

State Energy Advisory Board  
Meeting Minutes: March 13-15, 2012  
Arlington, VA

**STEAB MEETING ATTENDEES**

**Designated Federal Officer (DFO):**

- Gil Sperling, STEAB DFO, Senior Management Technical Advisor, EERE, DOE.

<b>STEAB MEETING ATTENDANCE</b>		
<b>BOARD MEMBERS</b>	Present	Absent
<b>Susan S. Brown</b> , Deputy Administrator, Wisconsin Division of Energy	✓	
<b>Tom Carey</b> , Director, Energy and Rehabilitation Programs, New York State Division of Housing and Community Renewal	✓	
<b>Dan Carol</b> , Strategic Advisor/Organizational Consultant		
<b>William Vaughn Clark</b> , Director, Office of Community Development, Oklahoma Department of Commerce	✓	
<b>John H. Davies</b> , Director, Division of Renewable Energy and Energy Efficiency, Kentucky Office of Energy Policy	✓	
<b>Cris Eugster</b> , Executive Vice President and Chief Sustainability Officer, CPS Energy		
<b>David Gipson</b> , Director, Energy Services Division, Georgia Environmental Facilities Authority		
<b>Philip Giudice</b> , Chief Executive Office, Liquid Metal Batter Corporation		
<b>Paul Gutierrez</b> , Vice Provost for Outreach Services, Associate Dean and Director, Cooperative Extension Service, College of Agriculture and Home Economics, New Mexico State University	✓	
<b>Duane Hauck</b> , Director, Extension Services, North Dakota State University	✓	
<b>Robert Jackson</b> , Manager, Michigan Economic Development Office, Michigan Energy Office	✓	
<b>Elliott Jacobson</b> , Vice President for Energy Services, Action Energy	✓	
<b>Peter Johnston</b> , Project Manager, Clean Energy Technologies, Burns & McDonnell		
<b>Maurice Kaya</b> , Hawaii Renewable Energy Development Venture	✓	
<b>Ashlie Lancaster</b> , Director, South Carolina Energy Office	✓	
<b>Lou Moore</b> , Chief, Energy and Pollution Prevention Bureau, Montana	✓	
<b>Frank Murray</b> , President and CEO, New York State Energy Research and Development Authority	✓	
<b>Steve Payne</b> , Managing Director, Housing Improvements & Preservation, Department of Commerce	✓	
<b>Janet Streff</b> , Manager, State Energy Office, Minnesota Department of Commerce	✓	
<b>David Terry</b> , Executive Director, ASERTTI	✓	
<b>Daniel Zaweski</b> , Assistant Vice President - Energy Efficiency and Distributed Generation Program, Long Island Power Authority	✓	

**Contractor Support & Other DOE Staff:**

- Emily Lindenberg, SENTECH, Inc.
- Renae Steichen, SENTECH, Inc.

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**March 13 Agenda Items:**

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| 1. Welcome and Review of Meeting Purpose   | Janet Streff       |
| 2. Overview of EERE Programs and Deployment Task Force   | Dr. Henry Kelly    |
| 3. Presentation and Discussion on Technology Transfer  | Dr. Karina Edmonds |
| 4. Review of Initiatives and Programs for Rural Development  | LeAnn Oliver       |
| 5. Update on EERE Organizational Changes and Looking<br>Towards FY 2013                                  | Gil Sperling       |
| 6. Review of GoodCents' leveraged technology solutions and<br>integrated demand side management programs | William Rodgers    |
| 7. Discussion on ARRA Progress and Close-out/Impact<br>of SEP and WAP                                    | Joel Eisenberg     |
| 8. Board Logistics   | Janet Streff       |
| 9. Task Force Discussions  | Janet Streff       |

*\*Copies of all meeting presentations from March 13<sup>th</sup> can be found online at [www.STEAB.org](http://www.STEAB.org)*

**WELCOME & INTRODUCTION**

- Janet Streff (JS) opened the meeting by thanking everyone for coming and facilitating introductions around the room. Each member was provided a book with information about the STEAB, such as the charter. JS noted that the group would break into task forces during the meeting and new members will be added. The task forces are to be used only for the time they are accomplishing something. Therefore, if its task has ended the group can end, form a new group, or choose a new project.

**Overview of EERE Programs and Deployment Task Force**

- Gil Sperling (GS) introduced Henry Kelly (HK), Acting Assistant Secretary for EERE. HK gave an overview of the EERE programs and deployment task force. Energy efficiency and renewables are a central interest to the administration and is a driver of the US economy. EERE is interested in working with what states and cities are doing because that is where ideas grow. EERE received a 26% increase in the President's fiscal year (FY) 12 budget and they are now preparing the FY 13 budget. One of the main areas of growth is renewables. The Solar Program is focusing on achieving the goal of \$1/watt. They have launched the Rooftop Challenge to have companies challenge each other to do better and more efficient permitting. In the Wind Program, they are focusing on off-shore wind potential, including the Atlantic, Pacific, Gulf, and Great Lakes. The Biomass Program is starting to focus on materials that are direct drop-ins to fuel, not the typical fermentation of ethanol. EERE is also working on the demand side. Transportation is a continuing concern because of its reliance on foreign oil supplies. The US is on the cusp of major changes with all of the new technologies that are emerging, including hybrids and electric vehicles. Through the Clean Cities program they have been funding permitting and other activities to facilitate infrastructure such as charging stations. EERE is also working on appliance efficiency standards in coordination with manufacturers. The Buildings program is working on building shell standards and codes and on building labeling to incentivize efficient homes, commercial buildings, and federal buildings. The Advanced Manufacturing Program is helping existing manufacturers upgrade technologies to be more efficient and is also helping new manufacturers with new technologies through the Advanced Manufacturing Partnership. There is a new part of EERE called the Office of Strategic Programs, which was created to develop a coherent set of goals for the program. They are also trying to strengthen the innovation system focused on regions and trying to improve financing.
- Maurice Kaya (MK) asked if HK had ideas on how to get information from states and cities more effectively. HK noted that STEAB, a regional advisory board, and workshops are current methods, but he would like STEAB to contribute ideas.
- Elliot Jacobson (EJ) asked about future funding for weatherization. HK noted EERE is trying to gather unspent Recovery Act funds to help continue state weatherization programs. EJ noted that the program needs more support in addition to financing programs.

