# A New Strategic Approach

# Annual Report

U.S. Department of Energy
State Energy Advisory Board
October 1, 2006 through September 30, 2007

## What Is STEAB?

The State Energy Advisory Board (STEAB) is comprised of State energy directors, Weatherization directors, other state officials, representatives of state and local interests, and recognized exports in energy-related disciplines. The Board's statutory charge is to develop recommendations for the U.S. Department of Energy (DOE) and the U.S. Congress regarding initiation, design, implementation, and evaluation of federal energy efficiency and renewable energy programs and policies. STEAB maintains a close working relationship with DOE's Office of Energy Efficiency and Renewable Energy (EERE) and provides a conduit through which federal, state, and local voices can be heard at DOE and other offices of the federal government. STEAB also offers a forum for the exchange of ideas and information on energy issues and policies.

U. S. Department of Energy

State Energy Advisory Board (STEAB)

# Annual Report

For Period October 1, 2006

Through September 30, 2007

STEAB

State Energy Advisory Board

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# 1. Executive Summary

FY 2007 was a very active year for STEAB. By several measures, the Board stepped up its engagement with the Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE). The Board held three general meetings, one in Washington, to maintain an active dialogue with EERE executive leadership and program officials, and two at DOE National Laboratories to review ongoing research and development (R&D) in support of EERE technology advancement programs. Additionally, the Board's Executive Committee visited key members of the Assistant Secretary's staff several times between Board meetings to keep abreast of rapidly emerging and/or changing EERE strategies and priorities. The Executive Committee also visited the office of U.S. Representative Greg Walden (R-OR), Vice Chairman, Congressional Energy Caucus and member of the Climate Control Committee, to reintroduce itself and gauge Congressional interest in its activities. The Board produced four Board Recommendations for consideration by EERE.

From this engagement and its own internal deliberations, the Board assessed the status and tempo of progress in energy efficiency and renewable energy research, development, demonstration, and deployment. It also identified several major challenges. Led by ethanol, renewable energy fuels and technologies are moving forward into the market driven by higher energy commodity prices and Government subsidies. On the other hand, emerging energy efficiency technologies will need additional support and promotion to achieve their commercial potential. To accomplish this, the consensus of the Board is that increased management priority and innovative approaches will be required to leverage the outreach of the National Laboratories and facilitate expanded cooperation and collaboration by the relevant stakeholders.

To address these issues the Board drafted and submitted a white paper titled "Accelerated Commercialization of Federally-Sponsored Energy Efficiency and Renewable Energy Technologies." Drawing on the "Valley of Death" phenomenon in which promising technologies often fail to reach commercialization, the Board scoped and recommended that an EERE-developed, national web-based solution be established to enable R&D principals to showcase their technologies with prospective adopters, investors, and coordinators.

Additionally, the Board submitted a recommendation for enhancing collaboration with State and local energy institutions calling for the establishment of a "Director of State and Local Collaboration" position within EERE whose purpose would be to coordinate the activities of numerous State and local governments, non-governments, and public entities. This position would also serve as a cross-cutting voice within EERE regarding their capabilities, activities, and interests.

Recognizing the role that the North American Solar Challenge plays in assisting technology transfer and promoting educational activities that result in using more renewable energy, the Board submitted a recommendation encouraging DOE to continue financial support for a 2008 North American Solar Challenge event. This support will be an on-going expression of DOE's commitment to renewable energy development.

Finally, the Board recommended that adequate funding from Congress be requested so that the Renewable Energy Production Incentive (REPI) program would receive incentives and subsidies comparable to tax credits provided to the private sector to help accelerate the introduction and deployment of renewable energy technologies by interested public sector entities.

At the request of EERE, the Board developed and submitted an "Energy Efficiency and Renewable Energy Collaboration/Participation Roadmap," a matrix of potential issues or opportunities for interested Federal, public and private stakeholders. This "roadmap" would allow EERE technology and program managers to identify and engage appropriate partners.

Culminating its activities for the year, the Board reflected on its accomplishments, its relevance and its effectiveness by reviewing and refreshing its strategic direction. The following four strategic focus areas were selected for further definition and guidance for future Board activities:

1) Accelerate Energy Efficiency Market Transformation,

2) Facilitate Technology Commercialization/Deployment,

3) Facilitate Renewable Energy Advancement, and

4) Enhance Federal/State Synergies.

## 2. Background and Challenge

In the previous STEAB annual report, the Board highlighted the growing national consensus on the need for: (1) reducing America's dependence on foreign energy sources; (2) mitigating the impact of increasingly scarce energy supplies on the economy; and, (3) providing alternative energy sources to ease the impact of major disruptions. Since then, a global consensus has also emerged and solidified around the need to address climate change, beginning in the near-term. These conditions are driving greatly intensified interest and activity at the State level in energy efficiency and renewable energy programs, technologies, markets and consumer affairs. State energy officials report a significant spike in demand for their services from executives and legislatures as well as local governments, industries and individuals. Key among these demands is for information regarding Federal and State energy efficiency and renewable energy programs, availability of relevant technologies and technical assistance in identifying solutions and facilitating partnering and collaboration to effect their implementation. The challenge for STEAB, therefore, is to effectively convey these needs to DOE's Office of Energy Efficiency and Renewable Energy (EERE) and provide valuable insights and guidance on EERE's role in helping fulfill them.

## 3. Summary of Activities

FY 2007 was a very active year for STEAB. By several measures, the Board stepped up its engagement with EERE. The Board held three general meetings, one in Washington, to maintain an active dialogue with EERE executive leadership and program officials, and two at DOE National Laboratories to review ongoing research and development in support of EERE technology advancement programs. Additionally, the STEAB Executive Committee met with the Assistant Secretary for EERE's senior staff on several occasions. The Board held teleconference meetings between formal meetings to sustain momentum on it's initiatives, and also produced and unanimously adopted four Board Recommendations for consideration by EERE.

| Dates | Location | Organization Visited | Primary Agenda Topics |
|---|---|---|---|
| October 17–19, 2006 | Oak Ridge, TN | Oak Ridge National Laboratory (ORNL) | Presentations on the ORNL's energy efficiency and renewable energy technologies program; ORNL Laboratory tour; Development of the FY 2006 STEAB Annual Report to the Secretary and the Congress. |
| March 14–15, 2007 | Washington, DC | | EERE Technology Development Programs (Wind and Hydropower, FreedomCAR, Weatherization, Geothermal, Biomass); EERE Office of Technology Advancement & Outreach; Ad hoc STEAB meeting with Congressman Greg Walden (R-OR) - Member of the House Energy and Commerce Committee. |
| August 14–16, 2007 | Berkeley, CA | Lawrence Berkeley National Laboratory (LBNL) | Presentations on the LBNL's Environmental Energy Technologies (EET) program; LBNL Laboratory tour; Development of the STEAB Strategic Focus Areas. |

## a. March 2007 Meeting – Washington, D.C.

At the Washington meeting in March 2007, the Board met with the Acting Deputy Assistant Secretary for Technology Development (ASTD) who conveyed the Assistant Secretary's vision and goals for ongoing EERE success. During a wide-ranging dialogue, the ASTD enumerated a series of EERE's opportunities and challenges. Among these were: (1) re-establishment of the Building Codes Program; (2) increased collaboration with the States through the "Save Energy Now Program"; (3) collaboration with the Environmental Protection Agency (EPA) to identify plant specification methodologies benchmarks; (4) improvement of electricity grid integration through standardization of rules; (5) a National Renewable Energy Credit Trading System(s) that cross-cut(s) multiple institutions; (6) delivery of renewables to more locations nationwide; and (7) increased U.S. manufacturing in solar and photovoltaic technologies. The Board also received presentations from and engaged in dialogue with the Wind & Hydropower Technologies, Biomass, Geothermal Technologies, Weatherization and Intergovernmental, and FreedomCAR & Vehicle Technologies Programs. A presentation was also received from the Office of Technology Advancement and Outreach (TAO). During each of these presentations, the ensuing discussion focused primarily on the need to accelerate technology market introduction and acceptance. A variety of potential strategies and tactics were aired. It became clear that EERE and the Board were in close alignment on most of these issues.

