TRANSFORMING FEDERAL SECTOR PROCUREMENT OF PERFORMANCE BASED ENERGY SERVICES

Douglas E. Dahle, National Renewable Energy Laboratory, Golden, CO

ABSTRACT

Federal agencies are mandated to reduce their energy use by 30% by 2005. The investment in energy projects required to achieve this reduction is estimated at $4 billion to $6 billion. The Department of Energy's (DOE's) Federal Energy Management Program (FEMP) has developed streamlined procurement vehicles to allow Federal agencies to acquire private-sector-financed, performance-based energy services for all Federal buildings. These procurement vehicles, called Super Energy Savings Performance Contracts (Super ESPCs) will be in place covering all regions of the United States by summer 1998. The six regional DOE ESPC contracts will provide agencies the ability to contract for up to $4.5 billion in private sector financed energy services. This represents an estimated potential of $3 billion in private sector investments in Federal buildings for energy efficiency, renewable energy and water conservation projects. DOE has developed guidelines and unique project development tools that will allow Federal agencies to contract for ESPC services in months rather than in the years it used to take to develop and implement site specific ESPC projects. The Federal government's buying power has transformed the energy services and utilities industries by stimulating the formation of new cross-industry teams and partnerships to meet the breadth of capability and ability to respond to the needs of Federal facilities in large geographic regions. This paper presents results to date and describes the linkages between the Super ESPC Program and the U.S. Climate Change Proposal. A key U.S. strategy that calls for Federal leadership, and in particular for DOE to spearhead a comprehensive effort to reduce greenhouse gas emissions from Federal sources.

Introduction

The first challenge for the Department of Energy's (DOE's) Federal Energy Management Program (FEMP) has been to accelerate Federal agency use of private-sector-financed, performance-based energy services to reduce Federal building operating costs and energy consumption, as called for in congressional mandates and Presidential order. Assisting agencies in meeting this challenge is a principal mission and goal of DOE FEMP. Reducing the Federal facility annual energy bill by more than $1 billion will require a capital investment of $4 billion to $6 billion in energy efficiency and renewable energy projects between now and 2005 (Dahle, Ginsberg and Westby 1996.). DOE FEMP is committed to providing the procurement vehicles, project assistance and service support infrastructure in fiscal year (FY) 1998 to facilitate rapid achievement of significant private sector investment in energy efficiency, renewable energy, and water conservation projects for Federal facilities. The new procurement vehicles are called Super Energy Savings Performance Contracts (ESPC) and the new service support infrastructure is known as the FEMP Service Network (FSN). Significant Federal purchasing power, embodied in the Department of Defense (DoD) and DOE broad-based ESPC procurements has both influenced and responded to important market transformation conditions. The next new challenge for DOE FEMP is to review current energy management programs and strategies for integration and alignment with the goals and objectives of the U.S. Climate Change

Policy (Clinton 1997a). This paper examines and discusses the importance of using ESPCs to meet Federal energy management goals. It describes DOE FEMP activities to provide effective ESPC procurement vehicles, tools, project development expertise and technical assistance to all Federal agencies. And it includes a discussion on initial actions of DOE FEMP's leadership in developing responsive strategies to rapidly implement efforts to reduce greenhouse gas emissions (GHG) from Federal sources, through cost effective investments.

Background

ESPC and the Super ESPC Program

Dahle, Ginsberg and Westby have published a comprehensive overview of DOE FEMP's Federal ESPC Program, which includes its legislative history, the key points of ESPC program implementation, the Super ESPC program initiative, and examples of FEMP's technical support services (1996.). Briefly, ESPCs are procurements under which government agencies contract with Energy Service Companies (ESCOs), for energy efficiency, renewable energy, and water conservation projects. The ESCO provides the expertise to identify, design, install, finance (at no capital cost to Government), and, as applicable, provide operations and maintenance of installed measures and equipment. The ESCO is reimbursed after measure installation and government acceptance from a portion of the resulting energy and related operations and maintenance cost savings over a period of up to 25 years. It is recommended that the reader access the DOE FEMP Home Page at http://eren.doe.gov/femp.html. To find program summaries that provide excellent background and materials on Federal Energy Savings Performance Contracting (ESPC) (insert "/espcovw" between "femp" and ".html"). A Super ESPC program overview is brief and available (insert "/suprespc" between "femp" and ".html").