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- John Davies (JD) asked HK's ideas for areas on which STEAB. HK responded that one would be to find a way to get long term financing for retrofitting buildings. Another would be to speed permitting and adoption of new codes by states. The third would be to build on regulatory streaming idea for solar that also applies to a number of different technologies.
- Lou Moore (LM) asked what EERE is doing to evaluate the cost effectiveness on new building codes. HK said there is a team working specifically on cost analysis. They also have a software program that allows them to evaluate the costs and benefits of specific codes.
- Paul Gutierrez (PG) is interested in regional manufacturing sector and asked if there are potential state partners with whom they are working. HK noted that a good cluster is funded by the federal, state, and industrial sector. They are working with NIST to enhance regional clusters and one of the factors is whether there is a viable state partnership.
- Vaughn Clark (VC) asked how states should respond to Department of Defense (DOD) and whether they should direct bases to FEMP. HK noted that bases have a lot of independence in planning, but EERE is working closely with the facilities director at DOD. EERE also has an MOU in place with DOD to promote energy programs.
- Tom Carey (TC) encouraged EERE to work with National Planning Association. The Recovery Act created many jobs and any longer term support to continue these programs would be helpful. HK noted that these programs are also in line with local programs such as Clean Cities.
- MK noted that state energy officials (SEOs) are set up to be good sources of information and bringing people together, so EERE should work closely with the SEOs. As EERE is internally considering how to manage the process they should talk to STEAB for ideas and representatives from states.

**Presentation and Discussion on Technology Transfer**

- JS introduced Dr. Karina Edmonds (KE). KE was appointed to focus on tech transfers. DOE is trying to find new ways to partner with industry, with a focus on the national laboratory partnerships. The America's Next Top Energy Innovator project is trying to reduce barriers, educate new entrepreneurs, establish mentoring, and facilitate market opportunities. This is part of a larger effort to support new companies and commercialize new technologies. KE helped create a template for entrepreneurs to help reduce costs and mentor new companies. DOE recently finished Round 1 and is starting Round 2 of this effort. This program is a part of DOE's response to the Presidential Memo on innovation, which asked each Federal agency to set goals and metrics on how they will support innovation. DOE is also working to streamline processes such as setting up a licensing agreement. EERE funded an innovation portal that lists available technologies and market summaries. Another section of the partnership focuses on local and regional partnerships to reduce barriers and increase communication. The national labs have many ways to work with the private sector and DOE is working to improve many of those areas, such as exchanging personnel by allowing entrepreneurial leave. DOE is working to revamp the Collaborative Research and Development Agreements (CRADA) to improve and expedite the process. KE noted that the launched a new program Agreement for Commercialization Technology (ACT) to facilitate multi-party collaboration. Many of the changes with ACT could be done now if there was an incentive, so DOE is working to provide incentives. DOE is working to drive innovation and be a facilitator to get out as many technologies as possible. STEAB can help the tech transfer program by facilitating outreach to constituents and supporting implementation.
- David Terry (DT) complimented KE on the progress made in the program and asked how the funds may intersect with state investments with tech transfers. KE noted that innovation occurs at the state level, so DOE wants to work with them to facilitate deployment and leverage state partnerships.
- VC asked why the labs are not more interested in this program. KE noted that Secretary Chu is very interested in this program and she is optimistic about the changes that the labs have done. The labs agree that getting the technologies out is important, but the challenge is with the process, such as licensing fees and royalties.
- Frank Murray (FM) noted that labs still have a lot of work to do on tech transfer and thinks DOE could improve partnership with the states to facilitate tech transfer. KE noted that the labs could have tech transfer

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highlighted more as part of their reviews as a way to improve support, though middle management may not be as supportive as senior leadership on tech transfers, so DOE could add this to their performance plans.

**Review of Initiatives and Programs for Rural Development**

- JS introduced LeAnn Oliver (LO) from the Clean Energy and Rural Development program. LO stated that the program has three focus areas. The White House Rural Council is chaired by Secretary Vilsak and the point is to try to break down stove pipes to see how opportunities can be implemented in rural areas. The council supports a new job development grant program. The application process is flexible because rural areas tend to not have the time and technical expertise to complete complex applications. When there is an efficiency or renewable project, DOE will serve as the technical liaison with the applicant. One issue that has come to light is that rural water systems are old and deteriorating. DOE is trying to help ensure that the upgrades to these water systems are using the latest technologies available. Another prominent issue is the use of heating to dry agricultural products and the need to have different agriculture sectors share drying technologies and processes. LO is working to bring in partners so that scientists, industry, and local groups can share ideas. LO is also trying to find funding sources to help support energy efficiency in rural areas with co-ops and other local groups. The program will also try to provide training in technological and energy areas. LO noted that DOE can help build partnerships to build the energy economy. The State Energy Extension Program (SEEP) funded grants in three states to encourage relationships between the state energy offices and the extension system in those states, such as 4H groups.
- VC noted it was good that they are working on water and sewer programs. VC suggested that DOE work with HUD on the rural development block grants to provide CERTS type funding for efficiency. VC mentioned that engineers are key to the water and sewer systems, so it may be beneficial to coordinate with a national engineer group. TC noted that New York has a good partnership with rural communities in their housing program and agreed the CERT program is a good potential funding source.
- JD noted his group successfully leveraged Recovery money with tobacco settlement money to help develop an efficiency program with agricultural industry in rural communities. JD also noted not to disregard industry in rural areas. JD is trying to leverage performance contracting with water and waste water groups. JD also noted that EPA has a requirement for a percent of their projects to be green, so they could be a potential funding source.
- AL noted the state revolving fund with EPA is a potential funding source, but one of the challenges is that the funds cannot be used for economic development. AL suggested LO work with EPA to modify the loan/grant programs to help rural communities build capacity. AL has been working with co-ops on efficiency programs and noted they struggled with finding financing mechanisms for loans. Many of the people who need retrofits are in mobile homes or similar areas and don't have the credit ratings needed for loans.
- FM also noted there are renewable energy opportunities in agriculture (e.g. one farm put in a solar panel which reduced energy by 66%) that can boost economic development.
- DH mentioned the SEEP program and the STEAB group could help communicate benefits or needs to DOE.

