

U.S. Department of Energy Electricity Advisory Committee Meeting Capital Hilton Hotel Washington, DC October 16, 2012

Summary of Meeting

EAC Members in Attendance:

WILLIAM BALL, Southern Company LINDA BLAIR, ITC Holdings Corp RICK BOWEN, Alcoa

MERWIN BROWN, California Institute for Energy and Environment

PAUL CENTOLELLA, former commissioner, Ohio, now with The Analysis Group

RICHARD COWART, Chair of the EAC, Regulatory Assistance Project

ROBERT CURRY, former commissioner, New York, now with Curry Energy

CLARK GELLINGS, Electric Power Research Institute

DIAN GRUENEICH, former commissioner, California, now with Grueneich Consulting

MICHAEL HEYECK, American Electric Power

PAUL HUDSON, former commissioner, Texas; now with Stratus Energy Group

SUSAN KELLY, American Public Power Association

BARRY LAWSON, National Rural Electric Cooperative Association

RALPH MASIELLO, KEMA

DENNIS MCGINN, American Council on Renewable Energy

DAVID NEVIUS, North American Electric Reliability Corporation

CHRIS PETERS, Entergy Corporation

SONNY POPOWSKY, Vice Chair of the EAC, Pennsylvania Office of the Consumer Advocate WANDA REDER, S&C Electric Company PHYLLIS REHA, Minnesota Public Utilities Commission BRAD ROBERTS, S and C Electric Company TOM SLOAN, Kansas House of Representatives CHRIS SHELTON, AES Energy Storage DAVID TILL, Tennessee Valley Authority REBECCA WAGNER, Nevada Public Utilities Commission GORDEN VAN WELIE, Independent System Operator of New England MIKE WEEDALL, formerly with the Bonneville Power Administration **US DOE Participants in Attendance:** LAUREN AZAR, Senior Advisor to the Secretary ANJAN BOSE, Senior Advisor to the Undersecretary BILL BRYAN, Deputy Assistant Secretary, Infrastructure Security and Energy Restoration, DOE JAY CASPARY, Special Advisor to the Assistant Secretary, OE MICHELLE DALLOFIOR, Senior Policy Director to the Assistant Secretary, DOE ALEX DAHL, Office of the General Counsel, DOE **KERRY CHEUNG, DOE AAAS Fellow** IMRE GYUK, Energy Storage Program Manager, OE DEBBIE HAUGHT, DOE OE PATRICIA HOFFMAN, Assistant Secretary for Electricity Delivery and Energy Reliability (OE) RACHNA HANDA, Smart Grid Investment Grant Program, DOE CHRIS IRWIN, Smart Grid Standards and Interoperability Coordinator, OE KATHY KONIECZNY, Office of the General Counsel, DOE ERIC LIGHTNER, Smart Grid Task Force, OE DAVID MEYER, US Department of Energy, OE TITILAYO OGUNYALE, Special Assistant to the Assistant Secretary, OE

JOE PALADINO, Senior Advisor, Smart Grid Program Manager, OE BILL PARKS, Senior Technical Advisor to the Assistant Secretary, OE MICHAEL RODRIGUE, US Department of Energy MATT ROSENBAUM, US Department of Energy, OE ELAINE ULRICH, Solar Energy Technologies Program, DOE **Other Meeting Participants: MICHAEL BRAIRTON, ITC Holdings** JAY CARRIERE, MidAmerican NICHOLAS COLAMBO, Stateside Associates JIM CREEVY, National Electrical Manufacturers Association KAREN FORSTEN, Electric Power Research Institute ROBERT HENKE, ICF International JOHN HOWES, Redland Energy CHERYL LAFLEUR, Federal Energy Regulatory Commission EUGENE LITVINOV, ISO-New England CAROLE MCGUIRE, Lewis-Burke Associates LLC PHIL MIHLMESTER, ICF International TOM O'BRIEN, PJM **ROBIN PODMORE, IncSys** PETAR RISTANOVIC, California ISO AARON ROTHSCHILD, Rothschild Financial ELLIOT ROSEMAN, ICF International MATT SADINSKY, PREP Intl TOM SCHNEIDER, National Renewable Energy Laboratory JOHN SHENOT, Regulatory Assistance Project PEGGY WELSH, Energetics Incorporated

EAC Transmission Subcommittee 2012-2013 Recommendations and Work Plan (8:06 a.m.)

