

STEAB October 2015 Meeting
 October 6-7, 2015
 Renaissance Washington, DC Dupont Circle Hotel
 Washington, DC

OCTOBER MEETING ATTENDEES

Designated Federal Officer (DFO):

- Michael Li, DFO, EERE, DOE.

| STEAB MEETING ATTENDANCE | | |
|--|---------|--------|
| BOARD MEMBERS | Present | Absent |
| Jeff Ackermann , Director, Colorado Energy Office | X | |
| Roger Berliner , Council President, Montgomery County Council | | X |
| Susan Brown , Deputy Administrator, Wisconsin Division of Energy | X | |
| Tom Carey , Director, Energy and Rehabilitation Programs, New York State Division of Housing and Community Renewal | X | |
| Molly Cripps , Director, Office of Energy Programs Tennessee Department of Environment & Conservation | X | |
| William Vaughn Clark , Director, Office of Community Development, Oklahoma Department of Commerce | X | |
| Diane Duva , Office Director, Office of Energy Demand Bureau of Energy and Technology Policy Connecticut | X | |
| Marion Gold , Commissioner of Energy, Rhode Island Office of Energy Resources | X | |
| Robert Jackson , Director, Michigan Energy Office , Michigan Economic Development Corporation | X | |
| Elliott Jacobson , Vice President for Energy Services, Action Energy | X | |
| Maurice Kaya , Hawaii Renewable Energy Development Venture | X | |
| Ashlie Lancaster , Director, South Carolina Energy Office | | X |
| Louise Martinez , Director, New Mexico State Energy Office | | X |
| Katrina Metzler , Section Supervisor, Weatherization Office of Community Assistance, Ohio Development Services Agency | X | |
| Andrew McAllister , Commissioner, California Energy Commission | X | |
| Frank Murray , Consultant and Strategic Advisor, Former President and CEO, New York State Energy Research and Development Authority | X | |
| William "Dub" Taylor , Director, Texas State Energy Conservation Office | X | |
| David Terry , Executive Director, ASERTTI | X | |
| Malcolm Woolf , Sr. Vice President, Policy and Government Affairs, Advanced Energy Economy | | X |
| Daniel Zaweski , Assistant Vice President - Energy Efficiency and Distributed Generation Program, Public Service Electric and Gas Company, Long Island. | | X |

Contractor Support:

- **Genny Baptiste**, Coordinator, SRA International Inc.

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Welcome and Introductory Remarks

- STEAB Chair, Frank Murray (FM), opened the meeting thanking all members for their participation. He introduced and welcomed the new Acting Designated Federal Officer (DFO), Michael Li (ML). He provided the STEAB background on his work within the Department of Energy (DOE) and the Office of Energy Efficiency and Renewable Energy (EERE) and explained that this being the last year of the current administration, for this 2 day meeting he wants to focus a lot of time on planning for 2016 identifying key areas to work on. During the meeting ML also wants to find out how STEAB would like to be engaged with DOE on various projects. FM then introduced the new member Diane Duva, Director of Office of Energy Demand Bureau of Energy and Technology Policy in Connecticut. FM then had everyone go around the table for short introductions
- ML and FM then reviewed the agenda for the day.

Discussion with EERE's Deputy Assistant Secretary for Energy Efficiency

- The first agenda item for the October meeting was an update on activities within EERE and round-table discussion with Deputy Assistant Secretary for Energy Efficiency, Dr. Kathleen Hogan.
- Dr. Hogan began her discussion talking about the upcoming change in the administration and how she wants to focus on the role of STEAB using the expertise of the members to provide guidance during that change. Dr. Hogan went on to say that DOE is doing good work; at times it is great to call out the good work. Within that, STEAB can provide guidance to DOE to say what is working or not working; that is the role of an advisory board to see what frame fits for DOE.
- FM posed the question to Dr. Hogan, looking at STEAB from her perspective, what is the value she sees in STEAB and what can the members do for DOE to have a more effective partnership and where do we go to start the discussion. FM pointed out that there is not much communication on the federal level to maintain that partnership.
- Dr. Hogan asked FM what STEAB's recommendation would be to DOE to hold some set of forum with the right people. We won't get all the answers in one meeting and that this will be an ongoing discussion. We need to set up a meeting to plan the plan.
- Vaughn Clark (VC) states to Dr. Hogan that there is little integration at the top level between agencies. They can get through on the state level but when it reaches the federal agencies the discussion is not heard. Energy efficiency is not well placed.
- Dr. Hogan continues with saying that the White House announced in August a new low income task force that is cross cutting, DOE is on the task force. It involves HUD, USDA, Treasury, EPA, and DOE. So we do have the opportunity to engage a cross linkage at least as it relates to low income communities. Some of what will happen around the incentive programs requires EPA to refine its rules. Within that they are looking for a lot of comments and have reached out to us (EERE) for comments and our points of view. I know STEAB has points of view and that could be useful. EPA is open to the conversation. All STEAB would be doing is providing comment to DOE and EPA will be the final decision maker.
- Dr. Hogan then went on to talk about Better Buildings Initiative stating that they are now doing Accelerators where they can bring interested parties together and try to figure out more standardized approaches or best practices to solve important problems in the energy efficiency world; she would like for STEAB to brainstorm and get a list of topics for EERE to be considering as part of these Better Building Accelerators. We can identify our problem, figure out who wants to come together to be a part of solving the problem, and try to come up with a standardized approach and best practices that can be