**Update on EERE Organizational Changes and Looking Towards Fiscal Year 2013**

- GS gave an update on EERE organizational changes and the draft strategic plan. EERE recently had an all hands meeting to discuss issues, such as how to better involve staff in headquarters and national labs in plans. They opened plan development participation internally so that the plan would be designed by and for EERE staff. The goal is to reflect what they are doing now, look at investments, and assess how current funding fits in with goals. One of the next steps is to create panels with staff from different programs in EERE to draft a framework to integrate goals, outcomes, and strategies. The Strategic Programs staff will then draft a single document that includes everything from the process into a coherent document around a single vision. They also hope to have a plan out to EERE stakeholders such as the STEAB for comment. JD noted that this is a good initiative but they need to work with other Federal agencies as well. EERE is trying to leverage funding opportunities and partnerships, such as a revolving loan programs to transform markets. They are also

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working on policies, such as the real estate investment tax benefit, and convening stakeholders to discuss these issues.

- VC noted that staff and funding capacity are at much different levels in the states. States do better at managing contracts because that is what DOE pushes. VC noted they need more training and technical expertise because right now they have challenges keeping up with DOE rules.
- RJ asked whether there is a group looking at how to sell loans that states put together for commercial side and sell them on the secondary market. GS said that some of their loan programs have pursued this and NASEO is working with DOE on this issue. These programs need to be designed so that they can be consistent across states.

**Review of GoodCents' Leveraged Technology Solutions and Integrated Demand Side Management Programs**

- GS introduced William Rodgers (WR) from GoodCents. The company works with utilities and states to promote energy efficiency. They convene utilities to determine how they can best achieve their energy efficiency goals and cost targets. They are involved in commercial and industrial as well as residential side of utilities. Most of their programs with utilities are voluntary. They have a new program with the state of Indiana that involves multiple utilities and municipalities to offer an identical program. The program in Indiana began in 2004 when the Indiana Utility Regulatory Commission (IURC) did an overall review of the effectiveness of demand side regulations. The IURC found that there was a low level of money being invested and low energy savings being achieved. The IURC identified four policy priorities, which includes reducing customer energy costs and establishing clear and consistent rules for utilities. GoodCents won the bid with IURC to handle everything from communication and branding, to interacting with consumers, to reporting. There are five core programs: residential lighting, income qualified weatherization, home energy assessments, energy education, and commercial and industrial perspective. Their challenge is that the energy goal is large and must be achieved in the next two years. GoodCents has developed a reporting system that allows users to view data and display results in a variety of ways. The reporting will also help them understand what is working well or not in the program.
- VC asked whether they measure how customer behavior is impacted. WR stated they are measuring customer behavior based on the marketing channels and what avenues work best to get them involved in a program. Also, as they go through the qualifying process they will learn about their level of interest going into the program and what their behavior needs are.
- JD asked whether the Indiana utilities and co-ops are regulated and WR responded that they are not. Indiana invested about \$185 million into this program.
- EJ asked how someone is considered low income eligible and whether it's designed to piggy back with the DOE program. WR stated they use census block information to break down the market place, so it is self-declaration and not a house by house analysis. They work with community programs in the state as well.

**Discussion on ARRA Progress and Close-out/Impact of SEP and WAP**

- JS introduced Joel Eisenberg (JE) from ORNL who discussed ARRA progress and close out. JE has been working on the weatherization plus (WAP) and state energy programs (SEP). JE noted that the SEP data collection process has been approved at DOE and is now with OMB. They are receiving data on retrospective weatherization programs and the results will be rolled out in the next 3-6 months. JE passed out a weatherization funding flow chart that shows resources are distributed through grantees, states, utilities, and sub-grantees. Preliminary data on their occupant survey shows dramatic improvements from pre- to one-year post weatherization. Part of the challenge in evaluating the weatherization program in 2008-2010 is that the economy was also down, so it is difficult to distinguish what change is from the economy versus the weatherization. The weatherization plus committee is working to develop a new strategic plan for weatherization. The leveraging committee has shown that some states have great success, but others have not. JE asked the group whether there are things that they could focus on to leverage differently in more

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difficult environments. JE also asked what partnerships the new markets committee should or should not focus on and whether there is anything they can do to improve the quality of the program.

- TC asked why matching funds are not considered leveraged funds. JE noted they are not always cost effective. JE mentioned if there are things in regulations about weatherization that should be changed, they should be raised to the committee.
- JE noted that they need to find a way to transition through the next few years. EJ asked how weatherization could fit into the EERE strategic planning process. TC noted that we may not be able to finance our way out of this because low income families have a lot of other financial burdens. This group has the same goals and we need to find a way to achieve them. JE noted that there was an Inspector General report on the weatherization program and found many areas in which they can improve.