Richard Cowart welcomed everyone to the second day of the October 2012 Electricity Advisory Committee (EAC) meeting. He invited members of the public to address the EAC by signing up for the public comment period, and reminded everyone that the agenda for the day was very full. Mr. Cowart then introduced the chair of the Transmission Subcommittee, Mr. Michael Heyeck, and asked him to walk through the white papers that his subcommittee had been developing for review and approval by the EAC.

Michael Heyeck spoke about the three papers that had been developed by the transmission subcommittee in 2012: on Next Generation energy management systems (EMS); Non-Wires Solutions; and Mobile Generator sets for Grid Resiliency. In addition, the subcommittee drafted a recommendation regarding PMAs that was approved by the full EAC and submitted into the public process in June 2012. He explained that he was pleased with how thoughtful the entry was, and that the DOE is responding well to the EAC's suggestion to take advantage of Section 1222.

Mr. Heyeck then discussed the Transmission Subcommittee's work plan for 2013. First, they plan to address issues of asset life, and create a white paper regarding aging assets. Secondly, they plan to review efforts regarding interconnection wide planning funding. The DOE had funded \$80 million to create EIPC and EISPC, as well as fund efforts in the west and in Texas. The Transmission subcommittee plans to evaluate these efforts and have something for the full EAC to vote on during the March meeting. He said that there may be issues addressed such as power electronics and other elements of technology and grid resiliency, and that the 2013 would undoubtedly be full of activity.

Mr. Heyeck then moved into a more thorough discussion of the papers before the EAC, and the process the Transmission Subcommittee went through to get them into final form. The recommendations surrounding Next Generation EMS are broad, and it is likely that this Subcommittee will delve deeper into these in conjunction with DOE in the coming year. He referenced the discussion by the three panelists the day before, and complimented their presentations and responses to questions raised.

He paused to ask for questions from the EAC members on the Next Generation EMS paper.

Dave Nevius commented that the paper should mention the ability to better model the special protection systems of medial action schemes, wide area and local area protection systems, including safety nets and the whole family of relay systems, relay schemes that have been involved or even causal in blackouts since 1965. Additionally, there is a mention of the passage of the Electric Power Reliability Act of 1967, which was inaccurate and he planned to provide language to the Subcommittee to correct this reference before the document was finalized. Lastly, he said that they should consider how to incorporate the basic tenant of reliable operations criteria as operating within N minus 1.

Mr. Heyeck replied that he would eliminate the "rear view mirror" analogy as there is not time to develop the paragraphs needed to explain it

Merwin Brown commented that the report was extremely well done.

Barry Lawson commented that Recommendation 6 of the EMS paper mentions NERC and other technology leaders, but should expand to include industry folks into that collaborative.

Mr. Heyeck agreed to make that change to the recommendation.

Paul Hudson said that they should make the report more explicit in its discussion of the human and tool interaction piece.

Mr. Heyeck responded that this was a great comment.

Ralph Masiello commented that in a meeting with Anjan Bose at DOE there was a unanimous consent around that point that the visualization technologies and the way information is presented needs attention too.

Mr. Heyeck recommended approval of the Next Generation EMS paper including the changes offered in the discussion.

Mr. Cowart suggested approving the document during the meeting subject to understanding that the changes would be made

Wanda Reder motioned for the approval of the document.

The motion was seconded.

The document was approved by unanimous consent from the members of the EAC.

Mr. Heyeck then asked Mike Weedall to discuss the Non-Wires Solutions paper.

Mr. Weedall thanked the committee members who had contributed to the Non-Wires paper and defined the term non-wires specific to the paper as "any action or strategy that could help defer or eliminate the need to construct or upgrade a transmission line or distribution substation". He then went into a detailed discussion of the recommendations within the paper and asked the committee if they had any questions or comments.

Robert Curry provided an example of the process of implementing non-wires solutions being disjointed in New York. He explained that one of the virtues of this paper is that it has taken the perspective that there has been enough investment for profit, and it looks at the options that are not tinged with a selfish approach. The paper suggests that the DOE take the bully pulpit role, and try to get the playing field as level as possible.

The Honorable Tom Sloan encouraged that they expand recommendation 1 to included two legislative professional organizations -- National Conference of the State Legislatures (NCSL) and Council of State Governments (CSG).

Mr. Lawson commented that industry representatives should be included in the list under the first recommendation.

