Meeting of
Association of State Energy Research and Technology Transfer Institutions

September 8 - 10, 1999
Crowne Royal Hotel
Seattle, Washington

Hosted by:
Washington State University Cooperative Energy Extension
and
Pacific Northwest National Laboratory

The meeting was called to order by Mark Hanson, ASERTTI Chair, Energy Center of Wisconsin at 1:30 p.m. on Wednesday, September 8, 1999 with the following persons present:

Larry Ambs, Center for Energy Efficiency and Renewable Energy
Marcia Beck, LBNL - Environmental Energy Technologies Division
Jon Biemer, Bonneville Power Administration
David Block, Florida Solar Energy Center
David Claridge, Energy Systems Lab - Texas A&M
Jim Cole, California Institute for Energy Efficiency
Mike DeAngelis, California Energy Commission
Craig DeWitt, South Carolina Institute for Energy Studies
Ron Edelstein, Gas Research Institute
Kristine Growdon, Washington State University - Cooperative Extension Energy Program
Renee Guild, Electric Power Research Institute
Mark Hanson, Energy Center of Wisconsin
Jeff Harris, Lawrence Berkeley National Laboratory
Erica Henningsen, National Renewable Energy Laboratory
Dune Ives-Peterson, Northwest Energy Efficiency Alliance
Howard Jack, NYSERDA
George Kelly, National Institute of Standards and Technology
Bob Koger, Advanced Energy Corporation
Chuck McGowan, Electric Power Research Institute
John Morrison, Advanced Energy Corporation
Ron Nesse, Pacific Northwest National Laboratory
Norm Olsen, Iowa Energy Center
Lynn Price, Lawrence Berkeley National Laboratory
Larry Schoff, Oak Ridge National Laboratory - Rebuild America
Diane Shankle, Pacific Northwest National Laboratory
Bill Valentino, NYSERDA
Richard Vincent, St. Vincent's Hospital
Joe Visalli, NYSERDA

Gunnar Walmet, NYSERDA
Jack White, The Winslow Group
Ernst Worell, Lawrence Berkeley National Laboratory

1. **Welcome**
   Hosts Kristine Growdon, WSU and Ron Nesse, PNNL welcomed the members to sunny Seattle. ASERTTI meetings are becoming a more critical factor in the ability to collaborate and will be playing a vital role in the future. There is still some frustration with the slow pace of projects, which can result in lost opportunities. One goal of ASERTTI's collaboration is to assist in keeping the momentum and not to loose opportunities for collaboration.

   Pivotal topics of the meeting include MOU on joint planning, operational costs for Washington representation, election of new chair, and new and ongoing collaboration efforts.

2. **Member Updates and New Issues**
   STEAB - STEAB's meeting is later this month. STEAB is DOE's formal body to give feedback. Please take this opportunity to give Kristi Growdon, WSU or Bob Koger, AEC feedback to take to the meeting. STEAB will be discussing the budget and it is the opportunity to get heard. Another area of the agenda is deployment from the Labs, and should include ASERTTI and not just state groups.

   Chuck McGowan, EPRI - EPRI is currently working on various collaborative programs in renewable energy areas. They have developed a field verification program on wind turbines with DOE. There are also opportunities for collaboration in the biomass area.

   Bob Koger, AEC - Restructuring in North Carolina is progressing slowly, with a conservative stance. Advanced Energy is concentrating work in the deployment area, specifically in motors and residential construction.

   Renee Guild, EPRI - EPRI has been working with Public Benefits and have produced an CD ROM showcasing EPRI's efforts in this area and how to help state agencies in setting up Public Benefits.

   Diana Shankle, PNNL - PNNL is currently developing building standards and want to collaborate with others in this area.

   Erica Henningson, NREL - Erica presented to the membership a white paper written by Jon Pietruszkiewiez of NREL regarding the appropriate roles for government in technology deployment. Feedback regarding the paper is welcome.

Norm Olson, IEC - The State of Iowa legislature will be discussing deregulation in the their next session. The Iowa Energy Center is opening a new bio-mass R&D facility this fall with corn stalks being used as a primary source of dry materials. IEC is also serving as Bio-Mass and Bio-Energy coordinator on the ASERTTI-DOE MOU.

Bill Valentino, Gunnar Walment, and Joe Visalli, NYSERDA - NYSERDA is collaborating with various organization in the following areas: energy efficiency in business, radio active waste site, combined heat and power, bio-mass/fuels, vehicle emission testing, gas well development and storage.

