

**Meeting of the  
Association of State Energy Research and Technology Transfer  
Institutions, Inc.  
February 11-13, 2002  
Washington D.C.**

William Flynn, ASERTTI Chair, and New York State Research and Development Authority called the meeting to order at 9:15 a.m. on Monday, February 11, 2002 with the following persons present:

Larry Ambs, University of Massachusetts, CEERE  
Floyd Barwig, Iowa Energy Center  
Sherry Benzmilller, Energy Center of Wisconsin  
Marilyn Brown, Oak Ridge National Laboratory  
James Cole, California Institute for Energy Efficiency  
Charlie Curcija, University of Massachusetts, CEERE  
Jack Darnell, National Renewable Energy Laboratory  
Mike DeAngelis, California Energy Commission  
Richard Drake, NYSERDA  
Ron Edelstein, GTI  
Philip Fairey, Florida Solar Energy Center  
Ronald Fiskum, US Department of Energy  
Bill Flynn, NYSERDA  
T.J. Glauthier, Electricity Innovation Institute  
Mark Hanson, Hoffman Institute  
Jeffrey Harris, Lawrence Berkeley National Laboratory  
Patricia Hoffman, US Department of Energy  
Kathleen Hogan, US Environmental Protection Agency  
Bob Koger, Advanced Energy Corporation  
Doug Kosar, UIC – Energy Resources Center  
Ward Lenz, Advanced Energy Corporation  
Russel Leslie, Lighting Research Center  
John Morrison, Advanced Energy Corporation  
Nabil Nasr, Rochester Institute of Technology  
Miriam Pye, NYSERDA  
Mark Rawson, California Energy Commission  
John Ruckes, CT Office of Policy and Management  
Bernie Saffell, Pacific Northwest National Laboratory  
Wendy Shave, NYSERDA  
Larry Shirley, State Energy Office of North Carolina  
Roya Stanley, National Renewable Energy Laboratory  
Susan Stratton, Energy Center of Wisconsin  
Terry Surles, California Energy Commission  
Richard Sweetser, EXERGY Partners Corporation  
Richard Vincent, SVCMC – Department of Community Medicine

Joseph Visalli, NYSERDA  
Gunnar Walmet, NYSERDA  
Jack White, ASERTTI  
Jim Wiet, UIC – Energy Resources Center  
Bill Worek, UIC – Energy Resources Center  
Tom Yoder, MSU – Billings, Center for Applied Economic Research

## **1. Business Meeting**

### **a. Executive Director Report**

Jack White presented an introduction of the new DOE, ASERTTI and NASEO “Bold Proposal.” ASERTTI has met with Dave Garman, US DOE to discuss the proposal. This proposal will be presented fully later in the meeting.

The annual US DOE \$6 million dollar solicitation was approved by Dave Garman’s office in September and is waiting for approval from the Secretary for release. However, this year US DOE is combining the FY01 and FY02 funds for a total of \$12 million solicitation with no solicitation in FY02.

Jack thanked the ASERTTI Executive Committee for all of its efforts in continuing the growth and viability of ASERTTI.

### **b. Treasurer Report**

Financial updates were distributed to the membership. Membership levels were changed for the Florida Solar Energy Center to \$7,500 annually and for the Iowa Energy Center to \$2,500 annually. Future reports will list members by membership category rather than alphabetically.

### **c. Membership Report**

The membership committee (John Morrison, Mark Hanson, Gunnar Walmet, Miriam Pye, Jack White, and Mike DeAngelis) formed last spring. The Committee developed a six-step strategy for recruitment of new ASERTTI members.

The ASERTTI brochure was updated and sent out to members in December 2001. The Executive Committee will consider all organizations that show an interest in becoming ASERTTI members.

### **d. Chair Report**

Bill Flynn thanked the Executive Committee for its continuing efforts. The following changes were made to the Executive Committee: Bill Worek, UIC – Energy Resources Center was elected Treasurer. John Morrison, Advanced Energy was appointed Secretary as Gunnar Walmet, NYSERDA stepped down from this position. Jack White, Executive Director is retiring at the end of the year and a search will take place to fill the vacancy.

**e. Secretary Report**

John Morrison distributed proposed changes in the bylaws regarding the definitions of delegate and associate members.

