



**U.S. Department of Energy
Electricity Advisory Committee Meeting
NRECA Conference Center
Arlington, VA
June 17, 2014**

Summary of Meeting

PARTICIPANTS

EAC:

BILLY BALL
Southern Company

ANJAN BOSE
Washington State University

MERWIN BROWN
California Institute for Energy & Environment

MARILYN BROWN
Georgia Institute of Technology

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The Analysis Group

CARLOS COE
Millennium Energy

RICHARD COWART
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The Grid Group

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Stratus Energy Group

MARK LAUBY
North American Electric Reliability Corporation

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EAC Vice Chair

WANDA REDER
S&C Electric Company; IEEE

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Rhode Island Public Utilities Commission

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AES Energy Storage

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Independent

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State Representative, Kansas

DAVID TILL
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Speakers, Guests and Members of the Public:

MICHAEL BARDEE
Federal Energy Regulatory Commission

THOMAS BIALEK
San Diego Gas and Electric Company

MELICIA CHARLES
California Public Utilities Commission

KEN COLBURN
Regulatory Assistance Project

JIM CREEVY
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STEM

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Edison Electric Institute

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STEPHANIE MARGOLIS
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EAC Ethics Briefing

Mr. Brian Plessner informed the EAC members of the ethics that they must comply with. Brian's contact information is brian.plessner@hq.doe.gov and 202-586-2346.

Following the ethics briefing, Mr. Heyeck provided additional thoughts on the future of the transmission system, the value of bottom up thinking with respect to the role of transmission in systems and markets and the value of prior EAC work products in illuminating the pace of change in the sector.

EAC Energy Storage Subcommittee Activities and Plans

Merwin Brown, Energy Storage Subcommittee Chair, provided an overview of the current activities of the Energy Storage Subcommittee.

A National Grid Energy Storage Strategy Report

The report was approved by the Committee on January 24, 2014 and contained 11 recommendations in four phases. DOE accepted the recommendations and has begun and completed some projects consistent with the recommendations laid out in the paper.

ESA submitted comments and recommended that DOE-funded efforts be actionable by state and utilities in policy, planning and procurement, and suggested more coordination among the different DOE offices.

Discussion of Storage Testing & Safety Paper

Merwin Brown indicated that Ralph Masiello was previously planning to draft a letter on energy storage testing and safety but drafting of that piece has not begun.

National Strategy for Distributed Energy Storage in the Electric Grid White Paper

Merwin Brown indicated that the distributed energy storage white paper is being led by the Smart Grid Subcommittee with input from the Energy Storage Subcommittee.

Status of Biennial Storage Program Assessment

Every two years the EAC prepares an assessment of the DOE Storage Program with respect to how it is meeting its goals. The Energy Storage Subcommittee is expecting approval of the Biennial

Storage Program Assessment at the September 2014 EAC Member meeting, but suggested it might be required to seek approval via video conference in order to finalize the report if it is not ready for approval in September.

The nature of the report is to assess DOE's storage program and identify recommendations, but it will not focus on energy storage technology and repeating material that is available elsewhere. At this time, the Energy Storage Subcommittee has created an outline, identified resources to draw from, and developed activities to guide Subcommittee comments. The next steps for this report are to finalize the outline in June, receive feedback from ESA and other sources, and assign writing sections.

EAC Member Discussion of Energy Storage Subcommittee Plans

Granger Morgan recommended developing a resource that documents the cost per watt of power electronics as a function of time if such a resource does not already exist.

Assistant Secretary Hoffman asserted that the collection of prior reports created a solid background and reminded Mr. Brown to provide tailored, specific recommendations. Assistant Secretary Hoffman also requested that the Energy Storage Subcommittee monitor California mandates on energy storage.

EAC Smart Grid Subcommittee Activities and Plans

Wanda Reder, Smart Grid Subcommittee Chair, gave an overview of the current Smart Grid Subcommittee activities. She mentioned that the Subcommittee is seeking new recruits.