Jim Cole, CIEE - The State of California is concentrating its efforts on emerging technologies, daylighting, diagnostics and commissioning. CIEE is collaborating with CEC in the building area. CIEE is also looking for collaborative efforts in the market transformation area.

George Kelly, NIST - NIST has a 100 year history with a mission to improve the quality of life through standards and technologies.

Craig Dewitt, SCIES - South Carolina is looking for new opportunities related to energy efficient homes. SCIES is currently involved in Rebuild America.

Mike DeAngelis, CEC - CEC provides four major functions for California.

1. Establish energy policy
2. License power plants
3. Develop, implement, and administer energy efficiency and market transformation programs and
4. RD&D

There have been many changes throughout the state, involving a new governor and party change and a new commissioner.

Marcia Beck, LBNL - Collaboration has significantly increased over the past few years, although there are still some challenges with the collaboration. The national labs have developed “bull dog” group to help multi lab collaboration in buildings research.

David Claridge, Texas A&M - The Energy Lab is heavily involved in monitoring and is under contract with the state energy office. They are also involved in the commissioning work and are working with Minnesota on an effort for systems wide buildings O & M.

David Block, FSEC - FSEC worked recently on a successful collaboration with WSU and DOE.

Jon Biemer, BPA - BPA has developed a business listing with the latest energy companies included. They will be starting a "blue pages" type of listing to include government agencies in the energy efficiency area.

Ron Edelstein, GRI - GRI is working with both CEC and NYSERDA. GRI is in the position to assist in contract difficulties with government agencies on collaborative projects to avoid lost opportunities.

Jack White, The Winslow Group - Jack provided the membership with an update of DOE. The Office of Power Technologies is reorganizing and the changes are expected to go into effect in October. A systems benefit charge may have a role for ASERTTI to play, as it will need leadership that can span across the states to avoid duplication. The MOU provides a set of procedures to allow ASERTTI to serve in this role.

Larry Ambs, CEERE- Currently CEERE's role is to work in environmental and industrial areas. The state energy office is beginning some renewable projects and will use state funds for these projects. To date research has not been included in the wire charge although there is a significant move the have the charge cancelled. Currently the funds for research are going to the utilities.

Mark Hanson, ECW - Historically ECW has been funded primarily through member utilities. This trend is changing. ECW is currently funded by member utilities at about 65% compared to 90% historically. Collaborative opportunities in the Daylighting Collaborative and in cryptosporidium and virus treatment areas are available. Public Benefits are still in the legislature's hands, although it is expected to be resolved soon. Midwest Energy Efficiency Alliance has been formed; ECW is serving as chair of the program committee, and will hold it's first Advisory Committee meeting on Sept. 15, 1999.

3. ASERTTI Planning

a. Formalization

The ASERTTI organization has reached a point that it needs to become a formal organization via a 501c (3) or other means. Funding is the critical issue for formalization, as it remains difficult for many members to contribute to the effort without a formal entity in place. Formalization is not be a deterrent to joining so a sliding scale membership fee will need to be established.

Currently nine of the 24 members are funding the Washington DC efforts. Formalization would also allow ASERTTI to accept DOE funds directly to avoid the awkwardness of having individual organization accept DOE funds on the behalf of ASERTTI.

ASERTTI's reputation and recognition is beginning to flourish. Failure to formalize shows a serious lack of commitment by members. Additionally, formalization will allow for Associate members to contribute financially towards the organization's costs.

b. Membership Contribution Proposal

Dues that are paid into the membership would cover the Washington DC effort as well as administrative costs for the host organization (or other organization providing the bulk of administrative support).

A proposed due structure and questionnaire was handed out (Attachment A) and will be discussed in further detail prior to the vote for formalization on September 10th.

4. DOE Memorandum of Understanding

a. DOE Update

David Leiter, DOE. The DOE budget for next year is on the horizon and planning for the next two fiscal years is underway. The MOU committee at DOE has made progress and is taking input from state agencies for the upcoming budget process. DOE is pleased with the MOU and is committed to the process. DOE would like to meet not only the long term goals of the MOU, but institutionalize the planning process to allow organizations to be involved earlier. The budget for 2001 has the planning process factored in, and it is hoped that most of the funding will survive, and the results of the planning will be noticed.

b. MOU Executive Committee Update

Howard Jack, NYSERDA, updated the membership on the results of the Executive Committee. The Executive Committee was formed from the Ad-hoc committee originally set up during the MOU process.