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models for others. One of the areas they are actively considering right now is water and waste water treatment. This will give EERE and opportunity to engage with people and address these issues.

- VC brought up the point of how to get some innovation in SEP where you don't have to fill out an application, decide what you want to do, and have an outside person determine whether it's innovative or not. If DOE is really interested in bringing energy efficiency into to other areas let sit down and talk about that, let's not fill out forms.
- Dr. Hogan stated that a big conversation is the future of the energy system and the role of energy efficiency and grid integration and putting together a broader strategy for that. The challenges are many issues need to be pulled apart so we can actually work on them before putting them back together. She wants to focus on the ongoing work, the strategies, and finding what the roll for STEAB could be in FY16.
- VC made the point that DOE has extended a great deal of funding at the state level. There are a series of training centers in the weatherization program across the country now. These training centers should not only be used for weatherization, there are other things that can be done there to bring energy efficiency to the forefront and keep these training centers moving. Dr. Hogan agrees that there are opportunities that can be approved upon. She suggests maybe STEAB can put together a prioritized list that DOE can work on with the community to improve the infrastructure, improve the way the program operates. Dr. Hogan reiterated that energy efficiency continues to be a top priority for Assistant Secretary for EERE, Dr. David Danielson, and the goal of the office is focusing on making strides over the next few years to set the table for longer term energy efficiency accomplishments.
- FM agrees, thanks Dr. Hogan and said to the Board to lets focus on how to operate more effectively in FY16.

State Energy & Weatherization Programs – Update with Anna Maria Garcia

- Ms. Anna Maria Garcia led a discussion and presentation on State Energy and Weatherization Programs. She started the discussion focusing on getting the word out on all the good work in their programs. The focus was on the best practices and case studies that can be shared across the country. She briefly went over the budget for FY16 stating that they (EE) are under a continuing resolution and that they are in a pretty good situation for the coming fiscal year.
- She went on to discuss some of the WIP accomplishments; 40,000+ Renewable Energy Systems Installed, 500,000 energy efficient traffic signals and street lights installed, 1 million+ people trained to perform audits, retrofits, etc.
- She stated that the FY15 competitive awards were announced 9/15/2015. Negotiations on new cooperative agreements in process. Anticipated obligation of funds by November 16, 2015 and Selected projects to begin in November 2015. She gave an update on the SEP FY14 competitive awards. WAP update: Moving a little slow on putting out the FY15 formula awards. The goal is for the funds to be spent effectively and in a time frame of at least 3 years. She states that if states are not using funding in a certain time frame they are prepared to de-obligate the funds; this will apply to both programs.
- She reminded everyone of National Weatherization Day Oct 30th 2015; Dr. Danielson will be visiting the training center in NY; Better Buildings Summit May 9-11 2016.
- Ms. Garcia then went on to discuss the WAP national evaluation, and the over view of findings. This was one of the largest evaluations that have been undertaken. Covered 2 periods, the recovery act

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period (2010) and 2008. Ms. Garcia shared a table that summarized the results of the national evaluation. Katrina Metzler (KM) posed the question from DOE's perspective for public announcements or press releases of the findings, Ms. Garcia states that there will be no press releases or announcements and that DOE had taken another route and went with reports that are released the same day as the announcements. All reports posted on ORNL.

