www.esna.org
info@esna.org

Newsletter // February 2011

Content:

Member news

Market news

Meet ESNA and its members at the following events

- 08-09 March 2011; IQPC – Utilities Uncovered Europe 2011 in London UK
- 14-15 March 2011; SMI European Smart Grid Cyber Security 2011 in London UK
- 16-18 March 2011; AT-Unicorn – Asia Power T&D Summit 2011in Beijing CN
- 21-24-March 2011; Terrapin – Smart Electricity World Singapore
- 22-23 March 2011; MarketForce – The future of Utilities in London UK
- 01 April 2011; Smart Electricity World Africa 2011 in Johannesburg SA
- 11-15 April 2011; SZ&W Strong Smart Grid Week 2011 in Beijing CN
- 19-21 April 2011; MeteringChina 5th annual Conference & Exhibition in Guangzhou CN
- 05-07 May 2011; Smart Grid Tec China 2011 in Shanghai CN
- 10-13 May 2011; ISGA International Smart Grid Congress in Beijing CN

- 18-19 May 2011; SMI – Demand Response & Critical Peak pricing Europe Forum in London
- 31 May-1 June 2011; EIT - Smart Grids: Transforming generation, distribution and consumption
- 01-02 June 2011; Smart grid Technology Concerence 2011 in San Jose, CA
- 02-03 June 2011; Synergy Smart Metering UK & Ireland in London
- 07-08 June 2011; Fleming Europe – The 2nd Annual Smart Grids – Smart cities in Lisbon PT
- 13-14 June 2011; CIO – Utilities Summit in Scottsdale Arizona USA
- 15-16 June 2011: SMI – Realisation of the Future Smart grid in London UK
- 15-16 June 2011; ACI – Smart Grids: Vision, Strategy, Implementation in London UK
- 14-16 Sept. 2011; 3rd Annual China Smart grid Forum 2011 in Shanghai CN

Member News

Alliander – Significant investments in Smart Grids

This month, the Dutch grid manager, Liander, will begin installing innovative operating systems at significant junctions in the electricity grid. These new systems will ensure that power outages are shorter and will allow the energy supply to become more sustainable. Liander engaged Locamation and Liandon to develop this technology. This technology puts Liander at the forefront of international developments. Implementation will take seven years at an approximate annual cost of € 15 million. It is the first significant investment in smart medium-voltage grids in the Netherlands.

Duration of power outages reduced
The junctions in the electricity grid – the distribution substations – will be fully digitalised, which means that significant power outages can be solved more quickly. Where the system – the SASensor - is installed, power outages last 30% less on average. This is because it now takes less than a minute to identify the precise location of a power outage. Consequently, engineers can start restoring the electricity supply virtually immediately. As a result, a significant power outage lasts around an hour instead of one and a half hours. It will take seven years to digitalise the distribution substations throughout the grid. This is the first step on the way to the further digitalisation of the grid, gradually leading to greater reductions in the length of power outages in the future.

Sustainable energy supply a step closer
The digitalisation of the distribution substations – a first step in making the grids smart - plays an important role in the sustainable energy supply of the future. The voltage quality in the grid will be measured continuously. This is important for the reliability of the grid if more and more customers start generating and delivering back electricity using wind turbines or solar panels.

To read the whole article…

SEAS-NVE Achieves Nearly 100% Reliability Using Echelon based Smart Grid Solution

Multi-purpose energy control network achieves 99.5% favourable rating and is saving end customers 16% in energy use.
SEAS-NVE, Denmark's largest consumer-owned utility, is achieving nearly flawless meter reading performance from their smart grid project using Echelon's NES System. Results to date for the 200,000 homes connected thus far show that hourly collection of extended load profile data (a customer' energy use over time) is consistently within a 99.7% to 100% performance range. The extended load profile data is equivalent to over 400,000 meters readings in less than 4 hours. The project is saving SEAS-NVE's customers 16% in energy use.

"The performance of the NES based solution that Eltel Networks has built for us has exceeded even our very high expectations," said Peter Holm Westergaard Iversen, SEAS-NVE's CTO. "Nearly flawless performance coupled with happy consumers is a remarkable achievement. Engaging our

customers, the consumer, in the process from its inception was key in rolling out a smart grid system that is both welcomed into their homes, and provides real, tangible savings every month." SEAS-NVE targeted a low customer complaint rate of 5% for the project. To date their complaint rate of 0.5% is ten times better then target.