1. DOE development on budget for 2002. The first step is to develop unit plans at the lower levels. The plans will cover three years. After a program unit plan is developed, the DOE will develop an integrated plan, the executive budget goes to congress and the implementation plan is started. Once Congress acts on the budget, any necessary changes to the implementation plan will be made.
2. Non-DOE parties have a responsibility to include DOE in individual budgets, compile information on budget processes, and share budget plans with other stakeholders.
3. A new paragraph is recommended to be added to the MOU inviting other parties to review RDD&D areas.
4. Keep close communication with the six near term implementation teams.

Jack White explained the critical roles of the lead coordinator and the DOE staff person in working closely together. There are five separate agreements (MOUs) with DOE although DOE is treating them as one agreement as the collaboration process is extremely important. The six near term areas will evolve into more areas over time, the first step includes the planning process and inclusion on the DOE budget.

c. ISSUES regarding the MOU and Processes

- What is the interest from DOE in participating in key meetings on the individual state basis? *If there is a particular focus during a meeting, it is easier to send a DOE representative compared to a overall discussion.*
- How can we deal with difference in budget cycles between DOE and the states? *DOE is interested in gathering any information on state budgets that would be useful, regardless of the timing. Any information showing collaboration and coordination with the states is helpful.*
- What is the role of the Regional Offices? *The Regional Offices are currently redefining their roles and this is an opportune time to define their role when working with the individual states. Specifically the role could be to have representation present at state meetings.*
- How should problems regarding different focuses within near term areas be handled? *Currently, it is difficult to coordinate because of communication breakdown. DOE is willing to work on the problem collaboratively.*
- Some state's concerns are often based on past ventures and where they are headed in the future. Is there a conduit, which the states can use to coordinate in other areas? *DOE realizes that states are working on projects in other areas outside of the six near term areas and as time progresses the number of areas will expand. The first few years will be somewhat disorganized and difficult, as this is a learning process. It is hoped that over time less effort will be necessary to get new areas identified and off the ground. The joint planning process goal is to have a more unified system, and a systematic planning and implementation process.*

5. MOU Near Term Priority Areas Status Report

a. Bio-Energy

Norm Olson, IEC. The goal in this area is to create economic involvement in the bio mass area. The interested parties will meet in October. This area is moving forward and emissions issues will have an impact on what bio fuels are used. It is imperative that the EPA get involved or bio fuels will be developed and no one will be able to use them. Transportation fits well with the Bio-energy area, and there are plans to look toward end users.

b. Smart Schools

David Block, FSEC. The energy smart school project was started about 15 months ago. Sara Ward of Ohio is the coordinator in this area. There has been one conference call involving the following partners, FSEC/ASERTTI, NASEO, DOE, Ohio, and Georgia. A survey was recently conducted and 11 states, 3 labs and 2 other organizations participated in the study. Results will help set the priorities in this area.

c. EIA Data

Alan Mountjoy-Venn, WSU. Energy data in this area has the advantage of piggybacking on the efforts of others. Five primary areas of focus are 1. Increase knowledge of data through workshops, 2. Work on web site and accessibility of state data, 3. Electric information and restructuring efforts, 4. Need for state or federal legislation, and 5. Confidentiality of information.

d. Distributed Generation and CHP

Larry Ambs, CEERE. This area is becoming more interesting in the light of deregulation. The goal of the projects is to promote DG and CHP deployment in the market place, provide information and policies to streamline the implementation of DG units, investigate advanced interconnection systems and performance of integrated multiple DG units. Potential projects identified are:

1. Interconnection Standards and Rules for grid connection of DG and CHP units.
2. Precertification Guidelines for CHP and DG sets.
3. CHP Siting and Permitting.
4. Regulatory and Policy Issues to Facilitate DG Deployment.
5. Distributed Generation Integration Test and Demonstration (DGIT)
6. Integrated Switchgear and Interconnection Systems (ISIS) for Distributed natural gas Power Generation Systems.

Collaboration on these six projects would allow for greater benefit to participants.

6. Topical Presentations

a. Tuberculosis and UV Lighting

Richard Vincent, St. Vincent Hospital - New York gave an overview of the current study involving Airborne Disease Control: High Risk Settings - TB/UV Shelter Study (TUSS). The study is being conducted in the homeless shelters of Manhattan. The object of the study is to determine the efficacy and safety of UVGI for air disinfection and development of engineering application guidelines. The present status of the project is that it is up and running in four New York and two Birmingham, Alabama shelters with ongoing data collection. The highest cost of the project is the

funding of the lighting fixtures. The shelters in New York and Alabama are showcases and the states are encouraged to collaborate on the study to assist in setting up additional showcase sites or receive assistance with guidelines for setting up a similar program.

b. Energy Efficient Industrialized Housing

David Block, FSEC reported that the collaboration on Energy Efficient Industrialized Housing will be ending this year. The project has proved to be very successful. The project has worked with manufacturers of manufactured homes and provides a variety of activities to improve energy efficiency. The project has also worked with Habitat for Humanity and the American Lung Association. The manufactured homes can vary from a home built in a factory to a panelized home, as it is a more efficient way of building than the traditional stick home.

c. Behaviorally-oriented R&D

Jeff Harris, LBNL updated the membership of the research currently underway.