During this timeframe, the STEAB Executive Committee visited the office of U.S. Representative Greg Walden (R-OR), Vice Chairman, Congressional Energy Caucus and a member of the Climate Control Committee, to reintroduce itself and gauge Congressional interest in its activities. The meeting was very positive and represented a first step in the process of gaining increased Congressional visibility and renewed interest in STEAB activities.

To maintain continuity, momentum, and strategic focus, the Board continued to hold monthly teleconference meetings. The purpose of these meetings was to review, discuss, and achieve consensus and enact Board Resolutions under development; plan upcoming formal meetings; and address other business and issues brought before it in a timely manner.

## b. Meetings with EERE Leadership

Between formal Board meetings, the Executive Committee visited key members of the Assistant Secretary's staff on several occasions to keep abreast of rapidly emerging and/or changing EERE strategies and priorities and to apprise the EERE leadership of the Board's current focus and activities. During these meetings the Executive Committee called attention to prior STEAB resolutions and recommendations and received positive feedback and assurance that had been positively received and were being acted upon.

## c. National Laboratory Meetings

During October 2006 and August 2007, the Board traveled to Oak Ridge, Tennessee and Berkeley, California to meet with officials and principal investigators of the Oak Ridge National Laboratory (ORNL) and the Lawrence Berkeley National Laboratory (LBNL) respectively. At these meetings the Board received presentations on the progress and potential of EERE sponsored technology development. Discussions between the Labs and the Board addressed the market potential and current and prospective outreach efforts related to these technologies.

**ORNL, October 2006:**

At Oak Ridge the topics included an overview of the laboratory and presentations on Electricity/Energy Efficiency and Transportation, Buildings, Bio-engineering, and Nanomanufacturing Technologies. Touring the laboratory, the Board visited and viewed demonstrations at the Building Technologies Center, the Industrial Technology and Nanomanufacturing Technology Center, the Hybrid Solar Laboratory, and the Visualization Laboratory. The Board also traveled to nearby Lenoir City, TN to visit the Habit for Humanity Community, a cluster of near zero-energy homes and a proving ground for the latest energy efficiency home-building technologies.

**LBNL, August 2007:**

At LBNL, the topics included an overview of the laboratory and presentations on High Performance Commercial Buildings, Buildings Controls and Lighting Systems, (Electricity) Demand Response Research and Implementation, Recent High-Tech Industry Research and Demonstration Projects, Digital Networks, Retail Rate Structure, the Economics of Photovoltaic Systems in California, Car Component Energy Efficiency, and Cool Roofing Technologies. Again, the ensuing discussions centered on the need for the Laboratories to improve technology transfer and market deployment through enhanced outreach and improved collaboration with the States.

It was generally acknowledged that the greatest barrier to outreach has been the lack of a communication structure that broadly transfers information out of the labs in a "digestible format". One suggestion from the Board was that the Labs should consider approaching organizations such as the National Association of State Energy Officials (NASEO) and the National Association of State Universities and Land Grant –Colleges (NASULGC) where all States and land-grant entities are represented and actively participating. Since it was clear that the Labs were interested in learning more about partnership with the States, the Board suggested the possibility of STEAB working with the EERE Project Management Center (PMC) to help facilitate lab outreach efforts. At this juncture

two members of the Board volunteered as "point people" to communicate and work with the PMC toward this end. The first initiative will be to connect the PMC with the labs to develop a series of scheduled "Webinars" for the Labs to introduce their technologies nation-wide and provide relevant technical information.

## 4. STEAB Recommendations

From the above activities and engagements as well as its own deliberations, the Board was able to assess the status and tempo of progress in energy efficiency and renewable energy technology research, development, demonstration, and deployment. From this assessment the Board identified several major challenges and formulated four sets of recommendations to address them.

**Accelerated Commercialization of Federally-Sponsored Energy Efficiency and Renewable Energy Technologies:**

One major challenge involves the pace in which energy efficiency technologies in general are entering the market. Led by ethanol, renewable energy technologies are moving forward into the market driven by technological maturity coupled with higher energy commodity prices and Government subsidies.

On the other hand, emerging energy efficiency technologies will need support to adequately introduce and promote them to achieve their commercial potential. To accomplish this, the consensus of the Board is that increased management priority and innovative approaches will be required to leverage the outreach of the National Laboratories and facilitate expanded cooperation and collaboration by the relevant stakeholders.

To address this issue specifically, the Board drafted and submitted a white paper titled "Accelerated Commercialization of Federally-Sponsored Energy Efficiency and Renewable Energy Technologies." Drawing on the "Valley of Death" phenomenon in which promising technologies frequently fail to reach commercialization, the Board noted that successful transition into the market often depends upon vigorous demonstration through nation-wide information dissemination followed by active Government participation in the deployment process to catalyze linkages and sustain partnerships among interested and essential parties.

The Board recommended that EERE develop, establish, and maintain a national web-based solution to facilitate and enable principals of EERE-sponsored research to showcase their technologies with prospective adopters, investors, and coordinators. Essential features of such a system would include a matrix and searchable database of emergent technologies, a registry of interested participants by role category (manufacturer, venture capitalist, etc.), a registry of coordinators and enablers (DOE, States, universities, etc.), regular technology forums and virtual laboratory tours, and guidelines and best practices for technology deployment. STEAB believes this recommendation offers great potential for overcoming the major barrier to technology deployment.

**Enhancing Collaboration with State and Local Energy Institutions:**

Beyond the need for nation-wide dissemination of technical information, the Board believes that a mechanism is needed to bring various interests and stakeholders to the table to

collaboratively steer technologies through the deployment process. Recognizing the need to involve scores of different entities at three levels of Government, as well as regulators, utilities, industry and technology associations, and others, the Board developed and submitted a recommendation titled "Enhancing Collaboration with State and Local Energy Institutions." This recommendation calls for the establishment of a "Director of State and Local Collaboration" position within EERE who would coordinate the activities of numerous state and local governmental, non-governmental, and public entities. The incumbent in this position would serve as a point of contact and cross-cutting voice for these institutions working with and thru EERE Program Managers, project offices, and National Laboratories to cover a range of applied research, technology transfer, and deployment activities all aimed at moving technology to the market.

**North American Solar Challenge:**

Recognizing the role that the North American Solar Challenge plays in assisting technology transfer and promoting educational activities that result in increasing the supply and use of renewable energy, the Board submitted a recommendation titled "North American Solar Challenge (STEAB Resolution 07-01)," encouraging DOE to continue financial support for a 2008 North American Solar Challenge event. This support will be an on-going expression of DOE's commitment to renewable energy development.

**STEAB Renewable Energy Production Incentive (REPI) Action:**

During the public comment period at the March 2007 STEAB in Washington, DC, representatives of the American Public Power Association (APPA), Energy Northwest and the Sacramento Municipal Utility District (SMUD), provided testimony supported by information and rationale that public power systems are currently unable to receive financial support through the REPI program. REPI was enacted to provide incentives for public power system investments to the extent in which private entities were already receiving tax credits for the same purpose.

After review and deliberation, the Board recommended, in a resolution titled "STEAB Renewable Energy Production Incentive (REPI) Action," that adequate funding from Congress be requested for REPI so that public power systems would receive incentives and subsidies comparable to tax credits provided the private sector to help accelerate the introduction and deployment of renewable energy technologies.