To read more…

Telvent Deepens its Commitment to Smart Grid Industry Solutions With Acquisition and Technology Investment

Telvent takes majority interest and invests in Telvent DMS, LLC to accelerate development and fortify its Smart Grid Solution Suite for the global Electric Industry
Telvent announced today that it has entered into an agreement to acquire an additional stake and make an additional investment in Telvent DMS, LLC. The transaction also includes acquisition of energy management systems (EMS) applications and a new three year R&D plan which will enhance and extend its presence in global utility smart grid infrastructure investments.

Telvent will increase its stake in Telvent DMS to 57 percent. By increasing its investment for development in Telvent DMS, Telvent will enhance and further integrate its products, solutions and services portfolio including energy management systems (EMS) advanced distribution management systems (ADMS), electrical SCADA, network operations and planning, asset (GIS), outage (OMS) and meter data management (MDM) on a highly available, secure and integrated platform. Telvent expects that new customers, as well as its large base of existing utility customers, to be able to further improve operating efficiency, reduce costs and integrate real-time operations data with its enterprise in a way never before available from the market. The investment also supports the completion of an advanced EMS which provides a wide set of applications for efficient control of transmission and sub-transmission network operations. The advanced EMS tools will optimize large generation with power transmission and provide an integration of smart controls for generation from renewable resources.

To read the whole article…

EATON - U.S. Department of Energy Certifies Eaton as Energy Service Company

Eaton Corporation announced that the United States Department of Energy (DOE) has certified Eaton as an energy service company (ESCO). The certification recognizes Eaton's ability to meet the highest standards in managing energy-saving performance projects that help businesses and government organizations achieve energy efficiency objectives.
"As the need for energy efficiency and sustainability increases, so does the demand for the expertise of ESCO-certified companies," said Paul Cody, vice president and general manager, Electrical Service & Systems Division, Eaton Corporation. "Eaton is honored to be included among such a prestigious list of energy companies, utilities and other organizations that represent sustainability, energy efficiency and power management."
This designation acknowledges Eaton as an ESCO company, able to manage turnkey total energy solutions that include all aspects of key projects, such as needs assessments, installation of systems and equipment, savings verification, financing, and maintenance.

To read more…

ELTEL Networks - A head start in Smart Metering

Eltel has unsurpassed experience in AMM (Advanced Meter Management). To date, we have installed more than three million metering units. Our customers include several of the leading North European grid companies. This gives us a solid and unmatched track record.
Eltel is a full-service provider of Smart Meters. As a turnkey partner our delivery includes all elements from meters through logistics, installation and reading and operation services to overall project management.

Smart Metering is still revolutionary but Eltel is the clear leader in the field. We have already gained great experience and expertise from working with some of the largest utility companies. This has set the standard for our level of service. Eltel brings higher performance to Smart Metering implementations. And thanks to our international presence, we can act as a cross-border partner.

To read more…

E.ON Metering Competence Centre

The task of bundling experience in Smart Metering within the E.ON Group and further developing energy measurement as a new technology and driving forward standardisation in the technology has been in E.ON Metering's hands since the middle of last year.

As a new technology and business field, intelligent energy measurement is developing increasing dynamism and relevance in Germany, Europe and worldwide. The international experience of the E.ON Group, with around 1.3 million Smart Meters installed, has been bundled in an independent company, E.ON Metering GmbH, for the German market. The young company, which has the structure of a lean SME, covers all aspects of intelligent measurement as a complete provider. The Smart Metering range extends from advice, to making the appliances available and operating them up to additional Smart Meter services. In short: E.ON Metering provides system solutions under one roof. With tailor made service packages, E.ON Metering supports its business partners to secure a good starting point for itself in increasing competition.

To read more…

Echelon and Japan's ITOCHU Partner to Provide Energy Management and Smart Street Lighting Solutions

Echelon's highly reliable power line communications technology and SmartServer control solution of particular appeal to ITOCHU customers
Echelon Corporation announced it has entered an agreement with ITOCHU Corporation of Japan to be an authorized distributor and partner. ITOCHU, one of the leading trading companies in the world with approximately 150 locations in 74 countries, engages in trading for products ranging from energy and solar, to aerospace, electronics and chemicals. Echelon and ITOCHU plan to jointly develop and sell solutions for the emerging global smart grid market, with a focus on enterprise energy management, street lighting, and renewable energy.

"Conservation of energy and development of renewable energy sources are ITOCHU's focal business areas. There is a huge, global market opportunity to provide open, distributed energy control solutions that support enterprise energy management, smart street lighting and management of renewable energy. We believe Echelon's products are a perfect match for these solutions," said Tomohito Arai, General Manager, Information Technology Business Department of ITOCHU.