- New Commercial Buildings - Market Transformation Research Needs
- Making Appliance Efficiency Labels More Useful to Consumers
- Government/Institutional Purchasing of Energy Efficient Products
- Energy Use/Billing Feedback

There are new areas of opportunity including guideline specification in new construction, use of office systems, and second price tag concept for federal buyers. The second price tag will show lifetime energy costs, the purchase price and the cost of the product over time.

d. Combined Heat and Power Challenge

Bob O'Brien, WSU provided an overview of the CHP Challenge. The CHP Challenge began in December 1998 to promote the use of CHP. The Challenge is a collaborative with DOE, (including EERE, OIT, BTS, OPT) FEMP, EPA, US CHP Association, and WSU. The Challenge has resulted in HEATMAP CHP Enhancement and a guide book for development of CHP at IOF sites.

e. NEEA Programs

Dune Ives-Petersen, NEEA provided a progress update and future directions overview of NEEA. NEEA currently has 32 projects, distributed across all sectors. NEEA's current funding ends in December 1999 and is waiting extension into 2001. NEEA is investigation options for future funding, specifically replacing utility funding with public purpose legislation in some of states and adding consumer representation to the board of directors.

f. Improving Building Operations

George Kelly, National Institute of Standards and Technology presented an overview of the Joint Initiative on Improving Building Operations. This initiative is a collaboration with LBNL, NIST, PNNL, MIT, PECI, PG&E, Purdue, Texas A&M, and UC Berkeley. The three-year project is to develop Building Life Cycle Information Systems including planning, design, construction, start-up commissioning, diagnostics in operations, and retrofit/renovation. By using the Building Life Cycle Information System, sector savings potentials are 20-75% less energy use than typical commercial buildings. If 70% of non-residential buildings achieve these performance levels, consumption in 2015 would be reduced by $28 billion/year and sector carbon emissions would be reduced by 25%.

7. Collaboration Update

a. NLPIP

Gunnar Walmet, NYSERDA. NLPIP is one of the earliest ASERTTI collaboration efforts. Traditional Specifier Reports, Guides, and Lighting Answers are publications produced by NLPIP. Four new topics that are currently being explored are 1. Lighting Value-an outreach program, 2. Lighting for the Elderly, 3, Efficacy of Common Light for the Circadiona Photoreceptor System, and 4. LED Based White-light Source for General Illumination Applications.

b. Compressed Air Challenge ™

Norm Olson, IEC. Sixty level one trainings have occurred. The Challenge is currently developing level two training. New funding levels will be set at the next Advisory Board meeting. The Energy Center of Wisconsin serves as Administrator of CAC, although DOE will be assuming this role later this fall.

c. Commissioning Training

Mark Hanson, ECW. The basic training course has been developed and is receiving good reception. Ten one-day training sessions have occurred. The collaboration is still looking for additional funding partners in addition to DOE and numerous states to support the advanced training curriculum development.

d. Daylighting Collaborative ™

Mark Hanson, ECW. The Daylighting Collaborative is underway with technical specifications, web page, training and demonstration sites. It is receiving a good reception in the marketplace. The Collaborative is currently concentrating efforts on schools and office buildings and is seeking to add partners and programs in other states.

e. Industrial Technologies Studies

Ernst Worell, LBNL. Ernst described a proposal in the industrial sector focusing on emerging technologies. The proposal will identify emerging technologies, characterization with respect to expected performance and stage of development and deployment. It is hoped that final results assist in providing a common ground on emerging technologies, new and additional insights into technologies development and energy efficiency potential.

f. Renewable Energy Collaboration Opportunities

Chuck McGowan, EPRI. The focus of the ERPI program is to expand the renewable energy market. Areas of collaboration include

- Renewable Energy Technical Assessment Guide (TAG-RE)
- Solar and Wind in Schools
- State Renewable Energy Program Benefits Verification
- Field Verification of Renewable Energy Technology
- Advanced Thin-Film Photovoltaic Cell Development and Commercialization
- Wind Energy Forecasting
- Integrated Wind Generation-Energy Storage Systems
- Hybrid Biomass and Solar-Natural Gas Energy Systems
- Coproduction of Energy and High-Value Forest and Agricultural Products
- Integrated Waste Management, Recycling, and Energy Recovery for Municipal Wastes
- Small Hydroelectric System Development and Commercialization

g. Market Transformation Framework

Renee Guild, EPRI. EPRI has developed a Market Transformation framework that meets customer needs, linking to energy efficiency, and leveraging with natural allies. The framework is based on lessons and experience from successful program design. Different kinds of opportunities mean different kinds of programs.