Mike DeAngelis moved to waive the 20-day notice for these proposed bylaw changes, seconded by John Morrison. Passed unanimously.

John Morrison moved to approve the proposed changes, seconded by Floyd Barwig. Passed unanimously.

**f. RD&D Committee Report**

ASERTTI and other partners have continued to move forward in all areas of the ASERTTI-US DOE MOU. The Buildings area is the most advanced and has set 3-4 common areas of interest with US DOE for potential collaboration. ASERTTI continues to have increased activity and visibility with US DOE.

**g. Fall 2002 Meeting**

The Fall 2002 meeting will be held in the Napa/Sonoma California, hosted by the California Energy Commission in conjunction with Lawrence Berkeley National Laboratory. Topics will include Innovation and R&D and a tour of LBL.

**h. DOE OIT/ASERTTI/NASEO Allied Partnership**

The Allied Partnership is a standard method of cooperation to help disseminate DOE information within the states by opening communication. At this time there does not appear to have enough ASERTTI interest to submit a proposal under the Chemical solicitation. It was suggested to form a subcommittee of ASERTTI to work closely with DOE in this area.

**i. Website**

The current website must be updated. It is currently being maintained by Washington State University. It was suggested that \$10,000 be set aside for redesign and maintenance of the website. North Carolina Solar Center has expressed interest in maintaining and redesigning the website.

**2. Existing and Proposed ASERTTI Collaboratives**

**a. DOE Initiative on Cooperative Programs with States for RD&D**

ASERTTI member submitted eight proposals under the \$6 million annual solicitation. US DOE has not yet determined awards of proposals.

**b. Smart Schools (Susan Stratton, Energy Center of Wisconsin)**

This is a joint two-year project between NASEO and ASERTTI with DOE coordination. The project consists of eight tasks with the following leads:

1. Planning and Coordination – NASEO
2. Installation and Evaluation of Microturbines – State of Ohio

3. Baseline data collection and analysis to determine energy savings potential in nine US climates – Florida Solar Energy Center
4. Advanced Daylighting Research – Energy Center of Wisconsin
5. Integrated School Technologies – California Energy Commission
6. Large Scale Study and Diagnostics Testing of Schools – Florida Solar Energy Center
7. Technology Integration, Web-based Curriculum – NYSERDA
8. Applied Engineering and Design Assistance – NASEO

**c. Collaborative Research in Lighting (Russ Leslie, Lighting Research Center)**

National Lighting Product Information Program (NLPIP) goal is to rapidly provide the best information available on efficient lighting products, stimulating more widespread acceptance and more appropriate uses of these products.

A DOE Sponsored project “Reducing Barriers to Use of High Efficiency Lighting Systems: Lighting Controls” is underway. Preliminary recommendation is to aggressively encourage the widespread deployment of automatic shut-off lighting controls in existing and new C&I buildings.

**d. Demand Control Ventilation (Doug Kosar, UIC – Energy Resources Center)**

Demand Control Ventilation (DCV) proposed RD&D:

- ▲ Deploy technology in coordinated DOE and State program to demonstrate good IAQ and lower energy costs than fixed ventilation
- ▲ Develop extended product line capabilities that integrate CO<sub>2</sub> and humidity sensors for use with popular OA preconditioners
- ▲ Research short range RF application to DCV for non-hardwire retrofits in buildings

**e. Motor Decisions Matter (Marc Hoffman, CEE)**

The objectives of this project are to change the way motors are bought and sold, make motor management a standard practice, and increase demand for premium efficiency motors and quality repair service.

Motor Decisions Matter is a national awareness campaign promoting better motor management. The campaign offers a common message, tools and resources, platform to address motor system optimization and a network of motor industry stakeholders and experts.

**f. National Building Controls Information Program (Floyd Barwig, Iowa Energy Center)**

The NBCIP is sponsored by the US EPA and the Iowa Energy Center. “Building Energy Use and Control Problems: Defining the Connection” has been completed, providing a literature review summary to identify case studies of control-related inefficiency in buildings. The impact of the program has shown that in the US, buildings consume over 35% of primary energy and over 65% of electricity.

