anticipated 2020 power requirements, WVPA decided to deploy a centralized DRMS to manage demand response (DR) events.

Title	Duration	Description
Energy on Tap Self-paced (PDF) <i>GasInsDoc</i>	10 min	A gas-insulated line (GIL) tunnel allows a beer producer to make optimal use of the construction site for its new Munich brewery. Paulaner's COO Stefan Lustig talks about beer, Bavarian lifestyle, and energy transmission. This article from Living Energy, May 2014.
Energy Scenario 2050 Self-paced (PDF) <i>Energy2050</i>	10 min	This article discusses what the future of energy sources may look like in 2050, and features interviews with Robert Schlög and Michael Weinhold. Robert Schlög is head of the Fritz Haber Institute and founding director of the Max Planck Institute for Chemical Energy Conversion. Michael Weinhold is Chief Technology Officer of Siemens Energy and a member of the Siemens Sustainability Board.
Green Button Standard Self-paced (Video) <i>GmBtnVid</i>	30 min	Chris King, Global Chief Regulatory Officer for Siemens Smart Grid, discusses the development, community adoption, and policy issues regarding the Green Button Standard. All electric users have meters that are used to measure how much energy they use. This metered data is used by energy service providers to calculate how much that energy will cost. Green Button is all about making that data available and secure to energy consumers.
IT-OT Solutions Self-paced (Video) <i>ITOTvid</i>	5 min	In this video, Michael Strebl, Managing Director of Salzburg Netz GmbH discusses the successful implementation of SmartGrid projects between Siemens and energy utilities in Salzburg, Austria.
Nigeria: Land of Powerful Opportunities Self-paced (PDF) <i>NigeriaDoc</i>	10 min	After decades of neglect, Africa's most populous nation has started a revolution in its power sector. The country faces tremendous challenges, but even greater potentials, writes Chinedu Nebo, Nigeria's Minister of Power for Living Energy. Article from Living Energy, May 2014.
OT and IT Go Hand in Hand Self-paced (PDF) <i>OTITDoc</i>	10 min	Utilities today face complex grid management tasks. The new Siemens and Accenture joint venture OMNETRIC Group is there to help, offering integrated solutions based on the companies' expertise in information technology (IT) and operations technology (OT). This article from Living Energy, May 2014.
Power for Mining in Mexico Self-paced (PDF) <i>PowMexDoc</i>	10 min	Grupo Mexico has developed the most innovative turnkey plant with the technological support of Siemens. It is the largest user-owned electric power plant in Latin America. La Caridad Power Plant will allow Grupo Mexico to cut costs in electricity by 40 percent and help the state of Sonora and the country by supplying power to the grid. This article from Living Energy, May 2014.
Renewable Energy Self-paced (Video) <i>ITOTRenew</i>	3 min	In this video Chris King and Michael Strebl discuss the integration of renewable energies in to the grid - solar, wind, electricity. Also shown are video clips showing how renewable energy has been field tested and utilized in the town Kostendorf in Salzburg, where 50% of rooftops are equipped with solar panels, and 50% of the automobiles are electric cars.
Smart Buildings Self-paced (Video) <i>ITOTBuild</i>	3 min	In this video Chris King discusses how buildings can act as a micro-grid and Michael Strebl demonstrates the development of a smart grid-ready apartment building in Salzburg, Austria.

