CONSORTIUM FOR ENERGY EFFICIENCY, INC.

Expanding Markets for Super-Efficient Technologies℠

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CEE's Government Procurement Initiative

Purpose of Initiative

The purpose of this initiative is to develop and continue to refine a template and provide the tools needed for a program that can be used by members and other service providers to:

- Promote the practice of specifying and purchasing ENERGY STAR® labeled and other energy-efficient products by state and local governments throughout the country
- Increase the market share of ENERGY STAR® -labeled and other high efficiency products through the collective buying power of the nation's thousands of state and local governments.

Initiative Scope

The project focus will be on a number of activities that will support member projects with state and local government organizations. These will include direct assistance, a program template including all the research reports, tools and materials that have been or will be developed through the program, ongoing outreach by CEE to promote the program to national and regional organizations, and identification of opportunities for cooperative efforts with appropriate organizations. CEE is proposing phasing in the project over the first three years, while continuing to test and refine the program template. During this period, CEE will assist members to replicate CEE's Pilot Project efforts, and help to identify and overcome barriers to incorporating energy efficiency into purchasing practices by state and local government agencies. CEE will introduce the program template to member participants and provide assistance in the use of the tools and materials developed during the research phase. An Advisory Subcommittee comprised of member participants will provide important information to CEE and individual members on developmental issues and barriers to implementation. Based on this feedback, CEE can then identify and locate or develop additional tools needed by member participants. The following chart shows expected participation for each of the first three years:

Year	State and Local Government Participants
2000	4-5
2001	12-15
2002	24-30
3 Year Total	**24-30 State or Local Governments**

These numbers are based on the assumption that each participating CEE member will work with one state or local government in the first year of their participation, and will add another state or local government project in each of the following year(s).

Background

The Consortium for Energy Efficiency (CEE) is a national, non-profit organization with membership consisting of utilities, government agencies and energy efficiency groups. CEE has a long involvement in promotion of energy efficiency through government procurement practices. CEE was a founding member of the Energy Efficiency Procurement Collaborative (EEPC), and CEE's Executive Director served on the EEPC Board of Directors. Several CEE members have supported EEPC and also serve on the Board. This reflects CEE's recognition of the important role government purchasing can have in the promotion of the benefits of energy efficiency and the market transformation effects that a focused effort on purchasing energy efficient products and technologies by state and local governments can produce. CEE sees a number of opportunities in this arena. The public benefits when its government purchases the highest energy efficiency products both from lower operating costs and minimizing the impact on the environment. By promoting and demonstrating energy efficiency in purchasing commodity products, as well as in purchasing products and technologies purchased for building construction and renovation, government sets an example for its citizens of good practice. The public also benefits when the purchasing power of government procurement is channeled to remove barriers or to introduce high efficiency products. To pursue these goals, CEE actively supports efforts to increase the purchase of energy efficient products by state and local governments, and proposes an initiative in this area to develop a template for members to deliver services to these organizations locally.

During 1998, CEE, as a board member of the EEPC, stepped forward to conduct the work efforts for EEPC, funded through a cooperative agreement with EPA and DOE. At approximately the same time, EPA and DOE launched the ENERGY STAR® Purchasing Initiative, and developed the ENERGY STAR® Purchasing Tool Kit for State and Local Governments. The Tool Kit is a comprehensive guide for specification and purchase of energy efficient products, including office equipment, lighting and HVAC equipment, and has been an integral part of CEE's pilot research efforts during 1999. The Tool Kit contains separate product listings for over 50 products, and each listing includes information resources, specification language and source listings for high efficiency products. It also includes an interactive Life Cycle Cost analysis diskette that provides a comparison of the costs of purchasing energy efficient equipment with conventional equipment. When purchase cost, operating costs, and local utility rates are entered, the software calculates projected energy and maintenance cost savings. A second volume is the Communications Starter Kit, containing tools and materials to inform and educate employees, management and the general public about the benefits of purchasing energy efficient products.

In October 1998, CEE developed three solicitations for contractor services to assist with Procurement project activities during 1999. The three solicitations were:

- **EEPC 001 - Pilot Projects** - To study the procurement processes of select state and local governments and assist them to identify enhancements.
- **EEPC 002 - Tool Kit Testing** - To introduce the ENERGY STAR® Purchasing Tool Kit to state and local government purchasing officials and solicit appropriate feedback.

- **EEPC 003 - Market Segmentation Study** - To characterize segments of the state and local government to guide future outreach and program development efforts, and target issues for additional review.