**Board Logistics**

- JS discussed the STEAB task forces and whether changes were needed. An idea for a new group is focus on national laboratories partnerships with the states. DT noted there is a difference in what DOE is doing in tech transfer and what states are doing in deployment. MK noted the ability to have an effective relationship with a lab depends on the personnel, expertise, culture, and priorities. Labs may not speak the deployment language that states speak in talking to industries. In order to be effective, they should be focused and target the labs that are interested in the same things as STEAB.
- Another area raised for the task forces was the EERE strategic plan and ideas of what to include in the plan. PG suggested that, given the short planning timeline, STEAB may want to start articulating ideas now. FM noted it is important to integrate state partnerships into the strategic plan because DOE needs the states to achieve its goals.

**Task Force Break-Outs and Discussion**

- JS quickly reviewed the current make-up of the task forces, and then asked that each task force take time to discuss accomplished goals and future deliverables. She encouraged each group to think about how they can help facilitate communication and outreach across EERE, and focus on tech transfer with Labs as well as the EERE program areas.
- GS asked the groups to think about re-vamping the lab task force noting STEAB is looking for technology transfer opportunities and partnership opportunities for the Labs, but the only way the labs can contribute to these efforts is through an effective mechanism of communication between DOE and the labs and the community and the labs. Labs need leadership to do this and it just isn't there yet. This is something STEAB could focus on in the lab task force.
- DT noted again how he was struck by Dr. Edmond's comments about deployment and commercialization and how there are many parts of DOE already doing this. The STEAB should get a better idea of where these types of activities are taking place and how they are being handled because there is clearly a disconnect about what DOE thinks it is doing and what the states and labs feel is happening at DOE. PG and JS asked if before the group breaks-out, if the STEAB should establish a Strategic Plan task force to provide feedback to Henry Kelly, and if the new members should join the task forces before the discussions.
- It was determined that Ashlie Lancaster would join the Deployment task force, Robert Jackson, Lou Moore, Janet Streff and Paul Gutierrez would make up the Strategic Plan task force, Tom Carey would join the Weatherization task force and Frank Murray would join the lab task force.
- During the group discussion following the task force break-outs, the following updates were provided by the different task forces;
  - DOE/USDA Task Force: The State Energy Extension Working Group (SEEP) is coordinating between EERE and USDA to get an MOU signed between both agencies. The three states which are currently undertaking the SEEP pilot program are actively engaged with SEP to make sure deadlines are being met. The task force is interested to know why there was not a second SEEP competitive award issued by SEP this year, but they will follow-up with Anna Garcia when she presents on Wednesday.

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- SEP Task Force: The group would like an updated review of where the SEP Evaluation stands and also focus on ways to tell the SEP story, both internally and externally, to address concerns by states about competitive vs formula funding. The task force wants to take an analytical look at the way funding is divided between these two and thirdly, look at the ORNL study on Capacity Building to look at creative policies and the pro's of formula funding vs competitive funding. Finally, this study and comparison will be taken to OMB, with the recommendation of why one form of funding is superior to the other.
- Deployment Task Force: The group recognized the difficulties that exist within DOE and EERE with regards to deployment efforts. The task force wants to discuss the deployment White Paper with EERE again and refocus efforts to determine key priorities that will continue the deployment discussion within EERE and also ultimately result in successful initiatives or programs. The focus of culture within EERE needs to shift from being R&D centric to being market-driven and commercialization focused. Additionally, the task force wants to look at enablers of deployment such as different financing mechanisms and other structures within EERE. The White Paper had talked about developing an office for deployment at the Secretary level. Now there is the Office of Strategic Programs, but it is not clear if that office looks at outreach efforts across all EERE programs or if the focus of that office is actually deployment.
- Weatherization Task Force: The task force met with Joel Eisenberg and Ed Etzkorn, from OMB, and discussed the view of the Program itself as well as focused on ways that WAP could be part of EERE's Strategic Plan moving forward. The group discussed the reduction in funding provided by the FY 2013 budget and what that means for the future of the program. All members of this task force are also part of DOE's Weatherization Plus 2015 working group which is meeting in Baltimore next week, so hopefully these issues about the value and future of the program can be discussed.
- Strategic Plan Task Force: This small group did not meet, but the chair, PG, determined not only did they need more members, but that response time was critical. PG asked that the STEAB spend some time thinking about what should be included in the response to EERE about the Strategic Plan, and what the most important issues to address were, moving forward. The STEAB noted that on Thursday, they had time in their schedule to discuss ideas for the Strategic Plan.

**March 14 Agenda Items:**

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| 1. Overview of Previous Day   | Janet Streff    |
| 2. Update from EECBG Sub-Committee  | Ted Donat       |
| 3. Overview of EERE Energy Literacy Programs  | Matthew Inman   |
| 4. Overview of the Advanced Manufacturing Office's<br>Technology Deployment Efforts             | Katrina Pielli  |
| 5. Update from OWIP on SEP and WAP Programs   | Anna Garcia     |
| 6. Deutsche Bank Climate Advisors Investment Funds  | Jake Baker      |
| 7. Update on Deployment of Tech Transfer Initiatives<br>From the Fuel Cell Technologies Program | Sunita Satyapal |
| 8. Continuing Board Discussion  | Janet Streff    |

*\*Copies of all meeting presentations from March 14<sup>th</sup> can be found online at [www.STEAB.org](http://www.STEAB.org)*

**Overview of Previous Day**

- Janet Streff (JS) opened the meeting by discussing STEAB logistics. The group decided to keep the same teleconference meeting time. Emily Lindenberg (EL) reminded the group that the next conference call is April 19. The next in person meeting is June 26-28 at the Renaissance Mayflower Hotel in DC. Members should send suggested speakers and topics to EL. The group suggested visiting Brookhaven National Laboratory for the Fall meeting the week of October 8. Daniel Zaweski offered to help with contacts for that trip.

