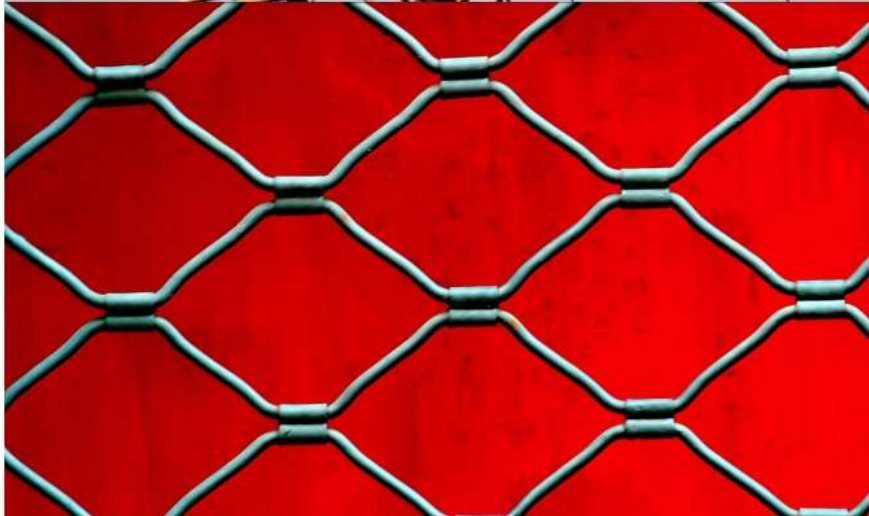
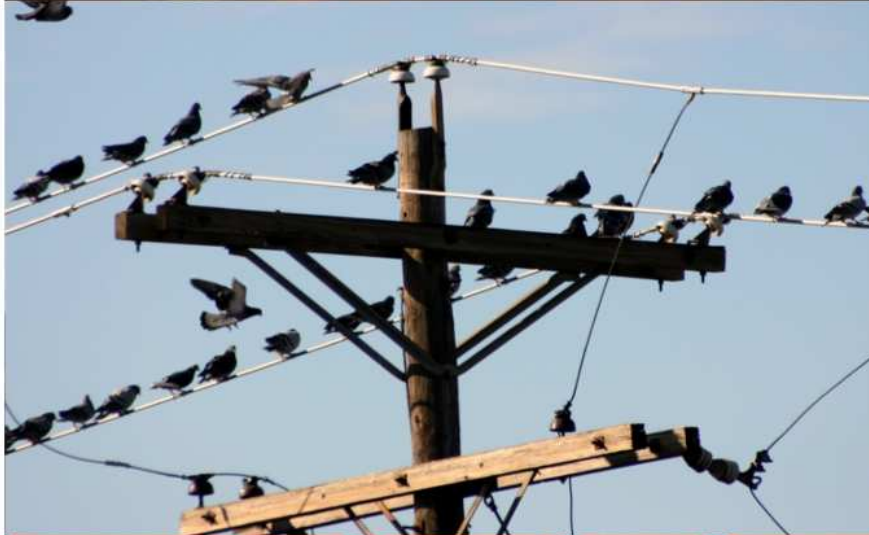




Newton-Evans Research Company's

Market Trends Digest

July 2011



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The Worldwide Smart Grid Market in 2011: A Reality Check and Five Year Outlook Through 2015

This survey based report covers data from two questionnaires completed between March and June of 2011. The first questionnaire was completed by public utility commissions and regulatory agencies, while the second was completed by electric utility operations and planning personnel.

The first question we asked PUCs was,

Do/Will you require utilities to include a Dynamic Pricing model as part of their plan to install smart meters?

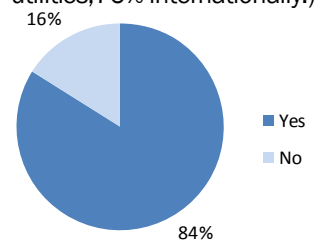
The majority of Public Utility Commissions reported that they do not require utilities to offer dynamic pricing as part of a smart meter program.