Four contractors were selected in December 1998, and work on the projects began in late January 1999. All four contractors conducted pilot research projects at sites representing a broad mix of 10 state and local government entities, including:

- 2 States
- 3 Cities
- 2 Counties
- 2 Universities
- 1 School District

In addition, two of the contractors conducted Tool Kit Testing and one performed the Market Segmentation Study. All of the initial project activities were completed and Final Reports submitted by September 1999.

During this period, CEE staff also conducted an intensive outreach effort to government Purchasing associations and other organizations supporting or working in government procurement. Staff attended and gave presentations on energy efficiency in procurement at several conferences throughout the year, including the National Association of State Purchasing Officials (NASPO), National Institute for Governmental Purchasing (NIGP), International Council for Local Environmental Initiatives (ICLEI), and the National Conference for State Legislatures (NCSL). Staff also networked with other organizations conducting procurement research, including the Northwest Energy Efficiency Alliance and Washington State University, which also was a contractor for CEE's efforts.

As a result of CEE's Pilot Project Research and Outreach efforts, over 400 Tool Kits have been distributed to state and local government purchasers throughout the country. In addition, CEE has completed its initial research and documented purchasing systems and practices at 10 state and local governments, and made specific recommendations for incorporating energy efficiency into their systems.

As the initial work was completed, CEE then began a number of follow up activities, based on needs identified during the research. Development was initiated for several tools to help assist implementation of changes in purchasing practices. These tools included guidebooks for key segments identified in the Market Segmentation Study. The guidebooks are 5-10 page pamphlets intended to provide a quick overview of energy efficiency in purchasing targeted to each segment's part in the process. The guidebooks will discuss opportunities as well as barriers that may need to be addressed, and will include documented purchasing experiences from similar staff in other organizations. The guidebooks are meant to stimulate interest in learning more, either from the Tool Kit or another resource, including a local program in this area, if available. Another category of tools under continuing development by CEE is training materials for purchasers. These include Power Point presentations on the use of the ENERGY STAR Tool Kit, and an energy efficiency training module for purchasers, with examples of specific high efficiency products and technologies.

At the June 1999 CEE Program Committee meeting in Newton MA, an Advisory Committee was formed, and 18 attendees at the meeting signed up to participate in the Committee, indicating a strong

level of interest from members in pursuing this activity. Three meetings have been held since then, and on November 17th, the Advisory Committee voiced support for a CEE initiative in Government Purchasing.

Energy and Environmental Savings Potential

State and local governments spent about $738 billion in 1994 for purchases, a 19% increase from 1980, according to the 1995 edition of **Business Statistics of the United States**. This represented about 11% of the national economy, compared with about 6% for the federal government.

A September 1999 report by the Northwest Energy Efficiency Alliance on state and local government purchasing, **Public Procurement and Energy Efficiency in the Pacific Northwest**, cites a more recent assessment of state and local government purchasing to be over $900 billion per year (Slater and Strawser 1999). A December 1997 report by Lawrence Berkeley National Laboratory, **ENERGY STAR® Purchasing for State and Local Governments,** estimated state and local government spending on energy related products to be $50 billion per year, with annual energy bills of $12 billion per year.

Many different types of facilities are operated by state and local governments, including administration buildings, hospitals, police and fire departments, water and sewage treatment centers, public schools and universities, libraries and public housing. These facilities use a wide range of energy consuming equipment, from major pumps and motors systems, and HVAC equipment, to light bulbs, appliances and office equipment.

The LBNL report estimated the savings potential from a multi-year program to promote energy efficiency in state and local government purchasing practices. Based on the assumption that 50% of the total purchasing by state and local governments would be energy efficient purchases by the year 2010, the savings per year as of 2010 were estimated to be:

- Energy savings of 21.6 billion kWh of electricity plus 34 trillion Btu of gas and fuel oil;
- Energy bill savings of $1.2 billion
- Energy operating costs savings of over $100 million;
- Annual CO2 emissions reduction of about 4.1 MMTC.

Market Description

The market for this initiative consists of state and local governments that procure energy-using products and technologies. In terms of energy efficiency potential, the state and local government market is a huge, largely untapped market. It consists of approximately 40,000 individual government organizations, including:

- 50 State governments
- 3,043 County governments;
- 19,279 City governments; and
- 16,656 Town governments.