Mr. Brown commented that the EAC should not be narrow-minded about what can be developed. This paper should have more emphasis on that new grid operations and technologies to balance it with demand response and the other non-wire solutions that are becoming more popular.

Mr. Heyeck agreed with Mr. Brown's sentiments, and spoke about how the PMU's have determined or uncovered some oscillatory behavior that can be addressed very simply to improve the capacity of the grid. There is not any deliberate attempt to exclude that, but the next generation EMS will be very helpful in uncovering issues that could be corrected, thereby improving the grid's capacity.

Gordon van Welie commented that there was not a mention of FERC in this set of recommendations. It would be ideal if the DOE coordinate its efforts with FERC on this topic to avoid confusion in the stakeholder processes.

Mr. Hudson commented that the different sectors mentioned here operate in silos and the transmission engineers and energy efficiency folks are not always on the same page. He suggested that the paper needs to connect some different constituencies together in such a way so that the transmission engineers actually believe in the veracity of demand responses and adequate solutions; same thing for energy efficiency.

Mr. Weedall agreed.

Dian Grueneich commented that she appreciates the support in this area. She spoke about how important it is to ensure that there are tools available and that they are used consistently across the regions.

Mr. Ball agreed with Mr. Centolella that a vertically integrated utility model should be advocated for. He explained also that he has high hopes for technology advancements that will allow operators to understand how their current state compares with "the edge." Meaning, in some cases new technology and new knowledge may mean that they need to be more conservative than they historically have been. He agreed that these technological advances will be helpful, but that they may not always yield greater access to or greater usage of transmission assets.

Sonny Popowsky urged inclusion of consumer organizations like NASUCA under the first recommendation.

Paul Centolella stated that there is a subtle but important difference in the way some of this paper is worded that is important for the planning process. These non-wires alternatives should be looked at on an integrated basis, as well as the planning process by investigating what the economic ramifications in omitting a specific transmission line, etc. This produces a potentially different result than simply having an updated set of assumptions about non-wires alternatives that would be there in any event.

Chairman Cowart suggested the Non Wires Solutions paper be modified to reflect the conversation and that the appendix be removed from the document before the EAC vote on it.

David Meyer spoke about the process involved in approving documents outside of the public EAC meetings.

Mr. Cowart suggested that a core group confer over the paper during lunchtime and that they vote to approve the paper later in the afternoon.

Mr. Ball then introduced and discussed the third paper that came out of the Transmission subcommittee, regarding Mobile Generator sets for Grid Resiliency.

Commissioner Cheryl LaFleur asked if there is already an industry-led effort on portable generation.

Mr. Ball replied that he is not aware of any formal process that exists.

Mr. Nevius commented that he agrees with the recommendation of the paper, but thinks it may be useful to add a description of what DOE's responsibilities are under ESF 12, Emergency Support Function Number 12, are.

Matthew Rosenbaum commented that he used to work on emergency response efforts, and that the ESF 12 responsibilities are laid out in detail in the national response framework.

Mr. Cowart suggested that they proceed under the assumption that the suggested reference was included in the paper and move towards a vote.

Mr. Bowen commented that this is a perfect example of an effort that is worthwhile for the EAC to undertake. He moved to approve the document.

Wanda Reder seconded this.

Mr. Cowart asked for all in favor of the document to say aye, and it was approved unanimously.

Clark Gellings was then introduced and asked to speak about the EPRI-sponsored survey on asset life. He explained that currently there is only modest information on the actual life of transmission and distribution equipment, and this is a concern for people across the industry. Specifics would provide insight for the community at large for Research and Development (R&D) planning to do things like develop better maintenance guidelines and equipment specifications for replacement of equipment down the road.

Mr. Heyeck explained the specific actions the Transmission Subcommittee was planning to take in 2013 regarding this issue.

Ms. Reder commented that this topic is one of the most important for the EAC to focus on. There is going to be a lot of investment in the ageing asset infrastructure going forward and providing guidelines on how to incorporate new technology in the future will be crucial.

Assistant Secretary Patricia Hoffman thanked Mike Heyeck and the Transmission Subcommittee members for all the work they had done over the course of the year. She suggested that it may be useful to look at some of the efforts involved in standardizing nomenclature for the assets and identification. Some concepts around that that OE is looking at from a sensing, monitoring, kind of grid perspective might be valuable to include as a valuable package on this activity.