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**Update from EECBG Sub-Committee**

- JS introduced Ted Donat (TD), Program Lead for the Energy Efficiency & Conservation Block Grant (EECBG) Sub-Committee. EECBG was a \$3.2 billion program part of the Recovery Act (ARRA). They have spent about 67% of the grant funds to date. The program will continue through the end of September 2013, which is the date the ARRA program loses its statutory authority, with the exception of the evergreen funds that are different revolving funds. There are approximately 100 grants, and \$100-200 million are evergreen funds so it does not constitute a large majority of the funds. These revolving funds would maintain their Federal character and ARRA rules in the future. EECBG is developing guidance to try to make it clear what to do with the remaining money. They think there is more potential in the market place and in states for building retrofits. Vaughn Clark (VC) noted that they were told to use EECBG and SEP money on projects that they could do quickly and were ready to go, which turned out to be building retrofits. Therefore, VC cautions interpreting the project spending as building retrofits having the greatest energy reduction potential. EECBG has had a significant impact, including installation of 170,000 kW solar capacity and energy upgrades to over 55,000 buildings. The EECBG sub-committee has members from DOE, cities, and states from different geographies and sizes.
- FM asked whether the utility challenge was regional or all over. TD said the challenges were in pockets and it depended on whether the utilities understood the benefits of energy efficiency to their business. EJ noted some challenges with New York utilities in dealing with neighboring state utilities. JD stated the utilities perform differently across the country but there are commonalities that would be good to understand. GS noted EERE needs to understand utilities better and would benefit from STEAB guidance on this issue.
- TD noted that one of the sub-committee recommendations was to create a database of EECBG closeout profiles that can be used as a future resource for project planning. This could help future communities find projects with similar features to help them plan. MK thought that tool would be very useful and asked whether there was a way to rate projects to show which were successful and which had problems. TD noted they thought about having a way for users to rate the vendor in this tool, but it would likely be too expensive of a feature to implement unless STEAB thinks it should be a priority. The sub-committees also recommended creating a national/regional energy efficiency loan facility and financing standards, continuing funding of the EECBG program, creating regional energy offices, and defining best practices in energy management. They found that the organizational location of the energy manager made a difference in effectiveness and that energy managers should have general management expertise.
- JS noted the recommendations from all of the previous EECBG meetings are in the workbooks given to each STEAB member. GS recommended that these comments from the sub-committee be passed along with comments to EERE. He asked Ted Donat to please condense the comments from the chart into a draft Resolution which can be reviewed and debated on the Board's April teleconference call.

**Overview of EERE Energy Literacy Programs**

- Matthew Inman (MI) gave a presentation on the EERE energy literacy programs. EERE began a major energy literacy effort in Fall 2010 and it has been included in the DOE Strategic Plan since May 2011. The goal is to have the general public be more educated about energy issues and be able to be involved in energy decisions. DOE is leading a multi-stakeholder effort to develop an energy literacy framework. At the core of their framework is energy education for all ages. Their upcoming report on energy literacy lays out everything they think should be involved in energy education and defines what it means to be energy literate. They based their program on existing literacy efforts, such as the Climate Literacy program. The report was developed with contributions from a range of stakeholders and venues, including workshops of people from multiple federal agencies, non-governmental organizations, and individuals, and an email distribution list. They came up with seven essential principles to energy education, which includes natural science and social sciences. The principles are not designed for the general public to read, it is for the educators to read so that they include the concepts in their training. The document will be released in late March or early April. DOE plans to develop an Energy 101 college level course that would eventually be recognized and consistent as a Psychology 101 course. DOE also has an online learning program that could be used across the country.

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- AL asked how DOE will determine which universities will offer the Energy 101 course. MI mentioned that universities could reach out to DOE and they are currently working through a higher education group. There will be various levels of participation and it may require formal sign on.
- The group noted that this effort may align well with the state energy extension and land grants program. The Association of Public and Land-Grant Universities (APLU), specifically the public universities, would be a good audience for this program.
- MK noted that STEAB may also want to look at workforce issues at a future STEAB meeting because the workforce is a key enabler for energy activities.

**Overview of the Advanced Manufacturing Office's Technology Deployment Efforts**

- Katrina Pielli (KP) gave an overview of DOE's Advanced Manufacturing Office efforts. The Advanced Manufacturing component is one of DOE's key contributions to the effort that bring together a variety of actors around specific technologies and tries to enhance the tools and partnerships to take the technology to market. The Better Buildings, Better Plants (BBBP) Challenge program has a goal to achieve a 20% savings in commercial and industrial buildings by 2020. To date, there are over 60 partners involved in the program. They have structured the program to have one level with partners striving towards aggressive goals and another level that wants to be involved but cannot commit to specific goals. The Superior Energy Performance (SEP) is tied to BBBP. The management piece is very important to save energy over time. The goal of SEP is to drive energy performance. ISO is one of the key building blocks to achieving SEP and an ANSI/ANAB accredited body will certify to SEP. KP noted that BBBP does not require SEP certification. DOE hopes that what they do with BBBP will create information to help other ISO partners. SEP has been rolled out through a series of pilots and DOE hopes to learn and modify the program through the pilots. SEP has 35 companies across 20 states involved in the program. JD noted there were resources to support Save Energy Now at the states level, and he wondered whether the money to support the rebranded program would stay. KP responded that the current thinking is that the funding would stay to help support states. JD suggested the funding stay to help support SEP. KP noted that DOE also has made a state and local energy efficiency action network. EPA and DOE facilitate the network but the chairs actually do the work and develop materials as needed. The working group has identified utilities as an important group to achieving goals. DOE has been working closely with EPA on the upcoming industrial boiler rule because it will require a significant investment in boilers to comply. DOE has been working with industry to show them the benefits of using natural gas as a way to comply with the rules.