**Energy Efficiency and Renewable Energy Collaboration/Participation Roadmap:**

At the request of EERE, the Board developed and submitted an "Energy Efficiency and Renewable Energy Collaboration/Participation Roadmap," a matrix of potential energy efficiency and renewable issues or opportunities cross-referenced to interested Federal, public and private stakeholders. This "roadmap" would allow technology R&D Program Managers to identify and engage appropriate partners early on. It may also be of use by the STEAB recommended EERE "Director of State and Local Collaboration" (see "Enhancing Collaboration with State and Local Energy Institutions"), as that position evolves over time.

# 5. STEAB Strategic Direction

At the culmination of its activities for the year, the Board reflected on its accomplishments, its relevance, and its effectiveness by reviewing and refreshing its strategic direction. The following four strategic focus areas were selected for further definition and guidance for future Board activities.

**Strategic Focus Area #1: Accelerate Energy Efficiency Market Transformation**

Expected Outcomes:

– Improved communications and awareness of working with EERE;

– Improved deployment strategies and tactics implemented by EERE through follow-up reports to the STEAB;

– Increased priority for energy efficiency programs among stakeholders; and,

– Support of the implementation of the National Action Plan for Energy Efficiency (NAPEE).

**Strategic Focus Area #2: Facilitate Technology Commercialization/Deployment**

Expected Outcomes:

– Transfer of knowledge; and,

– Application of the technologies.

**Strategic Focus Area #3: Facilitate Renewable Energy Advancement**

Expected Outcomes:

– Improved information deployment strategies and tactics that facilitate and enhance communication between Federal and State Government and other stakeholders.

**Strategic Focus Area #4: Enhance Federal/ State Synergies**

Expected Outcomes:

– Improved collaboration with all levels of government concerned with energy efficiency and renewable energy;

– Assistance in the application of the NAPEE; and,

– Increased involvement with higher education research and outreach initiatives in energy efficiency and renewable energy.

## 6. Conclusion

For STEAB, 2007 was a very active and productive year. The Board continued to survey the energy efficiency and renewable environment and engage the appropriate public officials and scientific community. The Board was then able to identify several major issues and challenges and formulate and recommend solutions, which were received positively and acted upon. By taking stock of its priorities and refreshing its strategic direction, the Board has positioned itself to move forward into the future by continuing to stay abreast of progress and events as they unfold and contribute to the nation's energy and economic security by providing timely and useful insights and advise to its primary constituent, the Office of Energy Efficiency and Renewable Energy.

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# Appendix A. Legislative Charge of the State Energy Advisory Board

The State Energy Advisory Board was established by Public Law 101-440 (The State Energy Efficiency Programs Improvement Act of 1990) to advise DOE on the operation of its Federal grant programs. The Board also advises on the energy efficiency and renewable energy program in general and on DOE's effort relating to research and market deployment of energy efficiency and renewable energy technologies.

The specific responsibilities of the Board, as mandated by statute, are:

l. To make recommendations to the Assistant Secretary for EERE with respect to:

   a. The energy efficiency goals and objectives within the Federal grant programs; and

   b. Programmatic and administrative policies designed to stimulate and improve Federal grant program effectiveness.

2. To serve as a liaison between Federal and State Governments on energy efficiency and renewable energy resource programs.

3. To encourage the transfer of R&D results from activities carried out by the Federal Government with respect to energy efficiency and renewable energy technologies.

4. To submit an annual report to the Secretary of Energy and the Congress concerning the Board's activities for the prior fiscal year.

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# Appendix B. Board Membership

The State Energy Advisory Board consists of 18-21 members appointed by the Secretary of Energy. Membership regulations are outlined in Public Law 101-440, Section 365(g)(1)(A) as follows: *At least eight of the members for the Board shall be persons who serve as directors of the State agency, or a division of such agency, responsible for developing State energy conservation plans pursuant to Section 362. At least four members shall be directors of State or local low-income weatherization assistance programs. Other members shall be appointed from persons who have experience in energy efficiency or renewable energy programs from the private sector, consumer interest groups, utilities, public utility commissions, educational institutions, financial institutions, local government energy program, or research institutions. A majority of the members of the Board shall be state employees.*

The following is a membership listing of the State Energy Advisory Board, as well as DOE contacts and contract staff support.

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# Appendix C. State Energy Advisory Board (STEAB) Strategic Direction

## Legislative Mission and Responsibilities

The State Energy Advisory Board was established by Public Law 101-440 (The State Energy Efficiency Programs Improvement Act of 1990) to advise the U.S. Department of Energy and the Congress on the operation of its federal grant programs. The Board also advises on energy efficiency and renewable energy programs in general and on the efforts of the Department relating to research and market deployment of energy efficiency and renewable energy technologies.

The specific responsibilities of the Board, as mandated by statute, are:

- Make recommendations to the Assistant Secretary for the Office of Energy Efficiency and Renewable Energy (EERE) regarding energy efficiency goals and objectives and programmatic and administrative policies designed to stimulate and improve federal grant program effectiveness;
- Serve as a liaison between Federal and State Governments on energy efficiency and renewable energy resource programs;
- Encourage the transfer of research and development results from activities carried out by the Federal Government with respect to energy efficiency and renewable energy technologies; and
- Submit an annual report to the Secretary of Energy and the Congress concerning the Board's activities for the prior fiscal year.

## Proactive Thrust

The STEAB is developing a long–range, proactive approach, and will develop, maintain and periodically update a Strategic Direction and plan to guide its activities, as well as determine its structural, organizational, and operational approach. The Board is committed to making the Strategic Direction and planning central to carrying out its mission. The Board will adjust the process as necessary to continue to obtain desired high priority and relevant planning outputs, effective follow-up, and documentation of outcomes. General parameters for identifying and addressing STEAB strategic focus areas follow. STEAB's actions will focus on:

- Crosscutting EERE programs.
- Long-term planning.
- Proactive information, advice, analysis and recommendations.
- High-priority issues that are based on documented need and relevance (two to three at a time).
- EERE programmatic and organizational issues.

## Strategic Focus

As noted previously, the legislative mandate of STEAB is to advise DOE on the operation of its federal grant programs encompassing energy efficiency and renewable energy in general, and on the efforts of the Department relating to research and market deployment of energy

efficiency and renewable energy technologies. In August of 2005 at a meeting in Golden, Colorado, the Board conducted a planning session to identify strategic focus areas and to prioritize those areas for future work. These areas were chosen on the basis of the idea that the focus areas of the Board's efforts would be evaluated on an on-going basis and re-assessed at least on an annual basis.

During the Board's recent meeting in Berkeley, CA (August 2007), the Board decided to re-examine their Strategic Focus with the intent of aligning the Board's priorities with those of EERE. A wide range of topics were discussed, including the broad areas of energy efficiency, renewable energy, and the commercialization and deployment of emerging energy efficiency and renewable energy technologies. The Board decided to focus on four major areas in the immediate future.

Focus areas selected

The Board, in congruence with the legislative mission, will focus time, energy, and activities in the following four strategic focus areas:

- Accelerate Energy Efficiency Market Transformation;
- Facilitate Technology Commercialization/Deployment;
- Facilitate Renewable Energy Advancement; and,
- Enhance Federal/State Synergies.