To read the whole article…

Vattenfall creates charging solutions of the future for electric cars

– Wireless inductive charging making a name for itself -
Vattenfall is a leader in e-mobility and is working to identify and contribute to the development of wireless charging solutions. The most promising technology at present is inductive charging.
In cooperation with the Viktoria Institute in Gothenburg, Vattenfall is running a project aiming to map the field of inductive charging, as regards both the possibilities of this technology and future business models. Vattenfall is responsible for the research and contacts with players from all over the world in order to identify companies and technologies allowing relevant products to reach the market. In this context, Vattenfall has also started a series of cooperative projects, for instance with German manufacturer WBT who is at the global forefront of these developments.

To read the whole article…

Ferranti - MECOMS™ gains traction in Denmark

Scanenergi A/S, which is serviced by our Danish partners is pleased with the impact the MECOMS™ solution has on their business processes and organisation structure. Michael Mikkelsen, managing director of Scanenergi A/S: "The reduction of manual operations enables us to handle about 50% more clients in customer management and billing, with the same resources. MECOMS™ offers us more opportunities to cross-sell, while our customers will experience better quality, because we can be more precise." Scanenergi A/S is the third largest energy trader in Denmark, with a turnover of approx. 850 million.

Meanwhile, a recent study by Deloitte analysts finds MECOMS™ to be the most promising challenger on the Danish market. The authors have plotted all major solutions as circles on a graph, with product quality on the vertical axis versus number of implementations in Denmark on the horizontal axis. The size of the circles represents the total cost of each solution.

To read the whole article…

EVB Energy solutions – Visualisation solution for Smart Metering

New: EVB is now offering an attractive starter package for existing customers for the interpretation and visualisation for Smart Metering -
In cooperation with the Smart Metering IT professionals ROCKET HOME, EVB offers its customers the most powerful software solution for a user-friendly interpretation and visualisation of smart meter data. On the basis of existing infrastructure EVB is the software quick, easy and inexpensive to implement. The system of ROCKET HOME prioritise the user benefits with a variety of functions:

- Attractive processing, interpretation and visualisation of energy use data
- Active evidence of potential savings, environmental and comfort tips
- Tariff analysis, usage control, cost-allocation, non-comparisons
- As well as extensive environmental and consumption indicators

Another advantage of ROCKET HOME: The software is "smart-home-ready". If you plan to retail offerings for the home networking in a later stage, the software is modular expansion as needed. Your advantage: You only need a single user platform and your customers are already used to it.

To read this article in German…
For more info contact...

Telvent to Implement Modern IT Solution for Dallas Water Utilities

Telvent technology will help Dallas Water Utilities increase efficiencies, cut costs and protect infrastructure
Telvent announced that it will collaborate with Prime Controls to implement a cutting-edge data technology system for the City of Dallas Water Utilities.
With this solution, Dallas Water Utilities will be able to gather a more accurate analysis of data critical to its operational decision-making and react more quickly when unforeseen situations arise within its growing network. Furthermore, the Telvent OASyS Dynamic Network of Applications system's highly developed security measures protect the city's fresh water infrastructure and meet the latest Department of Homeland Security standards.
By integrating the Telvent technology with its software, Dallas Water Utilities will have increased control capabilities throughout its water network, as well as remote monitoring and automation for multiple pump stations, storage tanks and water meter stations. This will provide a wider range of up-to-the-minute information, cut unnecessary costs and enhance customer service capabilities.
According to Telvent's CEO, Ignacio Gonzalez, "We are pleased to combine our technology with Prime Controls' capabilities to increase efficiencies for the City of Dallas. This offers Dallas Water Utilities a modern and reliable system that is efficient and secure."

To read more…

Oracle Applications for Smart Grid and Smart Metering

Smart Grid
Oracle's smart grid software is a solution set uniquely positioned to provide utilities with the end-to-end applications to help solve their technology needs for the roll-out of Smart Grid. The role of operational applications starts with distribution management features of Oracle Utilities Network Management System (which includes Outage Management and Distribution Management capabilities) and world-class Oracle Fusion Middleware to handle complex event processing, batch operations, streamlining of business processes, alignment of business applications, exponential data growth, and visualization for embedded spatial capabilities. In addition, the interaction with the utility customer is changing and is supported by applications including Oracle Utilities Customer Care and Billing, Oracle Utilities Meter Data Management and Oracle Utilities Advanced Outage Analytics. Our Smart Grid Gateway is the link to these mission-critical systems and the equipment that powers them.

