



European Academy
for Taxes, Economics & Law

European Seminar

Ensuring IT Security for Energy Infrastructures

27th - 28th May 2013, Berlin

With Experts from:

- **Vattenfall Services Nordic AB, Sweden**
- **Alliander (DSO), the Netherlands**
- **Technical Inspection Association for Information Technology (TÜV), Germany**
- **Cisco Connected Energy Networks**
- **European Commission, DG Energy, Critical Energy Infrastructure Protection**

Broschüre



Ensuring IT Security for Energy Infrastructures

Are you well prepared for coping with IT threats to your assets and systems?

Examples in several countries such as the Baltic countries, the USA, Brazil and Iran (Stuxnet) have shown the vulnerability of energy infrastructures to cyber threats and their dependency on IT. By introducing new technologies such as smart grids and smart metering this issue has intensified even more. As information technology is absolutely essential for managing networks, systems and supply, IT and cyber security have become a main task and challenge for operators and utilities. However, the IT security level in the energy sector is lagging behind the “classical” IT in offices and data centers. Especially network control technology is at risk. Protecting SCADA and real-time systems, information security in system control, data transfer and encryption in smart metering technology as well as automated meter reading and cloud computing are only few aspects to be considered. Moreover, also IT risk assessment, smart grid security, combating cyber attacks, handling failure of IT systems and awareness raising of responsible staff are challenges. Therefore, today you need to have extensive knowledge on all relevant IT security risks in the energy sector to be able to deal successfully with threats to your systems.

“Very interesting and dealt with the key issues.”

Hereafter you receive an insight as well as background information to one of the presentations beforehand:

German Smart Metering and European Privacy Needs

To secure the communication between the smart meter in each household and the smart grid as well as to cover German privacy laws a smart meter protection profile (PP for the Gateway of a Smart Metering System) according to the international Common Criteria (CC) was specified by the Federal Office of Information Security (Bundesamt für Sicherheit in der Informationstechnik - BSI) in Germany. This Smart Meter Gateway contains a security module (specified in PP for the Security Module of a Smart Metering System) which is able to collect data of meter devices, aggregates these data based on process profiles and sends these data to 3rd parties in the backend systems. The overall architecture of this German approach is now being specified in the Technical Guideline 3109 (Smart Energy) of the BSI. This presentation of the seminar describes how this German approach secures smart meter systems on a very high level and how this approach fulfils European privacy recommendations that are listed in the “European Commission Recommendation on preparations for the roll-out of smart metering systems” published on 9th of March 2012.

Preview

Who is this seminar for?

Staff responsible for ensuring IT security of energy infrastructures, in particular from:

- Network and system operators
- Power supply companies
- Energy providers and utility companies
- Energy service providers
- Public services
- Manufacturers and suppliers of power system control technology and software
- Manufacturers and operators of smart meters
- Associations and organisations of energy industry
- Responsible public sector institutions
- Specialised consultancies
- Other institutions responsible for IT security in the energy sector

Especially from departments such as:

- IT Security and Information Security
- Corporate Security and Services
- Network Operations and Network Control Station
- Network Control Technology and Power System Control
- Power Division
- Smart Grids and Smart Metering
- Risk Management
- Business Continuity Management (BCM)
- Crisis and Emergency Management
- Asset Management
- Critical Infrastructures
- Business Development
- R&D&I





European Academy
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What will you learn at this seminar?

- What are today's IT security challenges for energy industry in Europe?
- Which strategies have shown to be well-proven for protecting critical IT systems of network and systems operators?
- Which IT security technologies help you in counteracting cyber threats?
- How can you manage the consequences of IT system failures?
- Why are especially smart meters an interesting target for attackers and how can you guarantee the secure operation of smart metering infrastructures?
- What are lessons learnt and practical experiences regarding the security of smart meters from leading energy companies and advanced distribution system operators?
- How do different states address the security of smart metering infrastructures in practice?
- What are security risks in automated meter reading (AMR)?
- Which privacy and security measures do smart meters require today?
- In how far are smart meters standardised in Europe?
- What are the advantages of an IP-based (Internet Protocol) security architecture for power systems and how can you apply it?
- In how far does the EU actively support Critical Energy Infrastructure Protection (CEIP) and Europe's energy IT security?

"It was excellently planned & presented."