U.S. Climate Change Policy

To understand the impact on government procurement practices, let us first examine the guiding principles and strategies underpinning the global challenges to reduce greenhouse gas emissions. On October 22, 1997, President Clinton presented his Climate Change Proposal at the National Geographic Society in Washington, DC. His remarks (Clinton 1997b), included strategic principles and key points:

- "...[we must] embrace flexible mechanisms for meeting [binding emission reductions] limits."
- "...[we must] provide incentives and lift road blocks to help our companies and citizens find new and creative ways of reducing greenhouse gas emissions."
- "...we must reinvent how the Federal government, the nation' largest energy consumer buys and uses energy. Through technology, renewable energy resources, innovative partnerships with private firms and assessments of greenhouse gas emissions..."
- "This [climate change proposal] plan plays to our strengths –innovation, creativity, entrepreneurship."
- "There is a huge body of evidence now showing that energy savings give better service at lower cost with higher profit. We have to tear down barriers to successful markets and ... create incentives to enter them."
- "I call on American business to lead the way, but I call upon government at every level --

Federal, state, and local -- to give business the tools they need to get the job done, and also to set an example in all our operations."

- "We should...embrace this challenge, and we should do it secure in the knowledge that our children and grandchildren will thank us for the endeavor."

U.S. Climate Change Proposal

President Clinton's Climate Change Proposal characterized the Federal government role in reducing (GHG) emissions in three parts.

The first part is the Initial Action Plan. The President's immediate action plan has nine elements. The fifth element addresses Federal procurement and energy use. It states that DOE will spearhead a comprehensive effort to reduce greenhouse gas emissions from Federal sources.

The second part directs Immediate Actions. The fifth action item declares: "To reduce greenhouse gas emissions from Federal sources, DOE will spearhead a comprehensive effort that includes expanded performance contracting to make Federal buildings more energy-efficient, improved Federal procurement of energy-efficient technology, and partnerships to improve the energy efficiency of Federal aircraft, ships, and vehicles. Federal Agencies will be called upon to assess emissions in major initiatives."

The proposal's third part is a fact sheet on Federal energy management and calls for increased energy management in the Federal sector based on these three needs:

- The need to reduce the Federal buildings and mobility $8 billion energy bill.
- The need to reduce Federal emissions of GHG through enhanced focus on energy efficiency and renewable energy.
- The need to address areas which can deliver the greatest energy savings, best leverage private sector funding and improve the Federal procurement system.

Four of five actions and areas of emphasis proposed for the government are as follows:

Expand ESPC

- Expand the use of Energy Savings Performance Contracts. ESPC uses private investment capital and expertise to accomplish energy and cost saving projects in Federal facilities. When a private sector firm which has invested in Federal energy efficiency improvements is fully repaid from its share of the delivered savings, all additional savings accrue to the government. Streamlined ESPC contracts put in place by DoD and DOE are beginning to speed large investments in energy projects at Federal facilities. However, use of ESPCs is still limited in the Federal government. The Office of Management and Budget will lead an effort to increase their use. It will include new policy and budget guidance for agencies. ESPC authority can also be extended to other areas including:
  - -- Leased Federal buildings
  - -- Federal mobility
  - -- Water conservation
  - -- Non-Federal facilities

-- State and local government facilities.

Buildings for the 21st Century

- Establish a new level of excellence for Federal building construction and renovation that incorporates energy efficiency, quality, affordability, and sustainability
- Deploy solar technologies in Federal buildings
- Expand the use of combined heat and power generation at Federal facilities
- Use biomass fuels in Federal boilers
- Expand public awareness of energy efficient technologies
- Seek increased resources for civilian agency staffing to expand energy management activities and complete energy efficiency projects

Improve Aircraft, Ship, and Heavy Vehicle Fuel Efficiency

- Public-private partnerships to improve the energy efficiency of Federal aircraft, ships and vehicles
- Increase the use of alternative fueled vehicles (AFVs) in the Federal fleet

Greenhouse Gas Assessments

- Federal agencies will be required to assess their greenhouse gas emissions in major actions they undertake

