



## ABOUT THE NEWSLETTER

The EPRI Smart Grid Demonstration Initiative is a five-year collaborative research effort focused on design, implementation, and assessment of field demonstrations to address prevalent challenges with **integrating distributed energy resources** in grid and market operations to create a "Virtual Power Plant." This newsletter provides periodic updates on the project and relevant industry news and events.

## PROJECT UPDATE

### Hydro-Québec Smart Grid Demonstration Project – Selected as 12<sup>th</sup> Host-Site

Hydro-Québec's Smart Grid Demonstration project has completed the review process and was presented to the EPRI Board of Directors in April as our 12<sup>th</sup> large scale demonstration project.

This project intends to address performance and interoperability of a smart distribution system, consisting of a number of advanced distribution applications and the associated technologies. Utilizing the site of the conservation voltage reduction pilot, control of the project's numerous distributed energy resources (DER) integrated in the distribution management system (DMS). An advanced metering infrastructure (AMI) and meter data management system (MDMS) provide a bi-directional link between the utility and the customer. Beyond the interface with the customer, the AMI provides a potential source of voltage measurement for advanced distribution applications. Additional DER integration includes demand response technologies, electric vehicle charging and potentially vehicle to grid, concentrated solar and residential photovoltaics. In parallel with the DER technologies, automatic fault location and reconfiguration will also be deployed while a combination of WiMax and telephone lines, together with the meshed meter technology will link the various components in order to facilitate the required exchange of information.

#### Critical Priorities

- Telecom infrastructure
- IT Data management
- Interoperability standard development
- Management of equipment grid interaction

#### ACTIVE CUSTOMER PARTICIPATION

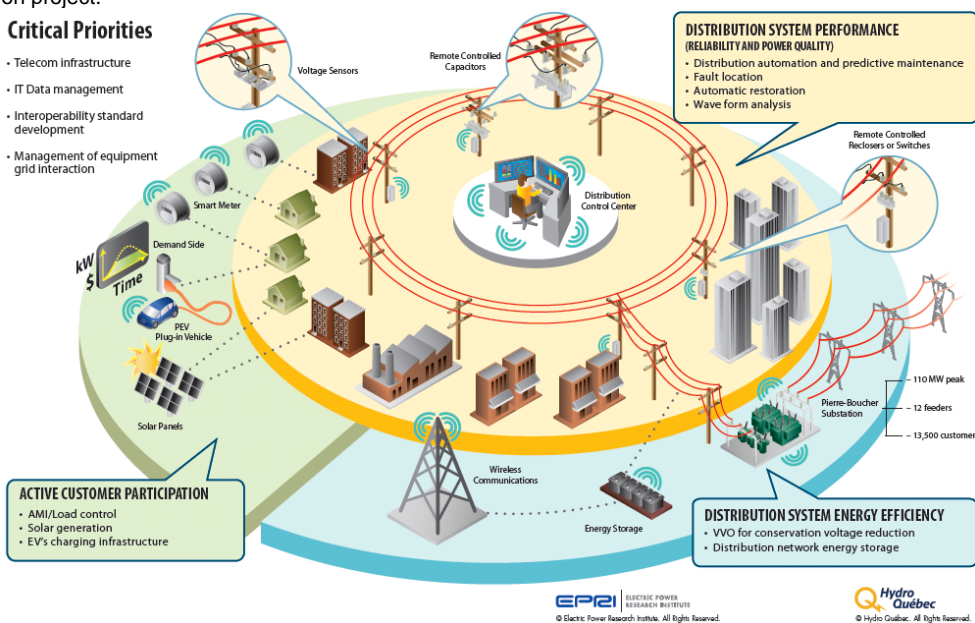
- AMI/Load control
- Solar generation
- EV's charging infrastructure

#### DISTRIBUTION SYSTEM PERFORMANCE (RELIABILITY AND POWER QUALITY)

- Distribution automation and predictive maintenance
- Fault location
- Automatic restoration
- Wave form analysis

#### DISTRIBUTION SYSTEM ENERGY EFFICIENCY

- VVO for conservation voltage reduction
- Distribution network energy storage



### Sacramento Municipal Utility District (SMUD) Smart Grid Project under review as Host-Site

SMUD's SmartSacramento Smart Grid demonstration is comprised of 21 sub-projects to be evaluated over the next three years. Overall, this demonstration is in the early deployment stage with several sub-projects well underway while others are still in the late planning stage. The Host-Site Peer Review Web Cast was on Wednesday May 25<sup>th</sup> and will be presented to the EPRI Board of Directors in August.