Distributed Storage Paper

The Smart Grid Subcommittee plans to have information to review at the September 2014 meeting, but will not be prepared to present a final paper for consideration by the Committee. The Subcommittee is looking from the bottom up in regards to distributed storage with local sources as the main intent of this paper.

Regulatory Policy Tools paper

Wanda Reder explained that Paul Centolella provided a thorough report of the work product in March and the outline continues to evolve. Ms. Reder explained that writing has begun and she expects to have this work product completed and ready to be voted on for the next EAC Meeting.

Research and Development paper

Mr. Gellings has been leading the effort for the Research and Development paper and would like to receive additional comments at this time.

The paper is 28 pages in length, but there is some concern that there are some issues around seamless interoperability across disparate technologies that isn't clearly addressed in the current draft. The Subcommittee is interested in looking at the issue from an overall architecture sense to ensure seamless operability.

In addition, Ms. Reder enumerated other ways in which the Subcommittee is providing input to DOE including comments to the Smart Grid Systems report, input on ARRA project assessment and next steps and other activities as well.

EAC Member Discussion of Smart Grid Subcommittee and Workforce Working Group Plans

Mr. Hudson began the discussion by stating that DOE publishes and makes available multiples resources, but that the information is under consumed by those who could benefit from it. Mr. Hudson asked whether DOE has plans to bring in non-traditional voices outside of this committee to provide input on topics and papers discussed throughout the meeting.

Assistant Secretary Hoffman responded that DOE has difficult decisions to make in terms of prioritization of investment strategies and agrees that DOE must go beyond talking to the same industry leaders.

Mr. Curry added that in New York the industry is grudgingly moving towards considering outside sources under the current proceedings, but it is hard to take utilities that have been primarily focused on reliability and effective delivery and recast their role as providing transparent data to the public and enabling new resources on the system.

Merwin Brown suggested that the Smart Grid Subcommittee address the lack of monitoring on the distribution system. He stated that while transmission is well instrumented, the same is not true on the distribution system. This leaves a gap in terms of the behavior of the distribution system and the potential impacts of new regulations. He explained this is especially critical since it is difficult to extrapolate from one feeder to the next.

Mr. Cowart asked the Committee to determine the value of distributed energy storage technology in terms of who is willing to pay and how much? He commented that it would be ideal if this Subcommittee could identify or frame evaluation studies that determine the value of energy storage technology.

Ms. Reder agreed that the value of service dimension would be important to capture in the paper on regulatory models in terms of location specific value of residential, commercial and critical loads.

Mr. Morgan explained that it is difficult to solicit customer value on energy storage

because the concepts of a widespread blackout or customer surplus are difficult to grasp. He explained that the problem of valuation in contingency situations is a challenging issue.

Mr. Zichella announced that the EAC members need to focus more on emerging energy storage technologies that are not receiving the attention they deserve.

Mr. Shelton added that the industry must design a system that can evolve independent of the regulatory constraints in a way that is perhaps analogous to the development of the TCP/IP protocol in that it enables transactions to take place independent of regulatory environment that each system inhabits.

Mr. Cowart then asked what distribution resources are worth to the end use customers and how to convey that value accurately. He mentioned that there is not a regulatory option where customers can disconnect their system from the grid and self-supply in an outage, and believes that if an option like that existed, then customers would be interested in that kind of installation.

Mr. Ball addressed Mr. Cowart's point and stated that he was unsure why customers don't self-supply in outage situations since he believes the technology required to do so is available. Mr. Cowart responded that interconnection requirements for net-metered customers do not allow it.

Mr. Sloan then stipulated that this line of questioning could be broadened to understand the value to the utility if the customer can switch to self-generation in addition to the value to the customer for self-supplying.

Commissioner Roberti mentioned that inverter based systems could provide backup for some loads but not others such as compressors.

Mr. Lawson joined the discussion and clarified that having a back-up generator is not the same as net metering so the EAC members should be aware of this distinction. Mr. Cowart clarified that he was not trying to equate the two and other members discussed the value and limitations of emergency backup service from PV systems.