Approach

Each of the strategic focus areas will be guided by expected outcomes and measurable performance indicators with benchmarks to judge progress. These performance indicators and benchmarks will enable STEAB to demonstrate benefit to the U.S. Congress, the Assistant Secretary for the Office of Energy Efficiency and Renewable Energy (EERE), and document value to the U.S. Department of Energy and to the States. Progress toward meeting the goals in each area will be documented in the Annual Report, and re-evaluation of appropriate focus areas will occur on at least an annual basis, or more often as determined by the Board. The detailed approach in addressing these strategic focus areas is as follows:

## I. Strategic Focus Area: *Accelerate Energy Efficiency Market Transformation*

**This focus includes:**

- Affordability.
- Energy Efficiency as a Supply Resource.
- Energy Efficiency Credit Systems (EECs).
- Economic Development.
- Consumer Education.

**Expected Outcomes:**

STEAB Outcomes will lead to:

- Improved communications and awareness working with the Office of Energy Efficiency and Renewable Energy (EERE).
- Improved deployment strategies and tactics among stakeholders.
- Increased priority for energy efficiency among stakeholders.
- Support of the implementation of the National Action Plan for Energy Efficiency (NAP-EE).

**Performance Indicators:**

STEAB will measure the:

- Number of recommended communications strategies implemented (i.e., webinars, e-Xtension, etc.).
- Number of recommended strategies and tactics implemented by EERE through follow-up reports to the STEAB.

**Benchmarks:**

In 2008 STEAB will establish a baseline for benchmarks based on:

- Number of working relationships between stakeholders and National Laboratories.
- Number of working relationships between States and EERE's Project Management Center (PMC).
- Documented use of technology transfer among and between partners.
- Documented success in strengthening visibility of energy efficiency.
- Number of stakeholders to join the Secretary of Energy's Energy Efficiency campaign.

## II. Strategic Focus Area: *Facilitate Technology Commercialization/Deployment*

**This focus includes:**

- Affordability.
- Attract Venture Capital for Emerging Technologies.
- Economic Development.  Increase the energy efficiency of buildings and appliances.
- Increase the energy efficiency of industry.
- Change the way EERE does business.

**Expected Outcomes:**

STEAB Outcomes will lead to:
Transfer of knowledge.

- Application of the technology.

**Performance Indicators:**

STEAB will measure the:

- Number of process and program changes recommended by the STEAB that enhance deployment effectiveness with States and partners.
- Number of recommended changes implemented by EERE through follow-up reports to the STEAB.

**Benchmarks:**

In 2008 STEAB will establish a baseline for benchmarks based on:

- Stakeholder participation in beta testing of lab technologies.
- Number of participants in webinars.
- Proof of deployment.

## III. Strategic Focus Area: *Facilitate Renewable Energy Advancement*

**This focus includes:**

- Renewable Energy Credit Systems (RECs).
- Economic Development.
- Transmission Infrastructure.
- Consumer Education.

**Expected Outcomes:**

STEAB Outcomes will lead to:

- Improved deployment of renewable energy information from the DOE National Laboratories and other sources.

**Performance Indicators:**

STEAB will measure the:

- Number of deployment strategies and tactics that facilitate communication among government and other stakeholders.

**Benchmarks:**

In 2008 STEAB will establish a baseline for benchmarks based on:

- Number of communication events from the DOE National Laboratories. Documentation of improved understanding of changes proposed.

## IV. Strategic Focus Area: *Enhance Federal/State Synergies*

**This focus includes:**

- Government Partner Collaboration (Local, State, Federal).
- Engagement of additional Stakeholder Groups.

**Expected Outcomes:**

STEAB Outcomes will lead to:

- Improved collaboration with all levels of government concerned with energy efficiency and renewable energy.
- The assistance in the application of the NAPEE.
- Number of involvement with higher education research and outreach initiatives in energy efficiency and renewable energy.

**Performance Indicators:**

STEAB will measure the:

- Number of EERE issues studied and analyzed.
- Number of recommendations resulting from study.

**Benchmarks:**

In 2008 STEAB will establish a baseline for benchmarks based on:

- Number of governmental agencies and higher education representatives involved.
- Documented attendance of interested stakeholders in webinar broadcasts.
- Active STEAB representation in NAPEE activities.

(Updated: (10/17/07)

# Appendix

## STEAB Strategic Planning Process

The STEAB Strategic Planning Process is a facilitated group activity, conducted in plenary session on a periodic and/or as required basis, to ensure the Board is addressing strategic considerations within the scope of its Charter and that are relevant to the current economic, technological and political situation. The unit of analysis is the "focus area", which may be broad or narrow depending upon criticality of need and availability of STEAB resources. Focus areas will be identified, described and prioritized; and a vital few, perhaps two or three, will be selected for STEAB action.

### Process Steps

**Step 1.** Board uses brainstorming or a similar technique to identify potential focus areas in three categories:
- Programmatic
- Organizational
- Current Issues

**Step 2.** The Board discusses potential focus areas for definition, clarification, advantages and disadvantages, opportunities and barriers or constraints.

**Step 3.** The Board uses a consensus technique to reach agreement on priority ranking of identified topics.

**Step 4.** The Board decides on the number of highest ranking items to address simultaneously (usually 2-3) based on criticality and availability of resources.

**Step 5.** The Board further defines each selected focus area in terms of its importance, significant considerations and expected impacts.

**Step 6.** The Board identifies necessary actions and addresses the selected focus areas.

**Step 7.** The Board's decisions for each focus area are recorded in minutes of the meeting.

**Step 8.** Action assignees take appropriate actions, e.g., conduct fact finding, draft resolutions, prepare to meet with Government officials to provide advice and recommendations, etc. Proposed actions are reviewed by the Board prior to implementation unless otherwise agreed.

**Step 9.** At each meeting, the Board will review the actions and outcomes of each focus area to determine which to continue, with or without redirection, and which to close.

**Step 10.** The Board decides whether sufficient resources and criticality exist to select, further define, assign and initiate action on the next highest ranking potential focus area.

**Step 11.** For the new area(s) selected, the Board repeats items 4-6.

**Step 12.** The Board conducts a one-day group strategic planning session every other year, or sooner if changes in the economic, technological and/or political situation warrant.

(Updated: 8/17/06)

# Appendix D. FY 2007 Travel Expenditure Report

In accordance with Section 365(g)(1)(B)(I)(7) &(8) of Public Law 101-440, which requires a reporting of federal reimbursement of Board members' expenses (including travel expenses) incurred in the performance of their duties, the following accounting is provided:

*For FY 2007, travel expenses of $55,831.25* were incurred and reimbursed for State Energy Advisory Board meetings.*

** Estimate based on number, location and duration of meetings, number of attendees, average cost of airfare and local travel, and per diem rates. Actual expense data not available.*

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# Appendix E. FY 2007 STEAB Recommendations/Resolutions

STEAB
State Energy Advisory Board

July 10, 2007

Honorable Alexander A. Karsner
Assistant Secretary
Office of Energy Efficiency & Renewable Energy
U.S. Department of Energy
EE-1 / Forrestal Building
1000 Independence Ave., S.W.
Washington, DC 20585-1290

Dear Mr. Karsner,

On behalf of the STEAB, I am submitting to you the following Board Recommendations for your review and consideration: the "Enhanced Collaboration with State and Local Energy Institutions" document; and, the "Accelerated Commercialization of Federally-Sponsored Energy Efficiency and Renewable Energy Technologies" document.

The Members of the STEAB have unanimously adopted the fore mentioned documents. It is our belief that these Recommendations are not only consistent with the "technology development," "deployment," and "outreach" goals of EERE, but will also assist the Department in meeting important energy, economic, and environmental issues and needs, while preserving the means to meet the needs of future generations of Americans. We, as a Board, are pleased to present these Recommendations to you and your Office.

If you have any questions regarding these Recommendations, or would like to discuss it further detail, you may contact me at (512) 463-1931 or via e-mail dub.taylor@cpa.state.tx.us.