- The advanced metering infrastructure (AMI) sub-project is approaching 50% completion with 99% completion expected by the end of the year
- DOE gave formal approval to conduct the Consumer Behavior Study, which includes both opt-in and opt-out critical peak pricing elements
- Installation of fifteen 8.8 kWh residential energy storage battery systems in homes scheduled for late June/early July
- Installation of three 30 kWh community energy storage battery systems at distribution transformers scheduled for September
- Three 100 kW Tecogen generators (for the microgrid project) have been delivered and installation will begin in July
- Feasibility studies completed on the 1.4 MW Sacramento Solar Highway sub-project and the environmental study is underway
- The other sub-projects are largely on schedule



Figure 1: Sacramento Solar Highway Installation Conceptual Depiction

# EPRI Smart Grid Demonstration Host-Site Updates

This section provides a brief highlight of recent activities for host-sites.

## ESB Networks Smart Grid Demonstration Update



The Irish Smart Meter Electricity Customer Behaviour Trial, established by the Commission for Energy Regulation (CER) has been completed ([Link to Report](#)). As part of this project ESB Networks procured, tested and installed 6,000 smart meters and the associated IT and communications systems. The trial ran from 1st January 2009 to 31st December 2010. 2009 acted as a benchmark period, where daily half-hourly profile data was collected from all the customers but with no changes in their tariffs or billing that they received from their electricity supplier. From the start of 2010, the customers were grouped into test and control groups providing statistically valid customer samples. The test groups trialed four different time of use tariffs from their electricity supplier. In addition four DSM information stimuli packages, including bi-monthly and monthly bills combined with energy statements, and an overall load reduction incentive were trialed in support of the ToU tariffs. Over 1,200 customers were provided with an in-home display developed by ESB Networks with Elster for the trials. The IHD provided real-time consumption and cost information to the customer. Interviews were conducted with all participants at the start of the trial with a follow up interview at the end of the trial.

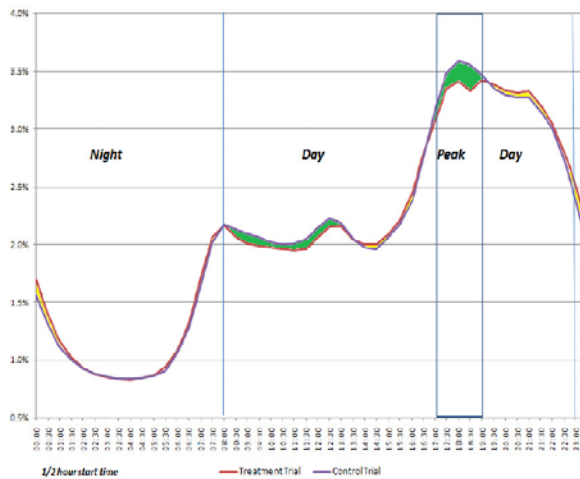
The trial has finished and the results have now been collated. These have contributed to the cost/benefit analysis being carried out by the Regulator to enable them to make a decision on the roll out of smart meters in Ireland. The combination of operational savings and the ensuing benefits achievable from changes in electricity customer behaviour demonstrated in the trial indicate a positive business case.

The Customer Behaviour Trial showed that ToU tariffs, in conjunction with other DSM stimuli results in a significant change in energy consumption with the main conclusions being as follows:

- The overall impact of ToU tariffs and DSM stimuli are found to reduce overall electricity usage by 2.5% and peak usage by 8.8%
- Customers with an in-home display showed increased load management resulting in a peak shift of 11.3% (2.5% greater than average)
- Overall energy reduction is linked with the level of usage: Households with higher consumption tended to deliver greater reductions
- Analysis of the load distribution suggests shifting of load from peak to the post-peak period and in general to night usage from peak
- There is no single tariff group that stands out as being more effective than the other, but the trial showed that ToU tariffs do encourage significant demand shifting
- Of the four DSM stimuli none is statistically better than any of the others in reducing overall electricity usage; moreover, the bi-monthly bill was not shown to be statistically significant in delivering overall energy reduction
- Demand for peak usage estimated as being highly inelastic relative to the level of the peak price incentive.