Mr. Bose concluded the discussion by adding that identifying value for the customer may not align with what is actually felt by the customer. Mr. Bose gave the example of the black-out in India that was said to have affected 620 million people, however, only 320 million of those people initially had electricity so the other 300 million did not feel the effects. He then concluded that the industry still needs research and development and he would like to know the penetration of PV that the industry can handle in the event that a solution for energy storage does not come about.

Distributed Energy Storage Panel

Ms. Wanda Reder introduced the distributed energy panelists including: Willem Fadrhonc, STEM, Tom Weaver American Electric Power (AEP), Tom Bialek San Diego Gas and Electric Company (SDG&E), and Melicia Charles California Public Utilities Commission (CPUC).

Ms. Reder explained that the Distributed Energy Storage Work Product is a joint effort between the Smart Grid and Energy Storage Subcommittee. The work group is well into the work product and is interested in identifying gaps in distributed energy storage. Ms. Reder explained that there are 233 storage projects and 368 megawatts of battery storage globally. She discussed the value placed on distribution is largely estimated by how well the infrastructure can serve during peak use, which occurs about 1% of the time, and the lack of utilization of energy on the distribution system. She suggested that research focus on how to make the energy distribution system more like the internet and this network. Ms. Reder explained how storage is being implemented in California and the success of the implementation. She discussed the requirements for distributed energy storage to be successful include integration and control, protection, standardization requirements, life expectancy on power electronics determination, a market and policies that promote storage and a cost effective way to monitor and maintain storage devices.

The first panelist, Mr. Willem Fadrhonc, Manager of Grid Solutions at STEM discussed the commercial application of energy storage in the market. STEM produces secondary, behind the meter storage providing hardware and software for customers and reducing peak energy use. STEMS works closely with distribution utilities to make sure that the storage units work properly and do not disturb distribution by discharging into the distribution system. By installing behind the meter, the distribution system circuit is undisturbed and costly upgrades to the distribution system are avoided. Mr. Fadrhonc discussed that most of the value comes from resource development including the ability to discharge quickly and responsibly. Mr. Fadrhonc suggested utilities aggregate storage units to help reduce price, offset peaks and open a potential market for energy trading. He explained being behind the meter allows their energy storage systems to avoid the issues around standards that have confronted other grid-facing systems. The supportive California incentives and a progressive customer base have created a great place for STEM to grow its business. Policy changes in regards to contracting and reliability of energy storage would allow utilities to invest in energy storage which would allow energy storage to gain traction in the market. Mr. Fadrhonc suggested software is more important than hardware when it comes to the business of energy storage.

The second panelist, Mr. Tom Weaver, Manager of Distribution System Planning, presented the past, present and future of batteries. Mr. Weaver discussed the mass batteries that AEP has set up in the past with the inaccurate expectation that the cost of batteries would come down over time. The high costs of batteries have slowed battery investment at AEP. However, recent customer interest has renewed the interest in batteries. Mr. Weaver discussed that AEP is currently working on community energy storage that would spread customer benefits in the local community. AEP is

testing community energy storage with small units that are connected to the substation which can offer the customer the ability to directly interface with renewable energy generation and reduce peak use. However, Mr. Weaver indicated that there needs to be a way to better monitor use of community storage. Mr. Weaver discussed the details behind several of AEPs installations in the field and described the successes and challenges that his company has had with Sodium Sulfur technology and community energy storage over the years. Mr. Weaver discussed battery advantages, including reducing peak load, improving the efficiency of the grid, providing a local source of generation, improving reliability, integrating renewables, providing ancillary services and reducing flicker. According to Mr. Weaver, the high installed cost, the large amount of space required, the temperature monitoring requirements and the modest value associated with energy storage all need to be addressed before it is a viable option for large scale deployment.