Your benefits

- Protect your IT systems and assure business continuity
- Save money and resources – Be more resilient against IT threats
- Guarantee energy supply and distribution – Avoid a loss of image
- Keep up-to-date with the current IT security threats in the energy sector and know how to combat them
- Learn how to prepare for and handle worst case scenarios
- Benefit from various best-practice examples and case studies from all over Europe
- Discuss your individual questions with our experts and practitioners – Receive first-hand advice



PROGRAMME DAY 1

Ensuring IT Security for Energy Infrastructures

9.00-9.30

Registration and Hand-out of Seminar Material

9.30-9.35

Opening Remarks from the European Academy for Taxes, Economics & Law

9.35-10.00

Welcome Note from the Chair and Round of Introductions

Johan Rambli, Alliancemanager Privacy & Security, Alliander (Distribution System Operator), the Netherlands

10.00-10.45

A Cross-linked Europe – Today's IT Security Challenges for Energy Industry and EU's Initiatives for Critical Energy Infrastructure Protection (CEIP)

- Increasing interdependency of critical ICT and energy infrastructures: understanding the risks
- EU Initiatives for enhancing Critical Energy Infrastructure Protection (CEIP) and in particular Europe's energy IT security
- The European Transmission Networks: electricity, gas
- Inter-European cooperation

José Antonio Hoyos Pérez, Policy Officer, Critical Energy Infrastructure Protection, DG Energy, European Commission

10.45-11.00

Discussion Round

11.00-11.30

Coffee Break and Networking Opportunity

11.30-12.15

Vattenfall's Smart Meter Operations and Lessons Learnt from its Automated Meter Reading Project

- Vattenfall Services' actions and experiences in IT security related to its smart meter operations
- The Smart Meter Project "Number One for the Customer"
 - Security risks in automated meter reading (AMR), its communication and collection of data as well as its data processing

Erik Nordgren, Business Area Manager - Metering, Vattenfall Services Nordic AB, Sweden

12.15-12.30

Discussion Round

12.30-14.00

Lunch Break and Networking Opportunity



JOSÉ ANTONIO HOYOS PÉREZ

Policy Officer, Critical Energy Infrastructure Protection Unit, DG Energy, European Commission, Belgium

José Antonio Hoyos Pérez joined the European Commission in 1992.

Since 2004, he has been involved in launching the European Programme for Critical Infrastructure Protection in the energy sector. Previously, he held several positions within the Commission, including Euratom safeguards inspector and has worked on the promotion of new energy technologies. Furthermore, he has contributed to nuclear safety projects and the Commission's decommissioning policy. Prior to his engagement in the European Commission, he worked in the private energy sector from 1980 until 1992, firstly in engineering aspects of nuclear operations and later in an engineering company where he was responsible for the supply of technology to energy systems.



ERIK NORDGREN

Business Area Manager - Metering, Vattenfall Services Nordic AB, Sweden

Since 2010, Erik Nordgren has been responsible for Vattenfall Services' smart meter operations. Moreover, he was Head of the Smart Meter Project

of Vattenfall Eldistribution AB from 2005 to 2008. This project, also called "AMR project" and "Number One for the Customer" project, was launched in 2002 and is considered as a pioneer and best practice project in new metering technology. It aimed at enhancing customer services by installing innovative automated meter reading (AMR) for all 850 000 distribution customers in Sweden. Prior, Erik Nordgren was responsible for Group Purchasing Coordination in the Business Unit Distribution in Vattenfall Group.

Case Study



14.00-14.45

Privacy & Security 2.0 of Smart Meters – Practical Experiences from the Netherlands

- Introduction to smart meters in the Netherlands
- Lessons learnt from 2008 till now
- Risk Assessment Methodology in the Netherlands
- Privacy & security smart meter requirements v2.0
- European standardisation of smart meters

**Johan Rambi, Alliancemanager Privacy & Security,
Alliander (Distribution System Operator),
the Netherlands**

14.45-15.00

Discussion Round

15.00-15.30

Coffee Break and Networking Opportunity

15.30-16.15

The Secure Operation of Smart Metering Infrastructures – The German Approach

- Smart metering in Germany – current challenges and how they are addressed
- Actions of the Federal Ministry of Economics and Technology as well as the Federal Office for Information Security (BSI)
- Background to the Technical Directive BSI TR-03109 “Requirements for the interoperability of a communication unit of an intelligent metering system for units of substance and energy“
 - The directive’s requirements for a secure operation of smart metering infrastructures at a glance
- Advice for the secure operation of smart metering infrastructure in practice