**Update from OWIP on SEP and WAP Programs**

- Anna Garcia (AG), Program Manager at the DOE Office of Weatherization and Intergovernmental Programs (OWIP), gave an update on the SEP and WAP programs. Under ARRA, WAP has weatherized about 680,000 homes and will save an estimated \$350 million in energy costs. For SEP, the financing dollars going forward will help sustain the efficiency work in to the future. They have helped build financing capacity that will continue to provide for retrofits going forward. OWIP's three areas of interest in competitive funding for FY 12 are around public facilities and building their capacity to continue programs in future. Looking forward, they want to leverage ARRA progress and enhance partnerships to grow a robust energy efficiency industry. DOE will be conducting program evaluations on WAP, SEP, and EECBG with final reports coming out in fall/winter 2012. The Weatherization Plus 2015 Initiative is increasingly important as ARRA funding winds down. DOE hopes to dovetail information and goals with the EERE strategic planning. SEP and WAP are working to showcase examples on their blog and through other communication methods.
- MK mentioned the EECBG effort to create a tool and database of the projects, and noted that states want to delve into the projects and show useful information about successful projects. MK suggested that when they highlight success stories they work towards organizing it in a way that is useful to showing best practices. AG agreed and hoped they would be able to do that with their remaining funds.
- RJ asked whether DOE will be extending the due date. AG noted that when they did the solicitation for the competitive program they were expecting a smaller number given the limited time frame. AG stated they

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need to get the money out by the end of the year and the participants need to go through a review process. If they extend the awards it can delay the funding by multiple months, so it may be a challenge. AG will talk to the procurement office about what options for extending the deadline.

- AL asked about the funding opportunities due at the end of April. States tried hard to meet the deadline and it will put them at a disadvantage in preparing reports. If they move funds to a third party administered RLF prior to the period of performance end date complies with the expenditure deadline. AG noted that as long as there is an agreement with the third party then the state should not have a problem spending the funds. AG also noted that the funds are still subject to federal requirements.
- AG noted that EERE plans to have a draft strategic plan by June. EERE wants to hear from state and local partners on goals, priorities, and how to move forward. The strategic plan is designed to be a living document and focused on the next 5 years, and will set aspirational goals for the next 10-15 years. They want to look at more granular program plans and have that feed into the larger strategic plan.
- VC noted that DOE representatives often discuss positive feedback on weatherization and EECBG, yet there is a dramatic decrease in budget in recent years for these programs. AG noted that EERE is very diverse and there are a lot of programs competing for budget. EERE is trying to prioritize funding to really create a green energy economy while keeping within the Administration budget.
- RJ asked whether they will have states involved in SEP revisions. AG said that yes they are already starting to work with SEOs that receive the funds.
- AG noted that the technical assistance program has been trying to address the state's priority areas. They want to be able to deliver some of the immediate data needs and workable policies and best practices in an accessible manner.

**Deutsche Bank Climate Advisors Investment Funds**

- GS introduced Jake Baker (JB) with Deutsche Bank Climate Change Advisers. This bank helped design investment funds with large endowments and create investment vehicles to help deploy energy efficiency projects. They recently produced a report with the Rockefeller Institute on market sizing and deploying energy efficiency projects in various types of buildings. At a high level, they want to use contract structures that do not require additional legislation. The funding frameworks similar to a power purchase agreement or a government project with outsourcing the work. The idea is to invest in some of the project early and get savings over time, and this allows building owners to buy out the contract early if needed. JB noted they want to find a visible pipeline of actionable projects during the design and fund raising of the project. They are bringing in investment experience in a targeted and focused way to partner with entities to transparently find projects, deliver projects, and only fund through achieved and verifiable savings.
- GS noted there could be three different ways STEAB could help this project. One would be to identify buildings that need funding, another is revising policy that would facilitate this investment mechanism, and the last is convening stakeholders to get the conversation moving. JB noted they don't think that the strategy needs incentives or policy; that is not the focus.
- MK asked whether the bank will be engaged in projects and how this differs from energy service contractors (ESCOs). JB noted that they do not rely on tax incentives. JB noted that the bank will be engaged in the project process to be able to find attractive investments and create from the ground up new retrofits that would not have occurred otherwise. The bank wants to use the energy service agreement model; they would only get paid on the difference between the historical and realized costs, so only on the savings. Their model differs from ESCOs because they have no incentive to implement certain equipment, and they are only going to get paid based on real savings rather than providing the mortgage type financing that ESCOs use. Their ideal project is \$3-5 million.

**Update on Deployment of Tech Transfer Initiatives From the Fuel Cell Technologies Program**

- Sunita Satyapal (SS), Program Manager of the Fuel Cell Technologies program gave an overview of the deployment and tech transfer initiatives in the program. Fuel cells provide much higher efficiency potential because they can convert directly from chemical to electrical energy. Fuel cells have many benefits, such as

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reduced carbon dioxide emission, reduced air pollution, easy to use for portable power, and more. The Clean Energy Patent Growth Index shows that since 2009 fuel cells have the most patents, three times more than the second place holder of solar. This shows there is a large investment in this technology. DOE conducted an employment study on fuel cells, which projects that by 2035 it could create 360,000-675,000 jobs, and the Renewable Energy Industry projected up to 925,000 jobs. The DOE Fuel Cell Program has recently revised its strategic plan and has key goals to develop hydrogen and fuel cell technologies for early, mid-term, and longer-term markets. The DOE program focuses on areas such as research and development, technology validation, and market transformation. DOE has seen great progress in hydrogen production and reducing the cost. Hydrogen storage is still a challenge, but in recent years they have shown that you can get more than 250 miles on a single tank of hydrogen. DOE is investigating options for low-cost early infrastructure and resources for hydrogen. DOE has two solicitations out right now to collect data and work on infrastructure. The Fuel Cell program developed an action plan in collaboration with other agencies on what needs to be done to advance the market for fuel cells. The program is showing that fuel cells are being used in applications that help provide energy security to facilities. The next steps in the program include funding a tool that states can use to evaluate jobs could be created from a project. They are also conducting an analysis of the economic impact from hydrogen fuel cell clusters in the northeast of the US and looking at the potential in specific industries in states.