Sincerely,

William "Dub" Taylor
Chairman, State Energy Advisory Board

Enclosures: STEAB Enhanced Collaboration with State and Local Energy Institutions document; and, Accelerated Commercialization of Federally-Sponsored Energy Efficiency and Renewable Energy Technologies document

cc: Tobin Harvey, Senior Advisor to the Assistant Secretary for EERE
Gary Burch, DOE's Designated Federal Officer
STEAB Executive Committee
Steven Chalk, Deputy Assistant Secretary for Renewable Energy
David Rodgers, Deputy Assistant Secretary for Energy Efficiency

STATE ENERGY ADVISORY BOARD
18757 N. FREDERICK RD., GAITHERSBURG, MD 20879 301.670.6390

# Accelerated Commercialization of Federally-Sponsored Energy Efficiency and Renewable Energy Technologies

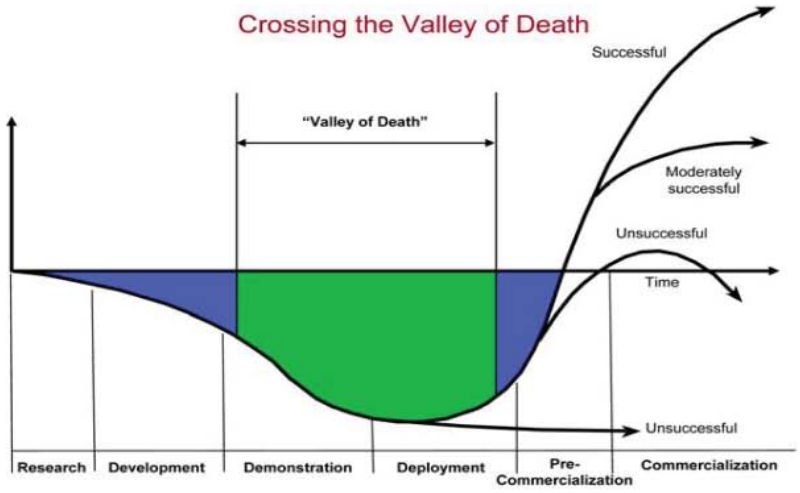
**May 2007**

**Introduction**: The State Energy Advisory Board (STEAB) recently met with the DOE Assistant Secretary of Energy Efficiency and Renewable Energy (ASEE), Mr. Alexander A. (Andy) Karsner, and discussed the imperative for achieving dramatic increases in adoption of federally-funded and researched technologies through creative thinking and out-of-the-box approaches. STEAB agrees with this vital need and offers the following thoughts and recommendations.

**Goal:** The goal is to achieve an order of magnitude increase in the application of federally-sponsored energy efficiency and renewable energy technologies with an associated major decrease in U.S. demand for greenhouse gas producing fossil fuels, as well as dependency on foreign sources of fossil fuels.

**Strategy:** To accomplish this will entail the rapid transfer and commercialization of emergent technologies from national laboratories, state research institutions and federally-funded research and development in industry, academia and other non-governmental organizations.

**Challenge:** The "Valley of Death," depicted below, represents the problem of bringing technologies to the market. Technologies that have been developed to the point of readiness for commercial application do not automatically make it across the "Valley." Successful transition into the market often depends upon vigorous demonstration through nation-wide information dissemination followed by active Government participation in the deployment process to catalyze linking and sustain partnering among interested and essential parties. The Board believes that the current combination of DOE program and field offices, national laboratories, academic institutions and their extension services, technical societies, and State and local political entities do not have sufficient combined or coordinated focus, reach or resources to introduce the emerging technologies to a critical mass of players, such as entrepreneurs and innovators, component and equipment developers and manufacturers, venture capitalists, major users such as builders, consumer groups, and the general public. Additionally, current mechanisms and resources to catalyze and facilitate the necessary linkages and partnering are not sufficiently robust to bridge the gap. These mechanisms need to cut across the array of technologies and players and help identify and bring together and sustain winning combinations. We believe this will require a new paradigm.

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**Proposal:** STEAB recommends that EERE develop a national web-based solution that:

- compiles and regularly updates a matrix and searchable database of all emergent technologies indicating the source, status, technical details, market potential, and other relevant characteristics;
- compiles and maintains a registry of all interested participants by role category (manufacturer, venture capitalist, etc.);
- compiles and maintains a registry of coordinators and enablers (DOE HQ and field office representatives, State and local energy offices, university extension services, lab researchers, etc.) who could provide technical and economic development assistance, find and bring together prospective partners, and facilitate the adoption process;
- conducts regular technology forums and virtual laboratory tours using web cast technology and maintains downloadable recordings for later access;
- offers guidelines and best practices for linking and collaboration to achieve commercialization; and
- includes linkages to the primary database on state and federal clean energy and energy efficiency incentives – DSIRE – The Database of State Incentives for Renewable Energy (www.dsireusa.org).

**Design and Implementation:** To succeed, we believe this initiative must have:

- well-defined expectations including inputs, outputs, timeframes and expected outcomes;
- the priority from the DOE's Office of Energy Efficiency and Renewable Energy (EERE);
- a dedicated and aggressive champion within EERE with sufficient knowledge, authority and resources to fast-track the initiative, overcoming barriers and inertia;
- a budget adequate to support the initiative and allocated to the EERE Program Managers.
- a national team that represents and can commit resources (within limits) of essential functions/organizations; and
- regular briefings and updates to ASEE.

STEAB believes this recommendation addresses an urgent national need and has great potential for taking a substantial step forward. We stand ready to discuss this recommendation further and offer the full weight of the Board in its support.



***Adopted by STEAB on May 23, 2007***

**Enhanced Collaboration with State and Local Energy Institutions**
State and local energy programs and policies are developed and implemented across a range of agencies and institutions. While EERE is working with some of these institutions on an *ad hoc* basis, a far greater level of coordination and communication could be achieved which would significantly advance collaborative state and federal efforts and achieve shared goals more rapidly. The breadth of major state and local energy interests include:

- State and Local Energy Technology Institutions (ASERTTI)
- State Energy Offices (NASEO)
- Land Grant Universities (NASULGC)
- State Low Income Heating Assistance Program Offices (NEADA)
- Governors Energy Advisors and Policy staff (NGA)
- State Legislators (NCSL)
- State Utility Regulators (NARUC)
- Federal Power Marketing Agencies (including BPA, TVA, WAPA)
- Local/Municipal Energy Agencies (including NACO, ICMA, NLC)
- Regional Energy Efficiency Advocacy and Outreach Organizations (MEEA, NEEA, NEEP, etc.)
- Private Utilities
- Municipal and Rural Utilities (APPA)
- Regional Governors' Organizations (WGA, CONEG, SSEB, etc)
- State Weatherization Directors (NASCSP)
- Local Low Income Weatherization Delivery, Advocacy, and Outreach Agencies (NCAF, etc.)

There is some overlap among the above organizations and the constituents that they represent. However, in general, they have different roles, capabilities, and resources. These state and local institutions together invest more than $1 billion of state and local ratepayer and taxpayer resources annually – as well as tremendous human resources. These institutions are also unique EERE stakeholders in that they share EERE's "public interest" clean energy goals and motivations. EERE can better draw upon these resources and support regional and national efforts by developing a new and more inclusive approach to collaboration across a range of applied research, technology transfer, deployment and education efforts.

***Director of State and Local Collaboration.*** Rather than creating a complex model or planning process to address this need and opportunity, a more pragmatic approach would be to establish and empower a Director of State and Local Collaboration to work with this set of partners. One of the primary roles of this position is to both serve as a point of contact for these institutions and a voice within EERE regarding their capabilities, activities, and interests.