Another thing she suggested for the EAC to consider is the data exchange. Is there a potential to build an asset database where it can feed into the models for multiple values and purposes? Finally she asked about what prerequisites exist for next generation EMS? One of the things she wants to go after are building blocks that will provide value to the industry in the future.

Mr. Cowart commented that the work of the subcommittee in the recent period has been terrific and he congratulated Mike Heyeck for all they brought forward. The EAC then took a 15 minute break.

EAC Storage Subcommittee Report to DOE and Work Plan

Mr. Cowart turned it over to Ralph Masiello to present the Storage Subcommittee's report to the Department.

Mr. Masiello explained that this report is a statutory requirement of the EAC, and the reason for the document's length. He moved into a discussion of the recommendations included in the report.

Mr. Centolella and others raised issues with the report and decided to convene over lunch to make the changes necessary to garner full EAC support. Voting on approval of the document was suspended until after the lunch meeting of drafters and dissenters.

Special FERC Topics

Next, Commissioner LaFleur updated the EAC on several FERC initiatives that were underway. First, they announced last month that the chairman has set up a new office at the Commission, called the Office of Energy Infrastructure Security. She explained that it is like a focus center of excellence to work on some of the emerging issues.

She moved into a discussion of upcoming topics, including the recent filings under FERC Order 1000, and then took questions from EAC members.

Lauren Azar asked if cyber security was included in the planning of the technical conference the Commissioner had mentioned.

Commissioner LaFleur responded that it had not been in any significant way, but had

been brought up as an emerging issue.

Chris Peters thanked Commissioner LaFleur for addressing the EAC and asked how she foresees the new office for cyber interacting with the industry and with the other agencies in the Beltway?

Commissioner LaFleur responded that part of the specific charge of the new group is to work with other agencies and focus on coordination.

Mr. Van Welie asked Commissioner LaFleur and Assistant Secretary Hoffman for an update on current thinking surrounding the gas/electric issue. He also asked them to talk about very infrequent but possible events like geomagnetic disturbances, and the policy questions that surround them.

Commissioner LaFleur said that different issues are being conflated, and it is right to ask about reliability in general. Most of the high-impact, low-frequency issues are dealt with through building mitigation into the system ahead of the time to the extent you can, and then having emergency plans to follow if those do not work.

Assistant Secretary Hoffman added that several things have to be done relating to this issue. First the flexibility of the gas pipelines themselves would have to be evaluated. Then, from a resiliency point of view, they must evaluate what happens if you lose part of a pipeline. There are segments and closures on pipelines, but you still lose the availability to the fuel, and so, what is the impact to your system? She also indicated that we have to recognize the value of diversity of assets, and that is something that the regions have to consider from a generation point of view.

Sue Kelly commented that she represented local distribution companies for natural gas regulatory work before FERC, and they are very serious about not losing natural gas service during peak periods.

Robert Curry commented that 80 percent of the members of the Edison Electric Institute are also members of the AGA. So, it's possible to reach out still further through that link if that's appropriate.

EAC Work Force Recommendations

Wanda Reder then discussed the Workforce whitepaper and provided the EAC background on how the ad hoc working group was formed and what the paper focused on. The paper includes two sets of recommendations, which are broken down into easier versus those that are more difficult for the Department to implement.

The Honorable Tom Sloan suggested a revision that Ms. Reder accepted.

Dennis McGinn made an observation on the subject of foreign students and foreign workers. He indicated that this is a problem that applies in just about every technical aspect of life in the United States, whether it's IT or biotechnology, and certainly electricity. And it's a problem that needs to be addressed more broadly. Culturally and technically, there is a significant match between our

industry and many things that the Armed Services do. While there have been efforts to make better matches, Mr. McGinn believes that we can do a better job. He suggested ideas like eHarmony, where the "e" could be electricity, and services such as "Monster" across the job-search area, in which we could have participants from the power industry. The Department of Energy, the Department of Veterans Affairs, DoD, and Labor, could populate databases and then have a good matching algorithm to categorize types of skill sets and skill demands into various jobs. He believes it would accelerate and make better matches.

Lunch

The EAC broke for lunch and small groups formed to make final edits to the papers.

Mr. Cowart announced that the EAC would start by voting on the remaining papers, and started with the Storage paper.

Mr. Masiello presented the edits that had been drafted for the Storage Report, and credited Paul Centolella for drafting the majority of the language.