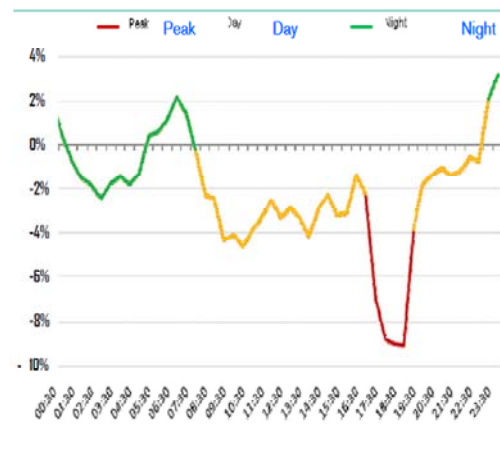
Demographic, behavioural and experiential conclusions

- The trial showed that participants adapted usage to avail of the savings achievable through the TOU tariffs on their bills. 82% of participants made some change in their electricity use and 74% stating major changes were made by their households
- Simple information can also be effective: The fridge magnet and stickers achieved 80% recall with 75% finding the magnet useful and 63% finding the sticker useful
- The in-home display was deemed to be effective as a support to those achieving peak reduction (91% rated it as an important support) and shifting to night rates (87% deemed it an important support).



www.esb.ie/esdr

Figure 3: Weekday Load Profile: Incentivised Customers vs. Control Group



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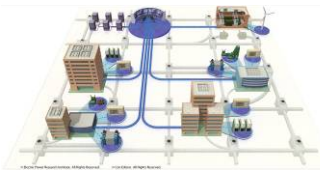
Figure 2: Treatment Group - Load Reduction

**American Electric Power (AEP) Smart Grid Demonstration Update**



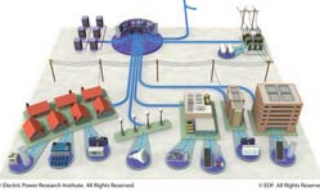
AEP presented the monthly deep dive webcast for April covering details of the project. Topics included the AEP approach to modeling and simulation (CES, volt/var), IVVC, interval data loads, model and circuit validation in OpenDSS, energy storage projects, PHEV, AEP customer engagement, and overall project plans moving forward. Both the presentation and the recording of the presentation are accessible in the program cockpits on the EPRI site.

**Consolidated Edison Smart Grid Demonstration Update**



ConEd is working on plans for an internal demonstration during the May or June timeframe that will involve ConEd network operations interface (e.g. DRCC) where a signal will be dispatched to a Verizon facility. An interface that was included that can also be used at the building facility. Innovative, as the aggregator, will also have a global view (interface screens) into the system to observe the event from a third perspective. An ISO notification is also being considered for the demonstration. A related use case development session initiated the first draft of a use case on AutoDR for Network Operators with expertise from Infotility (interfaces/GridAgents contractor), EPRI and ConEd personnel providing expertise in related areas.

**Electricité de France (EDF) Smart Grid Demonstration Update**



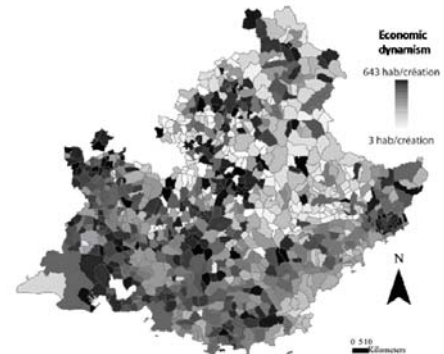
**Scaling up the Results of the PREMIO Simulation:** Within the PREMIO project, an evaluation has been performed to study the impacts of applying the load reduction simulations originally applied to the town of Lambesc on a bigger scale. This study was performed in conjunction with the engineering school, Mines ParisTech and was part of a recent Ph.D. Thesis.

The same simulation model presented in this Newsletter of March 2010 was used. This study assumes that a more accurate spatial resolution of input data (such as demographic, social, economic, geographic, institutional and energetic aspects) can be used to create a better representation of PREMIO platform impacts. The test was carried out by spatializing all input parameters of the reference simulation model and comparing the results of the spatialized model with the non-spatialized data model.