- Elliott Jacobson then thanked Ms. Garcia for having Dr. Danielson come speak in NY on Oct. 30th and he wanted to know if the findings from the evaluation will be presented in more detail then. Ms. Garcia was not sure. FM then said that with all the findings from the evaluation, simply put, is it good news, and if it is good news DOE should be spreading the word that the investments of federal funds for weatherization is reproducing some real positives results. He said based on the presentation he couldn't tell if it was good news and suggest DOE do a better job at making the positive known and be a little more enthusiastic about the findings. DOE should be pushing the programs.
- Tom Carey (TC) intervened and explained that he did notice a lot of the benefits based on the evaluation with a focus on multi-family energy issues with them being very cost effective. A lot of those benefits stemmed from the training centers and TC encouraged everyone to visit one close to them if they can't get to the one in NY. FM added that he along with Tom, Elliot, and David, will be attending the weatherization event in NY.
- Ms. Garcia went on to talk about accelerators, and that there needs to be a more concentrated push by DOE to overcome barriers. She has been talking to state energy offices for the past 2 years about convening state and local government expertise with utility expertise to work with us (DOE) to bring ideas together for the future direction of accelerators, and create a commitment goal. She's interested in suggestions from STEAB on the accelerator model and making progress with energy efficiency and renewable energy.

STEAB PRIORITIES FOR 2016

- FM started the discussion stating a few main focuses for FY16; developing recommendation for DOE; have the task forces meet and especially weatherization; Listen to DOE and not feel constrained while trying to make the case of gaining a stronger relationship with the department. He stated that there is only about a 12 month window before the administration changes, and within that change there are about 8 members up for reappointment by next November. FM is not confident that the Secretary will be able to appoint 8 members during the same time as the administration change. Task forces should be drafting transition memo for summer or early fall.
- Elliott Jacobson suggests that the board extend members until seats are full to ensure a smoother transition. FM agrees but still wants to push for November 2016 to have seats reappointed.
- FM talked about possible dates for the next meetings; Late January DC, April off site, and back in DC in September.

Grid Modernization/Integration with Kevin Lynn

- Kevin Lynn (KL) started his discussion talking about why grid modernization and explaining that the 21st century economy needs a 21st century grid. The older grid could not meet all of the 21st century. KL discussed the vision for grid modernization; the future grid will solve the challenges of seamlessly integrating conventional and renewable sources, storage, and central and distributed generation. It

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will provide a critical platform for U.S. prosperity, competitiveness, and innovation in a global clean energy economy. It will deliver resilient, reliable, flexible, secure, sustainable, and affordable electricity to consumers where they want it, when they want it, how they want it.

- KL then went on to discuss the vision of grid modernization. He explained that the future grid will solve the challenges of seamlessly integrating conventional and renewable sources, storage, and central and distributed generation. It will provide a critical platform for U.S. prosperity, competitiveness, and innovation in a global clean energy economy. It will deliver resilient, reliable, flexible, secure, sustainable, and affordable electricity to consumers where they want it, when they want it, how they want it.
- KL then discussed the connectivity with other DOE activities. Integrated Lab Call – Grid Modernization Lab Consortia (GMLC), Industry and Academic Solicitations – HQ Program Offices; joint funding opportunities between EE and OE (Office of Energy), How can we do Cooperative Research Agreements better within the national laboratories together with states and industries – HQ Program Offices, and Technical Assistance – HQ Program Offices and National Labs. KL then went into the Lab Call and explained it is open to the labs themselves they will focus on analysis for establishment and framework, core activities, pioneering regional partnerships and foundational technical areas.
- KL discussed DOE major achievements and demo projects that they want to have accomplished by 2020: Lean Bulk Power System, New operations capability for grid operators to safely run system closer to “edge” for increased asset utilization and to leverage distribution-level grid services will require less generation reserve. Clean Distribution Systems Coordinated microgrids control for resilience (e.g., 20% fewer outages, 50% shorter recovery time). Grid Planning and Analytics, work with States to more rapidly evaluate new business models, impacts of policy decisions.
- FM posed the question to KL would DOE be putting in money to these demo projects. KL said yes it is proposed that DOE will be funding some of these demo projects.
- KL then mentioned to the board regarding the multi-year program plan (MYPP), planning to go into concurrence in the next few weeks to DOE, he would like STEAB to provide recommendation for the round 2 of concurrence with a January-March timeframe, he also mentioned he would like STEAB’s input on the best way to implement the lab call, and also recommendation on participation in technical workshops based around the QER.
- FM noted that since Andrew will be heading the Grid task force that that would be a good start to the agenda for their next task force meeting/call.
- Diane Duva posed the question to KL, where do utilities fit into the planning process. KL stated that he wanted to get the utilities involved to possibly test out the demos and provide tools or guidelines to understand what the implications are before and investment is made.
- Elliott brought up the point of affordability for these demos, his focus is on low income communities and he would like for KL and EE to stay in communication with the planning of the to keep him and the board updated on cost and affordability. He doesn’t want to stand in the way of something that could be beneficial to society but the words like equity and affordability.