Assistant Secretary Hoffman asked if this report also includes Recovery Act projects.

Mr. Masiello explained that they are summarized in the beginning of the paper and they are discussed under ongoing R&D and the section on DOE R&D with highlights in some of them.

Imre Gyuk commented that the report showed the AES project in West Virginia but did not have images of other "lovely" storage projects the Department is doing.

Mr. Masiello replied that the Storage Report makes the point that some storage applications are commercially viable as evidenced by private investment going ahead without DOE. The scope of this report is more than just what is DOE doing, extending to what the market, EPRI, and the states are doing. Some DOE projects are included with pictures and discussions.

Dr. Gyuk thanked them for clarifying.

Mr. Cowart said that the storage report seemed ready for approval and would need a motion and a second.

Mr. Curry moved that the EAC accept and advance it.

Wanda Reder seconded the motion.

Assistant Secretary Hoffman requested that the paper reference OE specifically in reference to the Recovery Act projects.

The amendment was accepted as friendly, and the paper was unanimously approved by the EAC.

Next, Mr. Weedall went through the changes made to the Non Wires Solutions paper.

Mr. Cowart asked for a motion to be made.

A motion was made by Mr. Curry.

The motion was seconded by Mr. Centolella.

The report was unanimously adopted as amended.

Next, Ms. Reder presented the edits made to the Workforce white paper.

Mr. Shelton referenced the discussion that had taken place about recognizing what the industry was already doing and asked if the paper now reflected that. He provided the example of the Troops to Energy Initiative.

Ms. Reder accepted that as a friendly amendment and added a reference to Troops to Energy. There are some quite successful programs in here, and that teed up the recognition programs.

Mr. Nevius commented that with regard to university curricula, the Energy Systems Engineering Institute was a concept developed by EPRI and deployed in a number of universities around the country, including Lehigh.

Ms. Reder agreed to cite this specifically.

Mr. Gellings said the paper should also include the Office of Naval Research at the University of Minnesota.

Ms. Reder replied that this had been left generic for a reason. She said she would be happy to provide specific examples.

Rick Bowen made a motion to approve the paper.

Brad Roberts seconded the motion.

The report was unanimously adopted as amended.

Key Developments in the OE Smart Grid Program

Ms. Reder introduced Eric Lightner, Joe Paladino, and Chris Irwin from the DOE to provide an overview of all the activity going on at DOE in the smart grid area.

Eric Lightner presented on Progress and Plans: Annex 1 Global Smart Grid Inventory. He explained that this is a mechanism that calls for international collaboration, and they are the lead on one of the annexes. The goal is to collaborate on smart grid and smart grid matters. The first step is to get to know what is going on in each of the countries so we can then figure where there are common priorities, where there are common goals, and how we can better best coordinate

across those boundaries. He showed a slide of the countries involved that have officially signed up to participate in the implementing agreement on smart grid, also known as ISGAN.

The global inventory has three tasks: It needs to look at the Unified ISGAN framework for assessment of national-level motivating drivers and technology priorities for smart grids. Then there must be development and population of the initial project inventory with data content exchangeable with those in other existing smart grid databases. Lastly, there must be a quantitative analysis on select inventory projects, using key performance indicators.

They have developed a drop down menu of 24 drivers in seven categories along with 50 technologies. Then they developed a web-based survey tool around that so that countries could easily and remotely fill out the top six motivating drivers and their top five priority technologies in each of those driver categories. At the end of September they completed 35 of these surveys from 21 of the 22 countries. Each country validated the majority of those, which just means that the official executive committee member from that country has signed off on the completed survey. They are still waiting for some evaluations. With that they collect the information and then compiled it in different ways to come out with the listings of all the drivers across all the countries, and all the technologies across all the countries. They can then look at this information by economies and by continent.

He provided a few copies of the Smart Grid Drier and Technologies by Country, Economies, and Continent report that they developed under ISGAN. He explained that it was a smart grid system report draft for 2012. He said that any comments or feedback that the Smart Grid subcommittee could provide would be useful.

Joe Paladino spoke next about the impact of smart grid projects funded by the Recovery Act of 2009. He gave a brief update on where DOE is with respect to determining the results from the smart grid investment grant program. A little bit over half of the money went to these projects. A lot of that money is going to deploy advanced meter infrastructure, smart meters, and all the underlying communications infrastructure, et cetera, and about a quarter of the money is going toward distribution automation technology.