Title	Duration	Description
SmartGrid Living with John Cooper Self-paced (PDF) <i>SGCoopDoc</i>	10 min	The following article is the second part of the Smart Grid Living Lab interview series. John Cooper is a nationally-recognized innovator in energy. Part 1 of the series can be found here: https://blogs.siemens.com/en/smart-grid-watch.entry.html/1268-siemens-living-lab-for-the-21st-century-grid.html
The Future of the Smart Grid Self-paced (Video) <i>ITOTFuture</i>	3 min	In this video Chris King and Michael Strebl discuss the future roles and responsibilities of utilities acting as a transactional grid whereby energy is delivered and managed.
White Paper: Emergence of Meter Data Mgt Self-paced (PDF) <i>EmergeDoc</i>	10 min	The Meter Data Management (MDM) industry has recently emerged as a key to smart grid rollout in North America. MDM offers the ability to manage, store and employ consumption data, a crucial element of operating the smart grid as well as creating the value-added services that lead to consumer efficiency and economic viability.
Worldwide First: Warm Component Heat Reuse Self-paced (PDF) <i>FlexPdoc</i>	10 min	German plant operator Kraftwerke Mainz-Wiesbaden AG (KMW) is developing a steam reuse concept that will maintain the hot-start capability of its power plant at times when generation is not profitable, but a fast restart is desired. As part of numerous upgrades and updates to stay competitive, KMW says the steam reuse concept is a world first. This article from Living Energy, May 2014.

Getting Started

Energy Overview Self-paced (WBT) <i>Energyover</i>	30 min	This web based training explores some fundamental electrical parameters, their units, and, the inter-relationship and understanding the process of electricity generation, transmission and distribution.
Utility Industry Overview Self-paced (WBT) <i>UtilOver</i>	20 min	This web-based training course provides an overview of the energy and utility industry through a combination of animated slides, videos, and interactive quizzes and activities. The topics included are: <ol style="list-style-type: none"> 1. Basics of how power is generated 2. Roles of various entities within the utility industry, regulators, and system integrators 3. Information and resources on Siemens suite of software and applications that help utilities with Smart Grid metering and management

Title	Duration	Description
Grid Loss Detection		
Grid Loss Detection 1.2 Self-paced (Video) <i>GLD_1.2</i>	60 min	The Grid Loss Detection Analytics application is part of the eMeter® Analytics Suite of applications. The application uses information collected from AMI meters and grid control meters like transformers and substation meters to reconcile the energy consumed with the energy delivered. These Grid Loss Detection functions support a number of key use cases: <ul style="list-style-type: none"> • Identify areas with abnormal grid losses • Efficient asset management • Better understanding of the impact of Distributed Energy Resources (DER)
Market Transaction Manager		
Market Transaction Manager 1.0 Self-paced (Video) <i>MTM1</i>	45 min	The Market Transaction Manager (MTM) application is an add-on application for the eMeter EnergyIP® platform. MTM is designed to manage aggregation, change tracking, and deliver meter reads data to enable settlement transactions. With the MTM application, you can provide access of meter reads data and aggregated usage data to the market participants, analyze grid loss data, and process exceptions. In this product introduction video you will be introduced to MTM features and benefits, explore use cases, and learn about the product architecture and data flow.
Outage Event Management		
Outage Event Management 2.3 & LVOMS 1.1 Product Overview Self-paced (Video) <i>OEM-LVOMS_23</i>	60 min	EnergyIP® uses the Outage Event Management module to process power outage and power restoration events sent from the meter. The Outage Event Management subscribes to outage and restoration events, filters the events based on configurable parameters, and passes the validated notification to the utility's OMS. Additionally, Outage Event Management allows EnergyIP to receive power verification requests from an OMS, process the response from the AMI system, and provide a response to an OMS with the status of a meter.
Prepay		
EnergyIP® Prepay Application Demonstration Self-paced (Video) <i>Prepay_App</i>	15 min	EnergyIP® Prepay is an end-to-end solution that offers everything from connecting to the smart meter infrastructure, rating, and charging, up to the mobile payment system as one comprehensive package. It features flexible tariff management as well as intelligent energy consumption control features.