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SEP Competitive Briefing with Amy Royden-Bloom (WIP)

- Ms. Amy Royden-Bloom led a discussion and presentation on the State Energy Program (SEP) and the competitive awards, providing information from FY 2015 and a look at what the program is going to be doing in FY 2016. SEP competitive funding allow States to compete for funding designed to meet EERE's initiatives for the fundamental and permanent transformation of markets across all sectors of the economy. While the bulk of SEP funding is provided to states as part of formula funding, around \$5 million is allocated to competitive awards. Each year the focus for the competitive awards is different. SEP's competitive awards allow DOE and state partners to invest in high-value projects to advance energy efficiency policy initiatives. The State Energy Program currently provides active project management for 69 cooperative agreements with a federal investment of over \$28.96M. SEP announced on September 15, 2015, its selection of 11 states for FY15 Competitive awards
- Ms. Royden-Bloom discussed DOE goals; Collaborate with the Competitive Cooperative Agreement awardees to create successful energy efficiency programs, Understand what makes a successful program, Share this information with the SEO networks and stakeholders like NASEO, Replicate successes across the country and save energy. The state goals; Develop easy and effective energy efficiency policy frameworks, Implement successful programs, Learn through the process, Share lessons learned with peer states, cohorts and DOE. She went on to say that while she acknowledges that the competitive process is challenging and time consuming for states, DOE wants to understand how they can make it easier for more states to apply. There are rules they have to follow when putting out the Funding Opportunity Announcement (FOA), but what can DOE do better to encourage more states to apply. TC asked the question that since it is a competition, how many applications did they get and what are a state's chances of getting funding? Ms. Royden-Bloom explained that every year it differs, in FY14 there were 43 applicants and 12 out of the 43 got funded. With a total of \$5 million available, SEP is limited in the number of awards it can make. TC stated that with limited funding and maybe a 100 million dollars' worth of applications, a competition may not be the best way and that DOE should consider a different route. Ms. Royden-Bloom then gave an overview of selected FY15 applications.
- Marion Gold (MG) stated that in FY12 they received a grant and it worked just like it was supposed to, it gave them the money to launch another program they built on a grant they received before from the EPA, they built on it and now it's going to be a program they can sustain. It has allowed them to form ongoing partnerships, develop data, and lay the foundation for ongoing work. She applauded Ms. Royden-Bloom for that.
- Ms. Royden-Bloom went on the briefly discuss the SEP National Evaluation. The Evaluation was performed by an independent contractor (DNV GL). The contract was managed through ORNL. DNV GL used a Peer Review Panel of outside evaluation experts to review the evaluation approach and results. Focus was program-wide (SEP) rather than on individual State performance. Project selections were based on random samples of 6 broad program area categories. Project data were derived from project specific primary information, associated surveys, and on-site verifications on a sample of projects. The Evaluation consists of two parts: A retrospective evaluation that covers Program Year 2008, reflective of a typical year in SEP operations; and an American Recovery and Reinvestment Act (ARRA) of 2009 evaluation that provides insight into the unique program that was administered by DOE in the national effort to create jobs and promote economic recovery.
- FM posed the question to Ms. Royden-Bloom and the evaluation dates; he wanted to know why the data was so old. Starting with dates in 2008 means that information is over 7 years old. Ms. Royden-Bloom explained that they started conducting the evaluation during the Recovery Act, and 2008 was the

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only year where the data was not affected by the Recovery Act. Molly Cripps (MC) then stated that there are people in her office that were not even around during that period of time, and for DOE to get a great impact maybe there can be a sooner turnaround for the data to be more relevant.

- Ms. Royden-Bloom thanked the Board for their feedback.. FM thanked Ms. Royden Bloom for coming and adjourned the meeting for the day.