The third panelist, Ms. Melicia Charles, Energy Advisor, California Public Utilities Commission, presented on California's energy storage mandate D.13-10-040 which requires that 1,325 MW of energy storage be in operation by 2024. Ms. Charles explained that this bill will allow the framework for energy storage to be developed and look at the policy barriers to energy storage. D.13-10-040 will establish storage procurement targets and policies for load-serving entities with a target goal of less than 1% peak load in 2020. Target utility companies are categorized into three storage grid domains (transmission, distribution, and customer-sited storage) and the flexibility for utility deferment was written into the mandate to promote utility involvement and hedge investment risks. The CPUC staff will conduct comprehensive evaluation programs in 2016 and 2019 and Ms. Charles asked the DOE for any help that they may be able to offer in terms of program evaluation, interconnection and safety.

The fourth panelist, Mr. Tom Bialek, Chief Engineer, San Diego Gas and Electric Company, presented on the current status of energy storage and where energy storage should go in the future. He discussed the ARRA projects that expect to have 50 MW of storage created by market activities. The DOE has installed battery units that face different challenges in different regions. Sodium sulfur batteries were placed in the desert and faced the challenge of running at the appropriate temperatures. He discussed installation costs including a transformer and placing the battery underground. Mr. Bialek agreed with previous panelists that the benefits of energy storage are to reduce peak energy use, increase grid reliability by reducing power outages, offering flexibility in power generation and the battery's ability to act as a load generator or capacitor. The challenges with metering include implementing the correct technology and algorithms, the size and capacity of batteries and the initial cost. Mr. Bialek also discussed the issues with procurement that include creating a sustainable market for companies, requiring vendors to provide a quote and warranty due to a battery lifetime uncertainty and requiring solid contracts that promote battery usage. He indicated that issues with engineering include the large size of units, noise pollution, cooling requirements, safety and environmental concerns, permitting issues and the lack of suitable location. He added that construction and installation costs are high and software for

battery units needs to be improved. Mr. Bialek also suggested dynamic rates that would allow for energy storage to grow through flexibility and a quick response in the market.

EAC Members Discussion of Key Distributed Energy Storage Issues

Rebecca Wagner suggested looking at California as an early adaptor and asked the question what are California's goals with the procurement legislation?

Melicia Charles responded that the goals were to drive technology and technology optimization in energy storage and reduce greenhouse gases.

Bob Curry asked Tom Bialek how storage is put in the rate base, what amortization schedule is used and how those assets play out within the company's balance sheet.

Tom Bialek responded that any utility investment in energy storage would be expected to be recovered by rates, which would need to be argued in front of the CPC and need agreement from the CPUC. He also explained that asset lifetimes play an important role in asset depreciation schedules given the limited lifetime of DES relative to 40-50 year lifetimes for conventional assets on the bulk grid. He discussed different ownership models and conveyed the preference for treating storage as generation rather than a T&D deferral. .

Willem Fadrhonc suggested that companies with flexible tariff designs have an easier time managing risk due to the market transparency and flexibility.

Paul Roberti recalled the battery in West Virginia and asked what the cost effectiveness of a battery is and how can the cost be offset?

Tom Weaver responded explaining that usually only 50-60% of the battery cost is justified at current cost levels looking at T&D deferral value streams.

Sonny Popowsky asked Willem Fadrhonc if the behind the meter energy storage offers customers the opportunity to participate in the market without cost shifting?

Willem Fadrhonc confirmed that STEM's systems are designed to meet customers' non-coincident peak rather than responding to system conditions at peak through dynamic prices at the retail level.

Tom Bialek added that if demand charges are reduced then costs will shift to other customers. Rates are currently a regulatory problem and the volumetric rate paradigm breaks down when loads become more active and building design begins moving to net zero energy designs.

Patricia Hoffman asked Mr. Fadrhonc what technologies need to evolve on the building side of energy storage to allow batteries to handle critical loads. She expressed a need to prioritize energy storage research, including understanding ways to determine the best place to put energy storage, invest in smart meters for accurate determination of service value, invest in software structure to

manage storage devices and communication, integrate building management systems, and improve software controls. She asked Mel if there is a need for some open source tool for regulators that can help define the best location for energy storage.