Overview of Purchasing

The purchasing systems in state, county and local governments vary in many ways. Many players can influence purchasing decisions, and several factors can affect how purchasing works in any given organization, including:

- Size of the organization and number of employees;
- Differing rules, laws, and procedures;
- Environmental, cultural or individual-specific reasons;
- Extent to which the organization participates in current purchasing trends, e.g.:
  - **Decentralization** - a movement by many governments to allow purchasing decisions to be made by individuals or departments outside of the central purchasing unit.
  - **"Green Purchasing"** - the consideration of a broad range of environmental concerns in purchasing decisions.
  - **Electronic Commerce** - use of the Internet for purchasing information and/or transactions, including sources of information and access to vendors. Many government purchasing departments list solicitations on their web page and conduct bid processes electronically.
  - **Credit Card Purchasing** - allows specified individuals throughout the organization to make purchases from approved suppliers by using credit cards.
  - **"Best Value" Purchasing**- an approach that considers the overall costs and benefits of products, rather than first cost only.

The responsibility for procuring energy-using products usually resides in at least two separate organizations. One is a central procurement unit that, among other activities, makes commodity purchases. The other organization, usually called property or facilities management, is responsible for facility construction and renovation, which involves purchasing of major energy-using products and systems, including HVAC, lighting and motors.

A typical central purchasing unit will be responsible for preparing and administering purchasing contracts that cover the entire state, county or local municipality. Often other governmental bodies in the state can use state contracts, and multiple governmental bodies from many states may band together for purposes of cooperative purchasing, leveraging their greater buyer power.

Central purchasing might set specifications for products under its contracts, in conjunction with user/client agencies, or one or the other may set the specifications by itself. Sometimes, equipment vendors are involved in helping to set the product specifications.

In addition to contracts, the central purchasing unit will often make individual purchases over a certain dollar amount, at the request of user agencies. In this case, the user agency may set the product specifications, although the central purchasing unit can provide advice. The user department or agency is often permitted to make small purchases on its own. These "small purchases" can add up. At one of the pilot sites studied, individual users may purchase up to $2,500 of goods per day.

Some governmental agencies, such as legislative bodies, universities, transportation departments and/or prison systems, are exempt from the requirement to work through the central purchasing unit. These exempt agencies will each have some type of centralized or decentralized purchasing unit internal to that agency.

The second type of purchasing occurs in connection with facility construction or major facility renovations. Energy consuming products and systems, such as HVAC, lighting, motors, and appliances are included in these projects. Often there is a property management, or facilities management, function in the state/county/municipal government. This organization will normally be responsible for hiring third party architects/engineers who develop plans for the new facility. These external consultants are very important, because any consideration of energy efficiency for structure, systems and equipment, must be included at this early design stage of the process. The construction budget is based on these plans, and additional costs, if any, from specifying energy-efficient technologies, must be recognized up front.

Barriers

There are many barriers to including energy efficiency as standard criteria for purchasing at the state and local government level. In his LBNL report, **ENERGY STAR® Purchasing for State & Local Governments**, Ned Raynolds broadly categorizes barriers into policy/budgetary, informational and attitudinal. He adds two more specific barriers to the list:

- Risk Aversion, and
- Split Incentives.

The perceived risks by purchasers of violating the rules, of wasting government money, and appearing to favor one vendor over another are deterrents to introducing change. Many purchasers are reluctant to depart from "standard practice", unless specifically charged to do so. Also, time and energy constraints on purchasing staff do not allow for research and analysis of new information, and the promotion and defense of a new course of action to colleagues and superiors.

Split incentives occur when the specifier/purchaser of a particular piece of energy-using equipment and the payer of energy bills for its use are different.

The chart below lists a number of barriers to energy efficient purchasing, with possible solutions and proposed CEE strategies.

Barrier	Possible Solution	CEE Strategy
Higher first cost of some energy efficiency equipment conflicts with "Least-Cost" purchasing.	- Promote "Life-Cycle" Costing (LCC); and/or - "Best Value" Purchasing	- Train purchasers on the many benefits of Energy Efficient (EE) purchasing, and - Train in use of LCC - Authorize staff to pay higher price when savings in operating cost and maintenance justify the price - Communicate LCC and Best Value purchasing to policy makers, and encourage adoption of "Best Value" as purchasing criteria.
Trend toward more decentralized purchasing	- Outreach to more individuals with EE Purchasing message	- Provide training in the use of the ENERGY STAR Tool Kit, including benefits of EE Purchasing - Work with policy makers to adopt EE Purchasing policy