	Yes	No	Total
Total	7	34	41
Percent	17%	83%	100%

The utility survey addressed plans for smart meters and associated dynamic pricing plans; types of customer groups affected by pilot programs; plans for and current implementations of smart grid technologies; features such as distribution automation, demand response and load management, smart meters, substation automation, SCADA, FDIR, home area networks, and investigates the key drivers for success behind current initiatives. Utilities were also asked to identify which smart grid initiatives were slowest to develop and to indicate the reasons for this slow implementation. Responses were received from 112 electric utilities in 31 countries, representing approximately 150 million electricity end users.

Are smart meters part of your utility's smart grid plan?

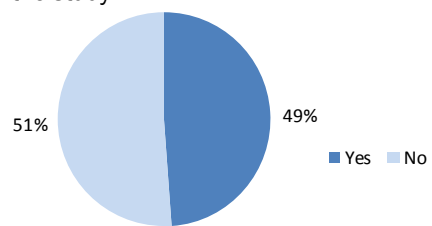
Eighty-four percent of all utilities surveyed responded that smart meters are a part of their smart grid plan. This percentage was a bit higher for Cooperatives in the U.S. (93%) and a bit lower for utilities outside the U.S. (80% of Canadian utilities, 76% internationally.)



Is Dynamic Pricing an integral part of your utility's smart meter implementation strategy?

Despite a majority participation in deploying smart meters, just under half of all responding utilities indicated that dynamic pricing was an integral part of smart meter implementation.

Utilities in North America lean more towards "no," while 64% of international utilities report that "yes," dynamic pricing is integral to their smart meter implementation. Within North America, IOUs and especially Canadian utilities were slightly more likely to be implementing dynamic pricing along with smart meters (54% and 75% answering "yes" respectively.) Further detail and statistical break outs by type of utility and world region are provided at the end of the study.



Has your utility conducted a pilot program (or is currently conducting a pilot program) to determine customer acceptance of a Dynamic Pricing model?

Overall, 38% of utility respondents answered that they are currently conducting a pilot program for a dynamic pricing model, and another 20% said they have conducted one already. These numbers were generally higher for international utilities and lower for North American utilities. Fifteen out of fifty-six respondents to this question overall reported "no" with no plans for a Dynamic Pricing pilot in the future.

Does your utility currently have Load Management (LM) / Demand Response (DR) programs in place?

Fifty-five percent of respondents overall reported that they have load management or demand response programs in place. The percentage of utilities with DR/LM was higher among North American utilities (60%) than international utilities (44%). Seventy percent of utility cooperatives in the U.S. said they currently have DR/LM in place.

This study, "The Worldwide Smart Grid Market in 2011: A Reality Check and Five Year Outlook Through 2015" is available for purchase from <http://www.newton-evans.com> or by phone: +1 410 465 7316 or toll free 800 222 2856. Please send email inquiries to Eric: <mailto:eleivo@newton-evans.com>