Technology Transitions with Jetta Wong

- Jetta Wong opened the discussion giving a brief background of her history with DOE/EERE. She explained that she would be giving a presentation on OTT (Office of Technology Transitions). She explained that OTT was just launched in February 2015. They have a mission to expand the commercial impact of DOE's \$10 billion RDD&D portfolio in the short, medium, and long term. OTT is the functional unit that coordinates the Department's multiple paths of RDD&D activities toward technology transfer and commercial development of DOE's research outputs. Ms. Wong then explained the 3 main office activities; Evidenced based impact studies, stakeholder engagement, and data collection and analysis. She has an emphasis on evaluation and long term impact as it relates to data findings. She said when she first started OTT there was not much data to analyze from years prior.
- Ms. Wong the went on to discuss TCF (Technology Commercialization Fund) which states : The Secretary shall establish an Energy Technology Commercialization Fund, using 0.9 percent of the amount made available to the Department for applied energy research, development, demonstration, and commercial application for each fiscal year based on future planned activities and the amount of the appropriations for the fiscal year, to be used to provide matching funds with private partners to promote promising energy technologies for commercial purposes.
- Robert Jackson (RJ) posed the question about TCF and wanted to know if the technology they are looking to fund is commissioned technology by the agency or technology that was discovered as a result of some of the project work but shelved that can integrate into what a private entity needs? Ms. Wong explained that unlike small business vouchers where it is focused on the company's technology and how we can service the company, this is really focused on the lab technology, specifically a DOE funded lab, it can be any technology that they have conducted R&D on that they would like to try and commercialize. The only requirement is that it has to be energy technology.
- VC then stated that he is in a unique position where he is located in an economic development agency, they have never heard of what a "national laboratory" is. They work active projects that are moving forward. However, there needs to be some sort of work through the state energy offices, because most state energy offices do not have a relationship with their state economic development organization; there is no point of reference for labs so if information is being sent to them they are not responsive. That is one of his concerns and there is some work needed to be done there.
- Ms. Wong says that there is a presentation on the state, regional, and national impact of DOE national labs, and you can actually see how the national labs have significant impact outside of the states. Not to say things are perfect, she agrees that everyone can do a better job but the presentation would help it all make sense. She states that this is one of the reasons she likes attending the STEAB meetings in hopes of gaining insight on better strategies.

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- FM adds that for the next DC meeting in January he would like to arrange for Ms. Wong to show that presentation to STEAB. She agreed and told Mike Li she would be in touch regarding that.
- Ms. Wong then went on to discuss lab “partnering” service concept which would provide increased information and connections between potential industrial partners and laboratories. When developed it would be a lab-led service to facilitate effective communication, to access unique capabilities and opportunities for partnership.
- In reference to the “partnering” Jeff Ackerman asked if the objective was more to expand the partnering on research or is it part of commercialization. Ms. Wong stated that this is not targeted at any commercialization gaps; she said that the focus of partnering is how we communicate and connect and to be more transparent.
- Ms. Wong then moved on to discuss the Clean Energy Investment Initiative (CEII) which was kicked off in February 2015 at the ARPA-E Summit. Between Feb and June the White House worked to lock in \$4 billion in private sector investment commitments. This includes early stage R&D as well as deployment oriented activities as well. At the same time DOE committed to creating a new Clean Energy Investment Center. When fully established in OTT, the DOE Center will provide a single point of access to people, Technical Assistance, and Projects.
- Ms. Wong then went on to discuss OTT collaboration with states; Potential areas for collaboration: White House Lab-State Event – November 2015, State access to National Laboratories, OTT “Partnering” service, Technology Commercialization Fund, Clean Energy Investment Center, New analysis and information access, and other tools and services
- The final area of focus was for input from STEAB and open discussion. She posed questions for STEAB to keep STEAB and DOE engaged: How can OTT collaborate with states to enhance the commercial impact of DOE’s RDD&D portfolio? What tools or services could OTT provide that would be valuable to states? How can DOE’s capabilities and RDD&D portfolio further enhance state capacity to transition emerging technologies? What state programs are working well to support technology transitions? What models should OTT look into further? These questions will remain open to discussion for future meetings.