This Director position would be within the EERE office responsible for other state and local government programs and activities, and should be afforded ready access across technology programs. This should be a senior career position that offers greater continuity for state and local stakeholders. The Office of Weatherization and Intergovernmental Programs could house the position, but EERE should determine the most appropriate office and approach.

As an initial activity, the Director of State and Local Collaboration would organize a state and local working group with state and local representatives (not organizational staff) from the above organizations. The aim would be advancing collaboration to achieve shared national and regional goals more effectively. Specifically, The Director would:

- Use limited seed funds for initiating collaborations that support EERE goals;
- Work with and thru EERE Program Managers, project offices, and National Laboratories;
- Act as a facilitator and catalyst for short- and long-term collaborations and partnerships;
- Work across a range of applied research, technology transfer, and deployment activities all aimed at moving technology to the market;
- Interact with the State Energy Advisory Board; and
- Facilitate communication and information exchange among states and EERE on a national and regional basis.

***Adopted by the STEAB on 6/20/2007***

STEAB
STATE ENERGY ADVISORY BOARD

July 1, 2007

Honorable Alexander A. Karsner
Assistant Secretary
Office of Energy Efficiency & Renewable Energy
U.S. Department of Energy
EE-1 / Forrestal Building
1000 Independence Ave., S.W.
Washington, DC 20585-1290

Dear Mr. Karsner,

On behalf of the STEAB, I am submitting to you the following Board Recommendation for your review and consideration: STEAB Renewable Energy Production Incentive (REPI) Action document.

The Members of the STEAB have unanimously adopted the fore mentioned document. It is our belief that this Recommendation is not only consistent with the "technology development" and "deployment" goals of EERE, but will also assist the Department in meeting important energy, economic, and environmental issues and needs, while preserving the means to meet the needs of future generations of Americans. We, as a Board, are pleased to present this Recommendation to you and your Office.

If you have any questions regarding this Recommendation, or would like to discuss it further detail, you may contact me at (512) 463-1931 or via e-mail dub.taylor@cpa.state.tx.us.

Sincerely,

William "Dub" Taylor
Chairman, State Energy Advisory Board

Enclosures: STEAB REPI Action document
REPI funding concerns from the APPA, Energy Northwest, and SMUD

cc: Tobin Harvey, Senior Advisor to the Assistant Secretary for EERE
Gary Burch, DOE's Designated Federal Officer
STEAB Executive Committee
Steven Chalk, Deputy Assistant Secretary for Renewable Energy
David Rodgers, Deputy Assistant Secretary for Energy Efficiency
Jack Baker, Vice President, Energy Northwest Energy/Business Services/PIO
Joy Ditto, Director, APPA Legislative Affairs
Jim Shetler, Assistant General Manager, Energy Supply, SMUD

STATE ENERGY ADVISORY BOARD
18757 N. FREDERICK RD., GAITHERSBURG, MD 20879 301.670.6390

## STEAB Renewable Energy Production Incentive (REPI) Action

The Renewable Energy Production Incentive (REPI) was introduced in 1992 in order to provide financial incentives that were comparable to tax credits that were available to the private sector for renewable energy generation investors and developers. The REPI program was reauthorized for an additional ten years in the Energy Policy Act of 2005.

There is increasing demand being placed on private and public utilities to generate electricity from renewable resources. Financial incentives and public subsidies are critical in the cost justification for most renewable energy projects. While the Congress continues to increase private sector tax incentives, incentives from the REPI program have not received similar support.

The STEAB respectfully encourages the DOE to request adequate funding from Congress so the REPI program has sufficient resources to provide full incentive payments to qualifying projects. Similar to the effect of incentives on private sector development, adequate funding for REPI will help accelerate the introduction and deployment of renewable energy technologies by interested public sector entities.

***Adopted by the STEAB on 6/20/2007***

American Public Power Association

2301 M Street, N.W.
Washington, D.C. 20037
202-467-2900; fax: 202-467-2910
www.APPAnet.org

**Statement of the**
**American Public Power Association (APPA)**
**Regarding Funding for the Renewable Energy Production Incentive (REPI)**
**To the State Energy Advisory Board**
**Following their Meeting on**
**March 14-15, 2007**

The American Public Power Association (APPA) is the national trade association representing the interests of the over 2,000 public power systems nationwide in 49 of the 50 states (all but Hawaii) that provide electricity to 44 million Americans. Approximately 70% of these public power systems provide electricity to communities of 10,000 or less. Public power systems are government enterprises comprised of municipal electric utilities, public utility districts, and state-owned utilities that are owned and operated by the communities they serve. Public power systems operate on a not-for-profit basis and rates for their customers are set, not by what the market will bear, but at a level sufficient to cover their costs and sustain a reasonable reserve for repairs and replacement of capital equipment. Furthermore, the mission of public power systems is to provide reliable, low-cost electricity in an environmentally sound fashion.

Public power utilities are governed either by elected public officials, such as mayors or city councils, or by boards of appointed or elected individuals – these groups are subject to open meetings laws and open records requirements that assure that local issues are adequately addressed. Public power utilities treat their revenues as public funds, are subject to strict purchasing regulations, and major decisions are well vetted within the community.

While public power systems differ in their governance and fiduciary obligations from the for-profit privately-owned investor-owned utilities and the not-for-profit privately-owned rural electric cooperatives that comprise the rest of the electric utility sector, they are all subject to the same environmental laws. In recent decades, Congress has used the tax code to provide incentives to various sectors of the economy, including the electricity sector, to help defray the financial impact of complying with strict environmental laws. However, because public power systems do not pay federal income taxes since they have no income to tax, these incentives have not benefited them directly.

For this reason, Congress has tried to create programs that provide similar financial incentives for the not-for-profit electric utilities, specifically public power systems and rural electric cooperatives. One such program is the Department of Energy's (DOE) Renewable Energy Production Incentive (REPI) program. REPI was created by the Energy Policy Act of 1992 and reauthorized in the Energy Policy Act of 2005, and authorizes DOE to make direct payments to public power systems and rural electric cooperatives at the rate of 1.9 cents per kWh (indexed for inflation) from electricity generated from solar, wind, geothermal, landfill-gas, biomass, ocean energy, and livestock methane projects.

REPI was established to assist consumer-owned utilities and their communities in overcoming economic barriers to greater renewable energy use, and to ensure equity between these utilities and investor-owned utilities that have access to production payments and renewable energy tax credits, as mentioned above. However, the program has been under-funded since its inception. For example, according to DOE sources, for power generated in FY 2005, applications for the REPI program (that were made in calendar year 2006) totaled $47.5 million, yet in that same fiscal year DOE only requested $5 million for the program (and for FY 2006, FY 2007 and FY 2008, the request has hovered at close to $5 million). The following graph from DOE's REPI website shows the history of funding and applicants to the program since its inception through 2005 (this does not include the calendar year 2006 numbers referenced above that have not yet been added to this chart):

REPI Appropriation Summary

| Year of Production (FY) | Year of Payment (FY) | Appropriated Funds | Tier 1 Paid | Tier 1 Unpaid | % Tier 1 Paid | Tier 2 Paid | Tier 2 Unpaid | % Tier 2 Paid |
|---|---|---|---|---|---|---|---|---|
| 1994 | 1995 | $693,120 | $100,725 | - | 100% | $592,395 | - | 100% |
| 1995 | 1996 | $2,398,472 | $218,604 | - | 100% | $2,178,217 | - | 100% |
| 1996 | 1997 | $2,490,893 | $195,902 | - | 100% | $2,294,991 | $347,038 | 87% |
| 1997 | 1998 | $2,853,997 | $154,504 | - | 100% | $2,699,493 | $6,519,682 | 29% |
| 1998 | 1999 | $4,000,000 | $122,167 | - | 100% | $3,877,833 | $9,747,420 | 28% |
| 1999 | 2000 | $1,500,000 | $603,182 | - | 100% | $896,818 | $15,664,879 | 5% |
| 2000 | 2001 | $3,991,000 | $1,339,377 | - | 100% | $2,651,625 | $24,755,332 | 10% |
| 2001 | 2002 | $3,787,000 | $1,365,846 | - | 100% | $2,421,154 | $33,679,732 | 7% |
| 2002 | 2003 | $4,815,033 | $1,810,911 | - | 100% | $3,004,122 | $40,211,074 | 7% |
| 2003 | 2004 | $3,714,911 | $3,714,911 | $1,091,206 | 77% | - | $58,145,027 | 0% |
| 2004 | 2005 | $4,960,000 | $4,960,000 | $2,205,009 | 69% | - | $43,393,560 | 0% |