This study showed that:

- There are differences in the local and scaled up impact. The impact of scaling up the model may be positive for the electric behavior on a scale of 12 towns. However, the impact on the behavior of the local system for each of these towns can be decreased and vice versa.
- The importance of electrical consumption of control equipment and ICTs. These devices may hide power reduction and potential energy savings of Direct Load Control. Consumption and implementation of different modes (on, standby, etc...) in the equipment must be optimized for their particular use.
- It appeared that in a scaled up model, an optimal deployment of certain (not all) Distributed Resources exists, which allows them to maximize their benefits on a given territorial scale.

An extrapolation of the case study from 12 to 230 towns is being conducted and shall be the subject of a future presentation.



**Figure 4: The representation of the data spatialized for a region of 12 towns**

**Exelon (ComEd/PECO) Smart Grid Demonstration Update**



**ComEd CAP Analysis Update:** EPRI conducted an analysis using data from the first three months (June-August 2010) of the ComEd Customer Applications Program (CAP). (See [EPRI report #1022703](#)) In preparation for the final project analysis EPRI is examining the impacts of applying various analytical methodology to complex data resulting from a multifaceted rate and technology pilot such as the CAP.

Upon an observation that contrasting results can be generated, the EPRI team initiated a review of various analytical approaches that can, or have been, utilized in evaluation of the data resulting from the numerous consumer, technology, and tariff related pilots undertaken in the utility industry. Various analytical methods could be deemed quite valid in certain circumstances while a unique event in the sequence of data will reveal cases where further study is needed to determine the sources of analytical differences. The resulting analysis will likely serve as an interesting case study on the application of various analytical methods and will be covered in the final analysis phase of the ComEd pilot targeted for completion in the fall of 2011.

**KCP&L Smart Grid Demonstration Update**



KCP&L recently finished meetings with EPRI staff (Bernie Neenan, Christina Haddad and Brian Green) to discuss best practices and experiment possibilities with their Customer Engagement Measurement and Verification project. This meeting allowed the members to discuss experiment strategies for the project that will assure the most statistically sound answers.

The team continues to work on use cases they are now up to 90+ for their project. We hope to hear more about their use case efforts at the October Advisory meeting in Kansas City in October.

### Southern Company Smart Grid Demonstration Update



Development of a detailed research plan and test plan for Southern Company's Smart Grid demonstration is currently underway. EPRI conducted an on-site workshop at the beginning of Q2 to support detailed project documentation

and present the cost/benefit analysis process for evaluation of the Smart Grid demonstration. The workshop resulted in the organization of 11 sub-projects that comprise the full demonstration. The sub-projects are subject to change as the research plan undergoes iterations.

The high-level sub-project breakdown is as follows:

- Sub-project 1:** Communication
- Sub-project 2:** Intelligent Universal Transformer
- Sub-project 3:** Electric Vehicle Integration
- Sub-project 4:** Renewable Generation – Landfill Gas
- Sub-project 5:** Distribution Efficiency
- Sub-project 6:** Solar Thermal
- Sub-project 7:** Energy Storage
- Sub-project 8:** PV
- Sub-project 9:** IDMS
- Sub-project 10:** Dynamic Pricing (Critical Peak Pricing – CPP)
- Sub-project 11:** Phasor Measurement

As part of the project, ten Lithium-ion based energy storage systems from Greensmith Energy Management Systems are being installed and tested. Each is rated at 6 kW, 24-kWh. Seven units have been placed in field trials and one is being tested in a lab environment. Two of the units are yet to be delivered.

Application testing sites for the units within the operating companies have not yet been determined and are currently located in a parking lot area of Southern's General Services complex as shown in the picture.

Eight of the ten bi-directional Ion-7330 revenue meters (see insert) were recently installed which were provided by EPRI as part of the Energy Storage Program to monitor the storage units and evaluate their operation. These units transmit data at one second intervals to an EPRI server via cellular modem. The data, both real-time and historical, can be viewed via a web portal displaying voltage, current, real and reactive power, energy, power factor and frequency.

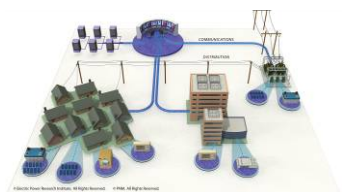


**Figure 5: Drew McGuire (Southern), Jeff Roark (EPRI) & Dexter Lewis (Southern)**



**Figure 6: Battery Units with Ion 7330 Meters**

### PNM Resources Smart Grid Demonstration Update



**Standards Documentation and Analysis at PNM:** Pat Brown and Tim Godfrey met with a host of individuals at PNM to perform an analysis of the standards implemented at PNM and the reasoning behind their implementation. The current technology portfolio at PNM was presented in detail. The standards and protocols that were used were enumerated along with the reasoning that PNM had to choose the implementation. The ability of vendors to support newer, more robust technology was a major deciding factor. Also formulated was a vision of the future ITC structure at PNM and barriers to the implementation of that vision.