Melicia Charles responded California research bill 327 is looking into determining location value and resource planning. Ms. Charles also suggested research should be expanded to renewable energy for distribution generation in general, not just energy storage. She indicated this is an area for future work.

Willem Fadrhonc suggested that the industry is still very fractured and common communication protocols and standards are welcome so that systems can better share data and information.

Tom Bialek responded to Assistant Secretary Hoffman's question by explaining that bill AB327 required distribution system planning and that interconnection costs can be minimized by mapping substations and circuits with available capacity.

Carlos Coe asked where a utility should put batteries.

Tom Weaver explained that this is something they are still working to figure out as they expand into community storage and look at other drivers on their systems. He also noted that they don't have the same solar penetration levels in their service territory that California and Arizona are currently experiencing.

Mr. Tom Bialek responded to Mr. Coe's question by explaining that storage feasibility varies by circuit depending on where storage can offer stability. Storage could help mitigation of intermittent generation sources and voltage support through enhanced inverter functionality. If the utility moves toward differentiated levels of reliability, storage could also help to implement that type of service flexibility.

Mr. David Meyer asked Will Fadrhonc if the high cost of energy storage is a hardware or software problems. He also asked Will if metering is in place so STEM can profile customer use that would allow for better optimization.

Mr. Willem Fadrhonc responded by explaining that hardware is the largest cost element of an energy storage system but that the value is more a function of the software. He explained that STEM installs additional metering onsite so they can interpret real time storage usage and determine actual peak usage reduction. He reiterated the importance that the storage unit not export energy onto the distribution system and disrupt the current. He indicated that software is where value will be created. Software will help place value on energy storage by tracking energy usage without the need for costly grid updates.

Mr. Granger Morgan explained that subsidizing investment in technology makes sense when the costs can be bought down through accelerated deployment. However, Tom Weaver previously explained that he did not see the cost of energy storage coming down. He asked Melicia Charles if

her staff is looking into if this battery technology mandate will do anything to reduce costs of energy storage.

Ms. Melicia Charles responded by explaining the specific energy storage unit requirements and the research into the best locations to put energy storage units is underway. She also reiterated the analysis that CPUC will perform an assessment of the policy after 3 years that will determine if storage is cost effective. She also added that the cost will not go down unless the government incentivizes the market and California's investment in energy storage is a leap of faith with the hopes that it will be worthwhile in the end.

Mr. Anjan Bose asked Melicia Charles what the mandate will mean to public utilities and IOUs. He asked how much decision making about the units implemented by utilities are up to the utilities and how is value measured during this project?

Ms. Melicia Charles responded by explaining the transmission distribution categories and the targets of the legislation but added that flexibility was included to help incur costs of failed investments. She explained that behind the meter costs are incurred by customers, but utilities are often aware of these through the interconnection process. Customers that self-generate can procure through the program but public utilities are not regulated by the CPUC and therefore outside the mandate.

Mr. Tom Bialek explained that AB 2514 directed the Commission to establish what targets that IOU would be obligated to meet and therefore non-jurisdictional entities are excluded.

Mr. Carl Zichella explained Carla Peterman's proposition for distributed generation zoning that has been approved by the CPUC. California has pilot projects that look at distributed generation, demand response, energy efficiency programs, aggressive marketing to customers and storage. Mr. Zichella agreed that the strategic planning of energy storages is an important area that needs further consideration, including the best location for storage as well as when to charge and discharge your battery.

EPA Clean Air Act Section 111(d) Rules Panel

Mr. Richard Cowart introduced the EPA Clean Air Act panelists including: Harvey Reid, EPA; Karen Obenshain, Edison Electric Institute; Sue Tierney, Analysis Group; and Ken Colburn, Regulatory Assistance Project.

The First Panelist, Mr. Harvey Reid provided an introduction to EPA's Clean Air Act Section 111(d), which addresses greenhouse gas (GHG) emission reductions broadly across the government. The power sector is responsible for one third of all GHG and 40 percent of carbon dioxide (CO₂) emissions, so EPA devised a rule to lower emissions from this sector. Mr. Reid explained that if the goals of 111(d) are met by 2030, EPA expects to see a 30 percent reduction in CO₂ emissions from 2005 levels. In addition to the climate and health benefits, EPA also expects savings up to \$9 billion.