Smart Metering
Oracle's smart metering software is a solution set that offers customers new ways to conserve energy, potentially reducing their bills and their carbon footprint. Oracle Utilities Meter Data Management can serve as the foundation for a Smart Metering initiative. It integrates with multiple advanced metering solutions and acts as a central data repository. It provides validated, 'clean' data for downstream systems such as billing, customer care, network management, and more. Oracle Utilities Meter Data Management feeds processed and formatted data to a variety of Oracle Utilities applications that support Smart Metering, including: Portfolio Management, Load Analysis, Load Profiling and Settlement, Customer Care and Billing, Quotations Management, Mobile Workforce Management, Asset Management, Outage Management, and Distribution Management

For downloading the Brochure " Oracle Utilities Capabilities…

GÖRLITZ - Ralf Hoffmann is Chairman of the CTG working group of ESMIG

The CTG (Communication Technology Group) commonly aims at assuring functional interoperability of products manufactured by ESMIG members with attention focused on communication technology. The European Smart Metering Industry Group fosters the advantages of smart metering in Europe. The organisation considers the harmonisation of processes and implementation of standards to be the key to future grids, measuring and metering systems, meters and communication technology. GÖRLITZ has been active for many years in the ESMIG at European level.

To read more…

GEO and Digi International Collaborate to Provide a Full Energy Management Solution for the Utility Market

Digi International and Green Energy Options (GEO) today announced at the E-World Energy and Water Exhibition that they are entering a joint collaboration agreement to develop a real-time, web-based energy management system for the European utility market. The new energy consumption information and control solution is based on the iDigi platform and Digi X-Grid solution, a solution for extending the power grid beyond the meter.

To read more…

Market News

Accenture report - Electric Vehicle Rollouts Challenged by Cost of Charging Infrastructure and Grid Management

Service providers called on to stimulate demand and manage consumer charging preferences
The large scale roll out of plug-in electric vehicles (PEVs) will be hindered unless investors stimulate demand, lower the cost of public charging infrastructure and manage the impact on the grid, according to a report published by Accenture.

The report, "Changing the game: Plug-in electric vehicle pilots", analyzed a range of electric vehicle trials around the world, focusing on pure electric vehicles (EVs) that depend entirely on charging from the electric grid. The report identified three key challenges:

- Cost: The business case for investing in public charging infrastructure is weak due to high costs and initial consumer preferences for home charging. Pilots reveal a risk that consumers may not use public charging spots at rates required to recover costs, which range from approximately $5,000 per charging station to $50,000 for units capable of fast charging a car in approximately 30 minutes.
- Control: Infrequent charging by consumers will limit the ability to control the impact of charging on power flows. Pilots show that PEVs meet the driving requirements of typical city users who may therefore not plug in their cars daily. This increases the unpredictability of charging and reduces control. Plugging in vehicles whenever parked will help grid management, easing the strain on the grid.
- Scale: While most electrification technologies work in isolation, there are too few electric vehicles in pilot areas to robustly test the technologies and their integration with each other. Grid impact will thus need to continue to be closely monitored as the market develops.

To read the whole article…
To download the White Paper…

SmartRegions – European Smart Metering landscape report

Due to the regulatory push by the European Union's Third Energy Market Package, most EU Member States have or are about to implement some form of legal framework for the installation of smart meters. Moreover, in some Member States electronic meters with bidirectional communication are installed for economic reasons even without any specific legal requirements.

As to smart metering services in Europe there is a wide range of feedback tools available to energy utilities and consumers in the form of displays, websites, information on mobile devices and TV, informative bills etc. The development within this market and the services that are offered to the final customers are key to achieving actual energy savings from the alleged saving potential.
Even though it is contested by the literature as to the extent these services in fact achieve energy savings, it is at the same time clear that without these feedback tools and additional metering services there is no benefit for the final customers. It will be difficult to convince customers of the added value of new metering technology and the modernisation of the European electricity grids, if metering data is only of use for operational changes within utilities (to reduce non-technical losses, for remote reading and switching or the simplification of billing procedures, etc.). This is particularly important because the real advantages of smart metering will and have to be compared with the related costs that will be borne by customers (not only in monetary terms, but also in terms of privacy intervention and other non-monetary issues). Only services based on metering data will provide added value to the consumers. Besides feedback tools that enable customers to regulate their energy consumption,

a number of utilities test and operate demand response and direct load control programmes in order to limit the peak load that has to be provided in the market. The Nordic countries in particular have used trial demand response programmes that give customers economic incentives to achieve a certain behaviour or apply direct load curtailment within the contractual framework with promising results. While these programmes are small-scale research projects, some of the programs show promising results with very little intervention. This report summarizes trials that are completed or in progress.