**Information provided on the REPI website at: http://www.eere.energy.gov/wip/repi.html*

According to these figures (including the unpaid amount for 2006 provided by DOE separately), approximately $284 million in REPI applications have gone unpaid because of lack of interest in funding the program by DOE and by Congress. (Please note that the types of renewable resources authorized by REPI are divided into two tiers – wind and solar in the first tier and the remaining resources in the second tier. Prior to the reauthorization of the program in 2005, the tier 1 resources were given priority, but EPAct05 ensured that tier 1 resources get 60% of the

funding and tier 2 get 40% of the funding. ) This lack of adequate funding for REPI means that communities with public power systems are not being given treatment by the federal government that comparable to the treatment provided to investor-owned utilities. Through the investment and production tax credits, the benefits of which are not capped, the federal government is defraying some of the expense of producing cleaner energy for these private entities and not doing the same for public entities. Ultimately, the end-use public power customer must pay for this disparity. This is particularly inequitable when for-profit investor-owned and not-for-profit public power systems and rural electric cooperatives are being asked to comply with the same federal environmental laws and state renewable resource requirements.

The REPI program deserves increased funding because of the issues discussed above. And despite the chronic under-funding problem, REPI is successful. It has worked to create incentives for continued and expanded use of renewable energy for the communities that have received it. For that perspective, APPA urges you to consider the testimony provided by two of our members: Energy Northwest in Washington State and Sacramento Municipal Utility District (SMUD) in California.

Given the increased pressure to produce electricity with renewable resources created by renewable portfolio standards in some states and pending federal climate change legislation, REPI funding is critical for public power systems, and the communities they serve.

Should you have any questions, please feel free to contact Joy Ditto, Director of Legislative Affairs, at 202-467-2954, or Claude Boudrias, Senior Government Relations Representative, at 202-467-2929.

**Jack Baker**
**Energy Northwest**
**Remarks on the Renewable Energy Production Incentive**
**State Energy Advisory Board Meeting**
**March 14-15, 2007**

Thank you for this opportunity to speak today regarding the Renewable Energy Production Incentive, or "REPI," program.

You and I are well aligned on our purpose to promote renewables – I am a state employee, too; Energy Northwest has developed large renewable projects for our public members; Energy Northwest and our public power members want to develop more renewables because it represents environmental responsibility, it diversifies our resource mix, it is responsive to our rate payers desires and it is consistent with the political trends in our state, our nation and the world.

Some history:

As you might know, originally authorized in 1992, the REPI program provides funds for consumer-owned utilities to help lower costs for renewable generation. Administered by the Department of Energy, REPI provides a 1.5 cent/kWh incentive (indexed for inflation) to build renewable energy generation, using solar, wind, geothermal, certain biomass and ocean power resources. The incentive payments are awarded after the project is constructed and are based on energy actually generated by a qualified project.

Congress authorized the REPI program in an effort to provide consumer-owned utilities with benefits comparable to those received by private developers under the federal Production Tax Credit (PTC). Because public power systems and cooperatives are not-for-profit utilities, they do not pay federal income taxes and, therefore, are not eligible for the PTC. Thus, in order to provide incentives to invest in renewable energy for the public sector, it was necessary for Congress to create REPI, which is funded through annual appropriations.

Though REPI is a valuable program, it is under funded to a great degree, limiting the amount of clean, renewable energy that can be developed by public power. For example, utilities applied for more than $47 million in funds in 2005, but available funding has been less than $5 million per year.

In 2000, Energy Northwest developed, and we are still operating, our 37kw White Bluffs solar facility. This is a REPI qualified project that we undertook to take some of the mystery out of solar and to get operating & maintenance experience.

In 2002, we built our 50MWe Nine Canyon Wind Project. This is also a REPI qualified project and our participants took the business risk of this project expecting REPI payments. The first year in operation we got $1 for $1 on our REPI payment.

In 2004, we expanded our Nine Canyon Wind Project by 15 MWe knowing that full REPI payment was at risk, but the first year for this project we got about $.85 on the $1, so we were hopeful that the initial REPI promise of a level playing field with the private developers would be realized through increased REPI funding.

In 2007, our participants elected to take additional REPI risk by expanding our Nine Canyon Wind project an additional 32 MWe taking it to nearly 100 MWe. That was with the knowledge that our last year payment was about $.48 on the dollar but again hopeful that this new congress and the DOE leadership would fulfill its REPI promise and find ways to encourage our common interest in having public power continue to develop renewable resources. If REPI funding is not increased, we would expect to get $.25 on the dollar next year.

I can tell you that our last 35 MWe expansion of Nine Canyon was delayed over one year because of the current REPI funding level and policy. The only reason it went through was because we had some access to lower priced turbines and the turbine pricing risk exceeded the REPI risk.

I can also tell you that we have a fully permitted 65 MWe wind site and willing participants that are waiting on the government to offer the same incentives to public power that they are currently offering to private developers.

Our membership has told us to continue to develop additional wind sites to meet their power supply needs. This could be hundreds of MWe in the next five years, if the federal government fixes this unfair policy that is inconsistent with administration and congressional statements of strong support for development of renewables.

We have a mission to develop diversified resources -- we are looking into low impact hydro, geothermal, solar, wave and tidal power. If this development is to be done by public power, it will require fixing these incentives.

This is not the first (or the last time) that I have given this speech and pleaded for a resolution – I have given it to DOE and many Members of Congress. They agree that this in an unwise and unfair policy. They agree it needs to be fixed but it is constrained by the budget. It is time for DOE to adjust its priorities and resolve this issue that has been going on for over 6 years in the budget.

So what would happen if DOE funded REPI and made it truly a level playing field with the Production Tax Credit:

1) Public power would accelerate their development of renewable resources.

2) Public power would be more inclined to own their renewable resources and less dependent on private developers. Since private developers deserve and charge a price premium, public ownership will allow this premium cost savings to be pasted onto its consumers.

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
The Power To Do More.®

*P.O. Box 15830, Sacramento, CA 95852-1830; 1-888-742-SMUD (7683)*

**Jim Shetler**
**Assistant General Manager, Energy Supply**
**Sacramento Municipal Utility District**
**Remarks to the State Energy Advisory Board on the**
**Renewable Energy Production Incentive Program**
**March 14-15, 2007**

Members of the Board, thank you for allowing me to submit remarks to advocate for a fully-funded Renewable Energy Production Incentive (REPI) program. The Sacramento Municipal Utility District (SMUD) and many others have benefited greatly from this Department of Energy (DOE) program, and would build additional clean resources if the incentive were more reliable.