Small Business Voucher Program Update with Joyce Yang

- Joyce Yang opened the discussion talking about the EERE Lab Impact Initiative stating that the mission is to significantly increase the industrial impact of DOE national labs on the U.S. clean energy sector. This will increase and enhance lab-private sector relationships, increase and streamline access to national lab capabilities, and demonstrate the value of lab-developed science and technology.
- Ms. Yang went on to discuss the lab and industry partnering successes. Lawrence Livermore National Laboratory and GE are partnering through the HPC for Energy incubator program to develop next-gen fuel injectors that will make aircraft engines more powerful and energy efficient. Local Motors produced the world’s first 3D-printed car using a process made available through Oak Ridge National Laboratory’s Manufacturing Demonstration Facility. Lawrence Berkeley National Laboratory is working with Heliotrope Technologies to roll out Universal Smart Window (USW) Coating that lowers energy by blocking heat-producing, near-infrared solar radiation without blocking visible light.
- Ms. Yang then explained the importance of labs and small business partnerships. Small businesses are the primary stakeholders, they are the ones who are going to deliver new technologies and undergo the

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mergers and acquisition to shape our existing industries; 23 million small businesses representing in the country, they make up 99% of all employers, and account for more than half of all private sector jobs, so they are the back bone of our innovating system.

- Ms. Yang went on to talk about the Small Business Voucher program (SBV); Leverage national laboratory capabilities for economic development by establishing a laboratory voucher program for small business, Provides access to expertise, competencies, and equipment at all DOE national laboratories, Selection through business plan competition, would not replace existing industrial or small business assistance programs. This comes from the lab's leadership. They developed this to gain a better relationship between small businesses and the labs.
- Ms. Yang gave the Board a description of how the voucher program would work. DOE establishes the criteria for the competition and puts a call out for submissions. Business plans are submitted and the best plans are chosen to work with the national labs. The selected awardees work with the national labs on their projects.
- Ms. Yang then went on to explain the development process of SBV. In Jan 2014 the original concept was developed by labs and presented to the Secretary. In March, 2014 there was an analyses of existing programs and lab-industry partnership reports. June, 2014 they revised concept developed by EERE and presented to the Secretary. July- September, 2014 draft pilot design elements deliberated; October 2014 there was a public workshop held. March 2015 released lad competition. June 2015, the pilot labs were announced.
- Ms. Yang explained the small business voucher website (www.sbv.org) launched on Sept 23rd 2015, where people will submit the request for financial assistance. Simple questionnaires about contact info (5 minutes to fill); Attach 5 page narrative (non-proprietary info only); Check boxes certifying/agreeing to: Eligible small business (SBIR/STTR definition), Non-negotiable Terms and Conditions under standard agreements, 20% minimum cost share, Reporting requirements beyond duration of pilot project. Vouchers are limited to specific clean energy R&D areas: Advanced Manufacturing, Bio-energy, Buildings, Fuel Cells, Geothermal, Solar, Water, Wind, Vehicles. This is a 30 min application process that is hoped to me seamless for applicants.
- FM asked for Ms. Yang to remind everyone of the labs that are participating. The lead labs are Oakridge National Lab(ORNL), Pacific Northwest National Lab(PNNL), National Renewable Energy Lab (NREL), Berkley Lab, and Sandia National Lab (SNL)
- Susan Brown then asked Ms. Yang if there was a limit to the value of the vouchers being awarded. Ms. Yang explained that these businesses can be awarded up to \$300K on the DOE side.
- Before Ms. Yang ended her presentation she emphasized the importance of our labs and investing in research. She used the story of Bell Labs as an example of true innovators. She also introduced The National Laboratory Impact Initiative. It is developing a print publication in FY2015/FY2016 to feature success stories of technology development, partnerships and commercial successes from our national labs. The concept is based on NASA's Spinoff Publication, which features 50 or so commercialized products that incorporate NASA-developed or NASA-funded intellectual property. We believe that a publication of this nature is vital to the success of the Lab Impact Initiative to demonstrating the value of DOE National Laboratories, and would serve to further each Technology Office's mission.
- FM thanked her for her presentation. Ms. Yang encourages STEAB to stay in touch.

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Discussion on QER with Karen Wayland (EPSA)