To download the report…
To get more info about the report…

ERGEG - Summary of Member State experiences on cost benefit analysis (CBA) of smart meters

Within the context of ERGEG's work on smart meters and, in particular, on the Guidelines of Good Practice (GGP) on regulatory aspects of smart meters for electricity and gas (Ref. E10- RMF-29-05), ERGEG reflected on the issue of an (economic) assessment of costs and benefits of implementing (rolling out) smart metering systems. The option to undertake such an economic assessment is included in Annex I of the 2009 Electricity and Gas Directives, which calls on Member States to ensure the implementation of intelligent (or smart) metering systems that assist the active participation of consumers. ERGEG notes, in particular, that Annex I of the Electricity Directive stipulates that "such assessment shall take place by 3 September 2012." No such deadline is provided for gas, although both Directives require (if the assessment is positive) the preparation of a timetable with a target of up to 10 years for the implementation of smart meters. As Member States and regulators begin to implement the Directives' various provisions, questions about how to conduct such an assessment, how smart meters should function and what services these meters should provide are high on the agenda for many energy market actors. The GGP aims to provide some guidance on these issues. In order to help inform its work and also to support an exchange of experience in this area

To download the whole report…

GAO – Electricity grid Modernization

The electric power industry is increasingly incorporating information technology (IT) systems and networks into its existing infrastructure (e.g., electricity networks including power lines and customer meters) as part of nationwide efforts—commonly referred to as smart grid—aimed at improving reliability and efficiency and facilitating the use of alternative energy sources (e.g., wind, solar). Despite these anticipated benefits, cybersecurity and industry experts have expressed concern that if smart grid systems are not implemented securely, they will be vulnerable to attacks that could result in widespread loss of electrical services essential to maintaining our national economy and security. Experts have also expressed concern about how well smart grid systems will work together (i.e., interoperate), whether modifications will be needed to achieve interoperability, and the extent to which the cost of modifications will be passed to consumers.
The Energy Independence and Security Act of 2007 (EISA)1 directed the National Institute of Standards and Technology (NIST) to coordinate development of a framework of, among other things, IT standards for ensuring that smart grid systems and networks are interoperable. As part of its efforts to accomplish this, NIST planned to identify interoperability and cybersecurity standards to ensure such systems and networks interoperate properly and are cybersecure. In addition to these undertakings, NIST also identified the need to develop cybersecurity guidelines, for organizations such as electric companies, on how to securely implement smart grid systems. EISA also directed the Federal Energy Regulatory Commission (FERC)—the primary federal regulator of the electricity system—to adopt those standards (identified as part of the NIST efforts) that it deemed necessary to ensure smart grid functionality and interoperability.

To download the reports…

www.esna.org
info@esna.org

PikeResearch - Installed Base of Smart Meters to Reach 350 Million in Asia Pacific by 2016

A number of electric utilities and governments in the Asia Pacific region are gearing up their smart grid initiatives, and smart meters will be an integral part of these programs. Advanced metering infrastructure (AMI), which utilizes two-way communications to enable real-time monitoring and control of energy use in residential, commercial, and industrial buildings, will be an important tool for the region's utilities to accomplish their smart grid objectives. According to a new report from Pike Research, the total installed base of smart meters in Asia Pacific will increase from 52.8 million in 2010 to 350.3 million by 2016, representing a compound annual growth rate (CAGR) of 37%.
"Governments and utilities in Asia Pacific have four major goals for smart grid and smart meter deployments," says senior analyst Andy Bae. "Their key objectives are to improve grid reliability and security, improve operating efficiencies of the grid infrastructure, balance power supply and demand, and reduce the electrical system's impact on the environment. To accomplish these goals, key industry players in many countries are making an aggressive push for smart meter rollouts."

To read the whole article…

New York Times - How Secure Is the Smart Grid

What if a burglar could browse data, which reveals which houses in an area are empty or a cyber attack could create an electricity blackout? What if you unwittingly paid for your neighbour's electricity or a hacker could hijack control of your washing machine?
These are all possible scenarios in an insufficiently secured electricity grid and in particular in the emerging smart grid.
Smart grid is a bionic upgrade to power generation and distribution that will let our energy network diagnose and heal itself, dynamically integrate renewable energy and local power sources and automatically lower electricity demand. The source of those new superpowers is IT. But increasing automation and communications within the electricity grid potentially has a dark side; increased vulnerability to attack.

To read the whole article..'

Harry Crijns
ESNA secretariat