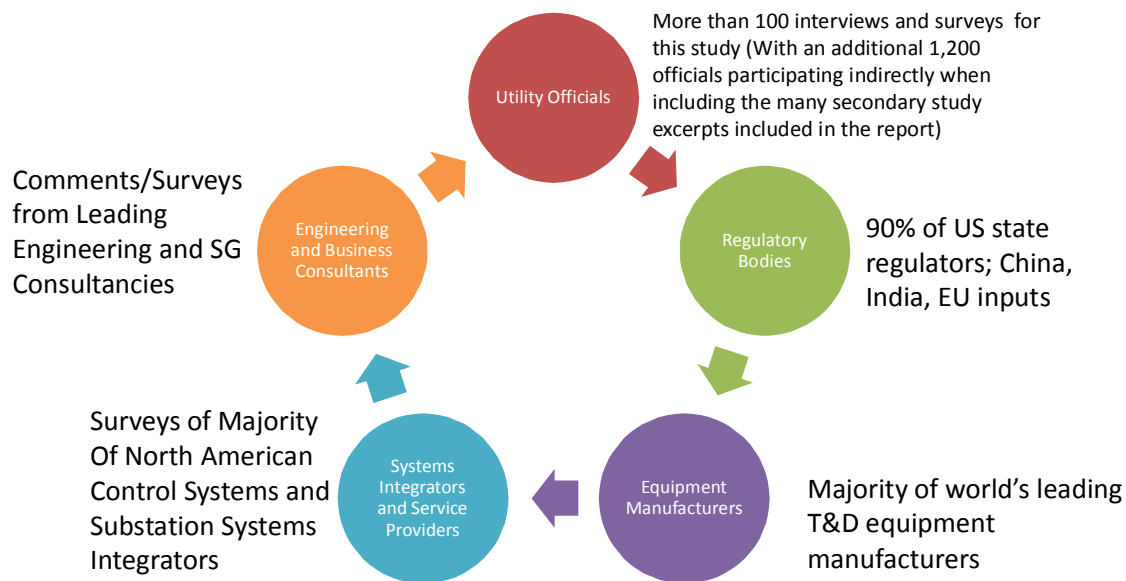


The Worldwide Smart Grid Market in 2011: A Reality Check and Five Year Outlook Through 2015

This comprehensive, survey-based report takes a look at how Electric Utilities and Utility Commissions are using or anticipating smart grid technologies. The purpose of this study is to determine market trends and usage patterns for various smart grid technologies and initiatives using the “facts on the ground” such as the implementation of electricity pricing models, demand response programs, and current/future smart meter deployment.

Methodology:

This report is based on survey responses from 41 Public Utility Commissions in the United States, 112 survey responses from Electric Utilities in 31 countries, input from smart grid manufacturers and integrators, as well as extensive secondary research.