Title	Duration	Description
Revenue Protection		
Revenue Protection 2.5 – Product Overview Self-paced (Video) <i>RevPro25Over</i>	30 min	An introduction to Revenue Protection Analytics version 2.5, an application that uses analytics technology to increase the detection and reduction of non-technical losses. UPDATED February 2018: v2.5 plus new demo video.
Revenue Protection 2.4 – What’s New Self-paced (Video) <i>RevPro24Delta</i>	20 min	Revenue Protection 2.4 Product Overview. Presented by Vidya Raman, eMeter Product Management.
Revenue Protection 2.4 – Install and Config Self-paced (Video) <i>RevPro24Config</i>	45 min	Installation and Configuration for Revenue Protection 2.4. Presented by eMeter Engineering. Major topics include: <ul style="list-style-type: none"> • Installation • Configuring Reference Data • Configuring System Console Properties • Configuring Job Properties
SAP Adapter		
SAP Adapter 4 Self-paced (Video) <i>SAPAD4</i>	6 min	This video introduces you to the new features and benefits of the SAP Adapter 4. Listen to YanPei Chao, Senior Product Manager discuss how the SAP Adapter helps reduce the complex integration of SAP ISU and EnergyIP® for businesses.
SAP Adapter 4.4 Self-paced (Video) <i>SAP44</i>	30 min	This product introduction course to SAP Adapter 4.4 provides an overview of the product features and benefits, market overview, use cases and data flow.
Settlements		
EnergyIP® Settlements Self-paced (Video) <i>Settlements31</i>	30 min	The Settlements application is a add-on application for EnergyIP®. Settlements is designed to manage aggregation of interval data for enabling settlement financial transactions in wholesale markets. For metering points that are not interval metered, profile estimations are performed and allocated to market parties. This video provides a product overview of Settlements - Markets, Features, Use Cases, and Data Flow.

EnergyIP 7x

Courses available for EnergyIP 7.x:

7.2 Billing Workbook.....21	7x Billing Exception Handling23
7.2 Navigation.....21	7x Billing Overview23
7.2 SysAdmin Checklist.....21	7x Cancel Or Update Billing Request23
7.2 System Console Workbook21	7x Create Billing Request23
7.2 VEE Files.....21	7x Exporting and Importing Data Using the Graphical Editor23
7.5 Activity Gateway22	7x Permanent Billing Hold And Release.....23
7.5 Graphical Editing Workbook22	7x Temporary Billing Hold And Release24
7.6 Billing Process22	7x Using the Graphical Editor24
7.6 Billing Terminology22	AMI and EnergyIP® 7.524
7.6 Calculating the Billing Window.....22	App Dev Resources (EnergyIP® 7.6)24
7.6 Introduction.....22	
7.6 Navigation.....22	
7.6 Procedure Tool23	

Title	Duration	Description
7.2 Billing Workbook Self-paced (PDF) <i>BA72doc</i>	30 min	This workbook of Billing Analyst exercises provides hands-on practice and reference for students with access to the Training lab environment, using course data.
7.2 Navigation Self-paced (WBT) <i>EIP72NavWBT</i>	20 min	The User Interface Basics course is designed to provide users with the skills required to access EnergyIP® data and navigate effectively within the EnergyIP® 7.2 user interface. The topics included are: 1. System Overview 2. Logging on and off of EnergyIP 3. Screen elements 4. Navigation 5. Running, creating, modifying and saving queries
7.2 SysAdmin Checklist Self-paced (PDF) <i>EnvL72doc</i>	10 min	This checklist can aid in the configuration, documentation and maintenance of an EnergyIP® 7.2 environment.
7.2 System Console Workbook Self-paced (PDF) <i>SCons72Doc</i>	30 min	This workbook of System Console exercises provides hands-on practice and reference for students with access to an EnergyIP® 7.2 environment.
7.2 VEE Files Self-paced (PDF) <i>EIVEE72doc</i>	10 min	This document provides a walkthrough of and reference for the process of exporting and importing files from Graphical Editing screen.