**Markus Bartsch, Business Development for IT
Security, TÜV Informationstechnik GmbH (TÜViT
– Technical Inspection Association for Information
Technology), Member of TÜV NORD, Germany**

16.15-16.30

Discussion Round

16.30

End of Day One



JOHAN RAMBI **Alliancemanager Privacy & Security, Alliander (Distribution System Operator), the Netherlands**

Johan Rambi is Alliancemanager Privacy & Security at the Dutch Distribution System Operator

Alliander and supports the organisation with the development of smart meter privacy & security and smart grid cyber security in the role of subject matter expert. As a former Privacy & Security Officer Johan Rambi implemented the controls of the Privacy Audit Proof certification for the smart meter processes in the organisation. Furthermore, Johan Rambi is chairman of the Dutch Policy Committee Privacy & Security within Netbeheer Netherlands, a working group that developed the Dutch privacy & security sector requirements for the smart meters. In Europe, Johan Rambi is active in several European expert groups and standardisation committees on smart meter privacy & security as well as smart grid cyber security. Before he joined Alliander, he worked as Security Architect and consultant at different organisations for 15 years.



MARKUS BARTSCH **Business Development for IT Security, TÜV Informationstechnik GmbH (TÜViT – Technical Inspection Association for Information Technology), Member of TÜV NORD, Germany**

Markus Bartsch was involved in the development of protection profiles for smart metering systems. Since 1995, he has been working at TÜV Informationstechnik GmbH (TÜViT), a Technical Inspection Association for Information Technology and Member of TÜV NORD. Amongst others, it is an evaluation and certifying body for both private and public organisations such as the Federal Office for Information Security and provides accreditations for ISO standards. Markus Bartsch is responsible for smart grids and corresponding interactions with IT process control technology and smart metering as well as automotive security including web-based services (localisation services, navigation, traffic information, V2X etc.).

PROGRAMME DAY 2

Ensuring IT Security for Energy Infrastructures

9.00-9.05

Welcome Note from the Chair

Johan Rambli, Alliancemanager Privacy & Security, Alliander (Distribution System Operator), the Netherlands

9.05-10.00

End-to-End SCADA Security: Implementing a Robust Cyber Security Strategy to Protect SCADA Systems in the Digital Age

- Creating a company-wide cyber security vision with SCADA systems in mind
- Translating this vision into a strategy with a roadmap and how a security architecture can help
- Defining how robust your security should be
- Identifying opportunities to increase (embedded) security measures for new and existing SCADA systems and processes, in line with your security strategy

Johan Rambli, Alliancemanager Privacy & Security, Alliander (Distribution System Operator), the Netherlands

10.00-10.15

Discussion Round

10.15-10.45

Coffee Break and Networking Opportunity

10.45-11.30

An IP-Based Security Architecture for Power Systems

- Status, industry specifics, and challenges
- Regulations, standards, and requirements (e.g.: NERC, NIST, IEC, EU Mandate M/490)
- A standard-based security architecture built on IP (Internet Protocol)
- Security controls and services
- Use case scenario: security for substation automation
- New challenges, new technologies and outlook

Maik G. Seewald, Technical Lead and Business Development Manager, Cisco Connected Energy Networks, Innovation and Standards, Cisco Systems, Smart Grid Architecture & Cyber Security Expert

11.30-11.45

Discussion Round



MAIK G. SEEWALD

Technical Lead and Business Development Manager, Cisco Connected Energy Networks, Innovation and Standards, Cisco Systems, Smart Grid Architecture & Cyber Security Expert

Maik G. Seewald is a Technical Lead and Business Development Manager with Cisco Connected Energy Networks. He is an expert in energy automation, security and grid communication and control. Maik G. Seewald represents Cisco in several organisations such as IEC TC 57 (Power Management), IEEE PES (Power and Energy Society), IEEE P1901.2 (Narrowband Powerline), EU Mandate M/490, and CIGRE. His employment experience includes development positions with Siemens, Comneon, Advanced Micro Devices (AMD), and AUDI. His special fields of interest comprise cyber security, system and software architecture as well as smart grid architecture. In this regard, his focus is on the change from rather isolated systems into large inter-connected networks based on distributed intelligence.