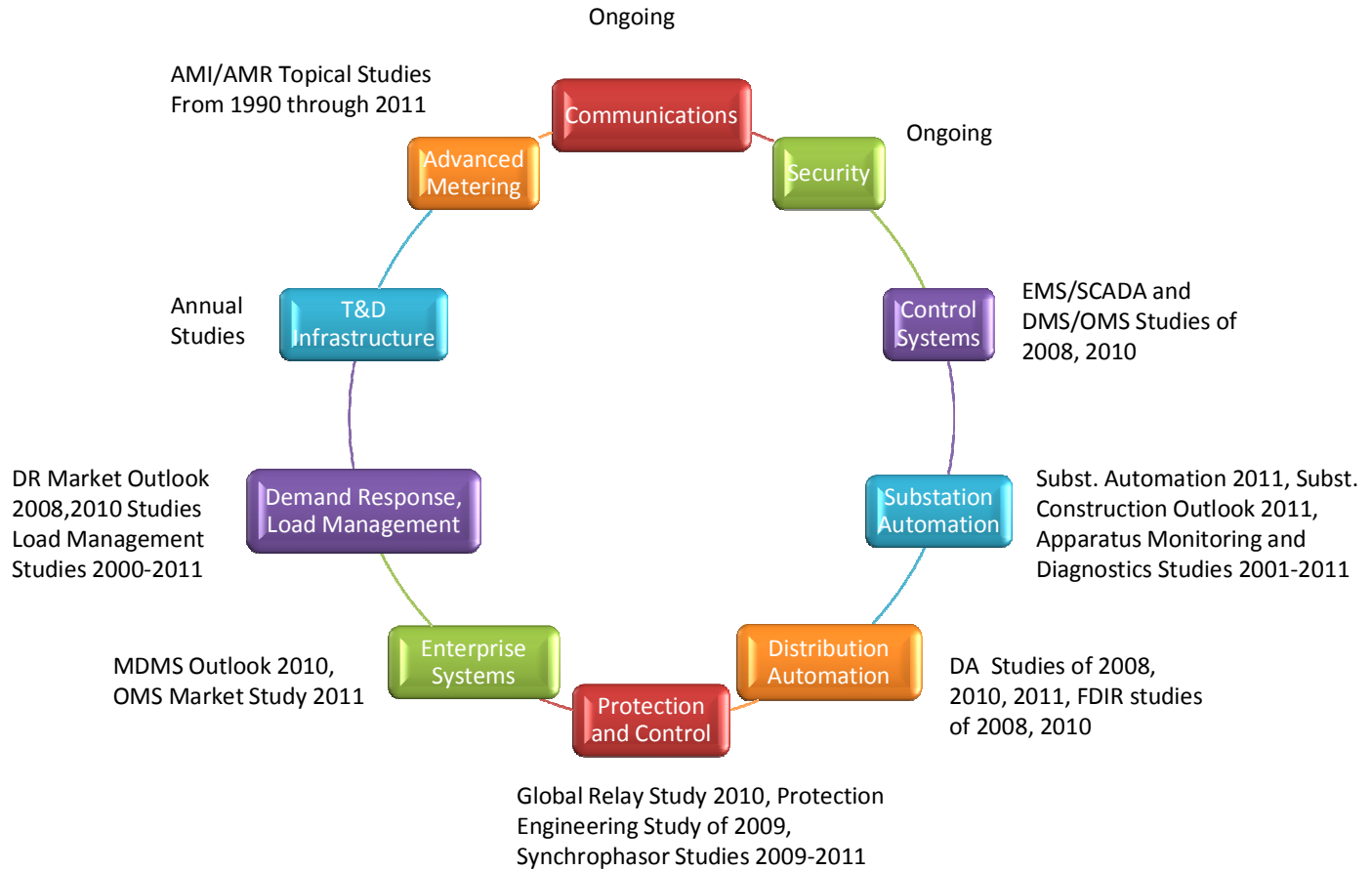
Policy/Public Service Commission topics covered include:

- What percentage of PUC's (public utility commissions) require utilities to provide dynamic pricing along with smart meters? Do PUC's anticipate a need for separate rate schedules for electric vehicles?
- Is Dynamic Pricing an integral part of smart meter implementation strategies?
- How many utilities have conducted a pilot program to determine customer acceptance of a Dynamic Pricing model?
- Have pricing models like Peak Time Rebate, Critical Peak or Time of Use been offered, or are they being considered in the near future?

Electric Utility topics covered include:

- Pilot programs for newer electricity pricing models
- Availability of new pricing models among different end users (residential, commercial, industrial...)
- Number of smart meters (two way communication) currently deployed and to be deployed by 2013
- Availability of demand response and load management programs
- Ranking of most efficient “smart meter initiatives”

What are the components of the Smart Grid and how do they fit together?



Sign Us Up!

To order this report, phone, fax or mail this form with a check (U.S. dollars) or purchase order number to Newton-Evans Research Company, Inc., 10176 Baltimore National Pike, Suite 204, Ellicott City, Maryland 21042, USA.

The Worldwide Smart Grid Market in 2011: A Reality Check and Five Year Outlook Through 2015.....\$3,750 (seat license)

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CIREN 2011 held in Frankfurt (6th - 9th June 2011) A Global Insight on the Technology and Business Drivers

Article by Gerry George

The 21st International Conference and Exhibition on Electricity Distribution (CIREN 2011) was held in Frankfurt, the lively city in the heart of both Germany and Europe. It was held in the Frankfurt Congress Center (Messe Frankfurt) and this city central location offered the record number of delegates (1,284) an excellent venue in which to enjoy CIREN 2011. The Conference was structured to address the global interest in the supply of sustainable energy from renewable resources and the need to establish smart grids whilst addressing the industry's core activities of asset, system and business management. Senior representatives from manufacturers, electricity distribution utilities, regulators, consultants, universities, research centres and major energy users from 64 countries attended and contributed to the three-day Technical Programme that was preceded by six Tutorial Sessions.