Throughout the President's remarks and proposal, he indicated numerous opportunities to build partnerships for innovation and leadership. The President called on American business and government leadership to get the job done and set an example for the rest of the nation. DOE's spearheading directive poses a unique opportunity to foster collaborations with Federal agencies, state and local governments, and the private sector to improve and integrate energy efficiency and renewable energy programs to concurrently facilitate enhanced focus and effective assessment of GHG reductions. A principle strategy and desired outcome, should be to position the nation so that in ten years the U.S. is benefiting from market-based, mature domestic and international emissions trading systems. This paper is a review and assessment of the impacts of U.S Climate Change Policy on Federal programs and initiatives to accelerate and expand the use of private-sector-financed energy projects.

Utility Restructuring

Utility restructuring has introduced challenges and opportunities to offer customers unique and innovative bundling of services. This paper will not address issues of utility restructuring in order to forecast impacts on DOE ESPC programs. Rather, it will note the changes in observed market conditions and the opportunities for public/private partnerships, and innovations that could result from market transformation of the electric utility industry.

Streamlining Procurement Practices

Objectives of the Super ESPC Program

Leveraging private sector investment in energy efficiency and renewable energy projects. A principal program objective is to deploy, Super ESPC contracts, by the end of FY 1998, that provide substantial Federal energy services contracting capacity to leverage private investment that approaches the $4 billion to $6 billion target by FY 2005. Six regional DOE Super ESPC contracts are all expected to be awarded by the end of summer 1998, with a total contracting authority of $4.5 billion, which represents an estimated private-sector investment of $3 billion. The capital investment in measures and equipment is estimated at $3 billion because the contract price for each ESPC price includes financing and services (e.g. equipment maintenance) provided during the multi-year performance of the contract term. DoD's Army Corps of Engineer, Huntsville Division has two regional ESPCs with total contracting authority of $1.6 billion, which represents an estimated $1 billion in private investment.

Additionally, DOE is establishing technology-specific Super ESPCs, which provide nationwide contracts focused on technologies like solar water heating, photovoltaics, and geothermal heat pumps. If proposed contracts are implemented, the technology-specific super ESPCs have been estimated to add $0.5 billion to $1 billion in contracting authority and an additional $0.3 billion to $0.7 billion in private investment. In FY98, $180 million in technology specific Super ESPC energy services will be available for energy projects involving line focused parabolic trough solar collectors, photovoltaic systems, geothermal heat pumps, and transpired collector, solar air heating systems representing an estimated $100 million in potential private-sector investment. At of the end of FY 1998, 24 months after beginning to actively pursue substantial private-sector resources through regional ESPCs, DoD and DOE combined efforts will have contracts in place capable of acquiring $4.1 billion in private investment. This will fulfill the first objective of leveraging private sector investment for energy projects.

Continuing the Implementation of Regional and Technology-Specific ESPCs. The Western Region Super ESPC was awarded to five ESCOs on May, 21, 1997 and the Southeast Region Super ESPC was awarded to six ESCOs on January, 12, 1998. For DOE and ESCO contacts see program status at http://www.eren.doe.gov/femp/western.html and http://www.eren.doe.gov/femp/southeast.html.
For the Central and Midwest Region Super ESPCs, ESCOs have been selected and contract awards are pending DOE announcement in June 1998. DOE's Northeast and Mid-Atlantic Region Super ESPC proposals have been received and are being evaluated; the target award date is August 1998.

On September 30, 1996, DOE's Golden Field Office awarded the first Technology-Specific Super ESPC to Industrial Solar Technology, Inc. for energy services involving line-focused parabolic trough solar energy systems. The DOE Golden Field Office issued a photovoltaic systems Technology-Specific Super ESPC Request for Proposal (RFP) in April 1998. Proposals were received June 1, 1998 and are being evaluated. RFPs for geothermal heat pumps, solar thermal (flat-plate and low-temp) systems, and Solar Air Heating are under development. This program objective is on track.