- Technology substitution - as newer technologies are introduced into the market, the new technology needs to replace an old technology
- Technology improvement - the goal is to increase market share
- System/process improvements
- Behavior modifications - change the way decisions are made regarding technologies.

h. Light Right

Ron Nesse of PNNL reported that a new consortium called Light Right has been developed with phase one completed. PNNL is looking for investors for phase two of the project.

i. Building Standards

Diana Shankle, DOE provided an overview of DOE Building Standards and Guidelines Program. DOE is involved with energy codes and standards in part due to legislative mandate for cost effective ways to improve energy efficiency in nation's building. Individual states can request that a code be developed specifically for their state. Technical assistance to states is available, which can be direct access to the national laboratories.

8. National Update

a. DOE Office of Building Technologies

Mark Ginsberg, Office of Building Technologies, DOE provided an update to the membership. Regarding the budget, congress left the budget at the same level as the previous year, with a few small increases. A strategic framework has been developed including peer reviews, roadmapping, and competitive solicitations. Timing for the next cycle for R&D grants is planned for the first quarter of the fiscal year.

b. Office of Industrial Technologies Initiatives

Denise Swink, Office of Industrial Technologies Initiatives, DOE. DOE has been working with a variety of states in the industrial sectors, especially those involved in the Steam Challenge, Compress Air Challenge, Motor Challenge and CHP Challenge. OIT is also working closely on Industries of the Futures (IOF) Strategy. There are nine IOF strategy areas including metal casting, agriculture, glass industry, mining, petroleum, and distributed generation. To date 34 states have received grants totaling $5.9 million. There is an expo scheduled for February 19 - 20, 2001 involving middle and high school students, show casing an understanding of the nine industries and putting them to use.

9. Formalization

a. Questions/Answers

What is the differential value?

By formalizing, ASERTTI would

- *have the legal ability to sign contracts*
- *ability to raise membership funds from more members*
- *enhance perception of ASERTTI*
- *ability for non-state organizations to provide financial support to ASERTTI*

Would a formal due structure discourage participation?

18 organizations responded to the survey. 15 of those organizations agreed that this would not be a barrier to membership although a few of the 15 had an additional caveat. For the three organizations that responded no there was discussion of means for how they could participate.

Will formalization increase operating expenses?

Depending upon the form the organization takes, operating expenses could be kept at a minimum.

Would the due structure support operating expenses?

Current estimated cost is $80K, and the survey results show that revenues raised would cover this cost.

Action: Moved by Mike DeAngelis, CEC, second by Kristi Growdon, WSU to formalized ASERTTI, file a 501c(3) including draft bylaws, and develop a rough budget to be distributed to the membership for vote at the February meeting. Motion passed without opposition.

10. ASERTTI Administrative Business

a. Election of new Chair

Kristine Growdon was nominated as chair for the next two-year term. Mark Hanson, ECW will continue to administer the Winslow Group contract.

b. Adjournment

The meeting was adjourned by Kristine Growdon, Chair on Friday, September 10, 1999 at 4:00 p.m.

Attachment A

ASERTTI ADOPTED DUES SCHEDULE

September 10, 1999

Level	R&D, Tech Transfer Annual Revenue	Minimum ASERTTI Funding Level
A	States < $2,000,000	Registration: at least one ASERTTI meeting per year at $400
B	States $2,000,000 - $4,000,000	$2,500 (cash or in-kind services) plus registration fees
C	States $4,000,000 - $10,000,000	$7,500 (cash or in-kind services) plus registration fees
D	States >$10,000,000	$15,000 (cash or in-kind services) plus registration fees
E Associate Sponsor	Non-state organizations	$2,000 (cash or in-kind services) plus registration fees
F Associate	Non-state organizations	Registration: at least one ASERTTI meeting per year at $400

Levels A-D will have one seat on the Board of Directors and will have equal rights and responsibilities.

Level E-F will be for those organizations interested in collaborative RDD&D with states but are not state or regional organizations.