Tutorial Programme (6th June 2011)

The six tutorials held on the first day offered delegates the opportunity to attend tutorials on the following subjects:

- Smart distribution systems for a low carbon energy future
- IEC 61850 for distribution system – basic concepts and application guideline
- Regulation models for distribution network operators (DNO's) in Europe
- Standardization activities regarding Smart Grid, Electric Vehicles (EV's) and Charging Stations
- MV and LV distribution feeder design using probabilistic approaches to load and distributed generation (DG)
- Trends in harmonics below and above 2 kHz

Opening Forum (6th June 2011)

The Auditorium was packed with delegates, visitors and partners for the Opening Forum as Theodor Connor (Chairman of the CIREN National Committee) introduced the Speakers in 'The Agenda of the Top Managers in Germany'.

The Welcome presentation was given by Sven Lindgren (Chairman of CIREN) who gave the audience a brief overview of CIREN that continues to expand

internationally. CIRED now has 18 National Committees and 19 Liaison Committees who between the bi-annual CIRED Conferences that are staged by the Technical Committee, are responsible for a series of Regional Conferences. For example, CICED (China), NORDAC (Finland), CIDEL (Argentina) together with events in Croatia and Asia Pacific. In even-years, Workshops on selected topics are held and CIRED is now recognized as the "Leading International Forum for Electricity Distribution."

Jochen Kreuzel (Chairman of the German Power Engineers Society –ETG) also took the opportunity to welcome delegates and then drew attention to the challenges now facing the electricity industry in Germany. In 2010, the generation capacity from wind farms was 26 GW and photo-voltaic (PV) 17 GW, but by 2020 a target of 30% generation from renewable energy sources has been established. The generation facilities are volatile relying on generation that is remote from load centres (wind and hydro) and distributed generation in the form of wind, solar, PV and combined heat and power (CHP).

'Challenges in Power Grid Business in Germany with Special focus on Distribution' was the topic presented by Dr Egon Westphal (EON-Energie) – The integration of renewables into distribution networks is a major challenge that sees the source of generation moving closer to the point of consumption, a reversal of the trend that has existed for decades. The target is a 20% reduction in CO2 emissions, 35% share of generation from renewables and a 20% increase in energy efficiency.

Changes in electricity consumption are required and it is anticipated that this will be initiated by new smart applications: Smart Meter, E – mobility / vehicle to grid, and Customer participation. The industry's three key drivers are: Security of Supply, Economic Efficiency, and Sustainability.

The Address given Matthias Kurth (President of the Federal Network Agency), 'German Aspects of European Energy Regulation' included a number of key industry statistics. Currently there are four transmission system operators (TSO's), 70 regional and national distribution utilities, 26 large municipal utilities and 800 local utilities with over 1,000 market players in energy sales. Generation from Northern Germany from wind power, mainly off-shore is set to play a key role in meeting the nation's energy requirements but there is a deficit in north to south transmission system capacity. It is estimated that 3,600 km (miles) of EHV transmission lines are required of which only 100 km (miles) have been commissioned to

date. Approximately 13,000 MW of renewable generation installed in 155,000 installations.

The expenditure incurred in the integration of renewable generation is expected to cost € 20 billion (US\$ 29 billion) and the subsidies being paid for renewable energy is €124 million (US\$ 180 billion) with a pay-back between five and eight years. The Smart Grid projects conducted by EON and supported by intelligent grid control systems now include Customer behaviour, Intelligent substations, PV integration, and Windpower integration.

E-Car- Project, Billing, Charging, Integration & Technology' were featured in an Address delivered by Dr. Sandra Krommes (BMW). The company started e-vehicle design in 2000 and by 2009 the Mini E field trials began and later this year the BMW e-vehicle will be launched in advance of a mega-capacity introduction in 2013. By 2020, BMW estimate the electric vehicle share of the market is projected to be between 5% and 15%.