When developing 111(d), EPA tried to build on activities that were already in place, such as energy efficiency renewable standards and renewable energy standards, and built in flexibility with a long timeframe for states to achieve the goals. In setting state goals, EPA looked at the existing fleet from 2012 and identified four ways to reduce CO₂ levels that each state could utilize, including: make fossil fuel-fired power plants more efficient; use lower-emitting power sources; build more zero/low emitting energy sources; and use electricity more efficiently. Mr. Reid then went on to discuss next steps which include four public hearings over the next couple of months and a 120 day public comment period from when the rule was finalized on June 18.

The second panelist, Ms. Karen Obenshain discussed that the electric utility sector is currently undergoing a transition to a cleaner, lower emitting fleet. She mentioned that the impact of 111(d) on the utility markets is not yet clear at this time since the goals are levied at the state level, but utilities will need to implement additional programs to improve energy efficiency and renewable energy. She concluded that her organization has reliability and technology concerns with 111(d) especially on the gas and infrastructure sides, but is happy for the public comment period and opportunity to collaborate with EPA.

The third panelist, Ms. Sue Tierney asserted that EPA has proposed a reasonably ambitious rule, which should not cause reliability problems for states. In preparation for EPA's new rule, Ms. Tierney developed her own report on what she expected and finds that 111(d)'s regulatory framework created a much wider set of compliance and implementation options and a more generous and liberal timeframe. She concluded her brief remarks by reasserting that 111(d) should be feasible for states to achieve and that the rules will not pose any major reliability challenges.

The fourth panelist, Mr. Ken Colburn reiterated what had previously been shared that EPA came out with a proposal where essentially all methods count to achieve the goal, and that 10 states have already achieved 30 percent or more CO₂ savings since 2005 levels. He then went on to describe that states must develop plans to achieve the goals and that they may do so either individually or in collaboration with other states. He noted the extensive interactions between air regulations and 11(d) and that state energy and environmental regulators have little experience collaborating, so this will be an area of interest moving forward.

Mr. Coburn went on to mention one concern in that some early adopters can be viewed as being penalized with higher CO₂ reduction goals than slower adopting states. He then concluded by informing the EAC members of the international benefits with China already announcing that it plans to implement a cap program.

EAC Discussion of EPA Clean Air Act Section 111(d) Rules Panel

Mr. Morgan asked for clarification on how the state by state goals were developed and the extent to which EPA is expecting pushback.

Mr. Harvey explained that EPA looked at the existing fossil fleet in 2012 to identify goals. For building block 1 listed above, EPA relied on operational technology; for building block 2, EPA looked at the mix of coal and each state's ability to shift away from higher emitting coal and diesel

oil units to natural gas units; for building block 3, EPA looked at the average RPS that exists in six regions and the opportunity for each state to move in the direction of the average goal in its region; and for building block 4, EPA reviewed the energy efficiency measures that the top 20 percent of states were employing. Across all blocks, EPA identified natural averages. Mr. Reid then specified that 111(d) is not a forward looking assessment, so some burdens are not as stringent.

Ms. Tierney added that each state has a different numerator and denominator to identify goals.

Mr. Morgan asked another clarification question of whether compliance actions such as air handler upgrades could trigger a new source review for a facility.

Mr. Harvey responded that 111(d) was designed to provide flexibility to states to create plans to fit the needs of their own situation.

Ms. Obenshain jumped in and announced that she was not aware that previous efforts could be counted toward state goals and is happy to hear that what organizations are currently planning in the next few years were not counted when EPA developed the goals and will not count against them.

Ms. Brown shared that the energy efficiency goals for Georgia seem low and the renewable energy goals seem high, and she does not feel that the energy efficiency goals are aspirational or address energy efficiency potential.

Mr. Harvey reiterated that EPA used a national approach by reviewing the top 20 percent of states and determined an energy efficiency goal of 1.5 percent of avoided electricity demand.