Accelerating ESPC Contractor Selection and Awards. Another critical objective of DOE Super ESPCs (and DoD Areawide Agreement ESPCs) is to streamline the procurement process and reduce lead time from establishing project concept and identifying its requirements through selecting the contractor. A performance goal that was established early was to reduce this pre-award process lead

time from an average of 12 to 18 months for single site ESPCs to 3 to 6 months for a Super ESPC delivery order covering single or multiple sites, as appropriate and economically feasible. To show the significance of this objective, the following brief examination of the overall procurement process is needed. An ESPC procurement process can be divided into four distinct stages:

(1) the government agency establishes requirements, develops procurement documents, and through delivery order RFPs works with DOE to conditionally select the ESCO that provides the best offer for the site;
(2) the government negotiates and awards the ESPC contract based on detailed site surveys (investment grade audits), conducted by the selected contractor, and submission of a final technical and price proposal;
(3) the contractor designs, finances, installs and demonstrates project energy and cost savings performance for government acceptance; and
(4) the contractor provides energy project management and maintenance over a multi-year pay-for-performance period with annual energy audits to confirm project energy and cost savings.

The first stage has historically been the most time and resource intensive as agency site staff climb a steep learning curve to develop the unique skills required to execute performance-based energy savings procurements. The timeline for this first stage, although it has been decreasing recently, has normally been 12-18 months from establishing the project concept and deciding to pursue a site-specific ESPC. Significant reductions in the timeline have occurred when agencies have centralized their ESPC acquisitions and developed a permanent core competency, such as the Army Corps of Engineers, Huntsville Division, for U.S. Army projects. As the government has downsized, however, the challenge for most agencies to develop a permanent ESPC project team has become formidable.

The expectation of the Super ESPC program, was for DOE and DOD staff with expertise in ESPCs to implement procurements that competitively select several ESCOs and embody most of the unique contract terms and conditions of Federal ESPCs. This allows agency personnel to focus on site-specific needs and requirements rather than on developing the expertise to develop all the technical, contracting, and legal requirements of a typical ESPC. In addition, as DOE and DOD have competitively acquired a cadre of ESCOs for different geographic regions, the selection of an ESCO for a project site is not an acquisition subject to protest by unsuccessful contractors. Under the Federal Acquisition Streamlining Act and its implementing regulations, agencies are provided much greater flexibility in the way that a contractor is competitively selected for work under multiple award contracts. There are also specific criteria under which agencies may select a single ESCO. For example, under DOE Super ESPCs, an ESCO may notify DOE, and if acceptable to the agency site personnel, the ESCO may provide, at its own risk, a proposal to the agency (i.e., the ESCO initiates the project by surveying Federal facilities and presenting the agency a proposed approach to implement an ESPC project). If the agency accepts the ESCO's proposed approach, the agency may select the ESCO and proceed to the second stage of project development discussed above. This process called a "Contractor-Identified Project" under the DOE Super ESPCs, is expected to be the principal mechanism that accelerates ESCO selection. ESCO selection in 2 to 3 months should be feasible.

In the second stage, the conditionally selected ESCO conducts investment grade facility audits and a feasibility analysis to confirm the facility's energy baseline (i.e., it documents current facility operating conditions and energy consumption). The ESCO then provides a detailed technical and price proposal for discussion, negotiation and delivery order award. This stage is estimated to require 3 to 4 months to complete. The initial Western Region Super ESPC experience has shown the ability to complete this stage in a timely manner, is highly dependent on effective communication, trust and

commitment to partnership building between the agency and the ESCO.

The pilot Western Region Super ESPC contract, did not meet this timeliness objective. Because this was DOE's first regional multiple-award Super ESPC, DOE and the ESCOs spent the first 3 to 4 months, after the contract award, developing guidelines, procedures, and standardized procurement document formats for agency use. Delivery Order guidelines for the Western region Super ESPC are now available from the FEMP Help Desk (1-800-363-3732), and they can be accessed on the Internet at http://www.eren.doe.gov/femp/western.html, through the "guidance manuals" link. The Western Region Super ESPC experience and procedural developments should help accelerate award of future delivery orders.

The use of contractor-identified project process did not emerge as a primary mechanism to initiate agency energy projects until early FY 1998. From October 1997 on, ESCO marketing and agency acceptance of the contractor-identified proposals approach in the Western Region has resulted in a significant increase in ESPC project activity. The majority of ESPC project activity is now based on ESCO initiatives.