### **3. Potential Collaborative Areas with EPA (Kathleen Hogan, EPA)**

Kathleen Hogan updated the membership on the Energy Star program. Results of Energy Star through 2000:

- 🏠 Avoided 75 billion kWh in 2000
- 🏠 Avoided 10GW of peak power
- 🏠 Reduced pollution
- 🏠 Saved \$4 billion

Energy Star helps market investment in efficiency and is a broad platform in both residential and commercial areas.

EPA's priorities in the Energy Star program include: increase consumer awareness/influence of label; maintain integrity of label; update specifications for existing products; enhance EPA review of product performance and marketing of label products; continue momentum with new home builders; and promote whole building benchmarking.

EPA has identified priority areas for future collaboration: design intent, energy codes, control systems, and systems benchmark of cooling and heating systems.

### **4. National Center of Remanufacturing and Resource Recovery (Nabil Nasr, NCR<sup>3</sup>)**

The mission of NCR<sup>3</sup> is to deliver to industry advanced technologies and tools for efficient and cost-effective remanufacturing and the design of products that have no negative environmental impacts. NCR<sup>3</sup> technology focus areas include: Structural and material analysis; logistics and policy; intelligent testing and diagnostics; sustainable design; operational assistance; clean technologies; and LEEDS: life-cycle engineering and economic decision system. Current activities include: Asset health monitoring, material aging, sustainable design, clean technologies and surface cleaning.

### **5. Member Updates**

#### **a. California Energy Commission – Mike DeAngelis**

CEC awarded funding for an oxygen producing plant and has issued a reciprocating engine solicitation. CEC is also planning on issuing solicitations in the renewable energy area, biogas and building integrated photovoltaics.

#### **b. NYSERDA – Gunnar Walmet, Joe Visalli**

NYSERDA's research activities include a strong emphasis on reducing the electricity use of heating appliances and the ability to use heating appliances during electrical shutdowns. NYSERDA's largest project is a demonstration of superconducting transmission cable with anticipated results in 2003 or 2004.

NYSERDA's work in the transportation area includes the multistate truckstop electrification, and may expand into other areas. There are 700 farms participating in 10 projects in the agriculture area ranging from efficient refrigeration to anaerobic digesters.

**c. GTI – Ron Edelstein**

There is an American Gas proposal for natural gas safety and efficiency which requires federal legislation. The proposal is designed to effect residential, commercial and industrial customers. GTI also has a group of projects that require co-funding that qualifies for FERC funds.

**d. Lighting Research Center – Russ Leslie**

There is an interactive education website developed about lighting efficiency and the advanced education training involves a lighting institute program. The LRC has finished the third round of PEARL testing – testing of Energy Star products to Energy Star specifications.

**e. National Renewable Energy Lab – Jack Darnell**

NREL is celebrating its 25<sup>th</sup> anniversary and is re-coordinating to make programs similar across the board. NREL is currently working on the interconnection standard and with support from the Department of the Interior and DOE revision of the land use plan for public land to include renewables.

**f. Advanced Energy Corporation – John Morrison, Bob Koger**

The Comfort Guarantee program is continuing to accelerate with staff added to train the next design assistants. The program is changing from design assistance to building assistance.

The motor efficiency regulation from 1992 went into effect on 11/4/01 and to date 30 certificates have been issued, 21 of those AEC provided assistance to the manufacturers.

AEC is the administrator of the Green Power program and has formed an advisory committee of various renewable interest groups.

**g. North Carolina State University – Herb Eckerlin**

NCSU primary activities include education, research and technology. These activity areas work together to provide a broad spectrum of projects that involve homeowner, homebuilders, architects, policy groups as well as others. NCSU is also working in the IOF area along with the state energy office.

**h. Washington State University – Dave Sjoding**

WSU office of Industrial Technology operates the clearinghouse for DOE – OIT. The Northwest Energy Information Center is focusing on applied energy and will partner with other technology agencies including DOE and California

**i. Hoffman Institute – Mark Hanson**

The Hoffman Institute/Corporation is a design build firm focusing on sustainable design. Hoffman is converting all building plans to follow the new Green Building Alliance guidelines along with Cool Daylighting practices.

**j. Montana State University, Billings – Tom Yoder**

The MSU Applied Economic Center is not an energy research center, although state government supports numerous fuel cell programs currently underway. There is a three year old fuel cell program with a grid parallel design.