- Karen Wayland of the Office of Energy Policy and Systems Analysis (EPSA), and her colleagues Matt McGovern and Kate Marks were at the STEAB meeting to discuss and update the group about the progress the Quadrennial Energy Review (QER).
- Ms. Wayland explained that the QER came out in April 21st of 2015, so they are at the 6 month anniversary of the release. They are in the process of putting together an internal report card on where they stand in the implementation that may become public through FOIA. Congress has been working on energy bills; the QER served as a blueprint particularly for the house side they laid out 4 sections early on in the draft and a lot of that information came from the QER. There is some question about whether we will actually see an energy bill when they reach the finish line in this congress. Nevertheless, the Secretary is quite pleased that the QER served as a basis for a part of the recommendations. There will be quite a bit of work in the next 6 months to a year implementing the recommendations.
- Ms. Wayland announced that the QER 2 installments will be on electricity based on the White House and the Secretary. In the first QER there was a focus on scenario analysis, for QER 2 it will be more focused on end use. They are in the process now of developing the scope, they have 13 lines of inquiry that people are looking at, which is way more than what they can tackle in a year or 2, they hope to narrow that list down to key issues that the electricity industry and states are dealing with. Ms. Wayland states that STEAB's advice and counsel the first time around was very helpful, and this time around with an emphasis on states she thinks it would be much greater. Ms. Wayland then introduced 2 of her colleagues Kate Marks and Matt McGovern to address some of the things EPSA is doing going forward in to the next year and to also see how best STEAB can engaged with us (EPSA).
- Kate Marks is the senior policy advisor to Karen Wayland, she explained that one of the things EPSA has decided to do was put together a more formal mechanism for state input, and they are calling it the Energy Policy Innovation Consortium (EPIC). They were able to get some funding to support some efforts with each of the national associations of state level officials in the energy space. The idea is that EPSA will go out to each of the groups to collect input on specific issue areas; they had a great first round meeting with NASEO to get insight on what's happening at the state level. Some of the work they plan to do is to lead up working groups to look at some of the jurisdictional issues and boundaries that have grown throughout and look at some of the policies that have been paramount to where they stand today. She thinks that EPSA will really be looking to STEAB for some of that input and that EPIC will help with that.
- Matt McGovern discussed stakeholder engagement. He explained that the President directed the QER task force to have a big open public stakeholder process to get input from people in the energy industries, non-profits, and state energy offices just to have as many view points as possible for input on the document. This time around they will be doing something similar and start off having informal briefings at DOE where they will give presentations, but more importantly listen to stakeholders for suggestions on topics where they should be focusing on; they will be hearing from trade associations, groups like STEAB, environmental groups, and utilities. They will also do the public stakeholder meetings around the country, last year they did 14 meetings. Along with those meetings they will be holding more technical workshops, smaller meetings, by invitation, more focused on hearing from experts in different fields.
- Ms. Wayland then went on to discuss how STEAB can engage with EPSA and how STEAB can be useful in making sure we (EPSA) are capturing things as it relates to the papers. For example, course corrections,

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and making sure they are addressing the critical issues. Ms. Wayland hopes that she can consult with STEAB pretty frequently on the work. Some things they plan to do differently this time is to have the papers and interim products that informs the QER to come out sooner. When the QER was released in April, 30 working papers were released after. She hopes this time they can be released before the QER and have STEAB involved and get interim reaction to the papers. She also thinks that STEAB can help with a series of case studies focusing on states and help identify the states and help review the case studies. Depending on the bandwidth that STEAB has she wants more engagement.

- FM then explained the meeting structure of STEAB to Ms. Wayland. He explained that there are monthly teleconferences and 2-3 live meetings per year. So there are opportunities for them to engage with EPSA face to face during the live meetings but he would like for her to also get involved in the monthly call on issues related to the planning process. He suggests that Ms. Wayland think of opportunities to provide STEAB with materials with specified information of what she would like back from STEAB. STEAB wants to be more engaged in the QER process but they have to be more specific for what the needs from STEAB are.
- Elliott Jacobson asked how people like himself with expertise in certain areas can get engaged. He hears Ms. Wayland speak about outreach but where would he find the proper point of interest as it relates to getting involved. Ms. Wayland states that there are numerous ways to get involved and she will plan on putting a proposal together that will outline themes, similar to the themes document that's sent to the White House, but this one will be sent around to the Board to get states reaction and she thinks that will be extremely helpful. So she will ask and see if she will be able to do that and follow-up. Kate Marks adds that they are open for suggestions because there are many areas for STEAB to get involved.
- Diane Duva asked for a recap of the time frame. Ms. Wayland states that with the 2016 election being in November she hopes to have the draft for the report by early Fall. The stakeholder meetings will start in January or February.
- Ms. Wayland asked STEAB to please think about what type of analytical things EPSA should investigate at the state level and what questions should the QER be asking states that speak to the issues on the ground that states and communities are dealing with now.
- FM thanked Ms. Wayland, Kate Marks, and Mark McGovern for their time and he looks forward to more engagement with the second QER. FM had to exit the meeting for the day early. Robert Jackson led the rest of the meeting for the day.