They have been collecting results for about a year from some of the projects because they are still in the deployment phase and it is going to take a while really to see results. There are a few projects that are reporting results, and DOE has two reports which are in their final draft review phase in DOE. One is on peak demand reduction as a result of implementation of AMI and pricing, et cetera, and the other is on reliability improvements. Following these are going to be reports on volt-var management as well as operational efficiency improvements in AMI. He said that they would send these to the EAC and that they would be available on smartgrid.gov. Mr. Paladino then gave a quick summary of the different project focus areas.

Mr. Chris Irwin discussed work on the smart grid vendor ecosystem analysis, potential economic impacts, and the green button data access initiative and open energy data. Mr. Irwin noted that one part of the vendor ecosystem analysis includes investments through the Recovery Act, and that they would like to see the economy-wide impacts of the smart grid investments. Mr. Irwin noted this is a dual mission of stimulus and building the smart grid focusing on following the dollars through the

investments. Mr. Irwin clarified that they are looking at the immediate impact on the economy, while Joe Paladino's work focuses on the long-term value of the smart grid, so the combined efforts will deliver the total picture. Mr. Irwin stated they were very interested to pursue this program, because after the Recovery Act money is expended, they will be relying on private sector and states to continue advancing the agenda. Regarding the green button and open data, many organizations (DOE, OSTP, MIST, EPA and others) are working to make energy data more available as well. The green button is a highlight on smart grid data and on the industry itself to make a common format for consumers to get their information and to start to use it.

Ms. Reder noted that Mr. Gellings needed to leave and asked if he could speak ahead on the agenda. She then introduced Mr. Gellings from EPRI to discuss the upcoming whitepaper for the smart grid focused on technology. Based on previous discussion, it was noted that they needed to look at the technology portfolio for smart grid going forward and also consumer acceptance, leading to the recommendation for two papers for 2013. Mr. Gellings discussed the technology portfolio with regard to Mr. Heyeck's references to power electronics such as new applications, local electronic devices that do not yet exist, advanced sensors, and digital transformers. The papers would discuss what technologies would be needed to go beyond those currently being demonstrated and deployed, and identify the key both to transmission and distribution technologies which may require further development and or demonstration. Mr. Gellings offered to lead this with Billy Ball and asked if the effort was worthwhile and if there were volunteers to help as a call to action.

It was suggested that the effort expand beyond technology to include architecture at the distribution level as well as data, metrics and policy. Mr. Gellings acknowledged the good suggestion. Ms. Reder recognized the amount of work and activity that DOE, OE has been doing. Discussions continued about R&D needs and existing challenges. It was suggested to consider following the European joint research committees research efforts to better coordinate research across states, federal government, and private sector.

Ms. Hoffman asked about the green button and applicable applications (apps) and data. She also asked about asset management and predictive failure. In response, Mr. Irwin identified the application called Leafully and the EPA Portfolio Manager.

Further discussion continued about the emphasis on data collection, smart grid application, AMI applications for peak load reduction, throughput reduction, and total consumption reductions. It was noted that information and tables exist for the energy consumption data, but that information needs to be extracted. That information is there also for the influence of technology, the influence of pricing on being able to effect this technology, and whether it's opt-in or opt-out. It was noted that some of the opt-in customers actually do better in terms of energy consumption reduction than the opt-out customers. Mr. Cowart recommended that the relevant point to compare would be across the average consumer in the jurisdiction or in the service territory in order to see whether an opt-in regime is more conserving than an opt-out regime.

EAC Smart Grid Subcommittee Outreach Recommendations and Work Plan

Ms. Reder continued with the Smart Grid Subcommittee Outreach Recommendations and white paper. The work plan noted several options were considered regarding what to focus on this year.

They thought the most immediate effort should be the outreach and communication of the "gold mine" of information from the SGIG program, and how to extract the findings and communicate them to the constituencies and stakeholders. The objective was to take on the lessons and early findings stating that key points include the necessity to be accurate and portray the information as it is gathered. The paper is organized around the strategic purpose of DOE in the smart grid involvement, and why this outreach piece is so critical right now.