The BMW light weight e-vehicle will have a carbon reinforced fibre body shell, and an aluminium drive train. Powered by a lithium-ion battery produced by SB Motors the vehicle will have four-seats.

The Address given by Achim Zerres (Federal Network Agency) on 'German Aspects of European Energy Regulation' captured the attention of the audience with an overview of the policy regarding generating capacity. Renewable energy is now considered the main source for the future supported by an efficient grid infrastructure. Future generation capacity policy remains under review following the decision to de-commission nuclear power plants (some 23% of the existing generating capacity 8,400 MW) taken as a result of the destruction of the Fukushima plant in Japan. No realistic solution to the problem of insufficient generation has been agreed although for 2011/12 and 2012/13 a shortfall of 1,000 MW has been forecast and warnings of system shutdowns have been given.

To read the rest of this article visit our website:

<http://www.newton-evans.com/Post-CIRED2011Report.pdf>



Critical Issues In Protective Relaying

Protective Relay Engineering

Perspectives From 24 Countries

This report is based on results from a survey conducted in 2009, and it includes more respondent comments than any previous relay survey conducted by Newton-Evans. Responses were received from 87 electric utility relay engineers in 24 countries.

Section D: Strategy/Policy Issues presents the survey respondents' comments on the variety of ways utilities are structured to handle the responsibilities of their Relay Organization. This section also summarizes the tactics used to attract and retain the next generation of relay engineers. Some Utilities have extensive training programs for young talent, while many do nothing or do not even recognize it as a potential problem.

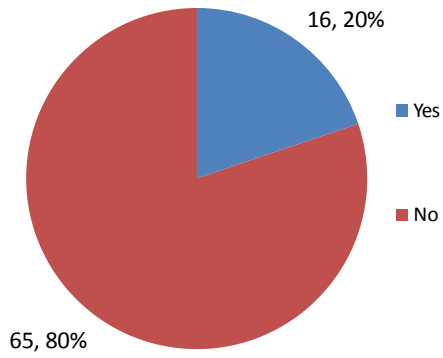
A few participants were pleased that this survey was unlike the typical P&C research to which many have grown accustomed. The questions asked in this survey cover a wide range of issues that relay engineers deal with on a day-to-day basis.

This report is not an "overview" nor is it a typical "Executive Summary." This Newton-Evans Protective Relay Engineering Perspectives report is an in-depth study of topics currently on the minds of Protection & Control professionals throughout the world. Consequently, Newton-Evans trusts that the extensive comments and detailed charts will yield valuable insights in addition to providing useful information.

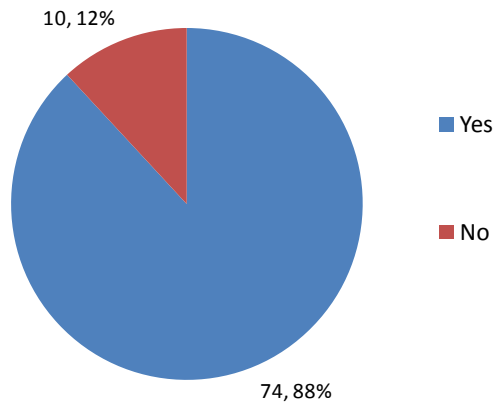
Many of the survey questions were definitive choice, i.e. "yes/no," or "pick only one of the following." However, a few questions instructed respondents to "check all that apply." Pie charts represent exclusive choice questions while bar charts represent questions where multiple answers were allowed (for example, "Which of the following criteria do you use...")

This 82 page report is available on our website for \$975. Here are a few excerpts:

In >110 kV substations, do you allow remotely made setting changes?



Do you use event report analysis to check / adjust relaying scheme or coordination?



Does your Utility use time based, condition based, or performance based testing of lockout relays or auxiliary relays used for breaker tripping?