Weatherization Program Evaluations & SEP with Bruce Tonn and Mark Ternes

- Bruce Tonn gave a presentation via teleconference on the Weatherization Program Evaluations. He started the presentation by thanking STEAB and others in the weatherization network for all of the help provided to the evaluation, filling out surveys, and providing data on homes and metric installments. It was a big team effort and he really appreciates the work.
- Mr. Tonn then went on to give some statistics on Weatherization and results of the evaluation. The network increased production from about 100,000 homes to over 330,000 homes in just 2 years; Units by climate zone, from 2008-2010 (Recovery Act period) the percentage of weatherized units increased, that may have increased due to the recovery act energy savings.
- Mr. Tonn discussed health and household non-energy benefits. Explored the health & household non-energy benefits of 'regular' weatherization (i.e., installation of both ECMs and non-ECMs); Conducted a nationally representative survey of weatherization recipients (> 600) plus a comparison group (> 800)

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pre- and post-weatherization; Monetized a subset of these benefits using a combination of survey results, measures installed, medical cost databases, and other valuable secondary sources.

- Mr. Tonn continued the presentation providing the board with a lot of findings from the evaluation via graphs and tables. (Presentations were sent to all members)
- Mr. Tonn explained the indoor air quality study. The question was “What are the impacts of weatherization on indoor air quality?” The study was nationally representative sample of over 500 single family homes. Random control trial design; control homes in same locales as treatment homes. They Measured CO, radon, formaldehyde, temperature, humidity pre- & post-weatherization in winter, closed home conditions. This study showed weatherization does in fact reduce radon in homes.
- Tom Carey asked if the study was done before the new ventilation regulations were put into effect. Mr. Tonn stated that yes, these were done prior to the regulations; he then gave results and showed a graph that provided proof of the lower levels of radon in homes when the ventilation systems where on in homes.
- Mr. Tonn stated that other findings were that carbon monoxide cleared up post weatherization. He also pointed out that the results in homes would vary based on household factors and the number of people living in the home.
- Mr. Tonn concluded by saying that despite what the New York Times article stated Weatherization does work. The program is effective, it’s competent, and mission oriented. He was inspired working out in the field speaking with the staff and the weatherization crew. There are proven environmental and household benefits.
- Elliott Jacobson (EJ) wanted to thank Mr. Tonn and his team on behalf of STEAB for the hard work. His concern is moving forward needing his help along with DOE’s help in defending and promoting the Weatherization Program. Mr. Tonn stated that he is in the process of writing a rebuttal to the New York Times article. He will be available to help support STEAB in his free time because this issue is important. He will share the rebuttal as to where and when it gets posted. EJ then states he’s searching for a more formal way that STEAB and Mr. Tonn’s team can stay in contact. Diane Duva then asked Mr. Tonn if he is looking for active engagement or assistant with the rebuttal or if STEAB can be helpful in adding to it stating that STEAB stands behind DOE and Oakridge and the National Evaluation. Mr. Tonn will be in contact.
- Mark Ternes from the Oak Ridge National Lab was on the call to give more information on the National Evaluation of the State Energy Program. He gave a very brief overview which was the same information that Amy Royden-Bloom shared the day prior. He stated that the purpose of the SEP National Evaluation was to develop independent estimates of key program outcomes for Program Year (PY) 2008 and for the American Recovery and Reinvestment Act of 2009 (ARRA) period (PYs 2009-2013). PY 2008 focuses on a single year’s activities and more closely aligns with SEP as it has been conducted to support programs and policies enacted and implemented in the State Energy Offices over the last 30 years. The ARRA period covered multiple years (2009-2014) and focused on investments in shovel-ready energy efficiency and renewable energy projects to promote job creation nationally. The program outcomes studied included: Energy savings and renewable energy generation; Job creation; Carbon emissions reductions and avoided social costs (such as agricultural losses and flood damage associated with climate change); and Bill savings and cost effectiveness. Independent evaluation: The evaluation was performed by an independent contractor (DNV-GL). A Peer Review Panel comprised of outside evaluation experts was employed to review the evaluation approach and results. The contract was managed through ORNL.

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- With time coming close for the meeting to adjourn he just shared his contact information and asked for questions from the members. There were no questions and Robert Jackson (RJ) thanked him for his time.

Public Comment

- RJ then turned to the part of the STEAB meeting where members of the public can comment either in person, via the teleconference line, or through written and provided statements. RJ asked if there were members of the public who wanted to make comments. There were none present, he moved on to the final agenda item.