**k. Iowa Energy Center – Floyd Barwig**

Iowa remains very active in the Compressed Air Challenge. The CAC has offered a course at the University to provide training on compressed air systems and has excellent response. IEC has been designated as a biodiesel training facility to learn to operate a biodiesel plant.

**l. University of Massachusetts, CEERE – Charlie Curcija**

CEERE is participating in building envelope work in computer simulation tools. Simulation tools are rarely used in early stages of design and are working with the state energy office to educate architects on the use of these tools.

**m. Energy Center of Wisconsin – Susan Stratton**

ECW is creating a new strategic plan to address the end of mandatory utility funding in July 2003. ECW projects of interest:

- ▲ Water Wastewater which is a result of outbreaks of cryptosporidium in the water system;
- ▲ Industries of the Future, ECW is involved in the seven areas of IOF and working with Focus on Energy (Wisconsin's public benefits);
- ▲ Focus on Energy a \$44 million statewide effort. ECW is involved in areas of residential, environmental, renewable research, and commercial/industrial markets.

**n. CT Office of Policy and Management – John Ruckes**

Connecticut has SBC funds involving small grants to early stage companies. Although the program is small it has been able to expand through use of utility funds.

**6. MOU Implementation Team Updates**

**a. Industry – Bill Worek (UIC – Energy Resources Center) and Marsha Quinn (DOE-OIT)**

The Allied Partnership Agreement is in place. ASERTTI will be listed as a place to look for potential partners in new solicitations issued starting with the upcoming Chemicals solicitation.

There is interest in the Food processing area by ASERTTI members. Although food processing is not an IOF area, OIT may still be able to work in this area. It was suggested that dairy would be a common area among most states and therefore may be a good area to look at by OIT to see if collaboration could be done in the food processing area.

**b. Buildings – Jim Cole (CIEE), John Ryan (DOE – OBT)**

The MOU team met on January 30, 2002. Current ASERTTI initiatives in the building area include:

- 🐾 Indoor air quality scoping of R&D needs
- 🐾 Energy Smart schools
- 🐾 Roadmapping processing
- 🐾 Pending proposals – residential retrofit, daylighting, uncontrolled air flows, moisture problems in wall systems

The end result is to have \$1-2 million in projects with ASERTTI members playing a vital role.

New potential DOE opportunities in the building area include:

- 🐾 New commercial building showcase demo
- 🐾 Building control systems
- 🐾 Best practices: daylighting, window and lighting controls
- 🐾 Residential retrofit systems
- 🐾 Building America partnerships
- 🐾 HVAC equipment
- 🐾 Emerging technologies
- 🐾 Lighting

**c. Transportation – Richard Drake (NYSERDA) and Jim Merritt (DOE)**

This area started with a workshop with 20 participants. DOE presented its overview and discussion of 12 projects of common interest. A result of the workshop was the funding of the Truckstop Electrification project. It is anticipated that this technology will expand through the Interstate Highway system.

**d. Power Technologies – Terry Surles (CEC) and Bill Parks (DOE – OTT)**

There are three areas for collaborative activities.

- 🐾 Hydrogen Infrastructure – enhanced interest due to security and environmental concerns, evaluation of potential R&D for infrastructure
- 🐾 Distributed energy resources and related interconnection issues
- 🐾 Technology Certification – need for objective data developed by third parties, allows end-users to make informed decisions, provides for product improvement, can be modeled after environmental technologies program.

**7. National Building Energy Science Fellowship (Jeff Harris, LBL)**

The objectives of this effort are: next generation leadership for building energy technologies and policies; near-term needs for highly talented, trained professionals; and new paths for collaboration informal networking. To get the program started is to form and executive board, sponsor commitments, organize orientation and recruit initial fellowship class.

**8. Status of MOU Implementation – State Technologies Advancement Collaborative (STAC) Pilot Program (Mike DeAngelis, CEC)**

This program is under development with DOE and NASEO. The concept of STAC arose from the poor results of the MOU process with DOE. The program purpose is for joint planning, funding, implementation of federal multistate RDD&D projects consistent with goals and objectives of DOE and states. Program elements include a wide range of eligible technologies, use joint planning in each EERE area and have NASEO/ASERTTI collaborative implementation.