The first recommendation focused on developing a systematic process that moves from a one-way outreach and communication methodology to one that is two-way and dynamic in nature. Part of this recognized that it a lot more effective to work through partners and other organizations that have communication channels established. To the extent that messages could be articulated and packaged and worked through other organizations that are dealing with their membership base, this would be a much more effective and economical way to spread the message fast and efficiently and also collect information back. It was recognized that resources are limited and they could probably get further faster by collaborating with others.

Recommendation 1: There were five focus groups that were planned, and each was designed to discuss similar projects. The consumer behavior focus group has been quite active. The others may need to be more formalized. The communication and outreach strategy would bring these pieces together. Further the methodology to drive the message into the marketplace, i.e., social media, trade articles, conferences, and of course, expanding upon smartgrid.gov were examples, and the concept is for two-way communication that is dynamic, with lessons learned being communicated through multiple channels.

Recommendation 2: This concept is to create a matrix of information on smartgrid.gov to categorize the benefits, locations, and types of projects to quickly get to information on particular technologies or the types of benefits, and to identify the case studies that are applicable.

Recommendation 3: Identify partners that can help get that outreach infrastructure and collaboration mechanism established to disseminate quickly and consistently throughout the industry with established communication channels.

Recommendation 4: DOE should explore five broad policy types of topics. The EAC subcommittee would be used as a sounding board. This recommendation is that DOE begin to establish more of a vision for the future and how it maps into aging infrastructure, cyber, grid reliability, resiliency, etc.

Recommendation 5: Develop a comprehensive outreach strategy that would cover the cost, benefits and risks. Smartgrid.gov could be further leveraged with other components.

The whitepaper recommendations were discussed by the committee. Ms. Hoffman questioned who the intended audience would be noting that there are consumers and also the state regulators and NARUC type organizations. Mr. Cowart brought up the environmental connection related to consumers who are worried about the local environmental effects of the meters themselves or who do not understand the environmental improvements that can be facilitated by having a smarter grid. Getting the environmental groups as allies in order to understand why the smart grids can be part of

their agenda is actually an important step in getting consumer acceptance. Mr. Cowart encouraged them to look at the communication strategy making sure that the potential environmental improvements associated with smart grids are a part of the message. Mr. Cowart noted pages to include this and efficiencies into the text. Others noted to remain somewhat balanced and focus on the benefits.

Mr. Cowart asked the committee for a motion to approve the paper. It was noted that with amendments it was adopted by the committee. Mr. Cowart announced that the final document would be circulated to the full committee.

Ms. Reder mentioned the final topic of consumer acceptance noting that both technology and consumer acceptance themes were discussed and that an outline was prepared with the intent for a 2013 deliverable.

Mr. Weedall discussed the outline for consumer acceptance, and asked for input over the next few weeks mentioning some of the topics which included health, regulatory issues, privacy, cyber, investments utilities would make, and impacts on rate design. The goal would be to have a draft in the Spring of 2013. Mr. Cowart recommended that when explaining the benefits of smart grids or various smart grid applications to figure how to put something in the table that is of interest to the customers.

Ms. Hoffman requested the subcommittee approach customer acceptance to determine if anything is missing, repeatable, or valuable to how commissioners would look at the data and consider if it is meaningful from different audience's perspective.

Mr. Cowart noted there was no public request to speak to the committee. Mr. Cowart then indicated which committee each of the new members would work on. Chris Shelton will become a member of the Storage Subcommittee; Linda Blair, the Transmission Subcommittee; Chris Peters, Smart Grid Subcommittee and the Workforce Taskforce; Paul Hudson, Smart Grid Subcommittee and the Transmission Subcommittee; and Denny McGinn, both Storage and Transmission.

Mr. Cowart thanked and congratulated the subcommittees and the working group for terrific work and getting the documents in good shape to be approved by the full committee and to everybody else for terrific conversations and dialogue.

The meeting was adjourned at 3:32 pm.

Respectfully Submitted and Certified as Accurate,

Prichard H Court

Richard Cowart Regulatory Assistance Project Chair DOE Electricity Advisory Committee

12/18/2012

Date

Sonny Roporty

Irwin "Sonny" Popowsky Pennsylvania Consumer Advocate Vice-Chair DOE Electricity Advisory Committee

12/18/2012

Date

David H. Meyer

David Meyer Office of Electricity Designated Federal Official DOE Electricity Advisory Committee

12/18/2012

Date

Matthew A Rosenbaun

Matthew Rosenbaum Office of Electricity DOE Electricity Advisory Committee

12/18/2012

Date