Bureaucratic and organizational inertia. (System in place and working, don't add more work or more bureaucratic requirements)	- Promote benefits of EE purchasing to the organization - Promote "good government" practices; government as leader by example - Encourage adoption of "best value" criteria	- Work with policy makers to understand why EE purchasing is "good government" practice - Encourage use of "best value as purchasing criteria - Provide Tool Kit/EE training for staff and management
Lack of understanding by purchasers of the benefits of EE Purchasing No experience with EE Purchasing Lack of information about EE products & technologies Purchasing staff has no time to research new products	- Provide training & tools to make EE Purchasing easy. - Provide easily available product information, specifications & sources	- Provide Tool Kit Training, incorporating the benefits of EE Purchasing and LCC - Provide Tool Kit updates with new products and information, as available. - Provide lists of low- or no-incremental cost products that are widely available and used, and can be used as a starting point for purchasing EE products - Provide short purchase "success story" reports documenting a similar organization's approach and experience in purchasing the product(s). - Provide comprehensive specifications and lists of manufacturers and suppliers
No incentive by state or local government to buy EE products - Don't pay (or even see) energy bills - Don't know how much energy they use, and - Can't easily measure savings from EE Purchase, and - If they save energy costs, energy budget reduced next year.	- Provide incentives for agencies & staff to purchase EE products (& save energy) - Connect energy bills to the sites where it is used - Devise metrics for determining savings from EE purchasing	- Work with policy makers to adopt EE purchasing and provide incentives - Encourage tracking of energy consumption by individual participating facilities, to be used as a baseline for energy savings. - Work with Advisory Committee, EPA, DOE and others to work out acceptable metric for energy and environmental savings.

Most computers are ENERGY STAR rated. However, - Sleep mode is often not enabled at time of purchase - Or routinely disabled by users or MIS departments. - Computers often left on 24 hours/day.	- Work with MIS groups to help them to understand the importance of operating computers with the energy features enabled - Educate users about the benefits of keeping energy features enabled, and turning computers off when not using. - Identify perceived problems with energy saving features on networked computers, and satisfy MIS concerns	- Work with MIS & Purchasing to specify that new computers are received with energy features enabled. - Promote training for users by vendors on the energy saving features as a provision of the purchasing contract - Work with EPA to address network solutions
Individuals or organizations do not understand the link between environmental initiatives and energy efficiency in purchasing.	- Explain how energy efficiency can be an effective way to meet environmental policy goals	- Incorporate an environmental component into training modules to link EE purchasing to environmental benefits, as well as to cost savings and other benefits. - Incorporate discussion of the link into all outreach activities
Energy efficiency is generally not a criteria for building operators or facility managers when specifying equipment or technologies for purchase	- Need to communicate EE benefits that <u>are</u> important to these purchasers, e.g., quality, reliability, reduced maintenance, longer life, etc. - Need commitment to EE purchasing communicated throughout organization	- Guidebook for Facility Managers promoting relevant benefits of EE products & technologies and easy access to product and source information - Provide comprehensive specifications - Provide Toolkit/EE training including LCC principles - Work with policy makers to adopt and communicate EE commitment throughout organization
EE products and technologies often considered "luxury" items in design of new construction or renovation projects. If the project exceeds budget, often EE products get "value engineered" out of the project. Products purchased for construction/renovation projects are usually specified by third party Architect or Engineer and purchased by General Contractor	- Need to communicate the organization's standards for EE into the bid solicitation, and make sure design and construction meet standards - Need to promote and use Life Cycle Costing - Need to include extra cost (if any) for EE products at the planning stages of the project, and make sure the energy efficient products are protected from budget cuts	- Work with policy makers and state or local government project managers to set policy and standards for energy efficiency in design and construction projects - Develop a guidebook for third party Architects and Engineers, with EE information, and sources for specifications and product availability

The Proposed CEE Initiative

The proposed CEE Government Purchasing Initiative has four primary goals:

1) Increase the understanding of the benefits of purchasing energy efficient products by state and local government purchasers;
2) Overcome the barriers to purchasing energy efficient products and technologies;
3) Promote the practice of specifying and purchasing ENERGY STAR® labeled and other energy efficient products and technologies;
4) Develop an infrastructure for delivering ongoing support, and expanding the project.

CEE will work with members who are interested in developing a Government Purchasing program for state and local governments in their geographic area. Using the basic program template developed by CEE as a result of the research phase of the project, CEE will assist members to customize a program based on the individual members' needs.