- The expected deliverables of this effort will include
- o Circuit drawing & application/interface drawing
  - o Summary observations
  - o Interface Spreadsheet
  - o Analysis of the Results

One of the lessons learned was that the IntelliGrid<sup>(SM)</sup> methodology did an excellent job of determining the functional requirements for PNM's SG Demonstration technology. After surveying the market place, it was determined that PNM could not implement the suite of technologies that the IntelliGrid methodology identified – the vendors could not support it. The IntelliGrid methodology did not have a good way to update and down-select the technology portfolio. This is a future development opportunity for IntelliGrid.



**Figure 7: Jon Hawkins (PNM), Mark Lane (PNM), Pat Brown (EPRI) and Tim Godfrey (EPRI) discuss the standards implemented at PNM**

The rest of the results were presented at the PNM Deep Dive webcast on May 19 and will be part of a report that will be available to the SG Demo members later in the summer.

## Southern California Edison Smart Grid Demonstration Update



SCE's Irvine Smart Grid Demonstration (ISGD) project is currently in the late stages of planning for most of the sub-projects and early stages of

engineering/design on others. The Department of Energy's Metrics & Benefits Reporting Plan was formally submitted on April 25, 2011 and awaiting response with estimated completion in the beginning of the 3rd quarter of 2011. Most of the sub-projects' Statements of Work have been finalized by SCE and await final agreement from the partners with contracts expected to be finalized by the 3<sup>rd</sup> quarter of 2011.



**Figure 8: Inside and Outside of SCE's Containerized 2MW lithium-ion Battery to be located on a 12kV circuit primarily used with dispatching DER**

## Strategic Smart Grid Research Issues and Topics

### Strategic Research Topics for Cross-Collaboration in 2011

Four strategic issues were identified as top priority research topics to collaborate across host-sites in 2011. Below is an update on the progress of the 2011 topics. Formal updates will be presented during the three EPRI Smart Grid Demonstration Advisory Meetings in that calendar year and selection of new topics will occur for 2012, 2013 & 2014.

### Conservation Voltage Reduction (CVR) and Volt/VAR Optimization (VVO)

The June meeting will feature an EPRI Engineer discussing the current and recent modeling work with CVR/VVO using OpenDSS. Much has already been done in this area and we will learn from the presenter how OpenDSS provides features and opportunities that most modeling software does not offer and what that could mean for you the member. They will discuss CVR Factor, Energy Efficiency and Demand Response usages of CVR/VVO and give us "real world" analysis from several distribution circuits. We also hope to have one of our members present on the latest findings from their VVO Project

### DMS Integration and Visualization

The last newsletter reported on the completion of the original goal for the DMS Data Visualization and Integration Strategic Project. The team met to discuss what the focus of the research should be next. Items that were discussed include:

- Change the survey question into an RFI and send it out to DMS vendor to determine their technology "footprints."
- Develop a whitepaper that outlines the basic steps to developing a Smart Grid.
- Develop a whitepaper that discusses the decision factors in a DMS implementation.
- Develop a white paper that would look into human factors research.

A quick survey is being developed to rank the suggestions. This effort is also closely coordinated with the DMS Interest Group, started by Bob Uluski of EPRI. We will be sharing information and holding joint events in the coming months. Upcoming events of interest involving DMS Visualization and Integration include a web cast and face to face meeting in August – listed in the "Additional EPRI Events" portion of this newsletter.

### Energy Storage Monetization

Development of the prototype valuation tool software is underway. Much of the model development has occurred so far, and the Energy Storage program is working with contractor E3 to develop a first iteration of the user interface. We plan to have a web cast on the topic in the next week or two. In parallel, a list of key input parameters is being put together for the model to direct our case study utility partners to find key information internally for the purpose of performing site specific value analysis. We would like to begin the first case study after the web cast, and hopefully have some preliminary findings and present them at the June advisory meeting.