The pilot structure consists of a DOE intergovernmental agreement with NASEO on the behalf of STAC, NASEO and ASERTTI delegates responsibility to Joint Committee, and Joint STAC Executive Committee to provide decision making and oversight for STAC program.

Projects that would come through this program would need to be in one for the four program areas, with 50% cost share from states and other sources. States that do not have cost share availability can provide in-kind staff resources or other options.

**9. New Ideas and Collaborative Brainstorming**

**a. Distributed Energy Resources (DER) Collaboration Opportunities (Mark Rawson, CEC)**

Distributed Energy Resources objectives are to provide DER that is clean, efficient, and cost effective; safe reliable and effective integration of DER into the distribution system and; optimize DER to provide maximum system-wide benefits. Issues in the DER area involve generation, market integration, and system effects. There are national collaborative opportunities to develop standardized nationwide protocols for testing and performance reporting of DER, including an unbiased database of project operation, determine overall net effects from widespread implementation of DER and DER education.

**b. Standardized Testing Protocol Project (Mark Rawson, CEC)**

The problem of this project is that consumers are not using (and utilities not connecting) DER due to performance uncertainty. The project objective is to develop testing protocols that: ensure consistent testing methodology and test results between testing facilities and verify manufacturer's claims.

This project is a result of and ASERTTI proposal to DOE OPT in February 2001. Tasks include: national testing protocol and standards; re-evaluate tasks, schedule and budget; convene stakeholders and add new one and; develop protocols, databases and conduct testing.

**c. Distributed Utility Integration Project (Mark Rawson, CEC)**

The objective of this project is to develop a layperson's guide to interconnection. The scope of the project includes:

- 🐾 Educate stakeholders on requirements, implications for DER and best practices
- 🐾 Provide clarification on application requirements and process
- 🐾 Provide information on contracts
- 🐾 Conduct training workshops for utilities, developers and manufacturers

**d. Application of Ultraviolet Germicidal Irradiation to Control Transmission of Airborne Disease (Richard Vincent, St. Vincent’s Catholic Medical Centers)**

The study began in 1991 to interrupt airborne diseases through ultraviolet (UV) light. Since the events of 9-11-02 the study scope has changed to look at all airborne organisms including bio-terrorism organisms. The CDC guidelines for persons with active tuberculous (TB) recommends that at least 12 air changes per hour occur. The use of UV produces the same results with only 6 air changes per hour. The TB study results can be used for treatment of other airborne pathogens and can be integrated into other various projects. The CDC is now looking at ways to effectively treat anthrax, small pox and other bio-terrorism pathogens.

**e. Opportunities to respond to the events of 9-11-02 (Brainstorming Session)**

- 🐾 Showcase efforts of R&D for the re-development of Manhattan
  - Research analysis on the site, building materials etc.
- 🐾 Rebuild new buildings to higher than current standards
  - Tax incentives for new commercial buildings
- 🐾 Ventilation research to prevent pathogens from spreading throughout a building
- 🐾 Ground zero atmospheric concern
- 🐾 Increase in security measures of new and existing buildings
- 🐾 National Guard reports – can they be used a vehicle for technology transfer?
- 🐾 New efficiency performance standards in new commercial buildings
- 🐾 Distributed generation
- 🐾 Exit lighting in existing and new buildings
- 🐾 Fire stairs codes, allows for rescue personnel to “up” while others come “down”
- 🐾 Transportation – peaking alternatives for the subway system
- 🐾 Cleaner emergency generation
- 🐾 Water supply security

**10. Electricity Innovation Institute (T.J. Glauthier, E2I)**

E2I was created by EPRI to allow for ease of collaboration in R&D areas and to provide results widely in the public community. EPRI is trying to steer or manage the R&D base, E2I’s role will be to manage the overall process and make sure the work is completed. E2I is inviting ASERTTI members to work with EPRI to leverage funds and collaborate on projects.

**11. Joint Sessions with NASEO**

- 🐾 DOE Energy Sector Roundtable

ASERTTI Projects Presented to NASEO

**12. Adjournment**

The meeting was adjourned on Wednesday, February 13, 2002 at 12:00 p.m. The next meeting will be held in Napa, California November 13-15, 2002.

Respectfully submitted by,

Sherry Benzmilller  
ASERTTI