The target of selecting an ESCO in 2 to 3 months and awarding ESPC projects after an additional 3-4 months, using Super ESPCs, has not been met, but the recent increase in agencies' interest in DoD and DOE Super ESPCs has been encouraging. An example is the DOE Southeast Region Super ESPC awarded January 12, 1998. Prior to a DOE contracting team and ESCO meeting in April, to review guidance materials and procedures, Southeastern ESCOs had already submitted 11 contractor-identified proposals for agency consideration. DOE focus for late FY98 and beyond will be continuous improvement and agency facilitation support to decrease timeline and resource demand for ESCO selection (phase 1) and negotiations and award of DO (phase 2).

DOE Super ESPC Program Results (through June 11, 1998)

Western Region Delivery Orders - Awarded

Agency Site: United Stated Coast Guard, Kodiak, AK
ESCO: ERI
Project Scope: Multiple buildings (administrative, boiler plant, medical clinic, housing units)
Investment: $915,672
Annual Savings Guarantee: $220,000
ECMs: Boiler improvements, Lighting, Motors, Energy Management & Control Systems (EMCSs)
Contract Term: 94 months, June 8, 1998 through April 8, 2006
Installation Period: 10 months
Energy Savings Performance Period: 7 years
Annual Government Payments: $218,000
Total Contract Payments: $1,520,698

Western Region Delivery Orders – In Negotiations or Proposals Received

2 Delivery Orders (DOs) - initial sites in Western Region Super ESPC Contract
5 Government Identified Project DOs – Various Agencies
5 Contractor Identified Project DOs – Various Agencies

Southeast Region Delivery Orders – ESCO Conducting Detailed Energy Surveys

2 Delivery Orders (DOs) - initial sites in Southeast Region Super ESPC Contract

Market Transformation Indicators

Energy Service and Utility Industry Partnerships

The DOE Regional Super ESPC solicitations have required a familiarity with all energy efficiency and renewable energy technologies as well as comprehensive capability in the energy services field. Accordingly, teaming of firms has been encouraged and expected. The first two DOE Super ESPC procurements awarded contracts to firms representing large and medium-size ESCOs; joint ventures between ESCO, regional utility company and facility management services firms; and joint ventures of utility company parent companies. In addition, shortly after the Western region Super ESPC award, the lead member of one joint venture (Bentley Company) was acquired by ENRON Corporation. Subsequently, Energy Pacific (a joint venture of Enova Energy & Pacific Enterprises) acquired CES/Way International Inc., a leading ESCO in the Federal sector. For the competitive Technology-Specific Super ESPCs, such as the Photovoltaic Systems RFP, DOE FEMP anticipates that ESCOs and technology based firms will partner to successfully compete by combining a knowledge of the technology with expertise in turnkey project implementation and project financing of an ESCO.

Interest in Super ESPC in the Financial Industry

A desired outcome of the Super ESPC Program has been to offer the energy services industry an opportunity to competitively acquire a portion of a large volume of work. This could also help to achieve a reduction in project financing rates. One of the key pricing components of the government's Indefinite Delivery/Indefinite Quantity (IDIQ) contracts is a table indicating the basis points (1% = 100 basis points) above Treasury notes at various financed amounts and terms. Based on Treasury notes currently in the 7% range, the finance rates for almost all Super ESPC awardees are under 10%. Although this has not been thoroughly investigated yet, there are indications that the financial industry is interested in aggregating Federal ESPC projects. This interest entails potential management of performance contract financing portfolios and it is growing.

Diversification Needs in the Utility Industry

There is significant interest from the utility industry in regional Super ESPCs. This interest is evident in the number of offers involving utility industry firms received by DOE FEMP and in the emerging utility strategy of offering customers the "value added" services such as energy efficiency and load management. Other indicators include utility/ESCO partnerships: Enron's acquisition of Bentley Co. (a Western Region Super ESPC awardee), and Energy/Pacific's buyout of CES/Way International, Inc. (a Southeast Region Super ESPC awardee). New business strategies in the utility industry focus on offering customers bundled services that combine performance-based energy services with utility transmission and distribution in the face of the impending restructuring of the electric utility industry.