11.45-12.15

Managing the Loss of IT Systems Part I – Handling Worst Case Scenarios

- Loss of IT systems and the implications
 - For physical operations
 - For commercial operations
- SCADA and the business systems required to maintain the operation of energy networks
- Managing the risk – contingency planning, training and testing

Michael Gilbert, Associate Director of the Energy & Utility Practice, Steelhenge Ltd, United Kingdom



12.15-12.30

Discussion Round

12.30-14.00

Lunch Break and Networking Opportunity

Interactive Workshop

14.00-15.15

Managing the Loss of IT Systems Part II – Workshop

Group work on a given scenario regarding the implications of loss of IT systems for your energy networks

- When it is too late – how to cope with loss of IT systems:
 - Understanding the consequences
 - Managing the consequences

Michael Gilbert, Associate Director of the Energy & Utility Practice, Steelhenge Ltd, United Kingdom

15.15-15.30

End of Seminar and Hand-out of Certificates

15.30-16.00

Concluding Teatime with Discussions



MICHAEL GILBERT
Associate Director of the
Energy & Utility Practice,
Steelhenge Ltd,
United Kingdom

Michael Gilbert is chartered engineer (MIGasE) with in-depth knowledge of the structure and operation of the energy industry and has extensive experience in resilience and IT security in energy sector. He held a number of Senior Management roles in National Grid including Head of System Control and Head of Emergency Planning. During his time as Head of System Control he was responsible for the risks associated with loss of critical IT systems and putting in place the necessary contingency arrangements. This was part of managing the Gas National Control Centre and four regional control centres responsible for the daily physical and commercial operation of the UK gas supply network. Moreover, he advised the UK Government on energy resilience within the UK when he worked for the Ministry now called Department for Energy & Climate Change (DECC). Since then, he has worked closely with a wide range of energy and utility clients. He has developed the Natural Gas Emergency Plan for the Republic of Ireland with Bord Gáis Networks and the National Emergency Plan – Gas & Electricity for Great Britain with DECC.



European Academy
for Taxes, Economics & Law

ORGANISATIONAL MATTERS

Ensuring IT Security for Energy Infrastructures

Date of Event

27th - 28th May 2013

Booking Number

S-580

Event Language

The event language will be English.

Event Price

1.389,- Euro, excl. German VAT (19%)

The above price covers the following:

- Admission to the seminar
- Hand-out documents in print and digital version
- Seminar certificate, if seminar fully attended
- Soft drinks and coffee/tea on both event days
- Lunch on both event days

Booking Modalities

It is recommended to book soon as seats are limited. For organisational matters, we kindly ask you to complete the booking form in capital letters.



BOOKING

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For online booking please visit our website: www.euroacad.eu

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(Programme is subject to alterations)

Event Location

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Friedrichstraße 151

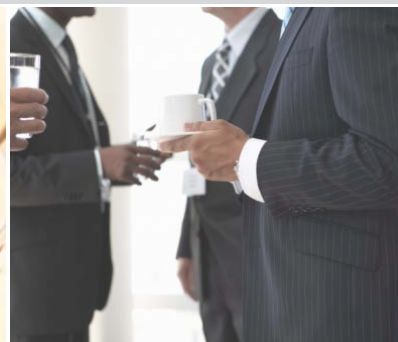
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NOTE

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BOOKING

BOOKING NUMBER: S-580 (PR)

27th - 28th MAY 2012, BERLIN

Herewith we register the following persons for the Seminar: "Ensuring IT Security for Energy Infrastructures"

Delegate 1
 Ms. Mr.

First name _____ Last name _____ Phone _____
 Department _____ Fax _____
 Job position _____ E-mail _____
 Your organisation _____
 Street _____
 Postcode / City _____
 Country _____

Delegate 2
 Ms. Mr.

First name _____ Last name _____ Phone _____
 Department _____ Fax _____
 Job position _____ E-mail _____
 Your organisation _____
 Street _____
 Postcode / City _____
 Country _____

Delegate 3
 Ms. Mr.

First name _____ Last name _____ Phone _____
 Department _____ Fax _____
 Job position _____ E-mail _____
 Your organisation _____
 Street _____
 Postcode / City _____
 Country _____

Invoice organisation

To the attention of _____
 Street _____ Phone _____
 Postcode / City _____ Fax _____
 Country _____ E-mail _____

In case of registration of more than one delegate - do you prefer: single invoice? collective invoice?

With my signature I confirm my registration and accept the General Terms and Conditions as legally binding.

I herewith agree to receive further information from the
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NOTE

Only Valid with Signature and Stamp.

Place, Date

Authorised Signature and Stamp



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