### Consumer Behavior and Engagement

In conjunction with a firm that engages in both marketing and consumer research, EPRI is working on a two phased project to understand how a consumer may become engaged in grid modernization. Initial study will be brief and target 1000 consumers of a mix of demographics to cover a baseline of consumer understanding. A more detailed study will follow using an on-line focus group format. The second study will separate groups by those with some knowledge of the smart grid and those without any background knowledge of the topic. This study will be designed to uncover items such as what drives consumer motivation and observation of a process of learning about the smart grid along with concerns and uncovering related consumer values and motivations. The team is planning to log consumer interactions and discussion for further review.

### Cyber Security Strategies & Practices

Cyber Security was identified as the 5<sup>th</sup> priority strategic topic and in an effort to document current practices associated with cyber security and privacy, Galen Rasche and Annabelle Lee, EPRI Technical Executives, are completing a number of interviews with host-sites. A summary of the interviews will be presented at the June advisory meeting with a follow-up written report in the following months. EPRI's [Cyber Security and Privacy Initiative](#) is a new and growing program at EPRI addressing key issues to address members' needs. The interviews in the Smart Grid Demonstrations are helping to drive and prioritize EPRI's overall Cyber Security & Privacy research. The Cyber Security and Privacy Initiative will provide a proactive approach of mapping security and privacy landscape, provide guidance on cyber security requirements, provide approaches to mitigate cyber security risk and perform short-term R&D to address gaps in current cyber security work. If you are interested in learning more about the Cyber Security Initiative, email [Galen Rasche](#) or call at 650-353-0336.

## Key Deliverables and Information since Last Newsletter

### EPRI Program COCKPITS



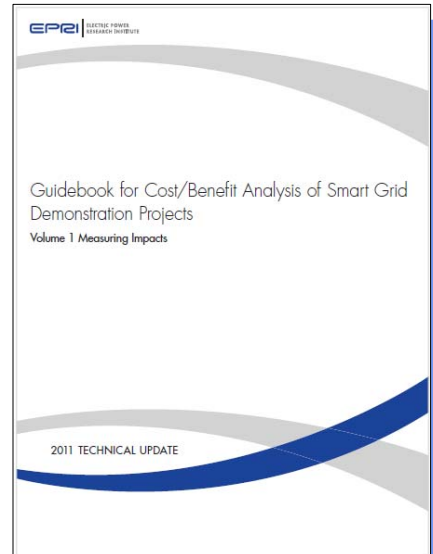
Access ALL program and project information in one, centralized place!

EPRI's new [Program Cockpits](#) provide EPRI Members a centralized location to bring together research results, events and event materials, links to collaboration and user groups, contacts, committees, technology transfer and more. The Smart Grid Demonstration program information is also available in the Cockpits including access to the monthly web casts and the advisory meeting presentations which are available for download.

### Cost/Benefit Analysis Guidebook for Smart Grid Demonstration Projects Volume 1: Measuring Impacts

Product ID: [1021423](#)

This report presents a step-by-step process for estimating the costs and benefits associated with Smart Grid demonstration projects. In its entirety, the guidebook is meant to function as a standalone user's manual for the analysis process, from the initial step of describing the project to the final step of communicating the results to all stakeholders. This volume of the guidebook contains detailed discussion of the first seventeen steps, from initial project definition to establishing measurement and verification protocols. Further, it applies these steps to a specific Smart Grid technology to illustrate how the methodology can be applied.



#### Related – US Department of Energy (DOE) Cost/Benefit Analysis Resources

The Department of Energy's Smart Grid Computational Tool is now available online. The following link also provides a consolidated location for the DOE CBA activities: [http://www.smartgrid.gov/recovery\\_act/program\\_impacts/assessing\\_benefits](http://www.smartgrid.gov/recovery_act/program_impacts/assessing_benefits).

### ComEd Customer Application Program (CAP) Appendix

Product ID: [1022761](#)

This report provides appendices that support EPRI report [1022703](#), which describes the Phase 1 analysis of some aspects of residential customers' response to Commonwealth Edison's Customer Application Plan (CAP). This report contains technical materials that describe in detail all of the methods employed in conducting the Phase 1 analysis and presents the results of the application of those methods.