CEE's template includes the following tools and resources, all of which will be made available to participating members:

- **Request for Proposal (RFP) for Contractor Services** - to help members solicit contractor assistance with the procurement project(s).
- **Pilot Project Reports and Case Study Reports** - the results of CEE's project research at 10 state and local governments throughout the country. These reports can help members to understand how procurement works, the barriers faced by governments, and common recommendations for overcoming barriers and incorporating energy efficiency into government purchasing.
- **Pilot Project Summary Reports and Tool Kit Analyses Reports-** these can provide additional information on the purchasing process, related issues, and recommendations for using the Tool Kit effectively.
- **Market Segmentation Study** - an in-depth analysis of the complicated government procurement function, and a separation of this "market" into definable segments. The barriers to incorporating energy efficiency identified at the individual segment level can be addressed by specific activities or the development and application of tools.
- **Interview Guide** - used to direct the process of interviewing state and local government staff responsible for purchasing.
- **ENERGY STAR® Tool Kit for State and Local Governments** - a comprehensive guide to purchasing developed by U.S. EPA and DOE. The Tool Kit includes product information, specification language, source listings for high efficiency products, and an interactive Life Cycle Costing Analysis diskette.
- **Tool Kit Training Module** - a Power Point training module incorporating the benefits of purchasing energy efficient products with an overview of the ENERGY STAR® Tool Kit. CEE will train members or their contractors to present the training module to government purchasers.
- **Procurement Guidebooks** - a series of guidebooks, developed for the main purchasing segments identified through the Market Segmentation Study. The guidebooks address the function of the particular segment, and include a discussion of why energy efficiency is important and how to overcome potential barriers. The guidebooks are intended to be an introduction to the purchase of energy efficient products, and a link to using the ENERGY STAR Tool Kit, as well as other available resources.

- **Energy Efficiency Training Module** - this Power Point presentation combines energy efficiency and environmental principles with examples and benefits of high efficiency products and technologies.
- **List of No- or Low- Incremental Cost Products and Technologies -** Products on this list cost little or no more than conventional products. It can be used as a "starter" list for organizations that are beginning to purchase energy efficient products.
- **Purchase "Success" Stories** - for a number of high efficiency products and technologies, these are documented purchase experiences of a state or local government. Included are descriptions of how and why the energy efficient product was selected; specifications that were used; any problems or barriers that were encountered and how they were addressed; and performance of the product.

CEE will provide these tools to participating members, and will offer direct assistance in using the tools with their state and local government. As new tools are developed and added to the template, these will also be offered to all participants.

For the first projects begun by members, CEE will provide the following "start-up" direct assistance services to members or their contractors:

- Initial meeting to explain the scope of the project, the tools included in the template, and the various steps in the process;
- Tool Kit Training for member's staff or contractor;
- Assistance in identifying the appropriate staff for interviews;
- Participation in the first interviews, if possible and if requested by member.
- Assistance in determining recommendations, if requested.
- Work with members to implement recommendations

At the same time, CEE will continue to identify and locate or develop new tools and solutions to overcome remaining barriers. CEE will also continue to work with other organizations that are promoting or developing procurement assistance programs, including the Northwest Energy Efficiency Alliance, to share information, identify additional needs and consider new approaches.

As members complete the initial pilot projects, they will gain a greater understanding of the state and local government purchasing process, and the problems and opportunities associated with incorporating energy efficiency as standard purchasing practice. It is anticipated that they will continue to work with additional state and local government organizations to identify opportunities for change and assist with implementation.

After the first year, CEE will continue to provide start-up services to additional members to initiate programs. In addition, CEE will act as a clearinghouse for information, and continue to research and develop new tools and resources to assist members in their government purchasing programs. A sub-group of the Advisory Committee will continually address new issues and work to identify and provide solutions. Member projects will be discussed and "success stories" documented for use in promoting purchasing projects to other organizations.

Outreach

CEE staff will continue to conduct outreach activities with government purchasing and related organizations, such as the National Association of State Purchasing Officials (NASPO), the National Association of Counties (NACO) and others to spread the word about the benefits of incorporating

energy efficiency into purchasing practices. In addition, CEE will work with NACO, Public Technologies Incorporated (PTI), the National Conference of State Legislators (NCSL), the Northwest Energy Efficiency Alliance and others to explore opportunities for conducting cooperative project activities.

Requirements to Participate

The basic requirements for participation include: a.) a commitment to provide staff or contractual resources, and other resources as needed, to a Government Purchasing project; and b.) demonstrated interest by a state or local government customer or constituent to participate in the project.

Resources

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