- New York has an active fuel cell industry and their perception is that DOE does not support fuel cells. SS noted that the agency did not provide as much support in 2009, but in recent years the Secretary has increased support and it is more recognized as a part of the DOE portfolio. DOE's activities are focused more on the longer term.
- MK asked whether the recent environmental issues with natural gas fracking have impacted the program's focus on natural gas hydrogen. SS noted that they have evaluated the synergies of natural gas and fuel cells and the Department recognizes the potential issues.
- DZ asked what DOE was doing on solid oxide fuel cells. SS noted there has been a lot of progress in Bloom Boxes that are not DOE funded. DOE has been funding some small solid oxide projects, but it is a lower priority.

**Continuing Board Discussion**

- PG led a discussion on STEAB issues. MK reviewed notes from the deployment task force break out meeting.
- GS noted there are a few overarching issues he has heard discussed. One is that EERE should prioritize deployment compared to pure technology development. Another is that deployment, as much as possible, should use limited public funds and leverage private capital. Third, is the markets we're trying to penetrate require partnership with states and localities. To meet those principles, EERE needs to build its knowledge base and expertise in these areas.
- DT noted that federal and state partnership with the private sector needs to happen to really push the market and financing. He also noted that the focus on the utility market and regulators needs to be expanded to include the governor's office and state energy offices. The group noted that government does have a role in energy efficiency for low-income housing and weatherization projects.
- The priority areas for DOE, such as the focus on public buildings, are a reaction to the comments they have heard. The goal is to put government money into projects that will spur private funding and partnerships.
- FM noted that partnerships may not translate into putting billions of dollars out but it does require significant funds. It needs to show that DOE is serious about finding connections to people outside of the agency. DOE should look at the states as a real partner in helping EERE accomplish its mission, which can involve money and infrastructure to help deliver programs.
- EJ stated the government has to play a role in low-income families. There needs to be leveraging and DOE needs to be involved in that to maximize the impact. The critical next step is to formulate a Strategic Plan response within the Task Force and then circulate a letter to the Board for feedback before the letter goes to Henry Kelly.

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- PG commented the key to this response should be partnerships and how those can have a big impact for little money or time. We need to highlight bottom-up change and use the ability to convene the right players to make an impact. We should also make specific recommendations about the right players and how these groups need to work together.
- GS reminded the STEAB they have talked about Partnerships, but should the Board define that? Is “partnerships” about money only or about a mission? We should focus on what partnerships really looks like and how we make them work effectively. DT agreed with FM that partnership is attitudinal. We need to remind DOE and EERE that to achieve its mission, the Department should have a vested interest in strong energy offices, and work to get those strategically aligned with the DOE mission. Strategically, it could be important to show DOE what happens without SEO’s and what types of programs and support goes away, and then highlight how to tie in the DOE and EERE missions with activities in the SEO’s already before building out new programs.
- SB agreed with Frank and David and noted there is an urgency to apply for competitive grants and how would the SEO’s do that with no one in the energy office? Keeping staff in the SEO’s is also key and having a continuity of intellectual capital is vital.
- MK noted there used to be an Assistant Secretary for EERE who was an advocate for the states. Back then the states and DOE had great joint programs specifically focused on targeted deployment. It was, at that time, a priority of the department and the administration to focus on the states and use them as a partner. How can STEAB make an argument compelling enough to showcase and highlight the contributions working with states and having strong state programs?
- GS stated DOE cannot get work done without the SEO’s. SEO’s, when charged with a mission of developing a state clean energy economy, become a major force to be reckoned with. SEO’s are important for laying out policy and the way the Governor runs the state energy program in their state. The SEO advises the Governor. Within DOE there is no recognition that SEO’s are essential to the achievement to the national mission. There needs to be a well written piece of how to connect these two entities.
- PG commented that DOE is not looking for formula funding recommendation so we have to get creative on how to present our ideas. STEAB needs to make specific suggestions to DOE about how to present the idea for more formula funding. SEO’s need to think about this and STEAB needs to look at what the funding level should be for SEO’s. GS replied that to accomplish that *requires* a strong network of Energy Offices at the state and local level. STEAB needs to make a strong case that “but for additional assistance you will never accomplish what you want to DOE.” The plan has to be about partnership and to change the political focus, we need a SEO and if that means federal funding is needed to support SEO’s, that is what we need. Without it, DOE cannot accomplish its mission.
- DT suggested the Board do a scorecard of DOE’s technology program areas. DOE struggles with deployment and tech transfer and maybe STEAB can set-up metrics and do a DOE/EERE scorecard, not on the state level, as that would be counter-productive, but on the EERE Program level. LM liked the scorecard idea with regard to SEP and technology transfer. ORNL looks at money being leveraged and longer terms effect of that money to track metrics of success. The STEAB could look at doing that and use the ORNL model as a way to move forward. The “real world” in a small state is the inconsistency of funding, and an inconsistency from DOE. There is almost a “black box” which is DOE and from it comes no guidance and no funding.
- GS reminded the STEAB that whatever response the Board sends to EERE, it cannot ignore low-income families and must address how the Board advises DOE and EERE takes care of WAP. How would DOE meet any of their EE goals without addressing 40 million low income homes across the country? It would be impossible.
- MK then asked what the top points are to outline in the Strategic Plan response to EERE? JD noted three things to focus on are deployment, partnership and funding. A fourth thing, which is more of a question, is will this Strategic Plan be a precursor towards a re-org of EERE. Is that something the STEAB could provide recommendations on, and suggest how to look forward to a blank slate from which to start and suggest changing the organizational structure of the office itself?