Internet Based Procurements

The DOE Super ESPC procurements use the Internet exclusively to issue and amend RFPs. The DOE procurement Web sites increase access without the waste of printing and mailing dozens of RFPs. Information, such as site data and drawings, that is needed by offerors need to prepare technical

and price proposals for Federal projects under Super ESPCs, is made available through local copy and printing shops at nominal fee. Several Super ESPC awardees have established Web sites for their ESPC contracts. E-mail correspondence between DOE and Super ESPC ESCOs is now the norm for real-time communications. Internet-based communications are expected to enhance and continuously improve the effectiveness of these public/private partnerships.

FEMP Service Network

In FY 1998, DOE FEMP plans to implement a strategy called the FEMP Service Network (FSN). The FSN is designed to maintain the core competency of DOE and national laboratory teams that have worked so successfully together to develop the Super ESPC Program. The guidance of the DOE team of contracting, legal, finance, and technical experts will be sustained to facilitate, improve, and vigorously implement the DOE FEMP Super ESPC Program.

Background

In the Senate Interior Appropriations bill for FY 1996, Congress requested that DOE FEMP develop ways to provide technical assistance to agencies on a reimbursable basis. In FY 1998, the Senate Interior Appropriations Bill gave DOE the authority "to accept funds from other agencies in return for assisting agencies in improving energy efficiency in Federal facilities and operations through the use of private financing mechanisms." This unique authority also allows agencies the option of not having to fund in advance the estimated cost of DOE reimbursable services; rather, payment can be deferred and recovered by DOE after FSN services are rendered. In addition, DOE FEMP will be allowed to retain funds received through agency reimbursements until they are expended in assisting other agencies with ESPC or other types of privately-financed projects. This was a key element in launching a reimbursables-based virtual organization (i.e. FSN partner organizations are located throughout the U.S.) within DOE to deliver high-quality expertise and project support services for agencies wishing to contract for energy services under Super ESPCs.

Implementation

The FSN will consist of contracting, legal, and technical staff members of DOE Headquarters, DOE field offices, DOE regional support offices, and DOE national laboratories, supported by competitively contracted resources with energy management expertise to provide services readily available from the private sector. In FY 1998, activities will focus on developing and implementing the FSN operations plan. This plan will include the establishment of a DOE-approved pricing policy and procedures for FSN services, communication and project management systems for timely and responsive customer-based services, and fiscal management and accounting systems to implement the DOE authority and handle agency reimbursements and revenues in a flexible manner.

Benefits

The FEMP Service Network will provide government agencies with a "one-stop shop" for all the expertise and services needed to assist them in successfully implementing projects, such as a Delivery Order with Super ESPC ESCOs. The FSN provides agencies access to the energy technologies and technical expertise available and emerging through research and development

programs at DOE's national laboratories. The FSN can also provide a continuous improvement infrastructure to ensure consistency in Super ESPC contract utilization, and adapt and offer new FSN services based on lessons learned and changing market conditions, such as utility restructuring and climate change initiatives. The network can also assist in implementing national climate change initiatives.

An expected outcome of the FSN is to foster and encourage effective public/private partnerships between the Federal government and the energy services industry. These partnerships are designed to reduce transaction costs and develop new strategies to achieve Federal energy management goals, meet infrastructure modernization needs, and ensure national leadership in securing the economic and environmental benefits of energy efficiency, renewable energy, and water conservation projects. The FSN will maintain, standardize, and improve Federal ESPC tools (e.g., project and technology screening tools and project economic analysis software) and guidance materials (e.g., Super ESPC delivery order guidelines and formats; Measurement & Verification Guidelines updates). These will be developed for agency assistance and cost-effective implementation of the Super ESPC and other DOE FEMP Programs. In addition, the FSN provides a cost-effective way to acquire and report Federal ESPC program and project energy savings performance to quantify economic and environmental benefits (e.g. GHG emissions reductions).