### Smart Grid Training – Advanced Distribution Management Systems (DMS) Applications – Training Session #1

Product ID: [1023169](#)

(Training DVD available to order – not available for download)

This is the first of a series of Smart Grid training DVD's from the optional Training Sessions at the Smart Grid Demonstration Advisory Meetings. Bob Uluski, EPRI Technical Executive, Provided the training on Advanced Distribution Management System (DMS) Applications. This DVD can be used as a training resource by our members for their in-house training sessions as an effective education tool for engineering, operations and key smart grid related staff to help them understand one of the key functions being implemented in the smart grid. The June Smart Grid Training topic is Communications with an Emphasis on wireless technologies by Tim Godfrey and the October meeting will provide training on Cyber Security.



### Heart Transverter HT2000: Test and Evaluation

Product ID: [1023251](#)

The HT2000 is a novel multifunctional system manufactured by Heart Transverter, S.A. This unit can be a grid-tied system that primarily functions as an UPS but can also integrate solar, while performing advanced monitoring and measurement functions. EPRI conducted an exhaustive evaluation of this system, the results of which are documented in this report. In summary, the unit performed as expected. However, a few issues were seen during the testing. Heart Transverter, S. A. responded promptly to these issues by addressing fixes in the units to solve these problems. The feedback from Heart Transverter and the corrective actions that were taken are also documented.

## Related deliverables, not from Smart Grid Demo, but publicly available for free

### **Estimating the Costs and Benefits of the Smart Grid: A Preliminary Estimate of the Investment Requirements and the Resultant Benefits of a Fully Functioning Smart Grid**

[Product ID: 1022519](#)

The primary goal of this report, which is a partial update to an earlier report (EPRI 1011001), is to initiate a stakeholder discussion regarding the investment needed to create a viable Smart Grid. To meet this goal, the report documents the methodology, key assumptions, and results of a preliminary quantitative estimate of the required investment. At first glance, it may appear the most obvious change from the 2004 report is the significant increase in projected costs associated with building the smart grid. In actuality, the increased costs are a reflection of a newer, more advanced vision for the smart grid. The concept of the base requirements for the smart grid is significantly more expansive today than it was seven years ago, and those changes are reflected in this report.

### **Plugging In: A Consumer's Guide to the Electric Vehicle**

[Product ID: 1023161](#)

Late in 2010 the first mass-produced electric vehicles hit dealer showrooms, bringing car buyers a new, electric option. Electric cars offer performance, safety and versatility and can be charged from the electric grid, providing convenient, low-cost, at-home charging. At the U.S. national average price of 11.5 cents per kilowatt-hour, buying electricity is approximately equivalent to buying gasoline at \$1 per gallon. Displacing gasoline with electricity also lowers emissions and decreases petroleum use. On a typical day half of all drivers log 25 miles or less, so electric vehicles—if widely adopted—could reduce petroleum fuel consumption by 70 to 90%. One challenge for consumers is to understand their driving needs and how each vehicle option can meet their specific requirements. This brochure reviews three options and some essential points for buyers to know about each.

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## KEY EPRI SMART GRID DATES

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### **EPRI Smart Grid Demonstration Advisory Meeting – June 28-30, 2011**

**When/Where:** Hosted by Duke Energy, Cincinnati, OH, June 28-30 (Invitations Sent, [Link to Event](#))

Contact [Robin Pitts](#) (865-218-8057) if you are a member of the Smart Grid Demonstration Initiative, but did not receive an invitation.

The Summer EPRI Smart Grid Demonstration Meeting will include an update on Duke Energy's smart grid demonstration project and a tour of their Envision Center – *a model and testing facility for smart and energy efficient technologies*. This meeting will have an optional ½ day smart grid training session on June 28<sup>th</sup> (8:30 – noon) on Communications with an emphasis on Wireless Technologies.

The focus for this meeting will include an update on the four strategic topics of 2011 with presentations from members on these topics:

- Consumer Behavior, DMS integration / visualization, Conservation Voltage Reduction & Volt VAR Optimization, & Energy Storage Monetization.

The meeting will also provide an update on our Cyber Security Survey with Host-Sites and provide an update on the 3 Year Update and the Final deliverable - "Smart Grid Reference Guide to Integrate Distributed Energy Resources".

### **Future EPRI Smart Grid Demonstration Advisory Meetings**

All Smart Grid Demonstration Members (not just Host-Sites) are invited to host future meetings. Members interested in hosting one of the upcoming meetings, Contact Matt Wakefield.