Title	Duration	Description
7.5 Activity Gateway Self-paced (PDF) <i>AG75Doc</i>	30 min	This document is intended to provide EnergyIP® end users with a review of the Activity Gateway concepts, procedures and best practices. Topics include: <ol style="list-style-type: none"> 1. DCT Architecture 2. Activity Gateway Overview 3. Activity Gateway Configuration 4. How to Run Activity Gateway, using JBOSS 5. Workflow Engine 6. How to Develop Workflows using JBPM 7. Simple Workflow Examples
7.5 Graphical Editing Workbook Self-paced (PDF) <i>GrEd75doc</i>	30 min	This workbook of Graphical Editing exercises provides hands-on practice and reference for students with access to the Training lab environment, using course data.
7.6 Billing Process Self-paced (WBT) <i>BillProc</i>	10 min	This web-based training provides an overview of terminology and concepts for the billing process and functionality.
7.6 Billing Terminology Self-paced (WBT) <i>BillTerm</i>	10 min	This web-based training defines the terminology related to EnergyIP® Billing.
7.6 Calculating the Billing Window Self-paced (WBT) <i>CalcBillWin</i>	15 min	This web-based training defines the calculation considerations that a Billing Analyst will use on the job. The topics included in this course are: <ol style="list-style-type: none"> 1. The Processing Window Calculation 2. Start and End Times 3. The Read Window Calculation 4. Exception Handling.
7.6 Introduction Self-paced (WBT) <i>IntroAMI</i>	30 min	This self-paced course provides customers, partners, and employees an understanding of Smart Metering, and the EnergyIP® platform.
7.6 Navigation Self-paced (WBT) <i>EIP7BasNav</i>	30 min	This web-based training provides a high-level overview of the EnergyIP® 7.6 user interface. The topics included are: <ol style="list-style-type: none"> 1. The EnergyIP dashboard 2. The EnergyIP screens 3. A walk through the user interface

Title	Duration	Description
7.6 Procedure Tool Self-paced (EPSS) <i>BillEPSS</i>	30 min	Topics included in this tool include: 1. EnergyIP® Billing Overview 2. Operational Reports 3. Billing Service Exceptions 4. Configuration Check 5. Troubleshooting 6. Standard Procedures 7. FAQs
7x Billing Exception Handling Self-paced (Cam) <i>STBExCam</i>	10 min	This procedure-cam shows you the steps to take to complete the task and has voice over for learning about best practices.
7x Billing Overview Self-paced (Cam) <i>STBOvCam</i>	6 min	This procedure-cam shows you the steps to take to complete the task and has voice over for learning about best practices.
7x Cancel Or Update Billing Request Self-paced (Cam) <i>STBCUCam</i>	3 min	This procedure-cam shows you the steps to take to complete the task and has voice over for learning about best practices.
7x Create Billing Request Self-paced (Cam) <i>STBCrCam</i>	3 min	This procedure-cam shows you the steps to take to complete the task and has voice over for learning about best practices.
7x Exporting and Importing Data Using the Graphical Editor Self-paced (Cam) <i>STExpCam</i>	6 min	This procedure-cam shows you the steps to take to complete the task and has voice over for learning about best practices.
7x Permanent Billing Hold And Release Self-paced (Cam) <i>STBPrCam</i>	3 min	This procedure-cam shows you the steps to take to complete the task and has voice over for learning about best practices.

Title	Duration	Description
7x Temporary Billing Hold And Release Self-paced (Cam) <i>STBTpCam</i>	2 min	This procedure-cam shows you the steps to take to complete the task and has voice over for learning about best practices.
7x Using the Graphical Editor Self-paced (Cam) <i>STBGrCam</i>	9 min	This procedure-cam shows you the steps to take to complete the task and has voice over for learning about best practices.
AMI and EnergyIP® 7.5 Self-paced (WBT) <i>IntroAMI</i>	30 min	This self-paced course provides customers, partners, and employees an understanding of Smart Metering, and the EnergyIP® platform.
App Dev Resources (EnergyIP® 7.6) Self-paced (Video) <i>AppDev76</i>	6 to 10 hours	This course combines a number of resources of value to application developers working on the EnergyIP® 7.6 platform, including self-paced courses, videos, hands-on exercise materials, and a student forum. Note that the hands-on exercises will require students have access to an EnergyIP 7.6 environment, which is not included as part of this course.

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