SMUD is the sixth largest community-owned electricity utility in the United States. It generates, transmits and distributes electric power to a 900 square-mile service area that includes Sacramento County and a small section of Placer County. SMUD provides power to 1.2 million people through the use of hydroelectric generation, cogeneration plants, renewable technologies such as wind, solar and biomass, and power purchased on the wholesale market. Over the next several years, SMUD has a goal of significantly increasing the amount of power it generates through renewable technologies. Our 2006 goal was to provide 12% of our retail sales with renewable energy; we exceeded that goal by providing 13% in non-large hydropower renewables last year. Our 2011 goal is a 23% non-large hydro renewable energy supply.

Congress created the REPI Program in the Energy Policy Act of 1992 (EPAct 1992). The REPI program permits DOE to provide direct payments to publicly-owned utilities and cooperatives at the rate of 1.5 cent/kWh (indexed for inflation) for electricity generated from solar, wind, ocean power and certain geothermal and biomass electric projects. In 2005, REPI was reauthorized and modified for an additional ten years in the Energy Policy Act of 2005 (EPAct 2005).

Congress implemented this program with two goals in mind: first, to assist consumer-owned utilities in overcoming economic barriers to greater renewable energy development; and second, to provide "parity" to the renewable energy tax credits, such as the production tax credit (PTC) and the investment tax credit (ITC), available to investor-owned utilities (IOUs). Consumer-owned utilities make up 25 percent of the electric utility industry, and Congress felt strongly that if federal incentives to build renewable generation were going to be provided, they should be available to all sectors of the utility industry equally, not just to investor-owned utilities.

To date, however, both the promise of overcoming economic barriers and providing of "parity" for consumer-owned utilities have been unfulfilled. Since 1992, Congress has provided billions of dollars in energy tax incentives to private developers and investor-owned-utilities, but only $40 million[1] during the same time period in REPI funds to the consumer-owned utility sector. DOE has never requested an adequate amount of funds and Congress, using the DOE's request as a guide, has never appropriated the program at a level sufficient to meet the demand.

[1] According to DOE, the total amount appropriated from 1194 through 2006 is $40,337,173.

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
The Power To Do More.

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In 2006 alone, DOE received applications for REPI payments of $47.5 million. This was for renewable projects that were built, generated energy and applied for an incentive, but did not receive it because the program was not fully funded. Since its inception in 1992, REPI has been funded at approximately $4-5 million annually - far below the demand. According to DOE estimates, would take nearly $126.5 million[2] to fully fund the projects of all eligible applicants.

While SMUD has been more successful than most consumer-owned systems in obtaining REPI payments, our projects have not been fully funded. SMUD has received $4,453,869 (this includes digester gases at Central Valley Financing Authority (CVFA)) since the inception of REPI but has submitted applications for approximately $11 million (including CVFA). This is for generation constructed and energy produced. SMUD's projects assisted by REPI include solar PV, wind, biomass and landfill gas projects.

In order to make a decision to build a renewable project, SMUD goes through an extensive public process before deciding whether an investment is economically feasible and acceptable to our community owners. We must then go through the siting process, build the plant, generate the renewable energy and submit an application to DOE for re-imbursement.

This is not the optimal way to make long-term, capital-intensive investments. Full funding for REPI would provide much-needed certainty for consumer-owned utilities to invest in more costly renewable generation.

REPI will also play an important role as SMUD strives to meet California's aggressive renewable portfolio standard, which has as its goal to provide 20% of the state's supply from non-large hydro renewable resources by 2010. That supply goal is likely to grow in the future. In fact, legislation is currently pending to increasethe state RPS to 33% supply by 2020.

California also recently embraced an aggressive program to reduce greenhouse gas emissions (GHG) below 1990 levels by 2020 (AB 32). In addition, the State recently adopted a separate law (SB 1368) that prohibits load-serving entities, including municipal utilities, from entering into a new long-term contract for base-load generation unless that generation complies with certain specific emission performance standards (*i.e.* as clean as a natural gas combined-cycle power plant). In effect, SB 1368 bans current, commercially-available coal-fired generation from supplying new electric demand in California. These two new laws have increased the need to invest in new renewable energy and funding such as the REPI program will assist SMUD and other public power systems in California to make those investments.

[2] According to the *June 29, 2004 DOE, Renewable Energy Production Initiative (sic) Program, 10-year Projection Study,* "A Congressional appropriations in FY 2006 of $79,388,002 would be required to pay all recipient in full for payout year 2005." In 2006, DOE has indicated that they had $47.5 million in unfunded "eligible" applications, bringing the total to over $126.5 million in underfunding.

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STEAB
STATE ENERGY ADVISORY BOARD

August 27, 2007

Honorable Alexander A. Karsner
Assistant Secretary
Office of Energy Efficiency & Renewable Energy
U.S. Department of Energy
EE-1 / Forrestal Building
1000 Independence Ave., S.W.
Washington, DC 20585-1290

Dear Mr. Karsner,

On behalf of the STEAB, I am submitting to you the following Board Resolution for your review and consideration: 07-01, North American Solar Challenge Resolution.

The Members of the STEAB have unanimously adopted the fore mentioned document. It is our belief that this Resolution is not only consistent with the STEAB's legislative mission to provide recommendations to the Assistant Secretary for the Office of Energy Efficiency and Renewable Energy regarding energy efficiency goals and objectives, but it is also consistent with EERE's technology transfer and educational goals for the enhancement of renewable energy use. We, as a Board, are pleased to present this Resolution to you and your Office.

If you have any questions regarding this Resolution, or would like to discuss it in further detail, you may contact me at (501) 682-8065 or via e-mail cbenson@1800arkansas.com.

Sincerely,

Chris Benson
Chairman, State Energy Advisory Board

Enclosure: STEAB Resolution 07-01

cc: Tobin Harvey, Senior Advisor to the Assistant Secretary for EERE
Steven Chalk, Deputy Assistant Secretary for Renewable Energy
David Rodgers, Deputy Assistant Secretary for Energy Efficiency
Gary Burch, DOE's Designated Federal Officer
STEAB Executive Committee

STATE ENERGY ADVISORY BOARD
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# U.S Department of Energy
# State Energy Advisory Board
## *Resolution 07-01*

**BACKGROUND**

With record high fuel prices and heavy reliance on foreign sources of oil, new alternative fuel vehicles and technologies are crucial to addressing the nation's energy security and independence.

Originally called **Sunrayce USA**, the first solar car race was organized and sponsored by General Motors in 1990. Subsequent races were held in 1993, 1995, 1997 and 1999 under the name **Sunrayce**. In 2001, the race was renamed **American Solar Challenge** and was sponsored by the United States Department of Energy (DOE) and the National Renewable Energy Laboratory. Beginning in 2005, its name changed again to reflect the border crossing into Canada and is now called **North American Solar Challenge**, with the addition of co-sponsor Natural Resources Canada.

The event, scheduled for the summer of 2008, allows opportunities for university students to design, build and race an electric car powered by photovoltaics (PV), and compete in a long-distance test of endurance and efficiency, driving thousands of highway miles.

**ISSUE**

DOE support for a 2008 **North American Solar Challenge** is vital for continued coordination of the event. Many university teams throughout the country have expended considerable efforts and resources over the past couple of years in anticipation of a 2008 event.

**RECOMMENDATION**

In accordance with its legislative mission and strategic plan, STEAB makes recommendations to the Assistant Secretary for the Office of Energy Efficiency and Renewable Energy (EERE) regarding energy efficiency goals, objectives and programmatic direction. We believe the **North American Solar Challenge** helps fulfill this objective by assisting in technology transfer and promoting educational activities that result in using more renewable energy.

Therefore, members of the State Energy Advisory Board (STEAB) respectfully encourage the U.S. Department of Energy to continue financial support for a 2008 **North American Solar Challenge** event. This support will be an on-going expression of U. S. DOE's commitment to renewable energy development.

***Unanimously Adopted by the STEAB on 8/16/2007***






U.S. Department of Energy

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