<b>2011</b>	October 18-20	Meeting Hosted by <b>KCPL</b> , Kansas City, MO
<b>2012</b>	Feb/March –	Meeting Hosted by <b>CenterPoint Energy</b> , Houston, TX
	June/July –	Meeting Hosted by <b>Southern California Edison</b> , Westminster, CA
	Oct/Nov –	Meeting Host TBD
<b>2013</b>	3 Meetings	Meeting Hosts TBD
<b>2014</b>	3 Meetings	Meeting Hosts TBD

### **Smart Grid Demonstration Host-Site “Deep Dive” Web Casts for Members**

Throughout 2011, each host site will provide an update on their project to facilitate deeper learning and reporting on the individual projects. Members of the Smart Grid Initiative should have received an invitation to these web casts. Contact [Matt Wakefield](#) for more information.

**2011 Smart Grid Demonstration Host-Site Webcast Schedule** (3<sup>rd</sup> Thursday of the Month at 11am (Eastern) for 1 ½ to 3 hours)

- January 20th, ESB Networks (**COMPLETE**)
- February 17th, FirstEnergy (**COMPLETE**)
- March 17th, Electricité de France (**COMPLETE**)
- April 21st, American Electric Power (**COMPLETE**)
- May 19th, PNM Resources (**COMPLETE**)
- June 16th, Southern California Edison
- July 21st, Southern Company
- August 18th, Duke Energy
- September 15th, Exelon (ComEd/PECO)
- October 20th, Con Edison
- November 17th, KCP&L
- December 15th, TBD

### **Other Smart Grid Related Meetings and Conferences**

For a full list of national and international smart grid meetings and conferences, visit [EPRI's Industry Smart Grid Calendar of Events](#).

Interesting note, we now have over 120 Smart Grid Conferences/Events for 2011 and it's only May! EPRI's Power Delivery and Utilization Calendar of Events is accessible [here](#).

Additional EPRI Related Meetings	Date	Location	More Info
<b>Volt-Var Optimization using DMS</b> Contact <a href="#">Bob Uluski</a> for more information	June 1, 2011	Web Cast	<a href="#">Link</a>
<b>NESCOR Annual Summit</b> National Electric Cyber Security Organization Resources (NESCOR) Annual Summit Hosted by EPRI	June 29-July 1, 2011	Arlington, VA	<a href="#">Link</a>
<b>Electricity Pricing for the 21<sup>st</sup> Century: Remodeling or New Construction?</b> EPRI is organizing a workshop to explore issues, and encourage constructive and insightful dialogue, on how electricity rates can serve the wide range of interests associated with a Smarter Grid	July 14-15, 2011	Nashville, TN	<a href="#">Link</a>
<b>IEC 61850 Training and Workshop</b> Classroom training and equipment demonstration to assist utility P&C staff in obtaining a good knowledge of IEC 61850 standard.	August 3-5, 2011	New York, NY	<a href="#">Link</a>
<b>EPRI Power Quality &amp; Smart Distribution Conference and Exhibition</b> EPRI and TVA, along with the Tennessee Valley Public Power Association (TVPPA) and local conference host, the Nashville Electric Service (NES), invite you to the 2011 EPRI Power Quality (PQ) and Smart Distribution Conference and Exhibition.	August 15-17, 2011	Nashville, TN	<a href="#">Link</a>
<b>DMS Interest Group Face-to-Face Meeting</b> This meeting will occur as a post-conference workshop following the EPRI Power Quality & Smart Distribution Conference and Exhibition. Contact <a href="#">Bob Uluski</a> for more information.	August 18, 2011	Nashville, TN	<a href="#">Link</a>



Happy 50th Birthday to John Simmins! He "Took one for the Team" and missed celebrating this milestone with his family as he was traveling at the European CIM User's Group Meeting. We celebrated when he returned with a mild (hehe..) redecorating of his office & some birthday cake. (Don't ask about the crown – it's an EPRI (Knoxville) thing)

### Member Utilities of EPRI's Smart Grid Demonstration Initiative

American Electric Power | Ameren | Central Hudson Gas & Electric | CenterPoint Energy | Consolidated Edison  
 Duke Energy | Electricité de France | Entergy | ESB Networks | Exelon (ComEd & PECO) | Hydro-Québec | FirstEnergy  
 KCP&L | PNM Resources | Sacramento Municipal Utility District | Southern California Edison | Southern Company  
 Southwest Power Pool | Salt River Project | Tennessee Valley Authority | Wisconsin Public Service Corporation

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