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- DZ made the comment, that as a representative who is part of a utility, utilities are always the odd group out of the STEAB. As the Strategic Plan is outlined and we provide feedback, we need to figure out how all stakeholders are involved. As we look at different stakeholders, how does DOE find its way to the utility and help with regulatory issues or partner with utilities? That is a question we should look at.

**March 15 Agenda Items:**

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| 1. Overview of Previous Day                 | Paul Guitierrez |
| 2. Overview of eXtension                    | Dr. Sarah Kirby |
| 3. Review of Outstanding Issues or Concerns | Paul Guitierrez |

*\*Copies of all meeting presentations from March 15<sup>th</sup> can be found online at [www.STEAB.org](http://www.STEAB.org)*

**Overview of eXtension**

- Paul Guitierrez (PG) introduced Dr. Sarah Kirby (SK) from eXtension. Duane Hauck (DH) noted that the cooperative extension network across the country has been working together for a number of years and coordinates with the land grant universities. They have been working to compile unbiased information from all of the extension services and have launched a website to combine the information and facilitate network connections. SK is a housing specialist in residential energy at North Carolina State University. eXtension is an internet-based collaboration environment of Land Grant Universities where providers exchange objective information to help solve problems. eXtension has about 50 communities of practice to bring people together to share information and educational products and programs. They have established this network to give people an opportunity to collaborate with other professionals, keep each other informed of new resources, provide professional development and training opportunities, and as a way to maximize limited resources. Their Home Energy community of practice was designed to help provide people with reliable and credible information, especially in light of rising energy prices, an aging housing stock, and an increasing concern for the environment. They wanted to provide education to the general public and housing professionals focused on residential energy efficiency and renewable energy, and encourage adoption of best practices. They have involvement across 38 states in this Home Energy community of practice. Their process is to respond to questions, issues, or events and collaborate to develop educational products around them so that consumers have a place to get their questions answered. They also relate to other communities of practice such as wood energy, sustainable communities, farm energy, and extension disaster education network. The website tries to recognize where users are located and so they link users to their local university for information. They have an “ask an expert” feature that allows users to get a question answered within 48 hours.
- DH noted that the community of practice is striving to evolve and respond to what consumers want to optimize their experience. DT noted that DOE eliminated its call center so eXtension’s services will be particularly helpful for local users. VC noted that the website should link to local counties and weatherization people to encourage partnerships as much as possible.

**Review of Outstanding Board Issues or Concerns**

- PG led the group in a review of board issues. The group will gather comments on the EERE Strategic Plan and convene at a later date to discuss. PG noted that the people who are involved in the state energy offices and funding should try to think of specific recommendations for DOE rather than just saying we want the same or need more money.
- DT noted that there have been a number of scorecards done on state energy programs that DOE looks at. He suggested that it may be helpful to look at STEAB’s deployment, tech transfer, and other technology issues through a scorecard as a way to highlight issues, such as a lack of connection between technology development and OWIP. AL cautioned that scorecards can be helpful, but if they score low on something they need to show what can be done to overcome that and whether they have alternative avenues to achieve that goal. DT noted it could be a way to track progress within DOE on achieving goals and grade the agency on STEAB’s goals. DH mentioned the evaluation of states by USDA has been helpful to show funding needs

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and results. VC cautioned that scorecard results may impact funding formulas, and may help the successful states and penalize the states not doing well.

- STEAB members thought it may be useful for the National Homebuilders Association person on the last conference call to present at a STEAB meeting in the future.
- EL will send the deployment task force notes to the group. PG mentioned that he will work with EL to share the notes and capture ideas from this meeting, then work together to come up with specific recommendations for the EERE strategic plan. MK noted we may want/need to prioritize the board's concerns and recommendations. PG noted that one thing they need to do is to define the partnership among STEAB, DOE, and the states. PG noted these comments are urgent to try to integrate into EERE's planning process before they are final. JD mentioned the three things he's heard at the meeting are partnerships, deployment, and financing. JD noted that if STEAB's and EERE's priorities are such that the current organization is not set to support it, then they should consider a potential reorganization. RJ noted we may want to also look beyond the strategic planning process and get into developing metrics. DH noted that plans made from the bottom up generally have much more buy-in from the organization. Therefore, as STEAB looks to provide comments they should look at the programs to add that same bottom up value.
- For the next meeting, it was suggested to potentially have someone speak on voluntary carbon markets and other carbon rules. Another topic could be natural gas because that could be a game changer in the future energy market. They could also have someone from a national lab speak either about collaborating with the states, tech transfer, or their interests. One issue that could be important for the board moving forward is electricity markets because it relates to things like renewable energy, smart grids, distributed generation, and electric vehicles. Another issue could be transportation, including alternative transportation, fuels, electric vehicles, and trucking. These are important because they have overlapping jurisdictions. Another issue to consider is that responsibilities for deployment lie in different programs, so it would be good to have a presentation on what is being done to consider deployment holistically. DT noted that the Bipartisan Policy Center or National Academy of Sciences may be a good place to find a speaker on these issues to provide a higher level discussion on energy efficiency and renewables. Clean Cities may be another program to tap for speakers.

*Minutes were scribed by Renae Steichen, contractor support for the STEAB.*