Ms. Tierney added that EPA needed to create a rule on the best known emissions reduction system available today based on current data rather than extrapolations or projections of future technology.

Ms. Obenshain expressed that her organization has some concerns about the 1.5 percent in efficiency gains given that much of the most cost effective EE has already been deployed.

Mr. Popowsky voiced concern that the rate based approach will not work as well as the mass based approach for energy efficiency. The panelists and others in the room responded that the effective generation from efficiency would be counted in the denominator, and since there are no emissions associated with EE resources, the numerator would go down and the rate would decrease.

Mr. Popowsky then asked how states with organized markets could affect dispatch if it does not put a price on the cost of carbon.

Ms. Tierney informed Mr. Popowsky that Pennsylvania could join a regional trading scheme entities such as the Regional Greenhouse Gas Initiative (RGGI), implement its own cap program with neighboring or non-contiguous states.

Mr. Till inquired about synergies between 111(d) and grid modernization.

Ms. Tierney asserted that 111(d) and grid modernization are both modernizing the electric system and sees them as highly synergistic. She goes on to state that she feels that grid modernization is more complicated than 111(d).

Mr. Coburn is also inclined to believe that 111(d) and grid modernization overlap. He believes that grid modernization will allow aggregators to play a role in this field in a way that they have not had previously.

Ms. Obenshain stated that EPRI has recently released a paper on grid modernization which discusses some of the same points that Ms. Tierney and Mr. Coburn described.

Mr. Roberti mentioned that installed capacity is 99 percent natural gas in Rhode Island which has the lower per capita use of electricity. He expressed concerned about the goal for Rhode Island.

Mr. Harvey mentioned that he is welcome to have further conversations to address this specific situation and that Mr. Roberti should consider providing comments or attending a hearing.

Ms. Tierney added that Rhode Island could join a region such as with the RGGI states to submit a regional plan which could address some of the equity issues for individual states.

Mr. Ball ends the discussion asking for efforts that are underway to avoid a train wreck in regards to reliability.

Mr. Harvey responded that EPA is sensitive to the concerns regarding reliability and that EPA is having frequent discussions with FERC and DOE to ensure flexibility in terms of reliability.

EAC Member Discussion of Workforce Working Group Plans

Wanda Reder explained that a Workforce memo draft was sent around outlining past activities and recommendations to address workforce issues. Ms. Reder explained that the Workforce group has put out recommendations in 2012 and in the fall of 2013 and this memo serves as a follow up document. The purpose of the Workforce recommendations is to identify issues and allow feedback from the DOE on recommendations. Ms. Reder explained that there are various activities that the DOE, NSF and the Department of Labor have been working on. The Workforce group has identified the need for a leader to pull together the different factions of workforce initiatives together and OE has been identified as a suitable leader if staff limitations can be addressed.

Anjan Bose reiterated the main recommendation is for someone to take a leadership role in workforce issues. Professor Bose explained that the NSF is the only organization with a long term plan for education and training programs but, because the NSF does not target energy sector issues, OE is in a good place to fill that gap for workforce issues in the industry.

Assistant Secretary Hoffman confirmed that she thought the memo was a good way to proceed with workforce recommendations.

Public Comments

There were no public comments.

Wrap-up and Adjourn Day One of June 2014 Meeting of the EAC

Mr. Richard Cowart, EAC Chair thanked everyone for participating and the meeting was adjourned.

Respectfully Submitted and Certified as Accurate,



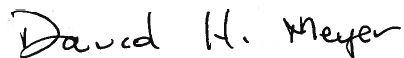
Richard Cowart
Regulatory Assistance Project
Chair
DOE Electricity Advisory Committee
8/8/2014

Date



Irwin "Sonny" Popowsky
Pennsylvania Consumer Advocate
Vice-Chair
DOE Electricity Advisory Committee
8/8/2014

Date



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



Matthew Rosenbaum
Office of Electricity
DOE Electricity Advisory Committee

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Date