Linkages to U.S. Climate Change Initiatives

The U.S. Climate Change Proposal provides a new challenge to expand energy efficiency and renewable energy use in Federal buildings. It calls for implementation strategies beyond those envisioned by the Energy Policy Act of 1992 and Executive Order 12902. The Super ESPC Program provides a solid foundation for achieving the mandate to "reduce Federal emissions of GHG through enhanced focus on energy efficiency and renewable energy." The following summarizes some of the actions either under way or proposed as part of DOE's role in spearheading a comprehensive effort to reduce GHG emissions from Federal sources.

Expand ESPCs: DOE Actions

Opportunities to expand the use of ESPCs for leased Federal buildings, Federal mobility, water conservation, non-Federal facilities (for which the Federal government pays utility expenses) will require legislative changes. The current ESPC statute (Title 42, United States Code, Section 8287) defines ESPC as being applicable only to existing Federal facilities. DOE has proposed legislative language that would amend the Federal ESPC authority to incorporate definition changes and revisions to statutory provisions. These proposed changes would allow Federal agencies to use ESPCs for leased space, water conservation (non-energy components of water conservation), mobile equipment, and non-Federal facilities. When such changes are enacted, it is anticipated that Super ESPC contracts may be modified, without significantly changing the scope of these contracts, to reflect the intent of the new ESPC authority. When ESPC for mobile equipment is authorized, the Federal energy project market opportunity will double. It will address not just opportunities to reduce the $4 billion Federal facilities energy bill, but rather an $8 billion Federal buildings and mobility fuel bill.

Promote Buildings for the 21st Century: Utilizing Super ESPCs

In this area of Federal energy management, the current Super ESPC program provides an

opportunity to use regional or technology specific Super ESPCs to:

- Deploy solar technologies in Federal buildings
- Expand the use of combined heat and power generation at Federal facilities
- Use biomass as a fuel in Federal boilers.

Improve the Fuel Efficiency of Aircraft, Ships and Heavy Vehicles: ESPC Strategies

ESPCs could play an important role in increasing the fuel efficiency of Federal mobility, if the ESPC statutory changes discussed above are implemented. In one example, DOE is working with the U.S. Air Force and a jet engine manufacturer to improve fuel efficiency through KC-135 aircraft engine retrofits based on fuel and O&M cost savings. Increasing the use of alternatively fueled vehicles (AFVs) in Federal fleets might also be accomplished through ESPCs. Using electric vehicles for short distance Federal fleets, like those of the US Postal Service in California, for example, looks very promising. This is not just because of the energy and O&M cost savings and environmental benefits, but also because of the potential ESCO performance requirements such as vehicle availability and fuel efficiency guarantees.

Conclusions

The DOE Super ESPC program has demonstrated that large-scale Federal procurements are able to attract private-sector capital needed for performance-based energy efficiency, renewable energy, and water conservation projects. Over the next 6 to 12 months, DOE, government agencies, and Super ESPC ESCOs must make a commitment to finding ways to streamline procedures and reduce the transaction costs and time needed to implement projects through Super ESPC Delivery Orders. This must be done if the potential private capital investments and energy cost savings in Federal energy projects are to be realized. Congressional budget tightening, external market forces and Federal buying power and leadership in energy efficiency have all influenced the transformation of Federal procurement practices and the development of new private-sector partnerships to support Federal sector needs. The U.S. Climate Change Proposal focuses on GHG emissions reduction in the Federal sector; this focus should expand the private sector's access to the Federal energy services market and should also provide new opportunities for increasing private investments in Federal facilities and mobility. The DOE Super ESPC program and the FEMP Service Network will provide a means for the Federal sector, and its ESCO partners, to demonstrate leadership in achieving significantly greater energy efficiency, more widespread use of renewable energy, increased implementation of water conservation projects, and substantial reductions in GHG emissions.

References

Dahle, D., M. Ginsberg, and R. Westby. (1996). "Alternative Financing For Federal Energy Projects: An Overview of the Federal Energy Management Program Role." *In Proceedings of the ACEEE 1996 Summer Study on Energy Efficiency in Buildings*, 5.33. Washington, DC: American Council for an Energy-Efficient Economy.

President William J. Clinton. (1997a). "President Clinton's Climate Change Proposal" (White House Proposal). October 22, 1997. Washington, DC: The White House.

President William J. Clinton. (1997b). "Remarks by the President on Global Climate Change" (White House Speech). October 22, 1997. Washington, DC: The White House.